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WISCONSIN HORTICULTURE

Vol. XIII

Madison, Wisconsin, September, 1922

No. 1



A Chapter on Roses

While this is not the season for planting roses and long past the season for enjoying their fragrance and beauty, we may well consider the subject now for next year. Do not plant roses in the fall of the year in Wisconsin. Plant only in early spring. Although we cannot plant we can *think* about roses and *plan* for roses as well now as at any time. The editor has read many books on roses beginning with that delightful classic, "Parsons On the Rose," as well as many charming essays and discussions which cover a period of almost a century, but in none does there appear such practical, common-sense directions for rose culture for our climate as in a recent bulletin by Prof. Alfred C. Hottes, of Ohio State University.

The climate of central Ohio is less severe than that of Wisconsin and we can rarely carry over the winter, teas or even hybrid teas. Making allowance for that there is not a word or sentence but applies to Wisconsin. Read it carefully and preserve for future use.

About Roses

By Alfred C. Hottes, Department of Horticulture, Ohio State University.

What melody is to music, what expression is to the human voice, what rhyme is to poetry, what color is to painting, and form to sculpture—that the rose is to the realm of flowers. It holds a warmer place in the hearts of the people than any other flower, delighting the eye with its perfection of form and color, and rendering the air fragrant with its perfume.

Our language is filled with expressions derived from the rose. We speak of rose-tinted glasses, of rosy futures, of roseate hopes, of giving our confidences *sub rosa*, and telling our friends that they are as welcome as the roses in May.

To have a rose garden of one's own seems to many people a desire impossible of fulfillment, owing to unfavorable location and poor soil. At the same time that these persons are complaining, however, a neighbor is growing roses under the same conditions. If one is possessed of a real desire to have roses, and is willing to devote some time to their cultivation, there are no roses too difficult to grow. It is true that some varieties do not stand the cold, but for these, protection can be provided; insect enemies and diseases are discouraging factors which must always be taken into consideration, but these can be controlled. The bringing to perfection of one good rose is worth all the care that it takes. The satisfaction of having roses from June until frost will be greater than that derived from the growing of any other flower.

LOCATION SUITED TO ROSES

Rose bushes should be planted by themselves, in separate beds, so located that they are not exposed to heavy winds or surrounded by high walls or tall buildings. To grow roses properly, it is necessary that they have sunshine the greater part of the day. Avoid planting in places where trees and shrubbery will rob the roots of plant food and moisture. Perennial and annual flowers should not be set between the rose bushes, as they also take the fertility and water, and make the requisite stirring of the soil about the rose plants impossible. Such shallow-rooted flowers as pansies and sweet alyssum can, however, be planted to border the rose beds.

The better quality roses should not be used in place of shrubbery because the bushes themselves are seldom beautiful in form or foliage. In enjoying roses we must look at the rose bloom and not the bush.

SOIL AND DRAINAGE

The best soil for roses is one of the heavier sort, but sandy soil will also give good blooms. The worst looking clay, after being enriched with manure, will grow roses to

perfection after they become established for a year or two.

In heavy clay soils, or where water is liable to stand, it is necessary to furnish a means of drainage as roses will not grow if water stands at their roots.

Dr. Huey once said that it is better to plant a fifteen-cent rose bush in a fifty-cent hole than to plant a fifty-cent rose bush in a fifteen-cent hole. The best part of the advice is that holes will not cost fifty cents but give healthful exercise.

Any well-rotted manure or good compost may be used as a fertilizer. Ground bone, at the rate of about 1 pound to each 8 square yards of soil, is excellent to add as additional food to the surface 6 inches of soil. If possible, the rose beds should be prepared in the fall, as this gives the soil a better chance to settle.

PLANTING

Time of Planting.—Rose bushes may be planted either in the spring or in the fall. If planted in the fall, they should be placed early enough to get established before the winter sets in. Plants are in better condition when received from the nurseryman in the fall, but because of the danger of injury from freezing, it is better that they be planted in spring in Ohio. (Also Wisconsin.—Editor.)

Kind of Plants to Buy.—Either one-year-old or two-year-old plants may be purchased. One-year-old plants are sold cheaply because they are usually very small, and require patience and extra good care to get them to good blooming size. Two-year-old plants are better. Many of these have been budded on strong roots. Budded roses usually have a decided crook at the surface of the soil, thus showing that they have been budded. For the first year or two these strong wild rose stocks will push the tops better than will the natural roots of the plants, but these stocks will often send up suckers that will need to be removed.

Plants that are not budded are said to be own-root roses because they are rooted cuttings and grow-

ing on their own roots. These plants send up strong blooming shoots from the roots which should not be confused with the suckers that often grow from the roots of budded stock.

The two-year-old plants are sold either as dormant stock or potted. Potted roses will not be set back when planted out-of-doors, and when buying one is sure of obtaining live, vigorous plants.

Depth of Planting.—The plants should be set 2 or 3 inches deeper than they were in the nursery rows. Budded roses should have the point of union between the stock and scion well covered. Never plant a rose just as you purchased it, but prune the plants when setting out, leaving 3 to 5 eyes on each cane. The climbers should be pruned in the same way, in order to insure a bushy growth the first year rather than blooms, as the two cannot be carried on successfully at one time. The roots should be spread out as much as possible, and the soil tamped firmly about them with the feet. The soil should then be thoroughly soaked, in order to settle it around the roots.

Distance Apart.—Some roses are strong growers, and need to be planted a greater distance apart than those of weaker growth. The bushes should be so spaced that when full grown they will not be overcrowded. Hybrid Perpetuals should be planted about 3 feet apart; and Teas, 15 inches apart. Coarser growing Mosses, Rugosas, and old-fashioned Briar sorts should be given at least 4 feet and should not be planted in small rose beds, but placed among shrubbery or for backgrounds.

Width of Beds.—To prevent the intrusion of grass roots, the rose beds should be at least 3 feet wide, and had better not be over 5 feet wide for convenience in picking and cultivating.

SUMMER CARE OF ROSES

Keep the surface of the beds continually loose: this retains the moisture and makes watering unnecessary except in the driest part of the summer.

When watering roses, lay the hose down on the bed and let it get thoroughly soaked. Water the plants thoroughly once or twice a week, preferably early in the morning or in the evening. This is better than light sprinkling more frequently. Spraying water on the leaves each day in the evening or early morning will help to remove dust and knock off the insects.

For summer fertilizing, cow manure and bone meal are the two best fertilizers, the manure applied as a mulch in midsummer. Manure should also be dug into the soil in the spring.

Suckers, which may grow from the roots of budded plants, should be removed by scraping away the soil, and cutting them out where they start from the roots, as they will exhaust the vitality of the plant, and often kill it. They have a different appearance from the normal branches of the rosebush. There are usually more parts to the leaf of the suckers, the thorns will be finer, and the branches will have a different color. No definite description can be given of a sucker because there are many sorts of wild roses which are used. They are never difficult to distinguish from the normal strong shoots from the bases of the plants.

PRUNING

If rose plants are observed it will be seen that they bloom from the stronger shoots of the previous season's growth, and that from the base of the plant extra strong wood is being produced each year, which causes the older, more branched shoots to become weakened. Each year the older, branchy shoots and dead wood should be removed, as well as the short, slender twigs. This is all the pruning necessary for Climbers and Briar sorts grown for mass of bloom. Pruning of such sorts can well be done as soon as the flowers fade. In this way the plants are easily trained and the unsightly blooms are removed.

Hybrid Perpetuals, Hybrid Teas, and Teas are grown for individual large blooms and long stems—they need severe pruning. The weaker the sort the more rigorous should

be the pruning. Prune the Hybrid Perpetuals back two-thirds of their growth, and the Teas and Hybrid Teas to within 5 to 8 inches of the soil. Pruning should be done in the spring after the plants have started growth. If pruned too early the shoots are apt to freeze back farther and will need pruning again. All through the season flowers should be cut off as soon as they fade, cutting back each of the stems upon which the flower is produced. There is a tendency for many roses to produce extra long shoots from the base of the plant, which may be induced to bloom provided they are continually cut back during the season and not allowed to grow their full height. Keep up the pruning process all through the summer.

INSECTS AND DISEASES

Should a housewife decide to make bread she would have to have an oven and necessary utensils; the same principle applies to the growing of roses—one must be supplied with the necessary equipment in order to have satisfactory results. Every rose grower should have on hand two insecticides at all times. As soon as the rose bushes are planted, buy a small bottle of nicotine extract (tobacco solution) and a can of arsenate of lead. Use arsenate of lead for all worms or slugs which eat the foliage, and the nicotine extract for the insects which suck the juices but do not eat the leaves.

Plant lice (aphids) and leaf hoppers belong in the latter class; they are always present, and will require spraying every few days if they are to be checked. The object of nicotine is to suffocate the insects, consequently it must be applied with force actually to hit the insects. Care must be taken to cover thoroughly each shoot infested.

Black Leaf 40 is the most economical of the nicotine extracts. It is effective against most plant lice at a strength of 1 part Black Leaf 40 to 800 parts of water. This may be combined with the arsenate of lead if both aphids and leaf-eating insects are present. If used alone, add 1 cubic inch of soap to

each gallon of water. A bucket pump is better for use against sucking insects, because of the higher pressure obtainable. If the pump is equipped with a few feet of hose and a 4-foot extension rod furnished with an extra angle at the base of the nozzle, it is easier to direct the spray upward against the undersides of the leaves when necessary.

Rose slugs, various caterpillars, and other insects that skeletonize the leaves are readily controlled by arsenate of lead.

Diseases.—Mildew is the commonest disease, and is difficult to control. Flowers of sulphur should be placed in a piece of cheesecloth and sifted on the plants in the morning while they are wet with dew. The sun will help to vaporize the sulphur. Dusting should be carried on once a week. Climbing roses are often affected if planted too close to the house where they do not get the proper air circulation.

A black leaf-spot is usually destructive on some varieties of roses. This disease is very serious and often defoliates the plants. The affected leaves should be picked, burned, and the plants sprayed with potassium sulphide, 1 ounce to 3 gallons of water. Do not allow the diseased leaves to remain on the soil.

WINTER PROTECTION

It would be poor policy to buy plants, take care of them through the summer, and then neglect to protect them through the winter.

When the first real freezing weather has arrived, start to protect the roses. All of the Hybrid Teas, Teas, and most of the Hybrid Perpetuals will need winter protection. The best protection is gained by hilling the earth about the base of the plants to a height of 8 to 12 inches. A common cause of injury in the winter comes from water being allowed to remain about the crown of the plants. This hilling of the soil will eliminate the difficulty. After the soil is drawn up about the plants, the surface should be mulched with several inches of coarse strawy manure, which will

not only serve as a protection against the cold, but will conserve the moisture in the plants and add to the fertility of the soil. Late in February and in March the strong sun causes the branches to become warm and start their growth. At night the air again becomes cold. Such alternate freezing and thawing is very injurious to the rose plants. To guard against this injury, the branches should be wrapped with burlap or straw, and tied, or the beds may be covered loosely with evergreen boughs.

Many rose lovers use orange boxes or peach baskets, turning them over the plants after they have been hilled up and mulched. Such protection will keep the winter rains and ice from contact with the plants. Many of the Briar roses and old-fashioned roses will need no protection for their tops. Merely hilling the soil about them a little will be sufficient.

In protecting Climbing roses, the hardiest sorts pass through the winter safely if they are grown in a sheltered situation where they do not have too much winter sunshine. The greatest injury to the climbing sorts is due to lack of maturity of the branches, it being the tendency of these roses to grow until stopped by the frost. If the climbers are planted in such a situation that covering them with burlap sacks will not be unsightly, this will make an excellent means of protection. Climbers are also well protected if their tops can be placed on the soil and covered.

PROPAGATION

Layers.—The simplest method of increasing roses is by layers. Choose a branch that may be bent down, and cover it with soil. Rooting will take place more readily if the branch is injured by cutting into the wood at a point under the soil. Climbers are very easy to increase by this method.

Seed.—The wild roses, such as the shrubby sorts used for landscape purposes, are usually increased by seeds. The seeds are collected in the fall and washed from their fruits. They are then sown in shallow boxes of sandy soil and placed

in a protected spot out of doors, preferably in a cold frame. Here they must freeze, so that their seed coats are cracked. They will germinate in the spring.

It is interesting to hybridize roses and grow them from seed. The results are very uncertain, but often very interesting. One cannot tell before the new plants bloom just what kind of a rose to expect. Many will be worthless, but occasionally one is rewarded by securing a really worthy rose.

Cuttings.—For making slips or cuttings the best shoots to use are those which are blooming. Cut the flower with a stem about 6 inches long, cut off all wood of the stem below the lowest leaf and cut off the shoot at the top down to a leaf that has at least five parts. This means that the cut should be just below an eye at the base and just above a strong eye at the tip. Remove all leaves except the top one and also take off its tip leaflet. Set the cuttings 3 or 4 inches deep in a loose soil or in sand, place a fruit or bell jar over it. The jar will keep the air moist, provided the cuttings are watered. Shade the jar for several weeks and the cuttings will root. When the cuttings start to grow slightly so that one realizes that they have rooted, they should be taken up and transplanted to good soil, shaded for several days, and carefully cultivated.

Ramblers may be propagated easily by cutting the long stems into 6 or 8-inch lengths. During the winter, bury them in moist sand, either in a cool cellar, a cold frame, or in a well-drained spot out-of-doors. In the spring they will have rooted and should be planted out in the garden, where by careful cultivation they will make excellent plants by fall.

PRINCIPAL GROUPS OF ROSES

The two most important groups of roses for cutting as well as for garden display are the Hybrid Perpetuals and the Hybrid Teas. The following distinctions can usually be made between them:

Hybrid Perpetuals—

Name a misnomer, for they are not perpetually blooming.

Hardy, will usually stand much cold.

More double flowers.

Flatter buds and flowers.

Not tea scented.

Produce a large amount of bloom in June.

Hybrid Teas—

Many varieties are rather perpetual blooming.

Will stand cold only when protected.

Less double.

Pointed buds.

Strongly tea scented.

Lovelier colors than hybrid perpetuals.

More bronze color in stems and foliage.

(Not sufficiently hardy in Wisconsin to be satisfactory.—Editor.)

HYBRID PERPETUALS

White—

Frau Karl Druschki—Best white; large flowers; every garden requires this variety.

Deep Red—

Prince Camille de Rohan—Almost black; best of color.

General Jacqueminot—An old standard red.

J. B. Clark—Large scarlet flowers; one of strongest growers, producing very large bushes.

Ulrich Brunner—Good cherry color; fragrant.

Light Pink—

Mrs. R. G. Sharman-Crawford—Fragrant; prolific; hardy.

Anne de Diesbach—Large; hardy; almost thornless.

Paul Neyron—Largest rose; rather coarse.

Flesh Color—

Clio—Vigorous; flowers in clusters.

Margaret Dickson—Vigorous grower; companion to Frau Karl Druschki.

HYBRID TEAS

White—

Kaiserin Auguste Viktoria—Extra large; sweet; free blooming; very double.

White Killarney—Good buds for cutting; less double; many flowers.

Deep Red—

Gruss an Teplitz—170 blooms per season; always in bloom; indispensable.

General McArthur—Fragrant, splendid.

Hoosier Beauty—Excellent buds; very fragrant; good producer.

Laurent Carle—Fine finish; good shape; lasting; bushes often not vigorous.

Madam Abel Chatenay—Excellent carmine rose, shaded salmon; flowers rather large.

Light Pink—

Jonkheer J. L. Mock—Two colors; good stems.

Killarney Brilliant—Fine effect; prolific.

Lady Alice Stanley—Lasting; good for cutting; one of best.

Lady Ashtown—Excellent color; good form.

Radiance—Large; free flowering; strong growth; one of best.

Ophelia—Lovely salmon pink; good form; excellent in every way.

Columbia—A new rose which should be very useful in the garden.

Los Angeles—Coral pink; excellent distinct color; poor production.

Yellow and Copper Shades—

Duchess of Wellington—Distinct color; good growth; one of the best of this color.

Mrs. Aaron Ward—Small flowers; attractive.

Miss Alice de Rothschild—Good color; fine form; not so hardy.

TEA ROSES

With the exception of Hermosa, it is not advisable to plant many Tea roses; they are rather tender, and require so much care that they should be grown only by one who is truly a rose enthusiast and will give them careful attention.

Pink—

Maman Cochet—Most hardy of teas; profuse blooming; beautiful bud; growth low; stems weak.

Mrs. Georges Shawyer—Lovely pink; seems to be an excellent bedder.

Hermosa—Delicate color; small size; this is one of the hardiest of the China roses. It blooms from June until frost continuously.

Wm. R. Smith—Excellent producer; salmon pink; vigorous.

White—

White Maman Cochet—Somewhat tinged with pink and yellow; as good as Maman Cochet.

Clothilde Soupert—White, creamy tinge; good as an autumn rose; small flower; producing all summer.

Crimson—

Papa Gontier—Perfect bud; long stem.

CLIMBING ROSES

Pink—

Dorothy Perkins—Delicate color; one of the best climbers; foliage excellent, glossy.

Tausendschon—Also called Thousand Beauties; several shades of pink; one of the large flowering climbers indispensable for each person's rose garden.

Christine Wright—A lovely pink; large flowers; borne singly and in cluster; beautiful in bud and bloom.

Dr. W. Van Fleet—Flesh pink; large blooms; excellent foliage; strong grower; one of the best.

American Pillar—Pink and white; single; vigorous. The simple form of a single rose is as great a delight to the eye as are the fully double varieties.

White—

Silver Moon—White with golden stamens at center; superb foliage.

Crimson—

Philadelphia—A much better rose than the Crimson Rambler; but a trifle later.

Excelsa—Deep crimson; an exceedingly hardy, rapid growing climber of a brilliant color.

Hiawatha—Ruby carmine; one of the finest single climbing roses; the plants are a mass of bloom.

Yellow—

Aglaia—Buds canary yellow, but the flowers are white when open; flowers borne in profusion. (Continued on page 15)

THE FLORISTS PAGE

EDITED BY

HURON H. SMITH, Curator of Botany
PUBLIC MUSEUM MILWAUKEE, WIS.

Milwaukee's Show Place

The flower business is the most poetic of all. Here, if anywhere, is a chance for beauty, and yet I think all my readers will agree that the average greenhouses are an eyesore. If a re-patched roof, scattered cold frames, a manure heap or two, and coal scattered from Dan to Beersheba don't put a quietus on the ultimate consumer, it is because he only sees the product much be-ribboned in the florist's window or in a special mahogany case at the Public Museum. We all know that the pure and spotless Calla lily has its feet in the muck, and do not revere it the less for that.

But Milwaukee has one set of growers that believe in beauty. Their whole grounds to the last pebble of the driveway are continually in order, and their residence is just as neat and well arranged. I refer to Hugo Locker and his sons, Alfred and Arthur.

Twelve years ago they bought a corn field, out in the wilds of Wauwatosa, and now with fine trees, shrubbery and care, they have the show place of Milwaukee. No city park is as well kept as their grounds—no private grounds that we have seen in Milwaukee are so beautifully arranged. And Locker and Sons have found the combination and picked the lock of prosperity. If you could see the pride in Hugo Locker's eyes, when he shows what his boys have done, you would appreciate what a happy family that is.

And it wasn't all sunshine and roses for them either. Time was when Hugo and Arthur had to sleep in the boiler room, but they never let the fire go out. When they started, they thought that violets would be their best bet, but the thermometer was against them in 1910 in Milwaukee which was a

sweet pea, although they don't raise their own seed now. No one around Milwaukee can equal them in variety and fine blooms. They have made a study of it.

Their plot of five acres lies over three miles past the end of North Avenue car line, and when they started was far removed from any city water main. So they built their own well, and found out that a driven well, 261 feet deep, with the proper appliances for pumping cost them over \$700. Now things are easier and they have dynamo-



zero winter. Corsages of violets froze soon after they were worn outdoors. Those were the days when \$7 a week looked good to the Locker family. The next year they invested in another untried thing, spending over \$19 for seed of the new large Spencer Butterfly sweet peas. They didn't sell a flower, but saved all their seed for next year, when they came out with practically the only stock of the new sweet peas that were to be had, and made money, scads of it. They have never forsaken the

driven pumps furnishing well and rain water to the green house and residence. Their work room looks like a rich bachelor's den. Just outside of it is a cunning series of terraces, with three fish tanks, superimposed in a series of steps, flanked by cobblestone pillar work that would do credit to the Japanese and forming a very lovely grotto embowered by ferns, begonias, cyperus, palms, and water plants.

In their modern boiler room not a speck of coal is seen. It is on tap at a gate in the farther wall.

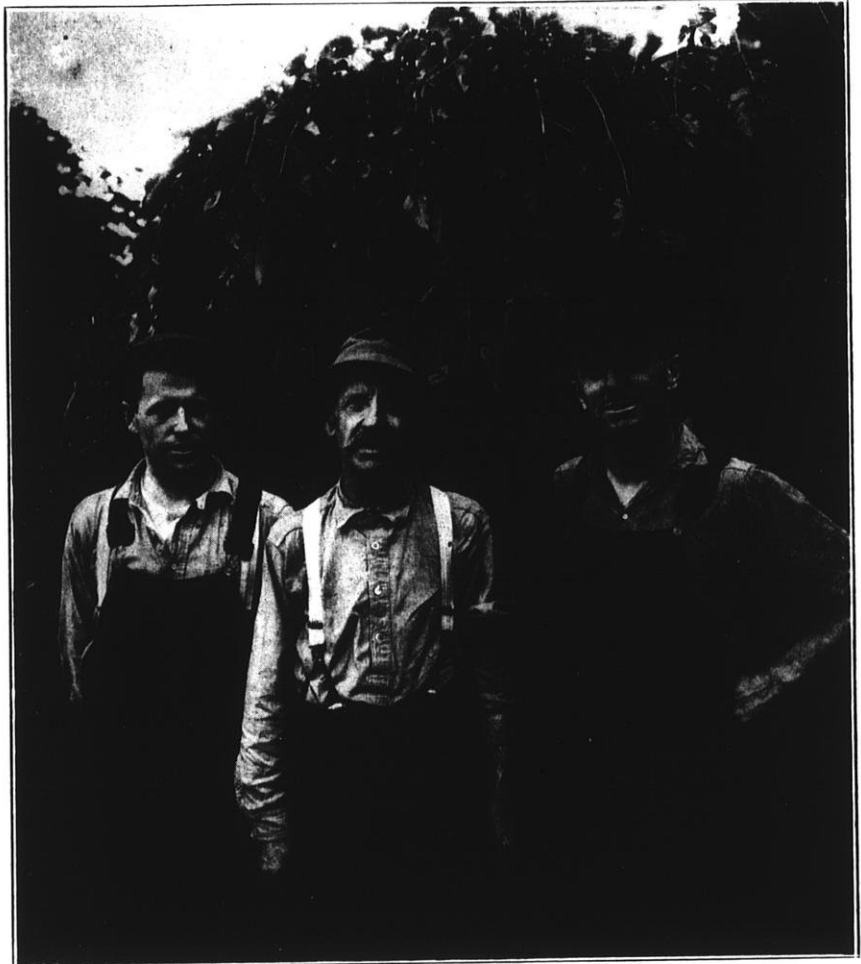
Their coal shed, even, is camouflaged. The roof has four doors which open to allow the coal truck to empty directly into their coal room. This room is built with sloping bottom and sides, which direct the coal to the chute in the boiler room.

Their plant is not large, as Milwaukee establishments go, but neither is their main line, large sweet peas and carnations. They have four houses 27 by 120 feet each, with 8 foot lean-tos on each end. Then they have 240 feet of heated hotbeds, and cement walks in every aisle.

Many pointers might be obtained from a visit to their plant, on the best way to do things. They have labor-saving devices that ought to be patented. For instance, their main aisles are wide enough and high enough to allow a truck to back into the houses. Then, with a wheelbarrow, their benches can be emptied or filled with a minimum of labor.

Back of their houses is a space for expansion up to 250 feet. They have their stock mostly outdoors now (June). They also have quite a bit of nursery stock outdoors. Eight years ago there was not a tree on the place, but at that time the Hawk's Nursery was just moving from Blue Mound Road to their present location just across the road so the Lockers bought a choice lot of stock for little money.

The place is really a gem. With ornamental rock work facing the road, a fine brick residence, grounds carefully planted and vistas well chosen, it makes a show place. Two huge century plants grace the entrance to the green houses. A Norway maple drive bisects the



Alfred Locker and sons lured by Mr. Smith into the shade of a mulberry tree so that he could snap them.

yard and on either side are masses of Spiraeas, Philadelphus, and other hardy shrubs. As fine a specimen as I ever saw of the Weeping Mulberry is full of fruit this year to tempt the Purple Martins to nest in their ornate bird house. The orange fruits of a thrifty mountain ash tower high over the east-end of the grounds.

Alfred Locker is president of the Milwaukee Florists Club and for three or four years past the July meeting of the Club has been held as a picnic and ladies day at the Locker grounds. It is the most fully attended meeting of the year. The

florists talk about this meeting for six months before it is held, and then talk about it six months after it occurs.

Last year they just completed their fine residence. It is a regular home and yet a series of three apartments. On the main floor lives Alfred and family, said family being wife and two boys, two years and eight weeks old, respectively, named after grandpa and Uncle Arthur. On the second floor west are the bachelor quarters (Flappers take notice) of Arthur Locker, with a full suite of rooms,

(Continued on page 11)

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The Summer Meeting at Sturgeon

Bay

The account of this meeting or any similar gathering of the Society should really be written by some one other than the secretary, who is also editor. After "covering" about forty such conventions and being very familiar with all sections of the state he is unable always to appreciate either the program or the excursions as do those who are participating for the first time. Housewives long occasionally to eat a meal cooked by some one else. So then the editor will present to you only the skeleton and extends an invitation, a request

to all various, divers and sundry persons who were there to clothe the stark outline with the rich garments of their appreciation. Tell me some of the kind things you said to others and I will print them.

The weather was *very* hot. The printed program fell to pieces. Mr. Spidel was not present, sent his regrets weeks ago; a letter from Prof. Cady received Wednesday morning announced that illness in his family would prevent him from attending. Mr. M. B. Goff, who was to fill an important place on the program, especially in respect to the commercial fruit growers conference, was taken suddenly ill Tuesday and was unable to attend any of the meetings. Then as a climax the Mayor of Sturgeon Bay who was scheduled for an address of welcome Wednesday morning and a number on the afternoon program escaped from the city Tuesday and was still at large Thursday night. In spite of this handicap the program, though partly improvised, was fully satisfactory. The outstanding features of the different talks will be given in later issues of this paper.

The demonstrations, cultivation, spraying and pruning were eye-operators to outsiders, even to many of the professional fruit growers. The long drive to Ellison Bay with the stop for lunch at the State Park and return by Bailey's Harbor and Jacksonport was all that could be desired. Will some one who saw these things for the first time on Thursday please tell their impressions? If there are many contributions offered about fruit growing in Door county, as observed at the summer meeting, no two may be alike, but concerning the fruit

growers and townspeople there can be but one opinion.

We were well entertained, not with bands or banners, the blaining hilarious convention type of entertainment, but none the less entertained. We were not permitted to know or feel for a moment that we were under the slightest obligation to anyone, but rather that it was a very great pleasure to them to have us there. It was all so quietly and courteously done that we felt at home all the time.

We were all impressed with the magnitude of the industry and conscious of the obstacles that have been overcome to make their business successful. Somehow, we seemed to know that many of these men are now, as a result of long hard years of effort, very well-to-do financially, but you would never know it from their manners. An utter absence of brag or boastfulness, a well bred modesty of demeanor is characteristic of Door county fruit growers. Somehow all really successful people are that way. We went to Sturgeon Bay with great expectations, we came away, satisfied, pleased and delighted.

Disinfectant for Fire Blight Pruning

Many requests have come in for information regarding sterilization of the tools when pruning out fire-blight. There is some question about the value of pruning out the blighted twigs during the summer as they occur, but if this method is undertaken in order to free the tree from fireblight, it is essential that the pruning shears or knife be disinfected after each cut.

It has been customary to use corrosive sublimate solution for this purpose but recent experiments in

Oregon have shown that better results can be secured from a combination material. These results have not been published, but in a letter to Dr. Keitt, Professor F. C. Reimer, of the southern Oregon station, reports that they have secured the most satisfactory results from the following formula

1 part cyanide of mercury
1 part bichloride of mercury.
1000 parts of water.

When to Plant Shrubs and Herbaceous Perennials

William Toole, Sr., at Summer Meeting, August 16, 1922.

A question by one of the members of our State Horticultural society asking if the fall is a good time to plant shrubs and perennials, prompted the offering of the following thoughts on the subject. The time was when I was positively of the opinion that spring was the proper time for all planting, but experience born of necessity has proved that not only can we safely plant at other times than spring but that some things can be better established with late summer or early fall planting than if done in the spring. This is very much the case with Oriental Poppies, Peonies and Iris. Many other kinds such as Phloxes, Delphiniums, Pyrethrum, the various daisies of the Oxeye or Shasta class, Veronicas, Gypsophila, in fact all with few, if any, exceptions may be reset in the late summer after their season of blooming.

My experience in collecting our native wild flowering plants shows that we may safely move many kinds of flowering plants during the growing season if we give attention to a few physiological plant conditions. We must have

well balanced leaf and root action for successful plant development.

In taking up and transplanting one plant we can save the white rootlets and put them in their new place in working order, but little removal of foliage will be necessary. If fibrous roots are injured in removal they should be cut away to prevent decay and nature will soon repair the freshly cut surfaces. Too often those who pack plants or shrubs for shipment seem to give too little thought to the care of the roots. This is too often the case in handling of shrubs and young trees in the dormant state. With herbaceous material there is in warm weather danger of overheating and decay if foliage is too closely packed. With most of herbaceous perennials there is a short time of rest at the close of their time of flowering, when they seem to have stored up energy ready to start future growth. From then on for a considerable length of time they may be replanted to advantage and become established before winter sets in.

For the reason given some of the early blooming kinds, especially Iris, may well be planted in July or August. Very late planting is generally unsafe. I have had less experience in fall planting of shrubs but that experience has been favorable. Last fall I had opportunity to take from the woods some hemlock spruce and native yew—*Taxus Canadensis*—those which were small enough to permit saving the small rootlets. The larger ones with roots much broken were failures. For spring planting the earliest is the best, but later planting may be safely done if the recent growth is cut back at the time of taking up the plants. Taking

up early and heeling in to check growth is necessary for late planting of shrubs and desirable for other plants. For success, soil conditions must be considered and if summer or other late planting is contemplated there must be previous preparation of the soil that it shall be moist below the surface if dry weather prevails at that time.

There is not so wide a range of time suitable for late planting of shrubs as for other plants. If the leaves have not all ripened some of the late growth may be cut back. Planting should not be done later than the middle of October.

The advantage of late summer and fall planting is that so much has been done to lessen the pressure of spring work, beside being better for the special kinds which have been mentioned. A mulching of course litter is advisable to follow late plantings.

The advantage over spring planting is that we have then completed our season's planning during the winter.

Oriental poppies may be divided now and reset where they are to bloom, or in nursery rows.

Rosa Rugosa is among the best hardy roses because of its long flowering season and bright foliage.

Gaillardia, *coreopsis*, *pyrethrum* and oriental poppies have given color to the gardens this year. These perennials all make fine cut flowers.

Heuchera Sanguinea or coral bells as it is commonly called is a fine perennial to group in front of low shrubbery. It is a fine plant for cut flowers.

THE INSECT PAGE

Edited by E. L. Chambers, Assistant State Entomologist

Cherry Aphis, the Black Sheep of the Cherry Game

Never were cherries so plentiful as they have been this year, especially in Wisconsin's favored cherry-land, Door county. A third more were picked this year than last and the fruit was much larger and finer in quality.

The raising and cultivating of cherries is not all ease and glory; the orchardist must continually fight against many enemies, such as leaf spot, cherry slug, plum curculio, and the black cherry aphis. Some years one enemy must be fought harder than others, other years some other parasite tries to get the upper hand.

The last two years the cherry aphis has been a persistent pest. It is a small black plant louse which sucks the sap from the under side of the leaves, causing them to drop. This usually happens about the time the fruit begins to ripen, and unless something checks the lice the cherries become bitter and unfit for food.

The life of the cherry aphis is not entirely understood. The eggs usually winter on the twigs and towards spring hatch into what is known as stem-mothers. These stem-mothers are really what their name implies; they are the mothers of all the progeny which follow. They give birth to living young and these young when they have become grown in turn give birth to living young. This process keeps up through the summer. Some of the lice get wings and fly to other trees to start new colonies, and thus the

spread goes on. In the fall of the year true sexes appear and the eggs are laid for wintering.

During the growth of all insects they shed their skins the same as snakes. The skeleton is on the outside and in order to make room for the growing insect the skin splits and the insect crawls forth. In the case of the cherry aphis this shedding process takes place several times, frequently as many as five times.

Plant lice get their food by inserting their stout beaks into the plant tissues and sucking out the juices. For this reason the cherry aphis seeks the young and tender leaves. The cherry louse gives off a sticky colorless fluid which is called honey dew. This liquid is relished by ants and flies which gather around wherever there are colonies of plant lice.

The life of the cherry louse is beset by many dangerous enemies. Some of the most important are lady beetles, syrphus flies, and lace wing flies. These insects prey upon the fragile lice, devouring them in great numbers. A disease often attacks the louse, especially during damp warm weather.

As the cherry aphis gets its food by sucking the juices from the leaves a spray that will control them must kill by contact. For this purpose nicotine solutions are used, using 1 part of sulphate to 1000 parts of water. Enough soap should be added to make the liquid spread well.

This method of control is not entirely successful as each aphis must

be hit in order to be killed. This summer we have tried out a nicotine dust, blowing the powder into the trees. This method is quite effective as a small hand duster is sufficient when the aphis are not too generally distributed over the orchard. With such an outfit one can go from tree to tree and dust only where needed.

Two or five per cent nicotine dust is effective.

C. L. F.

How Insects Injure the Pea Crop

C. L. Fluke, College of Agriculture

Insects probably damage Wisconsin's pea crop more than any other agency. The pea moth frequently attacks 50 per cent of the pea pods in the northeastern section of the state and the pea aphis is found everywhere; some places only a few lice are present, other places they are numerous enough to reduce the yield as much as 75 per cent. The first insect is serious only on seed peas, while the second injures both the can and seed varieties.

The adult of the pea moth is a mouse colored moth about a half inch long with black and white dashes along the front margins of the fore wings. They begin to appear about the first of July, soon after laying their tiny white eggs on the young pods, leaves or sepals. Within a few days the larvae hatch, make their way thru the pods onto the developing peas within. They feed for about two weeks, webbing the seed together with a dirty mass of excrement, then eat their way out of the pods, forming cocoons of soil particles webbed together near the surface of the soil, and here they spend the winter.

Control of the pea moths is

WOODEN BOXES and CRATES

One bushel size for apples, tomatoes, onions and other farm products.
Half barrel and barrel size for cabbage, watermelon, cantaloupe and muskmelon.

One bushel seed corn crates. Butter and cheese boxes.

Our newly designed coop for shipping live chickens, weighs 30 pounds and it is the strongest on the market.

LA CROSSE BOX COMPANY

LA CROSSE

WISCONSIN

rather difficult. The best method to follow is a proper rotation. Do not plant near last year's field; keep them separated as far as possible. Planting early varieties and seeding them as early as possible also helps.

The pea aphid is a sucking insect and injures the plant by sucking out the juices. Very few pods are formed and if the lice attack the pods, as they usually do, they become dwarfed and misshapen. The pea aphid is supposed to winter as eggs in clover and alfalfa fields. In the spring the eggs hatch and the young develop, soon making their way to the pea fields. Here they give birth to living young for several generations, after awhile winged forms begin to appear and gradually the lice fly away.

The pea aphid has a good many enemies such as lady beetles, syrphus or hover flies, and lace wings. The larvae of such feed upon the aphid in such numbers that frequently they disappear rather mi-

raculously. A disease turns many of the lice a reddish brown, especially during wet weather.

Control of the pea aphid is being studied by the experiment station this year. Nicotine dusts which are proving efficient against certain insects give us a ray of hope that they will also prove to be the best in checking the pea aphid.

Milwaukee's Show Place

(Continued from page 7)

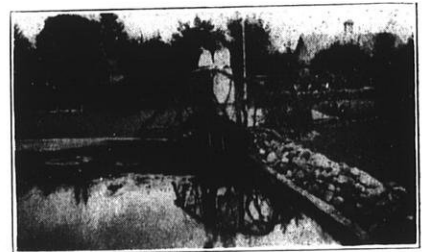
bachelor den, piano which he plays for amusement, and everything



Wide aisles permit backing a truck through them.

comfortable. On the east side upstairs, is father Hugo Locker with his aquarium, flower porch, sleeping

porch, his electric range, and everything convenient.



It is an ideal plan and an ideal family. Like About Ben Ahmed, may his tribe increase.

Huron H. Smith

The red berried elder has again demonstrated its value as a specimen planted in shrubbery. It flowered early and during the latter part of June is covered with red berries.

Order peonies and iris by name rather than by color. Learn to know them by name. They will be more interesting and as a rule better varieties are secured if purchased by name.

The Use of Vinegar Bee

What It Is.

By Lavinia Stinson

Division of Home Economics
University of Minnesota

The use of "vinegar bee" in the preparation of vinegar has been steadily increasing in the last few years, some housekeepers preparing in this way all the vinegar they use.

The making of vinegar consists of the addition of vinegar yeasts and vinegar bacteria to a sugary liquid. These two groups of organisms each produce a distinct change but each is dependent upon the other. If it is possible to secure the yeasts and bacteria separately (pure cultures) it is best to add the vinegar yeast and when the active gas production has subsided to add the vinegar bacteria.

(The Bacteriological Laboratory East Lansing, Michigan, will send out cultures at 25 cents each. One set of cultures is sufficient for a barrel two-thirds full of fruit juice or sugary liquid. If alcoholic fermentation has taken place it will be necessary to send for vinegar bacteria only.)

Altho little that is definite is known about the vinegar bee, a study of it seems to indicate that it is a mixed culture of vinegar yeasts and bacteria. The organisms found in the bee may produce good or poor results in the vinegar. If the vinegar-producing organisms predominate, vinegar will be made, but if other organisms are present in large numbers vinegar may not be formed and the sugar and molasses used will be wasted. As long, therefore, as we work with impure cultures whether or not vinegar is secured depends upon the quality of the "Bee".

Its Appearance.

In appearance, the vinegar bee represents a small section of a head of cauliflower. It may be dried and kept for an indefinite time.

Preparation of Vinegar from Vinegar Bee.

Method I.

1 cup vinegar bee

1 cup sorghum or molasses, best quality

2 quarts warm water

Add vinegar and a good quality of sorghum, to the water. Let stand for five days. The bee will double its bulk. At this time, remove the bulk of the bee for future use and let the vinegar stand for from three to five weeks so that the bee may act upon the syrup, producing vinegar. From the time the bee may act upon the syrup, stand in a fairly warm place, such as the back of a stove or a warm kitchen, or in the sun.

Method II

1 cup vinegar bee

2 quarts warm water

First day: add 3 tablespoons sorghum and 2 tablespoons brown sugar

Second day: add 2 tablespoons sorghum and 1 tablespoon brown sugar

Third day: add 1 tablespoon brown sugar.

Fifth day: remove bee and strain vinegar

Let stand three weeks in a warm place.

More About the Midwest Show

The Mid-West Horticultural Exposition which will be held at Council Bluffs, Iowa, November 13 to 18, will be without doubt the greatest horticultural exposition to be held in the United States for the season of 1922. Exhibits of

fruit, flowers, vegetables, nuts, nursery stock, honey, food products, and demonstrations by boys and girls clubs, throughout the Mid-West, will be the leading features of the exposition. The educational side of the exposition will be strongly featured by various demonstrations.

It is the aim of the promoters of this enterprise to make it something of more significance than a mere horticultural show. Its purpose is to spread a knowledge of modern ideas and better methods in all lines of horticulture.

It will extend the acquaintance of Mid-West horticulturists with each other and with the channels of trade through which they draw supplies and market their products.

It will extend the influence of horticultural organizations.

It will teach horticulturists better cooperation in the achievement of common purposes.

The show will include exhibits of all kinds of apparatus and machinery of interest to farmers who grow fruits and vegetables as well as market gardeners, truck farmers, florists and commercial orchardists. The splendid exhibits of fruits and vegetables will be fortified by demonstrations of how to grow all of these kinds of food supplies. Daily demonstrations will be given in spraying, harvesting, grading and packing apples; also in the use of various types of horticultural apparatus, tools and machinery.

In the development of commercial horticulture in its modern phases good advertising has become an indispensable part of the business. It is necessary for the fruit grower, the dealer in fruits and fruit products, and the manu-

facturer of horticultural machinery apparatus and supplies.

To all these the Mid-West Horticultural Exposition affords an excellent opportunity for reaching customers. It is a good chance to advertise. It also is educational. It favors comparison of the good and choice of the better methods and materials. It promotes emulation without envy and stimulates to better effort.

Sheboygan County Leads in Number of Bearing Apple Trees

According to county agricultural agent J. L. Wenstadt, of Sheboygan county, the county has approximately 90,000 apple trees and the crop is said to be equal to that of Door county and second to none in the state. The approximate value of the crop annually is placed at \$400,000. Of this crop the farmers consume fifty per cent and the city residents twenty-five per cent, which leaves twenty-five per cent of the apples open for sale.

Address of President L. H. Bailey

Thirty-eighth Annual Convention,
American Pomological Society,
Toledo, Ohio, Dec. 8, 1921

Ladies and Gentlemen, I welcome you to the thirty-eighth convention of the American Pomological Society. This I do with reverence for the past and confidence in the future. The society is in its seventy-fourth year. The conventions have been biennial, until this one and its predecessor. Movements are now too rapid to await a biennium.

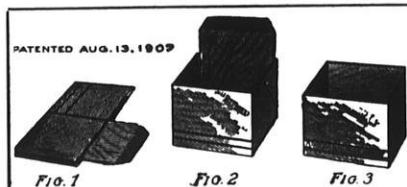
The program is before you. Some of you are surprised that the first business session opens with reports from the different states. This is in some sense a reversion to the older plan of the society, whereby the convention devel-

oped at once into an experience meeting. In the early years, the convention consisted of two parts—the reports of the fruit committees and the open discussion. In those days, pomologists did not come together “to hear papers.” They told each other what they had learned in the two years, for the custom had not then developed of asking government for aid, of demanding redress of grievances, and of laying great plans for the securing of rights and the furtherance of trade.

For more than half a century this society occupied a distinct field quite its own, concerned largely with amateur interests and the varieties of fruit because, at first there were practically no other interests. Its work was associated with production. But the great state horticultural societies came into existence; large commercial interests developed; distribution and marketing took precedence, in public discussions, over production; the scientific undertakings received great stimulus and the investigators made an association of their own. The old society came into difficulty, and almost before anyone was aware it found itself without a field of effective operation. There have been some years of prospecting. We think we now have a program, and we know the field is clear. There is nothing in the genius or even in the history of the society to prevent it from occupying a large place in the stirring processes of the twentieth century.

YESTERDAY

In a peculiar sense the society now stands between yesterday and tomorrow. It emerges from its long and honorable past into a future of a somewhat different direction. First, then, may we take a retrospect. Let us sit calmly for a few moments and try to reconstruct in our minds the temper of one of the early conventions. By the time of the fifth meeting, held in Boston in 1854, the society had gained its headway and its character was known. It



Berry Boxes

Crates, Bushel Boxes
and Climax Baskets
As You Like Them

We manufacture the Ewald Patent Folding Berry Boxes of wood veneer that give satisfaction. Berry box and crate material in the K. D. in carload lots our specialty. We constantly carry in stock 16-quart crates all made up ready for use, either for strawberries or blueberries. No order too small or too large for us to handle. We can ship the folding boxes and crates in K. D. from Milwaukee. Promptness is essential in handling fruit, and we aim to do our part well. A large discount for early orders. A postal brings our price list.

Cumberland Fruit Package Company

Dept. D, Cumberland, Wis.

Quality and a Square Deal

ARE WHAT WE OFFER YOU

Our new 48-page catalog (16 pages in colors) gives you an honest description of FRUITS, VINES, ORNAMENTALS, PERENNIALS, etc., for this climate.

If you are in doubt as to what is best to plant we will be glad to advise with you.

We do landscape work.

The Coe, Converse Edwards Co.

Fort Atkinson, Wis.

was a delegate convention. The proceedings of this convention are in my hand. Be attentive while I read.

"The morning session was opened, at ten o'clock, by the president, Hon. Marshall P. Wilder, of Massachusetts, who took the chair, and called the society to order. The secretary, H. W. S. Cleveland, of New Jersey, was present, and took his seat. The delegates were then requested to hand in their credentials to the secretary for examination.

"Col. Henry Little, of Maine, moved that when the delegations from the different states, should have presented their credentials, the president proceed to appoint a committee, consisting of one gentleman from each state, to nominate a list of officers for the next biennial term; and the motion was unanimously adopted. The president said there were other delegates in the city but as the time was passing, it might be expedient to proceed at once to business. He then requested those present to answer to their names, as the list of delegates was called in congressional order. The gentlemen present responded."

The delegates were: seven from Maine; thirty nine from Connecticut; twenty-six from New York; twelve from Pennsylvania; eight from New Jersey; two from Maryland; one from Ohio; two from Illinois; one from Iowa; one from Missouri; three from Florida; and one from District of Columbia—122. It is a mistake to suppose that in the old days the attendance at the conventions was large. I think the attendance was fair to good, but it was of superior quality and influence. The memberships in 1854-6 were 114, of which 26 were from Massachusetts, 23 New York, 23 Pennsylvania, 10 New Jersey, 5 Connecticut, 5 Ohio, 4 Maryland, 3 Maine, 2 each from Virginia, Florida and Illinois, one from each of several states including one member as far west as Davenport, Iowa. There was none from Canada. In 1867 the

membership, as published in the proceedings, was 308; in 1885 it was 322; in 1895 the number was 347; these figures include both life and biennial members.

"After the calling of the list of delegates, an invitation was extended to all persons present, and feeling an interest in the objects of the association, to take part in its deliberations.

"Hon. Marshall P. Wilder, the president, gave notice that he should hold a Levee, on the evening of the next day, Thursday, at eight o'clock, at the Revere House; and extended a hearty invitation to all the members and delegates of the society, to be present on that occasion.

"The president then rose and delivered the following address."

The president's address was the dignified, hopeful and artistic statement that was always received from Marshall P. Wilder. In this day we should call him "a gentleman of the old school." We now speak of our fellows as men, persons, delegates and associates.

The particular points emphasized in that address were the methods to be invoked for "the production from seed of new varieties of fruits adapted to particular localities, or to general cultivation;" the "arts of cultivation;" a discussion of "appropriate fertilizers for fruit trees;" mention of the difficult subject of "summer pruning;" the necessity of regarding "the affinities between different varieties in the arts of multiplication;" the maladies of trees; "the preservation and ripening of fruit." He admonished the delegates that "eternal vigilance is an indispensable condition of success." The conclusion of this worthy address was the following paragraph:

"Gentlemen, Go on. Prosecute the work you have so honorably commenced. Sow the seeds of your best fruits—raise new varieties—ply the arts of judicious cultivation—study the laws of nature, and extend your researches and labors, till our beloved land shall be adorned with orchards,

vineyards and gardens; and man shall realize the poet's idea of Paradise regained!"

The president's address was received "with enthusiastic applause." The president appointed twelve persons to serve as the nominating committee. A committee was then appointed by the president "to report business for the convention." Then "The president invited all editors and reporters of papers to take seats at the board, and requested gentlemen having list of fruits, which they might have contributed, to pass them into the secretary's hands, and they would then be disposed of by the committee on fruits."

The convention then proceeded to hear and discuss the reports of delegates representing the different states as to the condition of pomology, particularly in respect to the varieties of fruits. About one half of the report of 258 pages is made up of a record of this part of the proceedings. The second half of the report comprises a miscellaneous discussion, which turned to a considerable extent on the kinds and varieties of fruits.

It will be seen that this convention turned mostly on the subject of the production of fruits. Judging from the character of the experience which is recorded, it must have been a fraternal and entertaining series of meetings. The reason why production was the theme of the convention was because the commercial side of fruit growing had not then come into existence. The marketing of fruit was a local and personal practice, and did not need to be discussed before a convention. Remember that in that time there was no great fruit-growing West and practically no subtropical pomology. Railroads were few. If there had been marketing problems at that time, the society undoubtedly would have attacked them.

In the proceedings of the 11th session held at St. Louis in September, 1911
(Continued on page 16)

Kellogg's Nursery

Janesville Wisconsin

SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen. Order direct from a reliable nursery and save money.

About Roses

(Continued from page 5)

Gardenia—Small, double, yellow flowers; should be grown only by those rose lovers who will take the plant down during the winter and protect its top.

BABY RAMBLERS

Crimson—

Madam N. Lavvasseur—Standard crimson Baby Rambler; not as clear in color as others mentioned.

Erna Teschendorff—Redder than above variety.

Triomphe Orleannais—Most brilliant cherry crimson; excellent producer.

Pink—

Echo—Rather new; resembles Tausendschon, but dwarf; vigorous; prolific, usually in bloom through summer and fall.

Ellen Poulsen—Prolific, bushy growth.

Mrs. Cutbush—Good color; prolific.

White—

Catherine Zeimet—Standard white.

OTHER GOOD GROUPS

Moss

Crested Moss—Pink; excellent; very mossy.

Blanche Moreau—Standard white moss rose.

Rugosa Hybrid

Conrad F. Meyer—Clear silvery pink; popular Rugosa hybrid.

Sweetbriar Hybrid

Meg Merillies—Free-flowering crimson; sweetbriar hybrid.

Lord Penzance—Rather large bloom.

Amy Robsart—Flowers medium size; bright rose in color; leaves very fragrant.

Yellow Briars

Rosa Hugonis—One of the very earliest yellow roses; new; shrubby sort; flowers produced all along the canes.

Harrison's Yellow—Clear yellow briar; hardy.

The new strawberry, Minnehaha, gave a good crop this year. This is a large late berry which should be a good market sort.

Mildew may be kept off phlox by using sulphide of potassium one ounce to a gallon of water sprayed over the plants.

Early celery is best bleached with boards or paper. Earth may be used on late celery. Earth is likely to cause early celery to rust and decay.

Tomatoes may sometimes be ripened on the vines late in the fall if a frame is set about them and hot bed sash placed over them on cool nights.

Save seeds of native plants that are good ornamentals. In most cases they may be sown as soon as ripe, in well prepared soil. Cover with leaf mold or soil with a good deal of humus.

Prune currant and gooseberry bushes as soon as they are through fruiting. Cut out the old wood and some of the new growth. Remember that the fruit is borne on two and three year old wood.

Buy bulbs now for planting this fall. Tulips, hyacinths and daffodils make good house plants. Tulips and crocuses may be planted in the yard or garden to advantage. Get both Darwin and early flowering sorts.

The Hawks Nursery Company

are in a position to furnish high grade Nursery Stock of all kinds and varieties suitable to Wisconsin and other northern districts.

Will be glad to figure on your wants either in large or small quantities

Wauwatosa . . . Wis.

McKAY NURSERY COMPANY

MADISON

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Nursery Stock of Quality

for Particular Buyers

Have all the standard varieties as well as the newer sorts. Can supply you with everything in

Fruit Trees, Small Fruits,
Vines and Ornamentals.

Let us suggest what to plant both in Orchard and in the decoration of your grounds. Prices and our new Catalog sent promptly upon receipt of your list of wants.

**Nurseries at
Waterloo, Wis.**

Address of President L. H. Bailey

(Continued from page 14)

tember, 1867, the society was addressed by M. L. Dunlap, of Champaign, Illinois, on the subject of "Packing and marketing fruit." In subsequent reports the commercial subjects associated with pomology are given increasing attention.

TOMORROW

We now come to a time, nearly the end of the first quarter of the twentieth century, when the delightful subjects associated with the kinds and varieties of fruit are readily and effectively handled by state, provincial and local societies. The production of fruit is largely a series of geographical questions, and the methods employed in one part of the country may not be applicable to remoter parts. The national fruit-growing subjects are rather those that have to do with the policies and programs. How to organize and to effectualize the forces of society for the furtherance and protection of fruit growing are problems for a national and international society to consider. The different state and provincial societies represent political divisions of the continent. All of them, however, must consider large questions of policy associated with transportation, distribution, selling, marketing, storage, quarantine, packages, and many legislative matters that touch the fruit growing industry. It would add much to their effectiveness without detracting anything from their initiative and integrity if they could act through a body of continental scope, including both the United States and Canada. This is the large field of the American Pomological Society.

Some of its friends have felt that the society should not be "commercialized." We need, however, to understand what we mean by this word. I would not have the society commercialized in the sense of becoming a trade organization; it should not engage in buying and selling nor become an

agency of distribution; it should not be a pooling company or a fruit growers' exchange. However, it may very properly cover all the educational and informational subjects with the commerce in fruits as well as those associated with the breeding and production of fruits. The secretary's office should be prepared to give information on the fruit crops of other countries and of North America, the prospects of the export trade, the laws and regulations touching the handling and the movement of fruits, and all other subjects that will aid the fruit grower in the better conduct of his business. At the same time, the secretary's office may give any information it is able to collect that will help persons better to understand and to grow fruits, whether these growers are commercial men or amateurs on village lots. All new findings of experiment stations, conclusions as to new varieties, new apparatus, methods and practices, opinions of persons competent to advise, may be distributed freely to the membership. Although the society may cover commercial fruit growing in this way, it must never lose sight of the amateur and the small planter, for it is on this body of non-occupational fruit lovers that a successful and growing commercial fruit growing must rest. The American Pomological Society, therefore, may stimulate all planting of fruits independently of the size of those plantings. It must encourage the growing of single trees and plants as well as of large orchards, for the interest of fruit growing holds together from one end to the other.

If these statements are sound, then it follows that the central service of the American Pomological Society is not in its conventions and exhibitions, however important they may be, but in the secretary's office. I am convinced that the society may exercise a very large usefulness and make a great impression on the country without any conventions whatever. Such a frequent periodical

issuance of helpful information from the secretary's office as I have in mind, aided by supporting officers and by the membership, is competent to interest a vast number of people. The return for the membership will lie in a useful, attractive, well-bound annual report promptly delivered, in circular letters frequently issued, in the member's privilege of being able to write a central office for information, in the exchange of sample fruits and of cions, and in the support that a good organized body may give to all worthy needs and purposes of fruit growers. The society should be prepared to exert its influence promptly when questions of public policy touching fruit growing are pending.

To this end, the society invites membership from all persons who are interested in fruits, whether they grow the fruit trees in suburban lots or whether they have large commercial areas, and also those who grow the trees, who manufacture appliances and supplies used by fruit growers, from traders in fruits, and all others interested in the subject. Local and state horticultural societies are invited to affiliate and to take part by means of delegates, as are also institutions and business organizations.

The active personal membership is in two parts—the regular adult members and the collegiate members. The collegiate membership is a departure, and the organization of it is not yet perfected. I trust that we may now complete the plans for it. These members in the colleges should have full standing, receiving the annual reports and all the literature. They should hold chapter meetings, with suggestions, so far as possible, from the secretary's office. They should be led to expect a talk or lecture once each year by some officer or member of the parent society if their local organization is active and effectual.

(Continued in October)

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, September 1922

Wisconsin Beekeepers' Conference and Field Meet

Two hundred and ten people registered at the Fourth Annual Conference conducted by the University of Wisconsin and the State Beekeepers' Association, co-operating. No little credit should be given to the local beekeepers of Brown County for the success of this meeting and the splendid time given all the visitors. Mr. W. P. Brenner, president of the Brown County Beekeepers' Association; Mr. J. N. Kavanaugh, secretary of the same association, and Mr. Frank Mongin had charge of the local arrangements and were busy all the time trying to make things comfortable for the beekeepers. Mr. Brenner and Mr. Mongin also held their autos at the service of the speakers and took them on several trips to the surrounding country.

We take off our hats to the ladies who made arrangements for the picnic and provided the excellent food for the best and largest gathering of this kind ever held in Wisconsin. Mr. Kavanaugh as toastmaster furnished much merriment and fun at the expense of those on the program.

An expression of thanks is also due to the mayor of Green Bay, who welcomed the beekeepers and furnished each one a free bathing suit.

As in previous years, the main success of the program was due to the excellent talks given by the outside speakers, Dr. E. F. Phillips, Mr. C. P. Dadant, Mr. Geo. S. Demuth, Mr. E. R. Root, Kenneth Hawkins, and Mr. Colin P. Campbell, vice president of the American Honey Producers' League.

An outline of the proceedings of the conference is given here and an abstract of some of the talks will be given in following issues of Wisconsin Beekeeping.

Through the kindness and co-operation of the G. B. Lewis Company, Dadant & Sons and A. I. Root Company, a number of prizes were given. These were awarded through drawings made at the end of each day.

MONDAY, AUGUST 7.

Morning.

Registered, 22. Attendance, 22.
Speakers: Announcements—H. F. Wilson.
Address of Welcome—Mr. W. P. Brenner.
"Bright Prospects"—Dr. E. F. Phillips.

Afternoon.

Registered, 37. Attendance, 60.
Speakers: Address of Welcome—Mayor of Green Bay.
Response for Beekeepers—H. V. Wilson, Milwaukee.
"Early Preparation for the Honey Harvest"—Dr. Phillips.
"Some Pre-Winter Requirements"—Geo. S. Demuth.
Prize Drawing—One year's subscription to American Bee Journal—Wm. Hanneman, Cecil, Shawano County.

TUESDAY, AUGUST 8.

Morning.

Registered, 54. Attendance, 124.
Speakers: "Foreign Beekeepers and Foreign Beekeeping Methods"—C. P. Dadant.
"Successful Wintering of Bees"—Dr. Phillips.

"Meeting Possible Losses with Reserves"—Edw. Hassinger, Jr.
Miller Memorial Library Comes to Wisconsin—Announcement by C. P. Dadant, Chairman, Miller Memorial Committee.

Afternoon.

Registered, 36. Attendance, 140.
Speakers: "Co-operative Beekeeping"—H. L. McMurry.
Practical Application of Theory of Wintering—Geo. S. Demuth.
"Co-operative Marketing"—Kenneth Hawkins.

Prize Drawing—Copy of "Dadant System of Beekeeping"—A. J. Pfluger, Brillion, Calumet County.

WEDNESDAY, AUGUST 9.

Morning.

Registered, 19. Attendance, 110.
Speakers: "Popular Errors Concerning Bees and Honey"—C. P. Dadant.
"Candy for Shipping Cages"—E. R. Root.
"Spring Management"—Dr. Phillips.

Afternoon.

Registered, 5. Attendance, 136.
Speakers: Announcements.
Question Box.
Invitation from Fond du Lac County Farm Bureau:
"Fond du Lac County Farm Bureau welcomes and invites the Wisconsin Beekeepers' Association to Fond du Lac for 1923 annual Conference and Field Meet. Your problems are our problems; be they producing, marketing, distributing or advertising your product, we speak for you. Let our county beekeepers prove our hospitality."

(Signed) R. R. Runke,
Fond du Lac Farm Bureau.

"Prevention of Swarming"—C. P. Dadant.
Miller Memorial Library—Dr. Phillips.
Business Session—Delegates of local associations.

Resolution passed by members at this business session:

"Resolved, that it is the sense of this meeting of delegates of county beekeepers' associations, that we recommend to the state association assembled at Green Bay, Aug. 7 to 11, 1922, and to the board of managers of the state association, the adoption of standard labels and packages for Wisconsin honey."

Prize Drawing—One copy of "Honey Bee"—Thos. Cavill, Lawrence, Wis.



Some of the 211 Registered.

THURSDAY, AUGUST 10.

Morning.

Registered, 17. Attendance, 115.

Speakers: "How to Make the Bees Work with the Greatest Energy"—Geo. S. Demuth.

Invitation from Jefferson and Dodge Counties' Associations and G. B. Lewis Company:

"Wisconsin Beekeepers' Association: Please accept an invitation to hold your next Chautauqua at Watertown.

"This city is on the Dodge and Jefferson County line, on the St. Paul and Northwestern railroads half way between Milwaukee, Madison, Janesville and Fond du Lac on state highways 19 and 26.

"Mayor Wertheimer extends the free use of the municipal camp ground on the Rock River and the sessions may be held in the dance hall at the camp ground or in the City Hall. There are five good hotels also.

"Adam Grimm's early activities at Watertown in introducing some of the first Italian bees brought to the United States

would also make this a fitting memorial to him and other early Wisconsin beekeepers.

"You will be very welcome."
Dodge County Beekeepers' Association.

A. A. Brown, Secretary.

Jefferson County Beekeepers' Association,

W. R. Abbott, Secretary.

G. B. Lewis Company,

Kenneth Hawkins.

"What the American Honey Producers' League Is Doing"—Colin P. Campbell, vice president, A. H. P. L.

"The Entomological Basis of Beekeeping"—Dr. S. B. Fracker.

"How the Market Department Can Help the Beekeeper"—C. D. Adams.

Afternoon.

Registered, 7. Attendance, 111.

Speakers: "Swarming and Swarm Control"—Mr. Demuth.

"Commercial Aspects of Bee Disease Control"—Dr. Fracker.

Resolution as follows passed by the members in attendance:

"The Beekeepers of Wisconsin in Fourth Annual Conference, 210 strong, assembled at Green Bay, have enjoyed the high privilege and the unique advantage of sitting under the instruction of men in whom we recognize our foremost national and international leaders in the educational work and progressive development of the beekeeping industry.

"We have sat at the feet of the masters of our calling in the scientific and practical sides of both the production and distribution of honey.

"We have been inspired by our instructors through their effective presentation of the best information known with respect to modern beekeeping practice and by their fine spirit and sincere desire and effort to uplift and help us.

"Let us hope that we have drunk deep from the fountains of knowledge and inspiration. We shall take away with us whatever we brought with us the power to appreciate and assimilate.

"Our vision has been widened, our perspective corrected, our



Biggest Beekeepers' Banquet.

ambition stirred. If we profit by our instruction and grasp our opportunity, we shall not sit complacently and drift, but will redouble our efforts to put Wisconsin on the beekeeping map, to the end that our industry shall move up in the scale of importance, from the tenth rank in Wisconsin industries to the seventh or eighth and ultimately make for the individual success of all legitimate honey producers.

"We tender our sincere thanks to Dr. Phillips, Mr. Demuth, Mr. Dadant and Mr. Root for the genuine practical and inspirational values obtained through their instruction."

Beekeepers in Attendance
per I. C. Painter.

Discussion on Marketing—Dr. Siebecker, I. C. Painter and H. F. Wilson.

6:00 P. M.—PICNIC.

138 Attended.

Toastmaster—J. N. Kavanaugh.
Speakers — W. P. Brenner, Frank Mongin, Dr. Phillips, E. R. Root, C. P. Dadant, Mrs. Fred Christiansen and H. F. Wilson.

Prize Drawings:

1 Queen Bee—J. H. Gentz, Bowler, Shawano County.

1 Queen Bee — A. F. Grebel, Waupun, Dodge County.

1 Queen Bee—C. W. Herrington, Madison, Dane County.

1 Queen Bee — Mrs. Leonard Pfeifer, Sawyer, Door County.

1 Queen Bee—V. G. Milum, Madison, Dane County.

2 Queen Bees—F. J. Mongin, Green Bay, Brown County.

5 lbs. Dadant's Wired Foundation for Split Bottom Bar—Julius Gentz, Wabeno, Forest County.

One Year's Subscription to "Gleanings in Bee Culture"—Ray Sundberg, Menomonie, Dunn County.

FRIDAY, AUGUST 11.

Morning.

Registered, 10. Attendance, 40.

Speakers: "The Diseases of Adult Bees"—Dr. Phillips.

"The Control of Brood Diseases"—Dr. Phillips.

"How to Make Honey Vinegar"—E. R. Root.

"Melting of Wax"—C. P. Dadant.

"Use of Beeswax in Candy Making"—W. P. Brenner.

"Use of Beeswax for Floor Polish"—Discussion.

The following resolution was passed:

"We, the beekeepers attending the Beekeepers' Chautauqua at Green Bay, hereby express our deepest appreciation and sincere thanks for the many courtesies, privileges and hospitality extended to us by the members of the Brown County Beekeepers' Association and the mayor of Green Bay. We especially thank the ladies who provided the splendid banquet."

Beekeepers in Attendance,
Per Secretary.

Prize Drawings:

1 Modified Dadant Hive—Andrew Stevens, Stockbridge, Calumet County.

1 lb. Airco Foundation—L. T. Bishop, Sheboygan, Sheboygan County.

1 lb. Airco Foundation—E. A. Radtke, Menomonie, Dunn County.

1 lb. Airco Foundation—Mrs.

Wm. Hanneman, Cecil, Shawano County.

Afternoon.

Attendance, 32.

Business session of state association members.

Registration of Beekeepers' Chautauqua, August 7 to 11

County.	No. of People Registered.	No. of Colonies.	Average.
1. Ashland	3	137	46
2. Brown	37	644	18
3. Calumet	11	1,354	124
4. Chippewa	1	4	4
5. Crawford	3	220	74
6. Dane	13	456	36
7. Dodge	9	153	17
8. Door	1	8	8
9. Douglas	1	.....	.....
10. Dunn	10	34	4
11. Fond du Lac	6	345	58
12. Forest	1	140	140
13. Kewaunee	2	74	37
14. La Crosse	2	.....	.....
15. Langlade	4	104	26
16. Manitowoc	12	454	38
17. Marathon	2	232	116
18. Marinette	1	7	7
19. Milwaukee	19	241	13
20. Monroe	1	10	10
21. Outagamine	10	680	68
22. Oconto	6	355	60
23. Ozaukee	1	11	11
24. Pierce	1	.....	.....
25. Polk	2	40	20
26. Richland	1	29	29
27. Rusk	1	2	2
28. Shawano	17	653	39
29. Sheboygan	7	647	93
30. Trempealeau	1	.....	.....
31. Walworth	2	25	13
32. Washington	2	141	71
33. Waushara	4	367	92
34. Waukesha	1	10	10
35. Winnebago	5	.....	.....

Total registered for Wisconsin..200

Total number of colonies represented.....7,577

General average per person in attendance39 colonies

Average per bona fide beekeeper in attendance61 colonies

Registered from other states—Ohio, Indiana, Michigan, Illinois, Iowa, Georgia, Washington, D. C.—10, representing 2,793 (?) colonies of bees.

- 1 Beekeeper registered as having kept bees 60 years.
- 2 Beekeepers registered as having kept bees 50 years.
- 3 Beekeepers registered as having kept bees 45 years.
- 4 Beekeepers registered as having kept bees 40 years.
- 2 Beekeepers registered as having kept bees 35 years.
- 3 Beekeepers registered as having kept bees 30 years.
- 8 Beekeepers registered as having kept bees 25 years.
- 8 Beekeepers registered as having kept bees 20 years.
- 10 Beekeepers registered as having kept bees 15 years.
- 7 Beekeepers registered as having kept bees 10 years.
- 27 Beekeepers registered as having kept bees 5 years.
- 9 Beekeepers registered as having kept bees 4 years.
- 10 Beekeepers registered as having kept bees 3 years.
- 15 Beekeepers registered as having kept bees 1 year.
- 24 persons interested in beekeeping registered.

Miller Memorial Library Comes to Wisconsin

The committee in charge of the Dr. C. C. Miller Memorial Library has decided that, all things considered, the University of Wisconsin is the best place for such a library and an effort will be made to create under this memorial one of the finest beekeeping libraries in the world. Under the agreement made between the committee and the university, all bee books and bee journals will be available to the entire beekeeping interests of the United States.

Our beekeepers are urged to very carefully go through stacks of old magazines and pick out all the bee journals that you can find. Send these in to the Miller Memorial Library, University of

Wisconsin. We are especially interested in receiving copies of journals started in the United States and discontinued after a few volumes had been printed. Miss Mathilde Candler, Cassville, Grant County, Wisconsin, has just turned over to the library two volumes of the Rural Beekeeper, published at River Falls, Wis., in 1904 and 1905. If anyone has other volumes of this journal, we would appreciate a donation, or even an opportunity to buy these to complete this set.

Wisconsin beekeepers have already given more than \$100 to this memorial, but as the total sum subscribed so far is only about \$2,000, additional subscriptions are needed. We are, therefore, asking our beekeepers to make further donations. An initial subscription taken at the Chautauqua brought \$33. If you cannot contribute in cash, please donate your old bee books and journals. A list of the contributors follows:

C. D. Adams.....	\$1.00
Otto Klessig	1.00
Edw. Hassinger, Jr.....	1.00
C. W. Stauss .....	.50
R. A. Schwarzkopf .....	.50
Claude Moll	1.00
J. T. Clemens.....	.50
Mr. and Mrs. C. W. Herrington	1.00
Dr. and Mrs. R. E. Minahan	5.00
Martin Krueger	1.00
A. A. Brown	1.00
Fred Leonard .....	.50
Lewis Peterson	1.00
Geo. Jacobson .....	.50
Dunn County Aggies.....	4.00
E. S. Hildemann.....	1.00
E. A. Barleman.....	.50
L. T. Bishop.....	1.00
H. F. Wilson.....	2.00
V. G. Milum.....	2.00
John F. Otto.....	.50
C. W. Radloff.....	1.00
A. V. Pollock.....	.50
Harvey Fisher .....	.50
A. H. Kapelke.....	.50
Mrs. F. Christiansen.....	1.00
Kennith Hawkins	1.00
L. P. Whitehead.....	1.00
M. F. Hildreth.....	1.00

WISCONSIN HORTICULTURE

Vol. XIII

Madison, Wisconsin, October, 1922

No. 2



The Blister Canker of Apple Trees.

Of scab and fire blight we have a plenty in Wisconsin, but until this year no reports had been received of the presence of Blister Canker, a disease which has destroyed whole orchards in Illinois and is prevalent throughout the state. The fact that we have had this destructive disease as a neighbor for many years without reports of invasion has led many to believe that it was one of the things sent out by his Satanic majesty, particularly to vex the souls of Illinois growers and that our people were to be spared. Also it has been assumed that our climate conditions are unfavorable to its spread. Be this as it may, characteristic specimens of blister canker were sent to this office by an orchardist in southern Wisconsin, in July. Knowing that the Illinois State pathologists had done much work along this line, the Editor secured permission to publish in whole or in part a bulletin on Blister Canker, recently published. We give it in part only. Technical descriptions of spore growth etc., have been omitted and, unfortunately, pages of excellent directions, in detail, for the cutting and treatment of the cankers. Our thought has been to print enough so that the disease can be readily identified. If any grower finds Canker, he can write for a copy of the bulletin, to the Director, Agr. Exp. Station, Urbana, Illinois.

This is for first aid only and the presence of the disease should be reported immediately to the Division of Plant Pathology, Agr. College, Madison.

For the use of the cuts and text,

we are indebted to the Illinois Agricultural Experiment Station.

Orchard Practice for the Control of Blister Canker of Apple Trees.

By H. W. Henderson, Assistant Chief in Pomological Pathology University of Illinois Agr. College and Exp. Sta.

Years of effort on the part of Illinois orchardists to eliminate blister canker have resulted in no material decrease in the number of infested trees. As a matter of fact, the loss has increased annually, and many growers have given up all

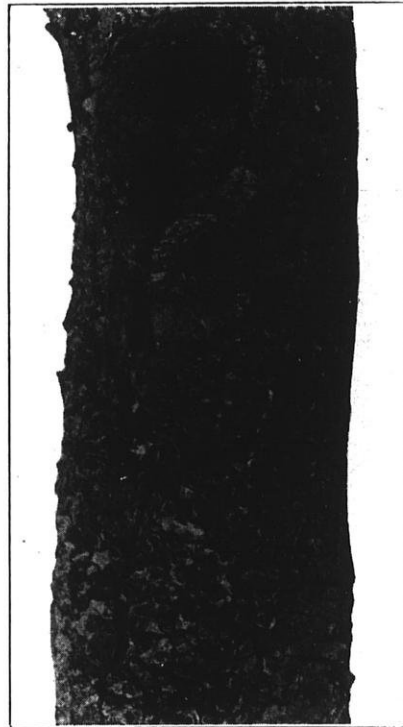


Fig. 1.—An old blister canker which probably originated in the cut at the top of the figure. The "nail heads" show plainly on the lower half of the figure where the bark has been partially worn away.

attempts to control the disease. In a large measure, their failure has been due to a lack of knowledge concerning the characteristics of the disease and the life history of the fungus causing it. This has meant that when control measures have been applied, they many times

have been started too late to be of much benefit.

The first steps in control should be taken *before the orchard is planted, or if it has been planted, before the disease appears.* This circular, describing the orchard practice necessary for the control of blister canker, therefore, is intended more for the orchardist who has not yet found the blister canker in his orchard, than the one who has a badly infested orchard.

WHAT IS A CANKER?

"Canker" is a term applied to a diseased area, or "sore," on the trunks, roots, limbs, or twigs of a plant when such an area has a more or less definite outline and characteristic appearance, and is bordered by healthy tissue.

HOW TO IDENTIFY BLISTER CANKER.

It is essential to know the "ear marks" of blister canker in order to be certain that it is blister canker and not canker of another sort which is causing the injury. Blister canker should be looked for on the larger limbs and trunks of the trees, especially about large wounds. Old blister cankers are easily distinguished by the presence of the characteristic fruiting bodies which are called "nail heads" on account of their resemblance to the thick head of the old-fashioned iron nail (Fig. 1). When the bark is worn away they stand out from the wood about one-quarter of an inch and are ordinarily from one-fourth to three-eighths inch in diameter. The "nail heads" are usually crowded together on the older part of the cankered area. They contain what are known as the winter spores of the fungus.

On new cankers and in the younger part of old cankers the fruiting bodies crowd up under the bark, and cause small, blister-like protuberances. Later these blisters split open in a star-like manner (Fig. 2). The ruptured segments curl backwards, exposing a dust-colored mass, which consists of the summer spores of the fungus.

If the top layer of the bark is cut away where either of these types of fruiting bodies occur, black rings, the diameter of the "nail heads" or blisters, may be observed (Fig. 3). When the fruit bodies are not very evident from an exterior examination, these rings furnish a safe method of distinguishing this can-



Fig. 2.—"Blisters" of the summer-spore stage shown with edges rolled back, exposing dust-like masses of spores.

ker. A curious characteristic mottling is also apparent on the inner bark. This mottling is quite different from the streaked appearance sometimes evident when black rot or other cankers are exposed in the same manner.

As the canker may become quite large before the fruiting bodies appear, it is necessary to have some way of distinguishing the disease in its earlier stages. Fortunately, this characteristic mottled inner bark is apparent before any blisters or nail heads are in evidence. It is the earliest definite indication of the nature of the trouble and may be taken as a sure mark if blister canker.

NATURE AND LIFE HISTORY OF BLISTER CANKER FUNGUS

The organism causing blister canker is a fungus—the group of

plants to which molds, mushrooms, and mildews belong. Scabs and rots are also caused by this group of plants. The fungus plant consists of numerous minute, thread-like structures which penetrate the tissues of the plant attacked and derive nourishment therefrom. The fungi develop seed-like bodies, as do higher plants. These spores, as they are called, are microscopic in size and of very simple structure. They are developed in or on the fruit bodies. The fruit bodies vary greatly in structure among the different kinds of fungi. In the case of blister canker they consist of portions of the "nail heads" and the blisters referred to above (Fig. 1 and 2).

When the bark about the "nail heads" becomes moist, the spores are either shot forcibly into the air or are crowded out on the surface where they form a thick, gelatinous layer. They may then be washed down the trees or carried by various agents to neighboring trees. The fact that infested trees usually occur in groups in an orchard indicates that the spores are not ordinarily carried by the wind, as in the case of such fungi as apple rust. On the other hand, the distribution of the disease in orchards miles apart indicates that there are carrying agents such as birds or insects. Workmen commonly distribute the spores in an orchard by means of tools used in pruning.

If the spores alight on an unwounded surface they will not grow into the healthy tissues. They will rarely infest when they alight on a small wound. But when they encounter a large, exposed wound, they are fairly certain to infect. Such wounds are often cracked and the spores sift down into these cracks, where they find the moisture necessary for their germination. Wounds produced by the sawing off of large limbs, and especially those made by the breaking of fruit-laden branches, furnish ideal infection courts for these spores.

The fungus of blister canker grows down into the heartwood

from the point of infection and then may spread up or down the limb. It usually causes definite brown streaks in the wood, which may be followed by cutting cross-sections of the limb. Later, the fungus invades the wood of neighboring limbs, and if unchecked, becomes fairly well distributed throughout the entire woody portion of the tree, even into the roots.

Other cankers may appear above or below the point of original infection, especially if limbs have been removed. These develop from the interior of the branch rather than from new infections, and may be called "secondary cankers." The fact that secondary cankers may appear on an apparently sound limb gives rise to the erroneous idea that the fungus can gain an entrance through the unbroken bark surface.

PREVENTIVE MEASURES.

The control of blister canker consists in rigidly following a definite program, which in a new orchard, in the majority of cases, will prevent the disease from getting a

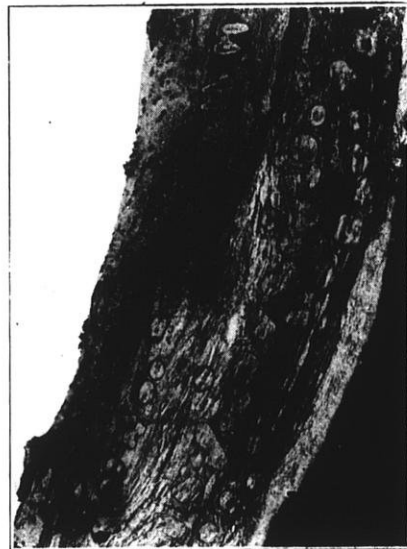


Fig. 3.—Mottled inner bark showing the black rings of the fruiting bodies.

start, and in old orchards will confine the canker largely to the trees already infected. There is no safe remedy or "cure" for blister canker after it has become once established in a tree, except in rare in-

stances where newly infected limbs may be cut out.

WHEN TO BEGIN CONTROL MEASURES.

The first step in control should be taken *before the orchard is planted*. This precaution consists in avoiding varieties known to be especially susceptible to blister canker. Illinois orchardists should avoid planting Ben Davis, a highly susceptible variety. Many varieties of apples are superior to Ben Davis, or equal to it, and Illinois orchards are already over planted to this variety.

CARE OF A YOUNG ORCHARD.

Infections from the spores of the blister canker fungus are rare in a young orchard, that is, one under six years of age. However, the orchard practice during the first ten years of the life of the orchard determines, in a large measure, the amount of infection which will occur later. Infection does not ordinarily take place in small wounds on rapidly growing, healthy trees. Therefore the tree should be shaped in its early life, when the limbs which are not wanted may be removed without danger of infection. It is not essential to sterilize the tools or wounds in ordinary pruning practice in orchards under ten years of age, so far as blister canker is concerned. However, pruning tools which have been used in an old orchard should always be sterilized before being taken into a young orchard. When a young orchard in the neighborhood of a cankered older orchard is pruned, the wounds should always be treated as described later, especially the wounds exposing wood over four years of age. In all cases, the limbs that are removed should be cut flush with the surface of the tree so as not to leave a stub.

CARE OF UNINFECTED, BEARING ORCHARDS.

Since large wounds of any origin are the points where infection takes place, any orchard practice which tends to produce large un-

covered wounds is to be condemned. In some cases, however, through early neglect of the orchard, or through accident, large wounds are produced. Such wounds should be properly treated at the earliest possible moment. If it becomes necessary to cut off large limbs, the workman should be instructed as to the proper method of removal. If limbs are broken through over-bearing, they should be cut back to the proper length. Limbs are frequently broken at the point of origin on a larger limb, thus leaving a "pocket." These pockets are very commonly courts of infection

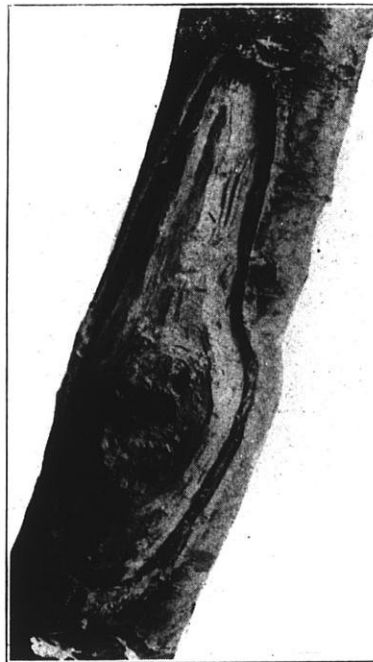


Fig. 4.—A canker which has been properly cleaned and painted with shellac and tar.

because the moisture which collects in them provides a good condition for the accumulation and germination of the spores. Such wounds should be opened by cutting a groove at the base.

The wounds should be dressed promptly and carefully. Fresh cuts need not be sterilized, but should be covered immediately with a coat of shellac, which, after drying a few minutes, should be covered with a coating of ordinary

gas tar. These dressings should be examined during the course of the year, and if any cracks have appeared, the surface should be re-coated.

If a tree has become sunscalded, or if areas of bark have been killed by other agents, the dead bark should be removed and shellac applied immediately, followed by the tar dressing. Lower limbs that are too shaded, and consequently weak, should be removed rather than allowed to die.

Tools used in pruning operations should be sterilized before passing from one tree to another unless the orchardist is certain that there is no blister canker in the orchard. Even then it is wise to use precaution in handling the tools, owing to the fact that blister canker may be present in a tree several years before it becomes evident externally.

CONTROL OF BLISTER CANCER IN INFECTED ORCHARDS.

Orchards having as high as 20 per cent cankered trees may be saved to produce profitable crops for many years. The labor involved the first year is great, but subsequent treatments are not much more complicated or expensive than is ordinary pruning. A single large apple tree often yields a return of \$40 to \$50 in a single season, and even when a return of \$10 is secured, a single crop will pay the expense involved in saving the trees.

PRELIMINARY SURVEY OF ORCHARD.

Effective control can be secured only when every infected tree in the orchard has been located. Therefore, a careful, systematic examination of every tree is necessary. This should be done by one who is thoroughly familiar with all the symptoms of the disease. Unless the grower feels confident of his ability to locate the infected trees, it will more than pay him to employ such an expert. The survey is best made in the winter when all the foliage is off, so that the entire surface of the limbs may be examined. When examining large

trees one should walk entirely around the tree, and if an unobstructed view of all the limbs cannot be obtained it will be necessary to climb the tree. The dark, roughened surface of old cankers may be readily located, but young cankers may be very easily overlooked. Special attention should be given to areas about large wounds, stubs, split crotches. When a diseased tree is located the person making the survey should mark the location of the tree on a previously prepared plan of the orchard and should also paint a broad band around the trunk of the tree to serve as an identification mark.

A large, sharp knife should be carried, and when the true nature of a diseased area is questioned, a cut should be made across the surface to determine the presence or absence of the characteristic mottled inner bark.

It has been stated that the fungus in infected trees may invade many limbs which show no external signs of canker. In pruning operations it is not at all unusual for workmen to cut into such limbs although they may avoid the cankered limbs. *Under no circumstances, therefore, should the workmen who do the ordinary pruning operations in an orchard be allowed to prune a tree which has canker.* Marking these trees and warning the workmen to leave them alone, prevents the possibility of spreading the disease on the tools. Experiments of the writer have proved that the fungus may be carried in a living condition in the sawdust between the teeth of a pruning saw.

It is a well known fact that many trees have blister canker for years without showing any external evidence of the disease, or at least such as would be noticed by the unskilled observer. Such trees may sometimes be detected by the character of the heartwood when weakened limbs are removed. * * *

CUTTING OUT THE CANKERS.

After a careful survey of the orchard has been made, the next operation is to get rid of all infec-

tious material and at the same time to treat the diseased trees in such a way as to reduce the injury to a minimum. The removal of the cankers does not eliminate the disease. Rather, the object of all this labor is to remove the superficial cankers, whereby all possibility of the natural spread of the disease is deferred until another crop of spores is produced. Since it takes at least a year for the production of a new crop of spores, the chances of new trees becoming infected are thus almost eliminated.

* * * *

The winter months are best for cutting out cankers, since the limbs are bare at that time and workmen are more easily obtained. The wounds start to callous early in the spring so that the operations should be completed by the middle of March. A man skilled in cutting out cankers should be employed if possible and a helper furnished him. If the diseased trees have been designated with bands of paint as described above, four rows may be treated at one time, each man being responsible for two rows.

* * * *

RECOMMENDATIONS FOR CONTINUED TREATMENT OF INFECTED ORCHARDS.

Should the fight against blister canker be discontinued with the above treatment, *all the labor involved would be lost.* It would be like cutting off the tops of the weeds, thus allowing them to sprout again to produce a larger crop of seed than they would have otherwise. Blister canker continues to develop and the year following the treatment some of the cankers will be found to be surrounded by dead bark with fruiting bodies beginning to develop. In other cases, fortunately, the treatment seems to check the spread of the canker, a good callous is formed about the edge of the wound, and several years may elapse before the canker again appears. A careful operation in which a healthy edge has been left round the wound after

the fruiting bodies and the dead bark have been removed, is a contributing factor in the quick and complete recovery of the wound and reduces the chances of borers and woolly aphids working in the edge of the canker.

During the summer following the treatment of the cankers, the edges of the treated areas should be scrutinized in order to ascertain whether the canker is advancing. If it has advanced, but there is no evidence of the summer stage of the fruit bodies, with their characteristic star-shaped openings, it is safe to leave the treatment until winter. If the canker has advanced rapidly, however, and the fruit bodies are forming, it is a good plan to cut out the diseased area immediately. This can be done hastily with a few strokes of the knife. No dressing need be applied at this time.

The winter following the first canker removal is the proper time to go over the orchard again to examine all the trees, both healthy and diseased. The healthy trees should be examined for the possible appearance of new cankers, while the diseased trees should be treated in the same manner as in the previous operation. This operation is much simplified by the facts that, first, the canker rarely extends more than a few inches during the year; secondly, the bark has been but recently killed and consequently is soft and easily removed; and finally, many of the cankers will show no advance.

Each winter a similar survey should be made. As the infected trees become so badly mutilated as to be unsightly and unprofitable, they should be removed and burned. New trees may be planted in their places without danger of infection.

Wenatchee valley apple growers have assessed themselves three cents a box for advertising purposes. This will amount to about \$1,000,000. No wonder people use western apples.

THE FLORISTS PAGE

EDITED BY

HURON H. SMITH, Curator of Botany
PUBLIC MUSEUM MILWAUKEE, WIS.

Wisconsin's Burbank.

By Huron H. Smith.

Avowed florists have been the theme of our articles up to the present time, and now it gives me great pleasure to present a man, who is a florist, but whose heart is not in the hot house, but in Wisconsin's out-of-doors. I write of Wm. Toole, Sr., of Baraboo.

Mr. Toole is as enthusiastic as ever and although he was 80 years old the 21st of last September, he had just put in the day (June 24th), in making hay. With my assistant, Mr. Tuttup, in the side-car, I drove up through Baraboo, en route to my collecting outfit at Black River Falls, and recalling the many good things said about Mr. Toole, by my friend Frederic Crane-field, I got him on the telephone, and in 10 minutes, made a date for an interview.

Mr. Toole has 40 acres, two miles southwest of Baraboo on Highway 12, and although he has turned over the business to his son Wm. A., still keeps a sizeable plot of his own for experimenting. Under the name "Garry Nee Dule" which means "gardens of the O'Toole's," his son runs the green-houses, and out door acres, producing annuals and hardy perennials in endless variety.

Wm. Toole, Sr., is the grand old man of horticulture, agriculture and floriculture in Wisconsin. He is the oldest member of the Wis. Hort. Society, belonging to it in the days of Prof. Henry, Prof. Daniels, and Dr. Wm. Trelease, those

old-timers of the University of Wisconsin. He was president of the Wis. Hort. Society from June 1909 to Jan., 1911 and has been a member of the Executive Board for the last 25 years. He was the recipient in 1911 of the annual Honorable Recognition Award of the University, during the presidency of Charles R. Van Hise.

Mr. Toole was born of Irish father and English mother, in Provi-

his work with pansies and developed and raised 80 or more varieties. In meeting me, he had a little story to tell about preconceived notions. When the State Fair used to be held at Madison, he was a slight man of 130 pounds and as Prof. Henry was standing with him looking over his pansy exhibit, a lady came up with a wish to see the great Pansy Toole. She was introduced and evidently disappointed as she said she always thought he would be a fine, portly fellow, but, "here he is a little runt." Mr. Toole had formed the notion that I was one of these Lord Fauntleroy office botanists, when he had let-



"Cozy Corner." William Toole, Sr., and Son, Dr. E. H. Toole, looking at us.

dence, R. I., leaving there in 1857 for North Adams, Massachusetts. In 1859 he came to Wisconsin, settling first at Excelsior, then moving to North Freedom and finally in 1887 to Baraboo. Ten years ago he moved to his present residence, "Cozy Corner" and turned over the old homestead to Wm. A., his son. His other son, Dr. Eben H. Toole, who obtained his Ph. D. from the University of Wisconsin, is now director of the Seed Laboratory in Washington, D. C., and is working on the problem of retarded germination.

Mr. Toole is widely known for

ters from me before, and said he didn't expect to see a two-fisted two-hundred-pounder, of Irish extraction.

Mr. Toole said he always thought he would like to raise some freak pansies, but confined his efforts to raising varieties for the florists' perfection for good round flowers. He had almost all the shades of color in his pansies, that you don't see in any other flowers. One in particular was touted as a black pansy, although in reality it was a very dark purple.

Mr. Toole, has always taken an interest in other people's love of

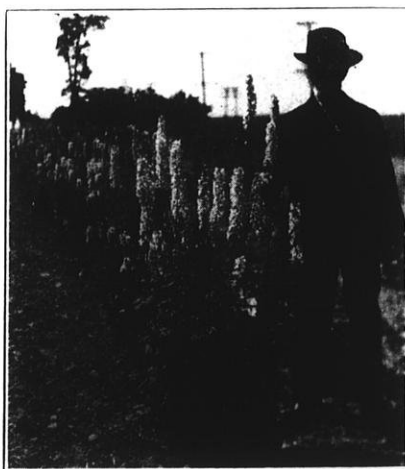
flowers, and has stimulated it wherever possible. Back in the golden days, they had a three room graded school in Baraboo, and he offered premiums in potted plants and hardy perennials to the scholars who collected the largest number of species of native wild flowers in the spring. Many residents of Baraboo recall with pleasure, their competition in those good old days. Mr. Toole has never ceased to promote the use of native plants for decorative purposes, and we think there is no one in the state, who knows the decorative possibilities of Wisconsin's flowers, shrubs and trees so well as he. On the shaded bank by his home, one may find ferns, wild flowers, and fine shrubs, which he has gathered in his rambles over Wisconsin, and planted with his own hands. All over his experimental plot, are constantly seen native wild flowers, so chosen that blooms are to be had at all seasons of the year. At the solicitation of Secretary Frederic Crane-field, he has written a pamphlet, on the use of native flowers, trees, shrubs and vines for decorative



gardening, which has just come from the press. Here one may get very valuable information on choice of plants for all situations.

To illustrate his work on plant breeding and selection would take more of an expert than I. Mr. Toole has produced a large flow-

ered Black-Eyed Susan. He has worked with the Butterfly weed (*asclepias tuberosa*) until he has many shades of red and orange to almost yellow. He was just making seed selections from our native Downy or Prairie Phlox (*Phlox pilosa*) while I was there, and he has a great range of color from deep pink to nearly pure white. He is also working out color variants in our New England Aster (*Aster Novae-Angliae*). He is producing some fine varieties of our Rosinweed or compass plants,



(*Silphium Terebinthaceum*, *S. laciniatum*, and *S. perfoliatum*). In fact, I doubt if he knows himself how many native things he is working on.

Mr. Toole doesn't care much for the ordinary *Delphiniums* of the florist, so has developed several strains of dense flowered ones. He has also produced a white *Delphinium* that bears seed. This is said to have been done in England, but not in this country before. We took his picture right by the white *Delphinium*. His *Lilium Candidum* was fine, too. At first we mistook it for the Easter Lily, but soon discovered the difference. The

peculiar delicate fragrance was the difference.

The old place is really now a plant factory and one may look over acres of blooming hardy perennials at this season of the year. We saw 40,000 hardy phlox plants coming along, and were told that they raised over 100,000 hardy perennials in a year. Most attention is given to bedding and spring plants for out door planting. Only the pansy and aster seeds are now raised, the others are purchased.

In fall sweet peas and "mums" are raised, but other cut flowers are purchased in Milwaukee. Baraboo is a beautiful city and from the hills at Garry Nee Dule, one has a clear view of the city and the surrounding bluffs, that is indeed beautiful. No more inspiring sight could be pictured than the location of the Toole gardens, and we hope Wm. Toole Sr. may be spared many years, to counsel the younger generation on the beauty that is round about us.

The Giant Late Tulip.

(From National Garden Bureau.)

The late tulips offer the most gorgeous display of the entire year in the hardy garden. In color, form and certainty to bloom there is no garden subject to compare with them. Coming into bloom about the second week of May in normal seasons they offer a display of color from the most brilliant to the most delicate and subtle and not offered by any other garden material.

In addition they have long stems and are ideal for cutting. Some of the Darwins will reach a height of three feet under good cultivation, while two feet is about a fair average.

(Continued on page 29.)

Wisconsin Horticulture

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Secretary W. S. H. S., Madison, Wis.

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Horticulture at the 1922 State Fair.

We have no first hand information about the fair and must depend on scanty reports. These reports show that the exhibits in all lines, exceeded in quantity and quality those of any previous year. Several tray exhibits of apples were not staged at all on account of lack of room, being dragged out for the judge then shoved under the tables. The vegetable department was also crowded, but the exhibits shown were very high in quality.

The Society of Milwaukee Florists kept us in first place with several hundred points to spare, in

decorating the building. The amateur flower show is steadily crowd-ing the other departments as well as showing a wonderful improve-ment in quality and taste in arrange-ment of exhibits. The professional florists did not expand,—because they have no chance to expand, shut in hard and fast by ropes. This is just a glimpse of horti-culture at the Fair and in no sense a record of exhibits. The whole story is one of crowding and clamor for more room on the part of department heads and exhibitors. Here, then, are the alternatives; discourage further exhibits, tell people there is no more room or, a new building.

Commissioner Norgord realizes fully the needs of our department and others, but has stated publicly that he is not in a position to request funds for new buildings, the people interested must do that; must go before the legislature and demand funds for expansion. Let's do that. Begin now to think about it and after election begin pound-ing your members of the house and senate.

Now that the fair is fresh in your mind, think over carefully all you saw and store it in the back of your head so that you will be able to give us the facts next winter when we call on you. Now just by way of closing, please go back to the opening sentence and connect it with the following privi-leged remarks. This, 1922, State Fair is the first one the Editor missed in 30 years. Just 30 years ago, September, 1892, he suggested to Prof. E. S. Goff, that it might be a good idea to make an exhibit of native plums at the Fair. It was done and that was the first exhibit ever staged by any depart-

ment of the State University and first non-competitive exhibit in the horticultural department.

Well, this is really not important except that 29 years is quite a stretch of time. I am of the opinion that the Editor holds the record for continuous attendance. Who says, nay? F. C.

Plant Spring Flowering Bulbs Now.

Mid October is not too late to plant tulips, hyacinth and like bulbs for spring flowering, except possibly in the extreme northern part of the state where frost has entered the ground. Bulbs planted late in the season and mulched heavily as the ground begins to freeze, will root splendidly and be ready for next spring. It is *not* advisable to plant too early for the long period of root growth may be followed by bud development this fall. No scientist has, so far as known, taken the trouble to look into this, but the experienced Wis-consin gardener knows that late planted bulbs give better growth than those planted early in Sep-tember.

No need to go into details about varieties, the catalogs list all standard kinds. There are three classes of tulips and the bulb enthusiast will plant some of each. First; the early dwarf usually listed as Duc van Tholl, in red, white and yellow; the mid season, taller than the preceding, with larger flowers, represented by Cottage Maid; the late or Darwin tulips, tall, long-stemmed and self colored.

Plant tulips and hyacinths so that the base of the bulb is about four inches below the surface. Cover heavily after the surface of ground has frozen with any material

available except autumn leaves. Leaves, when wet, pack into an almost air-proof covering and unless great care is exercised in spring the bulbs will be smothered.

The purpose of covering is to prevent alternate freezing and thawing during the winter months. A loose covering will serve this purpose and also allow gradual removal next spring.

Winter Protection for Roses.

Mrs. Angel in "My Garden" on another page, laments her inability to carry over hybrid perpetual roses, such kinds, no doubt, as Laing, Neyron, Druschki, Brunner and others. We make the guess that these roses were not given proper winter protection. Hybrid perpetual roses, numbering at least fifty good kinds, should live and bloom profusely for 10 or even 20 years if heavily pruned each spring and given winter protection. Most growers overdo the job of piling leaves, manure, straw or earth over the plants in the vain attempt to prevent freezing, with the result that the plants are kept moist all fall and winter, freeze just the same and if this doesn't finish them they are smothered in March and April.

Do not attempt to keep out frost. It can't be done in Wisconsin, and besides it isn't necessary for hybrid perpetuals. Do not prune in the fall. Bend the tops down, flat on the ground (don't say it can't be done), peg them in place and after the ground is frozen, cover with evergreen boughs, cornstalks, straw or building paper. Do not use leaves or cover with earth. The covering is simply and only for the purpose of protecting the canes from winter sun, alternate freez-

ing and thawing, and to allow the canes to remain dry. The Editor of the 1919 Annual Report allowed advice by one of the speakers at the Convention to cover with earth, to slip through and was properly rebuked the following spring by a member who followed this advice and lost her roses.

In one of the most successful rose gardens in southern Wisconsin marsh hay is spread over the surface of the beds protecting the stems only 8 to 12 inches from the ground. The balance of the tops die every year and are removed in the spring cutting back to live wood. Fine strong shoots arise from these lower protected buds, and although the blossoms are limited in number, are superb in quality. These rose plants are now eight years old.

My Garden.

Mrs. John Angel, Jefferson, Wis.

When asked to write an article about my garden, it seemed to me that such an article could be of no interest to the members of the Wisconsin Horticultural Society; but when I remembered that most of the members are amateurs seeking advice from such professional sources as are available and watching the methods used by other members, I decided I would try.

My garden is planted in woodland which seven or eight years ago had never been plowed. The first crop raised after the trees were removed and the land plowed was potatoes. At first the garden was very small; but each year a few trees were cut, the roots removed, the land plowed and planted with potatoes until now it is almost too large for one man who works

in town during the day and in the garden mornings and evenings to give it the care and cultivation a garden should have.

As it now stands, the garden is really four. What was first our vegetable garden, is now a garden devoted to flowers. The plot that was cleared later for vegetables proved more satisfactory. It is on a slight slope and now contains red and black raspberries, strawberries, grapes, a cherry tree, and some plum trees. The fourth plot now contains our table vegetables, potatoes and cow beets to feed the chickens.

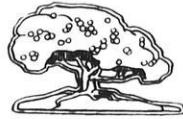
Thus far the only fertilizer used in the garden was produced by our poultry and has been sufficient. We used plenty of water and after a great plenty of water has been used on the flowers we use more water and add still more water.

This liberal use of water causes our bulbs to produce more flowers than I have ever before seen bulbs produce. Of course I could not write about my garden without writing about my bulbs for my flower garden consists largely of gladioli. Each bulb grew to about the size of a mason jar cover or larger in diameter and produced from six to twelve flowers. The plants grew strong and vigorous and reached a height of over five feet, many of them stood straight and over six feet tall without support.

Our experience has shown us that it does not pay to plant small bulbs. We bought some last year hardly as large as a small egg. Not one bulb of those we bought produced more than one flower nor did they increase as well as our own. We are anxious to see what

(Continued on page 29.)

FREE TO NEW MEMBERS



Native Plants of Wisconsin Suitable for Cultivation

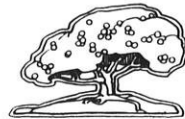
By WILLIAM TOOLE, Sr.
BARABOO

CONTENTS

- Domesticating Our Native Flowers
- Native Shrubs of Wisconsin
- Our Wisconsin Native Trees
- Cultivating Our Native Ferns
- Our Native Climbing Vines

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ANNUAL REPORT

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For the Year Ending July 1, 1921

VOL. LI

Frederic Cranebeid, Editor
Madison, Wis.

WISCONSIN HORTICULTURE SOCIETY
100 EAST WASHINGTON STREET
MADISON, WISCONSIN
1921

ANNUAL REPORT

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Contains Thirty-one Papers and Addresses on Commercial and Amateur Fruit Growing, Vegetable Gardening and Horticulture

VOL. LII

Frederic Cranebeid, Editor
Madison, Wisconsin

WISCONSIN HORTICULTURE SOCIETY
100 EAST WASHINGTON STREET
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1922

READ BIG OFFER PAGE 27



One Thousand Prizes of \$4.00 Each

We have set out to get 1,000 new members by January 1, 1923. By way of inducement we will give to each new member \$4.00 value (a low estimate) for \$1.00, annual membership as follows:

For One Dollar, currency, P. O. money order or personal check, we will send you:

(1) Wisconsin Horticulture from date, October 1, 1922, to January 1, 1924	\$1.25
(2) A copy of the 1922 Annual Report.....	.50
(3) A copy of either 1917 or 1920 Annual Report.....	.50
(4) The Wisconsin Garden Book .....	.25
(5) Native Plants of Wisconsin, Toole .....	.50
(6) Annual Membership	1.00
Total	\$4.00

- (1) Wisconsin Horticulture: A 16-page monthly magazine, not as good as some other horticultural magazines, perhaps, but better than most of them; at least for Wisconsin people, because whatever it contains is prepared for Wisconsin. There is no pretense of covering all of horticulture, but only Wisconsin horticulture. You will like it.
- (2) The Annual Report: Contains 182 pages; 16 pages lists of fruit trees and flowers recommended for cultivation in Wisconsin. These lists are carefully prepared by experts each with a lifetime experience in Wisconsin, and are revised every year. Addresses and discussions at the two annual conventions. Nothing is published in the Reports except that it has permanent value. The subject matter of a Report five or even ten years old is as valuable as one of yesterday.
- (3) We have a large surplus of 1917 and 1920 Reports and a few of preceding years. As long as they last one copy will be sent each new member. These contain many valuable papers; cloth bound.
- (4) The Wisconsin Garden Book: 55 pages, 5x7½ inches. The simplest, most concise and readable book on vegetable gardening for beginners yet published. It tells you exactly what you want to know, in plain language and in the fewest possible words; seven chapters on vegetable gardening, and two short ones on berry culture and tree fruits for good measure. Written by practical Wisconsin gardeners; published by the State Horticultural Society. Price 25c.
- (5) Native Plants of Wisconsin, by William Toole, Sr.: Five interesting and valuable papers.
 - (1) Domesticating our Native Flowers.
 - (2) Native Shrubs of Wisconsin.
 - (3) Our Wisconsin Native Trees.
 - (4) Cultivating Our Native Ferns.
 - (5) Our Native Climbing Vines.

These are not merely botanical lists of plants. In each paper Mr. Toole tells how to use these native plants. These papers, delivered at our Annual Conventions were considered of such value that the Society has issued them in this attractive booklet. Price 50c.

- (6) Annual Membership in the State Horticultural Society: This is what we are aiming at, why we are offering you \$4.00 for \$1.00, to increase our membership. The Society is doing splendid work. It is not a state "Board" or "Department," bound by red tape, but is close to the people. It is a privilege to be a member. You will receive the paper and one Report a year as long as you remain a member.

On receipt of One Dollar the books described above and pictured on the opposite page will be sent you postage paid; the paper from date of your remittance to January 1, 1924, and a receipt for Annual Membership to January 1, 1924. If you have a neighbor or friend who is a member hand the dollar to him, he will do the rest; otherwise address

FREDERIC CRANFIELD, Secretary

701 Gay Building

MADISON, WIS.

NOTE: We cannot accept postage stamps.

PREMIUM LIST

The following cash premiums are offered for exhibits at the annual convention, Madison, Jan. 10-11-12, 1923:

- (1) Best 25 plates, 5 plates each,
5 commercial varieties for
Wisconsin\$12.50 \$7.50 \$5.00 \$2.50

- (2) Best collection of apples, one
plate each not to exceed 10
varieties 10.00 6.00 4.00 2.00

- (3) Best plate of each of the fol-
lowing varieties: 1.00 .75 .50 .25
Ben Davis, Dudley, Fameuse,
Gano, Golden Russett, Grimes
Golden, Jonathan, King, Malin-
da, McIntosh, McMahan, New-
ell, Northern Spy, Northwest-
ern Greening, Patten, Pewau-
kee, Plumb Cider, Salome, Seek-
no-further, Scott Winter, Tol-
man, Twenty Ounce, Utter,
Wagener, Wealthy, Windsor,
Wolf River, York Imperial.

- (4) Best tray of any of above
named varieties **except** Malinda,
Newell, Northern Spy, Patten,
Plumb Cider, Twenty Ounce,
Utter 3.75 2.50 1.25 1.00

- (5) Best 5 trays of any of
the following 12.50 7.50 5.00 3.50 2.00
Dudley, McIntosh,
Northwestern, Wealthy,
Tolman, Wolf River, Fa-
meuse, Gano, Salome,
McMahan, Seek-no-fur-
ther, Windsor.

- (6) Best 10 trays of any var-
iety in 5 tray class..... 25.00 15.00 10.00 6.00 4.00
Separate samples must
be furnished for each
entry.

- (7) Plate any other standard variety, properly labeled with
variety name.

Ten prizes of \$2.00 each will be awarded under this prize number. Any exhibitor may enter a maximum of five plates under this prize number, but each must be of a different variety.

Trays shall be packed "diagonal pack."

The following score card will be used in judging apples:

Trueness to type.....	10	points
Size	15	"
Color	20	"
Uniformity	25	"
Freedom from blemish	30	"

Total100 points

Apples to be exhibited in trays 18 x 11¼ inches and 3 inches deep. Trays will be furnished.

Vegetables

(1) Best collection, not less than 10 entries, 1st, \$5.00; 2d, \$3.00; 3d, \$2.00.

	1st	2d	3d
(2) 6 Blood Turnip Beets.....	\$1.00	\$0.75	\$0.50
(3) 3 White Turnips	1.00	.75	.50
(4) 3 Rutabagas	1.00	.75	.50
(5) 6 Chantenay Carrots	1.00	.75	.50
(6) 3 Winter Cabbage	1.00	.75	.50
(7) 3 Red Cabbage	1.00	.75	.50
(8) 6 Chicory	1.00	.75	.50
(9) 6 Red Onions	1.00	.75	.50
(10) 6 Yellow Danvers Onions.....	1.00	.75	.50
(11) 6 White Onions	1.00	.75	.50
(13) 6 Onions, Large Type	1.00	.75	.50
(14) Largest Onion	1.00	.75	.50
(15) 6 Winter Radishes	1.00	.75	.50
(16) 6 Parsnips	1.00	.75	.50
(17) Hubbard Squash	1.00	.75	.50
(18) 3 Table Queen Squash	1.00	.75	.50
(19) 3 Heads Celery	1.00	.75	.50
(20) 3 Chinese Cabbage	1.00	.75	.50
(21) 6 Salsify	1.00	.75	.50

Rules of Entry for All Exhibits

1. Exhibits must be arranged ready for judges by 1:00 P. M., Wednesday, Jan. 10th. This will be strictly enforced.
2. Five apples constitute a plate, no more, no less.
3. Competition open to all residents of Wisconsin, but premiums paid only to members. Premium winners, if not members, must forward fee for membership before receiving check for premium. All final entries must be made on regular entry blanks which will be furnished by the secretary on application but exhibitors are urged to send lists in advance even if not all entries are filled at convention.

F. Craneheld, Secretary W. S. H. S., Madison, Wisconsin.

My Garden.

(Continued from page 25.)

results we get from that variety next year.

Our garden is almost oval, with a bed of King Humbert cannas in the center and red gladioli in two of the beds around it. It was one brilliant mass of red last August from which we cut hundreds of flowers for our friends.

The two other beds around the cannas have contained various experiments; some successes and several failures. We tried raising roses for several years. Our first attempt was a decided success in the joy it gave us. Early in April we bought 16 roses for a dollar, a mixture of climbers, teas, and hybrid teas—so called roses on their own roots. These were planted in pots in the house, later transplanted out doors where they blossomed all summer; however, the next spring very few of them were alive. We tried for five years buying such roses, but buying no teas and more hybrid perpetuals with the same result that some lived two years, but very few lived three years. The next time we start a rose bed, we intend trying grafted, field grown stock.

(Winter Protection Is More Important Than Stocks. Editor.)

One year we had a beautiful bed of hollyhocks, a mass of color, shading from a delicate pink to a dark red. The stalks were from 10 to 14 feet high. I looked forward to seeing that beautiful sight the following year, but some kind of bugs got into the stems and ate from the inside until they ruined the bed.

We were told not to cultivate our peonies, however, the old saying, "The most stupid farmer has

the largest potatoes," proved true. Our peonies are cultivated and have grown wonderfully. They produced such quantities of flowers that they all had to be tied up.

It would be impossible to tell all our experiences in one article, a few will do. As I glance through the window it seems as if the shasta daisies were still there nodding at me, as if to say, "Do tell about us." We planted one small row about nine feet long of small plants last summer. I remember distinctly that after 10 dozen flowers were cut one day this spring that they did not look as though any had been taken, they were so plentiful.

One of the most satisfactory flowers we grow is our spotted leaf calla. We started with a few bulbs given us by a friend. The first year we had only one or two flowers. Because the leaves were pretty we planted them again for a border plant. Last year we counted 90 callas in bloom at one time, this year over 250. They make very satisfactory cut flowers for they remain fresh a week or 10 days if given fresh water.

In closing this article—I want to close before I tell all I know—I must mention our moonflowers. They open white and glistening every evening about supertime, a source of great amusement to our many guests who would watch one bud after the other pop open and unfold so rapidly that even the most careless observer became interested in watching things grow.

The Giant Tulip.

(Continued from page 23.)

While the single early tulips need a sunshiny position, the late tulips are even better and last longer if given partial shade. In long lines from six to ten deep or in bold masses or in groups of half a dozen or more, interspersed among shrubbery and in the hardy borders they are invaluable.

The Darwin tulips range in color through a wonderful array of pinks and roses and scarlets, crimsons and maroons to almost black with a similar range in lilacs, violets, purples and mauves to almost black. There are no yellows in Darwins. The Darwin is peculiar in that many of the flowers have an overcoat or bloom something similar to bloom on the grape which gives them a soft character often likened to the pastel colors. Nearly all of them are beautifully shaded in coloring, the edges of the petals being lighter than the center. Many of them have striking blue bases.

To those interested in working out effective color combinations, the late tulips are the finest material in the whole world of gardening for almost every conceivable shade except pure blue and all manner of combinations of color may be secured by consulting the lists of the dealers.

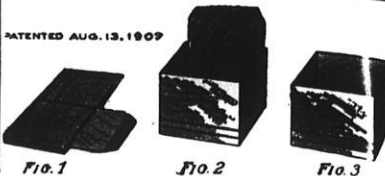
The Darwins are of such soft colors that mixed plantings are popular as there is no chance of an inharmonious combination while the combinations of lavenders, lilacs, mauves, with the various shades of pink and rose offer fascinating possibilities. The more brilliant scarlets and crimsons, usually having rose shadings or softer com-

(Continued on page 30.)

Annual Convention
Madison, Wis.
January 10-11-12, 1923

TENTATIVE PROGRAM

**39th Convention American Pomological Society
Council Bluffs, Iowa, November 15, 16, 17, 1922**



Berry Boxes
Crates, Bushel Boxes
and Climax Baskets
As You Like Them

We manufacture the Ewald Patent Folding Berry Boxes of wood veneer that give satisfaction. Berry box and crate material in the K. D. in carload lots our specialty. We constantly carry in stock 16-quart crates all made up ready for use, either for strawberries or blueberries. No order too small or too large for us to handle. We can ship the folding boxes and crates in K. D. from Milwaukee. Promptness is essential in handling fruit, and we aim to do our part well. A large discount for early orders. A postal brings our price list.

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Address—Paul C. Stark, Missouri.
Address—E. S. Briggs, American Fruit and Vegetable Shippers Association, Illinois.
Fruit Stock Investigations—L. B. Scott, Washington, D. C.; Dr J. K. Shaw, Massachusetts.
The Fundamentals of Pruning—Dr. E. J. Kraus, Wisconsin.
Correlation of Orchard Practices with Growth and Production—Dr. R. H. Roberts, Wisconsin.
Blight Resistance in Pears—H. P. Stuckey, Georgia.
Apple Breeding for the Mississippi Valley—Prof. S. A. Beach, Iowa; Dr. C. S. Crandall, Illinois.
The Sour Cherry Industry—M. B. Goff, Wisconsin; Prof. R. E. Marshall, Michigan.
The Plum Industry—East Dr. U. P. Hedrick, New York.
Middle West—B. W. Douglas, Indiana.
Northern Prairie Region—Prof. N. E. Hansen, South Dakota.
The Pacific Coast—Dr. W. L. Howard, California.
The Use of Spreaders—Dr. W. A. Ruth, Illinois.
Dusting and Spraying as Complementary Practices—Prof. W. S. Brock, Illinois.
The Drift and Development of Spraying Practices in America—Prof. Leroy Childs, Oregon.
Home Storage of Fruits—E. C. Cotton, Ohio.
The Proper Handling of Fruit in Storage—J. R. Magness, Pennsylvania.
Survey of Fruit Conditions—Pacific Northwest, M. L. Dean; Middle West—Prof. Laurenz Greene, Ind.; Annapolis Valley Canada—W. S. Blair, Nova Scotia.
A Horticultural Trip Through the Land of Evangeline—Prof. J. C. Blair, Illinois.
Advertising as a Factor in the Development of American Horticulture—C. I. Lewis, Illinois.
The Peach Industry of the Country—H. P. Gould, Washington.
European Pomology—Dr. U. P. Hedrick, New York; Dr. W. L. Howard, California.
The Export Situation—

Other papers tending to make the program of national and international value will be added.

Reports of Committees of Nomenclature, Wilder Medals, Fruit Shows, Slogans, New Fruits, Foreign Fruits etc.

The Giant Tulip.

(Continued from page 29.)

binations, furnish the most brilliant display when in bloom that can be imagined.

The culture of the late tulips is simple. Given a well-drained situation, in raised beds, if possible, to insure drainage, they should be planted six inches deep and from six to eight inches apart, the latter giving them better room to develop while the closer distance gives a better mass of bloom. If they are to remain undisturbed for more than a season it is advisable to give them the greater distance.

They are best dug every year and replanted. No manure should be used in the soil other than bone meal, which should be dug into the soil when the bulbs are planted.

See pages 26 and 27.

Kellogg's Nursery

Janesville Wisconsin

SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shrubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen Order direct from a reliable nursery and save money.

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If you are in doubt as to what is best to plant we will be glad to advise with you.

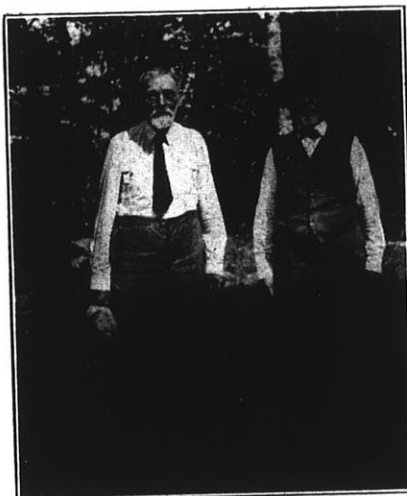
We do landscape work.

The Coe, Converse Edwards Co.

Fort Atkinson, Wis.

A Rumor Laid at Rest.

Man with a camera. Summer meeting. State Park. Noon. Man writes Editor; "Lots of things happened at Fish Creek that you didn't see or hear about." Editor shows interest. Insists on knowing things that happened. Man writes enclosing photograph and statement: "Here are two."



R. J. Coe. Wm. Toole, Sr.
Oldest living ex-presidents of W. S. H. S.

Keep celery growing as rapidly as possible all through the season. It requires plenty of water and fertilizers for best development.

Farmers' Bulletin U. S. Department of Agriculture 1264 is a good discussion of how to make unfermented apple juice.

The Hawks Nursery Company

are in a position to furnish high grade Nursery Stock of all kinds and varieties suitable to Wisconsin and other northern districts.

Will be glad to figure on your wants either in large or small quantities

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Nursery Stock of Quality

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Have all the standard varieties as well as the newer sorts. Can supply you with everything in

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Let us suggest what to plant both in Orchard and in the decoration of your grounds. Prices and our new Catalog sent promptly upon receipt of your list of wants.

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ANNUAL CONVENTION AND FRUIT EXHIBIT

Madison, Wisconsin
January 10-11-12, 1923

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One bushel size for apples, onions and other farm products.

Half barrel and barrel size for cabbage, turnips, carrots
and all winter vegetables.

One bushel seed corn crates. Butter and cheese boxes.

Our newly designed coop for shipping live chickens, weighs 30 pounds
and it is the strongest on the market.

LA CROSSE BOX COMPANY

LA CROSSE

WISCONSIN

Fourth Mid-West Horticultural Exposition

Auditorium, Council Bluffs, Iowa, November 13-18, 1922

Cash premiums to the amount of \$7,381.50 are offered, and in addition, special premiums
of several thousand dollars value

Fruits, Flowers, Vegetables, Honey, Food Products and Demonstrations

Six different horticultural associations will hold their annual conventions during the
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Under Auspices of

IOWA STATE HORTICULTURAL SOCIETY

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Write to R. S. Herrick, Executive Secretary, State House, Des Moines, Iowa, for Premium List
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Annual Convention American Pomological Society

Council Bluffs, Iowa, Nov. 15-16-17, 1922

In Connection with

The Mid-West Horticultural Exposition

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Columbus, Ohio

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, October 1922

Beekeeping and Popular Errors.

By C. P. Dadant.

Editor American Bee Journal,
Hamilton, Ill.

Many popular errors are injurious to the beekeeping interests, because they create an unfair prejudice against bees. To know what these are, and to be prepared to answer them and demolish them is of great importance to the honey producer. If we could educate the people properly upon these matters, we could probably secure a much greater regard for our industry.

I will therefore confine myself to a consideration of the errors usually current among the public on the question of bees and honey.

One of the most common errors is to believe that bees are injurious to sound fruit, principally grapes. The grape grower, in times of honey scarcity, when his grapes are ripening, sees bees upon damaged grapes and takes it for granted that they are the authors of the damage. This is incorrect. Bees cannot damage sound fruit. The physiological fact is that their mandibles are not armed with teeth. They are made of a horny substance, and are shaped much like spoons, working together sidewise instead of up and down like our own jaws. They can pull apart cloth, paper, and some harder substances, because they take hold of minute fibers that project and pull upon them until the fabric comes apart. But the skin of fruits is smooth and hard enough to prevent them from boring through it. Some people think that the bees sting the fruit. That is another mistake. If they did so, some of their poison would get into the fruit and make it deadly to them as well as to other insects, for the poison of the bees is stronger than that of the rattlesnake, though in much more infinitesimal quantity.

The actual test which proves that bees cannot damage sound fruit is that we can starve them on it. Take a bunch of sound, ripe grapes, crush one berry, puncture another berry slightly with a pin, then put the bunch in the center of a hive of bees, right in the cluster. Examine it the next day, and you will find that the crushed berry has been entirely sucked dry, that the punctured berry has been sucked down to a certain depth, but that no other berry has been touched.

So the bees cannot damage sound fruit, and their action upon damaged fruit is simply a provision of nature which dictates that nothing should be lost. However, in the case of bees, if a bad winter comes and they have much of this unsound juice in their hives, it makes them sick and many die, for it ferments and even turns to vinegar in the cells.

Many people take things for granted, without hunting for proof, other than a casual observation. That is not astonishing, and we would all be inclined to assert, for example, that the sun turns around the earth, instead of the earth turning on itself in 24 hours. It took the knowledge of the astronomers to teach us that the sun is immovable, as far as we are concerned, and that we are revolving in space at the speed of a cannon ball. So a man is quite excusable in believing things that are not so, although they appear so.

Another error common among the people, though in less degree than the former, is that bees damage flowers when they work upon them. Bees are beneficial to flowers. In fact, many flowers need the agency of insects to fertilize their fruit. Apple trees, pear, plum, cherries, raspberries and many other fruits would be barren if it were not for the insects which help distribute the pollen upon their pistils or female parts.

Horticulturists have tried cov-

ering apple buds with gauze and keeping them covered until after the bloom, and in all cases, few, if any, of those blossoms bore fruit. Similarly, if the blooming takes place in rainy weather, when insects such as bees cannot visit the blossoms, the blooming is a failure. Or if a very strong wind blows during the best of blooming, one will perceive that the tree has most of its fruit on the sheltered side, the insects having been unable to withstand the strength of the wind on the windy side.

There are plants upon which the male and female parts are on different blossoms. Such are the melon, the pumpkin, the cucumber. If you look carefully at the blossoms of these plants you will see that some have the rudiments of the fruit under them, while others look barren, having only a blossom with stamens, but no little round fruit under. These are the male blossoms, which bear the pollen or fecundating dust of the flower for the other blossoms. The bees are needed there.

Among strawberries, there are kinds which are only staminate, others pistillate. Without the help of the bees those strawberries are barren.

We might go on indefinitely on this subject. Clover, for instance, needs the bees to fertilize and to bear seed. You are probably aware that the first crop of red clover does not yield much seed. That comes from the fact that the bumblebee is ordinarily the only bee that can get honey from the long corolla of the red clover. There are but few bumblebees in spring, so there is but little fertilizing of the clover. But in summer, when the second crop blooms, the bumblebees are numerous and it is readily fertilized. The honeybee cannot suck honey out of red clover, except in some extraordinary seasons, when its corolla is short. In 1916, the dry spring caused the red clover to have a short corolla in our vicin-

Wisconsin Beekeeping

H. F. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association	
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ity, and the result was that the farmers were greatly astonished to find that the first crop had plenty of seed. We knew why, for we had seen our bees harvest honey from it.

Red clover failed to yield any seed in Australia until, at Darwin's suggestion, they imported bumblebees into that country.

It is therefore very evident that bees are beneficial to flowers. The horticulturists who thoughtlessly spray their orchards during the bloom, and thus poison many bees, are working against their own interests as well as those of their neighbor beekeepers. The proper time to spray an orchard is just before and just after the bloom. Spraying during the bloom also destroys much of the pollen by diluting it in poison, and thus decreasing many chances of fertilization.

Another error often made by the public is to think that the little yellow or brown pellets that the honey bee brings to the hive are beeswax. Those pellets are pollen, the fertilizing dust of the flowers which I have just mentioned. The bee gathers this pollen to be used in feeding its young, the larvae which occupy the cells, and grow there, finally transforming themselves into perfect winged insects. The queen lays eggs into the cells; in three days those eggs hatch into little worms which are nursed until they are large enough for their transformation into pupae. Then the bees seal the cell with a capping of wax and other material. At the end of 21 days from the

time the egg was laid, a young bee with wings comes out of the cell. The food of this young bee while in the larval or worm state is a pap made by the digestion of honey and pollen in the stomach of the nurse bees. Beeswax, instead of being brought in from the outside, is produced within their bodies, much like the production of milk in the cow, or fat in the hog. Wax is a fatty substance, and its production is made from honey, voluntarily or involuntarily by the bees, and it takes as much honey to produce a pound of wax as it takes corn or feed to produce a pound of fat. The proportion depends, as we all know, upon the conditions in which the animal finds itself, being greater when conditions are unfavorable and less when they are favorable. It is commonly accepted that comb costs the bees from 7 to 20 pounds of honey for each pound of comb produced, the average amount required being about 10 pounds to 1. So if we can sell our honey at 20 cents per pound, the comb in which the bees store it costs us \$2 per pound. That is why we use what is called a honey extractor, a machine which throws the honey out of the comb by centrifugal force without damaging it, so that it may be returned to the hive to be filled again. Extracted honey costs the beekeeper about half what comb honey in sections costs him to produce. That is why extracted honey often sells at less than comb honey, though it is in every way as good.

Another error is to believe that all honey should be alike in color and flavor. Honey varies just as much, in taste and in looks, as flowers vary. White clover honey is usually water white and of a very mild taste. Basswood honey is also white, but of very aromatic flavor, tasting just like basswood blossoms smell. Heartsease honey is of pink amber, Spanish needle and goldenrod honeys are of bright yellow color and strong flavor. Buckwheat honey is dark brown and smells and tastes just

as one can imagine when passing by a field of buckwheat in full bloom. Honey-dew, which is a product of plant lice, is the poorest of all, being almost black and of very indifferent flavor. But all honey is sweet, containing about 85 per cent of saccharine matter, while the vile glucose made of corn starch and sold under names, such as Karo, or Red-clover, or other fancy names, contains less than 30 per cent of sweetness. People who fear adulteration in honey should taste it. They would soon recognize whether it was sweeter than those cheap syrups.

Many people are also unaware of the fact that honey will harden, granulate, or candy, when it is exposed to cool temperatures after it has been taken out of the combs. Many imagine that such honey is either spoiled or adulterated when the fact is that the granulation of honey is a test of purity. The people who imagine that honey "turned to sugar," as commonly said, is adulterated, are helping the dealers in cheap corn syrup to fool them by making them believe that that cheap product is better than granulated honey. The fact is that honey has three times the sweetening power of commercial glucose.

By the way, here is another popular error which should be demolished. That is the belief that there is such a thing as manufactured comb honey. One of the noted chemists of the United States, some forty years ago, told as a hoax that there were factories where the honey comb was manufactured out of paraffin, filled with commercial glucose, and sealed over by machinery. He also said that there were manufacturers of eggs, and that the only difference between those eggs and the natural hen's eggs was that the former could not hatch.

This story was accepted as true by many newspapers at that time and there are still many who believe that there is such a thing as manufactured comb honey. The chemist who invented that story

excused himself by saying that he did not think people would be so gullible as to believe it. But we find it necessary to fight it even at this late date, because since the invention of comb foundation, the combs of honey in little sections are always straight and almost perfect, and this helps to entertain the error.

Aside from the fact that the making of the entire comb is an impossibility, there is a very easy way to convince the man who will listen to the incorrectness of this idea. The combs of bees are just like the leaves of trees, although all built in the same way, on a similar pattern, there are no two alike. You might spend a whole day putting tree leaves side by side; you would never find two exactly alike, no more than you would find two men exactly alike. In the same manner, you might spend a whole day placing sections of honey side by side, you would find no two combs alike. If they were made by machinery there might be half a dozen patterns, but you would find many exactly alike.

That which gave plausibility to the story was the manufacture of comb foundation, which is the making of the base of the honey comb out of beeswax, the bees' own product, and giving it to them to build upon. This secures perfectly straight combs and makes the labor of the beekeeper a pleasure, in the production of honey. But the bees accept only beeswax foundation. Attempts, by dishonest manufacturers, to give them foundation made out of a mixture of paraffin, have always proven a failure, for they know their own product and will accept no other.

Now there is still another error into which even experienced beekeepers fall, that is the belief that the little bee-moth can do injury to bees. The bee-moth feeds upon old combs. The winged moth lays its eggs at the entrance or on the cracks of the hives of bees, and when a colony is too

weak to care for its combs the little worm which hatches enters the hive, makes webs through the comb and finally destroys it.

In other words, the moth grub is a scavenger, just like the grub of the carrion fly which devours the bodies of dead animals which are left exposed to the air in summer. But the moth can no more injure a healthy colony of bees, which contains a queen and a sufficient number of bees to cover its combs, than the carrion fly can kill a healthy cow by laying eggs upon its hide. Both the moth and the carrion fly have a mission to fulfill, and if we suffer from their actions we have only ourselves to blame. The trouble, in the case of bees, is that when a colony is very weak, the bees in it crowd about the entrance all day long and the casual observer may imagine that the colony is strong, while probably all the bees are there, on the outside. When night comes, the bees re-enter the hive; then the moth, which is a "night-bird," comes and lays its eggs near the door. The tiny little creatures, when they hatch, enter the hive and hide in the combs, eating their way as they go. Soon the hive is entirely filled with them, and the beekeeper says: The moth killed my bees. It is only his ignorance which is the cause of their death.

It is very important for beekeepers to fight these more or less unreasonable errors, for most of them work to their detriment with the masses. If no one mistrusted the purity of the honey which our bees produce, the sales of honey would be eight or ten times as numerous. In fact, we could probably not fill all the requirements of the trade in our most successful seasons. So it behooves us to post the public in every way on the popular errors concerning bees and honey.

Members who desire to buy honey to keep up their local trade should write to the secretary for a list of the members who have honey for sale.

First Prize Recipes, Bee and Honey Exhibit, State Fair 1922.

HONEY DROP COOKIES.

Class No. 25.

1 cup honey.
2 eggs.
 $\frac{1}{2}$ cup butter.
Pinch salt.
4 teaspoons baking powder.
1 cup chopped walnut meats.
About 3 cups flour.

Beat the honey, eggs and butter together. Sift flour, baking powder and salt and mix to make a stiff dough. Drop with a teaspoon on a butter tin. Bake until brown.

Mrs. H. V. Wilson,
South Milwaukee, Wis.

HONEY CAKE.

Class No. 24.

1 cup honey.
1 cup shortening, part butter and part lard.
1 egg.
Pinch of salt.
 $\frac{1}{2}$ cup sour milk.
1 teaspoon soda.
 $\frac{1}{2}$ teaspoon cinnamon.
 $\frac{1}{4}$ teaspoon nutmeg.
About 4 scant cups of flour.
Vanilla.

Chocolate Frosting: Melt bitter chocolate over water (about two squares). When melted stir in honey until thick.

Miss E. M. Goelzer,
Oakwood, Wis.

HONEY NUT CAKE.

Class No. 26.

$1\frac{1}{4}$ cups honey.
 $\frac{1}{2}$ cup butter.
 $\frac{1}{2}$ cup sour cream.
 $\frac{1}{2}$ teaspoon soda.
3 eggs, well beaten.
1 cup chopped walnuts.
 $\frac{1}{4}$ cup sweet milk.

Flour enough sifted with three teaspoons of baking powder to consistency of cake butter. Ice top of cake with granulated honey, mixed with chopped nuts.

Miss E. M. Goelzer,
Oakwood, Wis.

State Association Convention.

Board of managers' meeting
December 13.

Convention December 14 and
15 at the Auditorium, Milwaukee,
in connection with the Wisconsin
Products Exposition.

At the prize drawings given at
the Beekeepers' Chautauqua,
Green Bay, August 7 to 11, the
copy of "Honey Bee Book" was
drawn by Mr. Thomas Cavill. Mr.
Cavill gave his address as Law-
rence, Wis. There is no postof-
fice under the name of Lawrence,
and if any of our members know
this beekeeper, please send his ad-
dress to the secretary.

Inventory Your Beekeeping.

Although we as beekeepers
should always be checking up our
beekeeping, there are two natural
times each year for looking over
the past months' work and taking
an inventory of our beekeeping.
The most interesting time is gen-
erally in the fall after the crop is
harvested and we like to point out
the colonies which have stored
the most and we take less pride in
what others have done. In the
spring we have another chance to
check up our fall and winter man-
agement.

We may take results as a mat-
ter of course and explain them as
"fate," or simply pass them by.
But for every result there is a
cause and we should find it, if
possible. Success and failure are
very closely related, for to enjoy
uniform success one must know
the causes of failure. To merely
say that certain colonies died dur-
ing winter, dwindled away in the
spring, or, on the other hand,
stored a bumper crop of honey, is
of no value. Unless we know the
causes we cannot avoid losses or
duplicate successes. To neglect
to find the causes is to deprive
ourselves of our greatest means of
future success.

But why is it so necessary to
know the causes of our successes

and failures? Let us introduce a
fundamental fact of educational
psychology, which is that the pro-
cess of learning is completed in
an expression, not in our impres-
sions. By impression is meant re-
ceiving ideas from our own experi-
ences or the experiences of
others, by seeing, hearing, read-
ing, etc. By expression is meant
doing or acting in accordance
with the judgments we form from
these ideas. Let me illustrate.
Someone says to introduce queens
by the honey method and explains
how (impression) and we follow
out the directions (expression).
We haven't learned how until we
have done it successfully, no mat-
ter how thoroughly we know the
directions. But how often we say
that we have learned as soon as
we get the information. How
many times we "learn" and do
not put down the directions in
"black and white" until we can
use them and then find out we
have forgotten something essen-
tial because we fail. How many
a beekeeper has tried Dr. Miller's
simple method of raising queens
and had the bees build drone
comb on his carefully prepared
starters. Perhaps he got the di-
rections from somebody who
"knew how" by reading. Even if
descriptions are complete, our
own experience is necessary.
How many of us have memorized
the characteristics of European
Foul Brood and found that neg-
lected brood had so many of them
that we were reasonably sure it
was E. F. B. We have no right
to say that we know without the
experience.

By emphasizing the fact that
we do not know when we get im-
pressions, I do not condemn or
belittle impressions. I only want
to emphasize the other side and
completion of the cycle of learn-
ing, the expression. Any bee-
keeper who deprives himself of
reading the bee journals, attend-
ing beekeepers' meetings, etc., is
robbing himself of his greatest
sources of impressions. The more

impressions we can get before we
act the greater is our chance of
succeeding, but to continually
keep on getting impressions with-
out using them is to acquire a bad
habit. The rule is, "Use it or lose
it." Reading, listening, observ-
ing, etc., may degenerate into
mere intellectual entertainment
without practical value.

Let us return to our losses and
successes. These are the results
of our own acts; either we did do
or didn't do as we should. If we
know what we did, and unless we
have records we probably will not
know, we can aid our experiences
by new ideas from the experiences
of others and form new judg-
ments for future action. When
we act again we should be more
successful. What we do is of
much greater importance from
our standpoint than what others
have done. Our successes and
failures are our expressions and
by them only we learn, if we can
understand their causes.

Beekeeping appears so simple
to most people until they get into
it. Then it seems so hard to ob-
tain uniform success. And the
reason is because it requires so
much experience; so many differ-
ent situations must be met and
understood. We can read all we
wish, but no matter how full we
are of "book learning," we have
to meet the situations face to face,
often more than once, before we
know. There is an abundant
source of learning right in our
own bee yards, all we need, if we
only get our impressions and use
them. Let us take advantage of
these natural divisions of the bee-
keeping year to find out how
wisely we have either caused the
bees to conserve or to expend
their energy.

Ivan Whiting, Sec'y,
Sheboygan County Bee Ass'n.

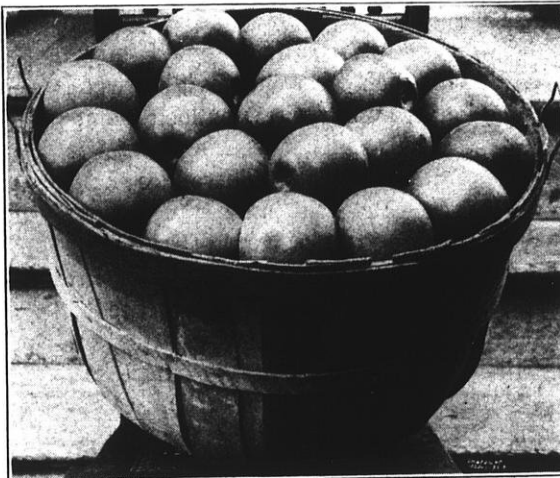
Dr. S. B. Fracker has consented
to act as secretary of the Amer-
ican Honey Producers' League.

WISCONSIN HORTICULTURE

Vol. XIII

Madison, Wisconsin, November, 1922

No. 3



NORTHWESTERN GREENING
"Grown in Wisconsin"

Country Beautiful

By JOHN A. HAZELWOOD,
Chairman Wisconsin Highway
Commission.

We are not given in the hustle and bustle of the hour to think much about æsthetic subjects. We are too busy commercializing to fully appreciate the beauty of our surroundings. The subject, "Country Beautiful", is a good subject for us to consider, if by so doing we can cultivate and develop our æsthetic senses. After all, education is at the basis of bigness and richness of life. It is essential to think about beauty in order to enjoy beauty.

We need to get away from the getting and spending of worldly goods, and learn to enjoy God's beauties which are not measured by the dollar sign. Real life is obtained in enjoying the sky, the hills, the lakes, and the landscape about us.

PIONEERS FOUND BEAUTY.

Our state is a beautiful one. It was more beautiful when our forefathers came here. The pioneers did not distract from the appearance of the state as later generations have done. To offset the coldness of brick and stones, and the ugliness of belching smokestacks, cities have provided parks and have planted trees, shrubs, and flowers.

Our state once covered with a beautiful forest, inhabited by hundreds of varieties of birds and animals now has, so far as trees and wild life are concerned, many places as barren as a desert. The waving fields of grain and fine farm buildings furnish better living conditions for civilized man and provide a new form of beauty.

CITY BEAUTY

Cities vie with each other in providing parks and playgrounds. St. Louis claims to have the finest sys-

tem of parks in the world. Baltimore, Chicago, and Milwaukee desire to make a similar claim for public breathing and recreational spots. Artificial lakes, bays, and lagoons are made wherever there are no natural lakes, streams, or bodies of water. Public spirited citizens have given many beautiful park sites to cities, because they realize the importance of same upon the health, happiness, and prosperity of municipalities. The first place you are called upon to visit when you go to a strange city is the park, because there our friends realize that we will get close to Nature and appreciate city life.

It is not the artificial, the mortar, cement, marble, and granite we enjoy so much as we do the walks and drives through the flowers, shrubs, and trees.

RURAL BEAUTY

Just so, counties should strive with each other in providing wood lots, camping sites, outlook points to show friends seeking real life and enjoyment. There are hundreds of citizens in the state owning suitable sites for rural parks willing to give title free of charge or for a nominal price. What is needed at this time is an intelligent organized effort on the part of our people, especially those in authority, to get hold of proper titles for county camping places.

It is easier to obtain these park sites in northern Wisconsin than in the southern part of the state. The time is not far distant when lake views and river banks will be difficult to obtain everywhere. Therefore, let there be no unnecessary delays. Let us all get busy and keep busy securing county parks.

WISCONSIN'S DRIVES

Wisconsin is noted for thousands of clear water lakes, its winding

streams, its pine-clad hills, its wide spreading oak and elm, its sun-ach and goldenrod, its summer and autumn climate, its many scenic drives and its wonderful State Trunk Highway System

Wisconsin has the best constructed system of highways in the nation considering the time scientific effort has been employed in road work; the best maintained complete trunk highway system in America; the best marked highway system in this hemisphere and best of all, the most beautiful highways in the world.

It is our privilege and duty to protect this natural beauty along our roadsides and to do what is within our power to enhance their attractiveness by planting trees, shrubs, and flowers. Of course, landscape planning is needed everywhere. Yes, a landscape artist should be abroad in every county in this state. No great work is accomplished without the expert direction of an engineer. The cost of planning and of execution to secure rural parks in this state should not be large. The poet rightly proclaims:

"Injure not Nature with absurd expense,
Nor spoil her simple charms with vain pretense,
Weigh well the subject but with caution bold,
Profuse with genius, not profuse with gold."

Wonders can be done in roadside beautification at little cost, if proper effort is put forth by a community. Wood lots galore can be obtained for a song if the right organized spirit is vigorously exercised by counties.

TOURISTS ATTRACTED

Wisconsin has become a great touring commonwealth. Our scenery and our climate are magnets which cannot be resisted by tourists. In Wisconsin we find attractions

that surpass those of Switzerland; we find hills, coulees, and ravines superior to those of the Berkshire Hills, and a balmy, healthy climate that is not equalled anywhere in the world.

The members of the Friends of Our Native Landscape have as their main object, that of conserving, preserving, and developing Wisconsin's beauty spots so that there can be more fully appreciated and enjoyed by present and coming generations. The object is a worthy one, and deserves the support of all who wish to make Wisconsin inviting and interesting. We must plan and execute in accordance with scientific direction. We cannot afford to go along in a crude, blundering manner.

ZONING LAW NEEDED

We need a zoning law written on the statute books of the state very much as forward looking cities are providing zoning ordinances in order to restrict industrial plants, business houses, public buildings, residences to their proper places. Counties should designate proper zones for construction of the various farm buildings. Farmers are apt to be thoughtless about encroaching upon highways with fences and building. Model plans for arrangement of structures on the farm should be advertised. The lawns and front yards of farmers should not be used for bull pastures and pig pens. Beautiful vistas for travelers about farm homes should be guarded. There are proper places for public and private buildings, for fields, farms, and ample room for public wood lots or county parks.

We should make it impossible for public officials to destroy beauty which should be protected. Highways should be laid out so as to

give the traveling public just and full right to enjoy landscape views. Roads should not be relocated away from lake and river banks just to give private parties lake and river shore building sites to sell for individual gain.

SYSTEM NEEDED

Schoolhouses should not be built within fifty or sixty feet of the highways. Barns and hog pens should not be constructed on roadsides so as to obstruct a view of a beautiful home.

Friends of Our Native Landscape should cooperate with every agency working toward improving Wisconsin. Much good can be accomplished by backing all plans decided upon by park boards and rural planning committees. Wisconsin has just started rural park work, and needs the active, energetic support of many to make country highways more beautiful.

HIGHWAYS TALK

A pretty drive is always inviting to the traveler. It pleases, entertains, and rests the tired soul. An unknown road is always alluring and impels one with a desire to explore. Some one has said he always meets a new road with as much pleasure as an attractive person and often parts with a beautiful road with even more reluctance than he does with a new friend.

A highway is rather personal. It talks with a traveler all the time. It tells the tourist much about the topography of the country, a great deal about the nature of farming carried on in the community, and whether the people are successful or otherwise on the farms.

HISTORIC INTEREST

The state is rich in Indian lore. No state has more important historic spots. Possibilities of Friends of Our Native Landscape are greater

in Wisconsin than in any other middle west state. Public officials need to be aroused from their passive interest in our natural advantages.

Let us arouse, stimulate, and make our officials and citizens aware of the opportunities to make Wisconsin the Playground of the Middle West. The importance of the work needs only to be understood in order to get great results in a very short time.

GOOD ACCOMPLISHED

It is surprising, the good already done by county rural planning committees. Plans are on foot in several counties to get hold of woodlots and free camping sites; other counties are talking much about planting fruit and nut bearing trees, flowers, and shrubs along roads, while still others are trying to obtain titles to historic places. Yes, the rural planning committees are doing far more than was expected even by the most optimistic. Therefore, let us all take courage, let us all boost and press forward the great work of Wisconsin Beautiful, so that we ourselves and our friends and visitors will be proud of actual accomplishments.

CONCLUSION

Lloyd George said that there is nothing more fatal to a people than that it shall narrow its vision to material things only. We need beautiful highways to stimulate the imagination and exalt the vision of our people. We need a beautiful country to aid in making life rich, full, and complete. Wisconsin citizens should become more interested in the æsthetic phase of life. We must learn to give less thought to material things of life and more thought to the spiritual, the beautiful, and thereby broaden our vision and deepen our conviction of truth and harmony.

(Continued on page 47)

Bulbs for Winter and Spring Forcing

James Livingstone.

Reprinted from Wisconsin Horticulture, October, 1918.

The time for the planting of Dutch bulbs will soon be here again, and a few instructions about their culture for winter and spring forcing would not be out of place at this time.

A great many varieties of tulips, hyacinths, narcissus, etc., are suitable for forcing, but the varieties mentioned in this article will be found most suitable for the ordinary house culture. The bulbs are very reasonable in price, and with intelligent care in handling them will give good results, and afford great pleasure for the amount of money and labor expended on them.

All varieties of Dutch bulbs should be planted as soon as possible after their arrival in this country, (which is usually in September or early October) and should not be delayed much after the first of November. In bulb culture ordinary good, rich garden soil, with a fair amount of sand mixed with it, will give good results. In planting bulbs of hyacinths, tulips or narcissus in pots or pans don't press the soil too firmly under the bulbs as, if the soil is too firm, the roots don't get freedom to work, and then bulbs are apt to get raised clear out of the soil. The roots are then exposed and suffer greatly. The entire results are unsatisfactory.

Some people are very fond of hyacinths, while others object very much to their strong odor in a living room. They should never be placed in a bed room, or in a room where a sick person is, as

the odor is very objectionable in a close room. The French Roman hyacinths are very pretty, and are easily forced. They should be grown in pots or pans, and can be planted quite closely, almost touching each other, and are very effective when grown in pans with five, six or more bulbs. This variety is not hardy, and should not be subjected to frost. After planting they should be given a good watering, and placed in a cool part of the cellar. Four or five inches of sand or coal ashes should be put over them. Leave them there for six or eight weeks, or until they are well rooted, when they will be ready to bring into heat and light. The large flowering single and double Dutch hyacinths can be grown in much the same way as the Romans, but they do not force so readily, and require a longer period in the dark as, to get good results it is absolutely necessary that they be thoroughly rooted. Much of the failure in forcing hyacinths, tulips and narcissus, is caused by bringing them into heat and light before they are well rooted.

In growing the Dutch hyacinths use a good, rich loamy soil. The large bulbs can be grown singly in five inch pots, and will give beautiful spikes, or they can be grown in pans of various sizes, the number of bulbs according to the size of the pan. They should be given more room than the Romans, as they are much stronger growers. The bulbs should be placed in the pan so that the top of the bulb is but barely covered with soil, and when covered the soil should be about an inch below the rim of the pan to give room for watering. Give a good water-

ing, and put away in a cool place covering with sand as already advised. Don't be in too big a hurry bringing them into the light, as the longer you leave them in the dark the more satisfaction you will have. From 10 to 12 weeks is not any too long. Dutch hyacinths can also be grown in hyacinth glasses which are made for that purpose. Fill the glasses with clear soft water so as to almost touch the base of the bulb, put a piece of charcoal in each glass to keep the water sweet, and put them away in a dark, cool place till well rooted. Even when they are well rooted it is sometimes hard to get the flower spike to develop properly. To get the spike to rise above the foliage it is a good plan to start their growth in a semi-dark place, and when the spike is growing vigorously bring them into full light. Another good plan is to put a collar of pasteboard or stiff paper around the pot or glass six or eight inches above the top. This will help to draw the flower spike up above the foliage. The flower spike of a well grown Dutch hyacinth is very heavy, so they should always be tied to a neat stake to keep them from growing crooked.

Tulips should be grown in much the same way as advised for hyacinths. The bulbs should be planted close together in pots or pans, leaving the tip of the bulb just above the soil. Eight to ten bulbs planted in a six inch pot or pan makes a very pretty show in bloom. They should be given a good watering, and then put away in a cool, dark place with the covering of sand as already advised. If the cellar is furnace heated, it will probably be too hot and dry

for good results. It is better to put the hardy varieties of tulips, hyacinths and narcissus out doors in some corner of the garden. Choose a level, well drained spot, and set the pots as close together as possible, water them well and cover to a depth of six or eight inches with sand or sifted coal ashes. Then put a good layer of coarse stable manure or leaves over them, and as the weather grows colder add coarse litter or leaves, enough to keep out the frost. After the bulbs are rooted it won't hurt them to get frozen, but it is better to keep the frost out so the more material that is put on top of them the easier it is to get them out in cold weather.

The single and double early tulips are both suitable for forcing, and if planted in October should be ready to bring into the heat and light about the latter part of January. If they have been cared for properly, they will be well rooted by that time, and will be sure to give thorough satisfaction. The following single varieties of tulips will be found to give good results: Cottage Maid, rosy pink white striped; Proserpine, glossy pink and one of the earliest to force; Rose Luisante, a very beautiful deep pink; Chrysolora, yellow; Yellow Prince. These two yellows are very sweet scented. La Reine, white; Keizerkroon, red and yellow; Thomas Moore, apricot orange. There are also many other varieties that are suitable. Among the double varieties the following are good: Couronne d'Or (crown of gold), rich golden yellow, Imperator Rubrosum, bright scarlet, Murillo, white suffused with pink, and many others.

Narcissus are also valuable for

forcing, and should be given the same treatment as advised for tulips, except the Polyanthus varieties, which will not stand freezing. The paper white Grandiflora and Chinese Sacred Lily belong to this class, and give good results grown in bowls of water, with gravel or pebbles around them to hold them in place. The ordinary narcissus or daffodils should be grown in soil, and treated like tulips. The following varieties will be found to give excellent results; Emperor, Empress, Golden Spur, Von Sion. There are other varieties of bulbs such as jonquils, crocus, snowdrops, grape hyacinths, scillas and others that are pretty that can be forced easily if the same method is followed as with hyacinths and tulips. The whole secret is to give them time to get well rooted before trying to force them.

If the bulbs are planted at the time advised, and left in a dark, cool place in the cellar, or outdoors, and covered as advised, the plants will have made several inches of growth by the latter part of January, and it will be an easy matter to bring them into bloom in any ordinary room with a sunny window.

Protect Fruit Trees

Fruit trees need protection during the winter months. Damage by mice and rabbits is severe if the trees are not protected.

Much loss of time and often great damage can be averted to newly planted fruit trees by a little time and effort to see that conditions are right for proper wintering. Damage by mice can be reduced to the minimum by care in removing all weeds, grass and other rubbish immediately

around the tree trunks; it is the presence of this harbor for the field mouse that is indirectly the cause of loss of thousands of young apple trees every winter by girdling. Apple trees should be protected from damage by mice and rabbits by using heavy paper or a thin veneer wood protector, or a protector made of lath and wire woven together.

This last is more expensive, but when properly made and applied to the tree the season of planting will last from six to nine years and usually this is as long as the young tree needs any protection. In making such a protector, take lath either full or half length and use eight for a protector, weaving them together with copper wire about the size of stovepipe wire, and leave the ends of wire long enough to fasten the protector about the tree; a small piece of burlap or dry grass stuffed in at the top around the tree trunk will prevent any chafing from wind moving the protector. Use a hammer and drive the bottom ends of the lath into the ground an inch, when ground is not frozen, which prevents the mice getting at the tree at all. This protector will guard against rabbits and mice and also prevent sun-scald in early spring, borers, and in fact is the best all around protection. Wood veneer protectors are usually 9 by 16 inches and are applied to the tree by being soaked in water and then encircled about the trunk, being fastened with heavy twine or light wire. These will probably last two years and are far ahead of no protection at all.—M. S. Kellogg in Janesville Gazette.

It's worth while growing sumac and some other shrubs for the beauty of the fruit and foilage in autumn. Besides, it helps to bind soil on banks.

THE FLORISTS PAGE

EDITED BY

HURON H. SMITH, Curator of Botany
PUBLIC MUSEUM MILWAUKEE, WIS.

Bulbs

It is really too bad that we must think so far ahead when we decide to grow some flowers. How nice it would be to decide upon a fine bed of tulips in the spring and go out and plant them two weeks ahead of Easter and yet have them for Easter. But Nature has decreed that certain bulbs must have a resting or dormant period, and many must be frozen solid to do their best. So from the end of August to the middle of November we must plan and plant our spring and summer bulb beds. Before this is written, members of the Milwaukee Florists Club have planted their bulbs for next spring for the Flower show, as they are now getting ready for their Fall Flower show in the Museum-Library rotunda, Nov. 2-5.

Milwaukee is the largest bulb market in the northwest, buying bulbs from Holland, Belgium, France, Germany, Italy and the Bermuda Islands by the carloads. It may interest our readers to learn that Uncle Sam is succeeding in growing bulbs in marketable quantities in southern California and Florida. While none of these were on the market this year, they will be next year and bulbs will be much more plentiful and cheaper next year. They will also probably be freer from disease.

There are really two camps interested in bulbs, the outdoor gardeners and the indoor fans. The property owners take pride in their outdoor gardens and the apartment dweller takes a little of the curse from a dreary winter by capturing a little

of the cheer and perfume of the bulbs in window boxes and water-bowl gardens. While there are 120 recognized genera classified as bulbs, probably ten times as many



species and 150 times as many varieties, there are only about 18 genera that are usually grown in the state. These are Begonia, Caladium, Cannas, Crocus, Dahlia, Freesia, Gladiolus, Gloxinia, Iris, Jonquil, Lillium, Montbretia, Narcissus, Scilla, Tuberose and Tulip.

True bulbs are formed in rings or layers like the hyacinth and onion, or are scaly like some of the lilies. But as understood to the trade, the term includes a large class of flowering and ornamental plants which are bulb-like in their resting stage. In this stage they are dug, stored, shipped, sold and planted. In addition to true bulbs, this class includes many known to botanists as corms which are solid,

as the crocus and gladiolus; tubers, which are succulent and have buds or eyes, as the dahlia and potato; rhizomes, fleshy creeping underground stems like some iris, ginger and several wild plants; pips, the flowering crowns of lily-of-the-valley; and certain other dormant fasciated fleshy roots like peonies, crowfoot and the like.

The bulb is the reserve storehouse of the plant and in it is formed new stems, leaves and flowers for one season. After flowering, the plant above and the roots below ripen off and die away. The bulb is then in its resting condition, a period of 3 to 6 months. It may be taken from the ground and sent to the ends of the earth, with the assurance that it will grow in its new environment.

Let us consider the indoor gardeners first, for we could never do justice in this meager space to the outdoor folk. The flowering of bulbs in vases, bowls and unique pots is always interesting. Hyacinths, Jacobæan lilies, trumpet Narcissi, large multi-flowered Narcissi (the so-called Chinese Lily); Roman Hyacinths, early single tulips, and a few variety of Crocus, all lend themselves well to such culture, provided they are not placed in a



dry furnace-heated room, which causes the buds to blast before opening. Sufficient pebbles or shells or fiber should surround the bulbs to keep them from toppling over. A lump of charcoal thrown in the water absorbs impurities. Where hyacinths are grown it is best if the base of the bulb does not rest in the water. I have seen an aquarium where hyacinths were placed on a strip of virgin cork with holes cut through to let the roots reach the water. At our spring flower show, Welke Bros. exhibited a unique treatment of crocus bulbs. These were planted in Florida Moss in a wooden shoe from Holland, and looked quite at home. Where moss or any special compost is used, especial care must be taken to keep the moss damp. If dry for but one day, there is danger of the bulbs going blind, that is, not opening.

Our commonest winter flowering bulb is the Paper White Narcissus and it may be had everywhere. The 5 and 10c stores always carry a large stock of them. They should be grown in shallow bowls or saucers and be supplied with sufficient water to keep the roots submerged.

The outdoor bulb culturist has many more species to choose from and can get many color effects hardly possible with other stock. When planting beds for a design it pays to take extra pains. The soil should be removed to a depth of six inches. The lower soil should be spaded, using well rotted manure and bone dust worked in. Then the bed should be smoothed over and covered with an inch of sand. This prevents the manure from touching them and allows the water to drain off, thus removing causes which might lead to decay. It is a difficult matter to plant a uniform depth with a trowel, and in trying to get

uniform distance apart, one will often chop off a part of a neighboring bulb. An inch too high or an inch too low will also change the time of blooming so that a bed would bloom patchy. Then too a bulb may become hung in the trowel hole, where it would die because it could not touch bottom.

Many folk do not realize that bulbous flowers should be picked, if they are to produce flowers more than one season. A hyacinth that is allowed to mature seed is exhausted. Only the leaves, must be left to store up food for the following season.



For the best flowers, one must purchase the largest, best and highest priced bulbs. The best named hyacinths, "top roots" as they are called in Holland, require 4 to 6 years to attain full size (8 to 10 inches) and give best flowers. Remember that smaller bulbs will produce smaller flowers or fewer flowers in the case of polyanthus types. Mere size alone is not a standard for judging bulbs. A plump, solid bulb without flabbiness will give the best blooms.

The proper depth to plant bulbs varies according to the kinds. It is a common fault to plant them too near the surface. Some kinds like

the Californian *Humboldtii* and the Washintonianum lilies do best when 10 to 12 inches deep. Hyacinths, narcissi, tulips and large bulbs do best at 4 to 6 inches deep. A good rule to follow is to make the depth three times the average diameter of the bulbs. Hardy bulbs root during the fall and early winter, when the soil is warmer than the surface of the ground. If they are planted too shallow, the freezing, thawing and heaving of the upper crust of soil in mild winters often causes the bulbs to break from their roots, and produce only poor flowers. When good cold weather sets in and a light crust has frozen, then cover the bed with a 4 to 6-inch layer of leaves or straw. This protects from thaws. This should not be put on too early, for it would warm the soil and start growth that would freeze. It should likewise be removed gradually in the spring. A light sandy soil is the best bulb ground, as it permits drainage and allows aeration.

The best hardy bulbous plants for lawn planting in clumps are: the day lily, such lilies as *candidum*, *tigrinum*, *speciosum* and *auratum*, *dicentra*, Crown Imperial, *Montbretias*, *pæonies*, and *Kempferi* and *germanica* irises. For earliest spring the crocuses, *chionodoxas*, snowdrops, squills, winter aconite, snowflakes and *tritellias* should be planted. For patch flowering in neglected corners where the lawn mower never goes there are a host of good species. Such flowers as hardy anemones, *camassia*, lily-of-the-valley, *dicentra*, *erythroniums*, *funkias*, *liliums*, iris, poets narcissus, *Von Sion* and many other narcissi, *trilium*, grape hyacinths and others too numerous to mention are recommended.

(Continued on page 47.)

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Out for One Thousand New Members

Two pages of the October number of this paper were used to announce premium offers to new members. Will readers please pass along to a neighbor this copy? If per-
 chance there are any who file their papers, please drop a postal card asking for an extra copy. Remember that the only way in which this offer can be of any value is to get it into the hands of people who are not members. Will you do this? No solicitation is needed, just pass along your paper. Extra copies may be had on application.

We have in preparation an at-

tractive offer to members which, we surmise, will start some of you working. In the meantime, pass the good word along. Will you?

The Next Annual Convention

Only the dates of the next annual convention were given in the October number; nothing more was possible at that time as copy for our paper must now be in five weeks preceding date of issue and the dates were not fixed until late in September. This paper is printed in Des Moines, Iowa, where the class of state printing of which HORTICULTURE is a part, is done.

The dates of the convention are Wednesday, Thursday and Friday, January 10, 11 and 12, 1923. The convention and fruit display is held in January, in odd numbered years, because the state legislature meets then, and the growers, both amateur and professional, are anxious for the opportunity to show the lawmakers that fruit-growing in Wisconsin is a reality and not make-believe. Many entries of apples are already in, three of which fill on every premium offered, and reports from others indicate that we will have the biggest display of apples ever staged in the state outside of the state fair. Even so, the chances are even, that somebody will ask: "Are these apples grown in Wisconsin?" This happens every year at the state fair. How would you answer such idiots? As we were saying, there will be a big showing of apples by some of the larger growers, but the small grower need not, and should not, hesitate to come. It invariably happens that some of the best prizes are carried off by the smaller exhibitors. Thirteen hundred dollars are offered in premiums, so most everybody ought to get at least a bite.

So far as the program is concerned, it is now in the making and we are open to suggestions up to December first.

As always, the leaders in horticulture in our state, both men and women, will be on the program and the biggest men we can get from the outside. If, with your help, the high standard of other years is reached, you can confidently decide to attend the convention even though no program whatever is printed in advance. An outline will be printed in the December number and the completed program in January.

James Currie

One of the oldest and most honored members of the Milwaukee Florist Club, Mr. James Currie, died at his home, 2527 Grand Ave., Milwaukee, on Sept. 26th, aged 69 years. Mr. Currie was born in Scotland in 1853 and came to the United States when 19 years old. He was joined a year later by his brother William. In 1875, the firm of Currie Brothers was founded.

James Currie was always interested in Florists Associations and belonged to the forerunner of the present Florists Club, and has been a member of this one till his death. He has been on the Milwaukee Park board for many years and has given liberally of his time. He was an enthusiastic landscape gardener as well as florist and seedsman. He has also been for many years the superintendent of the Forest Home Cemetery in southwestern Milwaukee. He was also a member of the Wisconsin State Horticultural Society. At the last meeting of the Florists Club, resolutions were engrossed to send to his widow and four children, telling of their appreciation of his life work. At this same meet-

ing the Club wrote to the mayor recommending one of their members for his place on the Park Board, Mr. Clem C. Pollworth. Mr. Currie is the first member of the Milwaukee Florists Club to die in several years.

Something Wrong

Potato growers in Central Wisconsin are selling their crop for twenty-five cents a bushel, and even less, with slight prospects for a gain.

In Outagamie, Racine and Kenosha Counties thousands of tons of cabbage are rotting in the field, because the cost of harvesting and marketing is greater than the price offered for the crop. The growers rightly conclude that there is no reason for throwing good money after bad. What is the solution of these serious problems? No doubt economists, both in and out of the department of markets, state and federal, are giving the matter deep thought and may arrive at the solution.

In the meantime, the editor may perhaps be permitted to suggest that a possible reason for these conditions lies in a lack of judgment, or vision, or brains, on the part of the growers of these crops. Just a few years ago, four or five, potatoes brought the growers \$1.50 to \$2.00 a bushel and cabbage \$80 to \$100 a ton. Since then production has been increased until in 1922, there is a surplus of several million bushels of potatoes in the country over and above consumption requirements. The same is true in a lesser degree of cabbage. There are other factors, but as a discussion of these might appear to savor of politics, we will confine our remarks to overproduction.

Supposing some of these potato and cabbage growers, not all of

them, but some of them, should turn their attention to fruit growing, should devote a small acreage to strawberries, raspberries and apples. At present less than one-half enough of these fruits are grown in Wisconsin to supply Wisconsin markets. Just now, October 10, potatoes are selling at retail in Madison at one and one-fourth cents a pound and apples at six cents a pound. Last summer, garden truck of all kinds was a drug on the market, while strawberries retailed at twenty-five cents a box and red raspberries at thirty-five to forty cents.

Somebody is ready to remark that this argument for more fruit is negated by the potato overproduction argument. This is possible but not probable. It will take several years of experience to catch up with the demand for fruit and in the meantime, only the fittest will survive. It takes brains to raise fruit successfully and market it to advantage. That's why we are telling you, raise fewer potatoes and cabbage and more fruit and everybody will be happier.

Property Rights on Highways

The following story from a Colby, Wis., paper might be duplicated in any other county in Wisconsin:

"Farmers in this county are complaining loudly that Sunday auto parties raid their apple and nut trees, showing no regard to the rights of private property, and that they also take any stray pumpkins and squash growing anywhere near the roadways. In several cases recently so aggravating have been the despoiling of apple trees, that the farmer or his wife have stood guard with shotguns. The question of rights on roadways has also come up."

"Who owns this road anyway," asked a grieved man from the city who had just been bereft of a sack of nuts that he had picked on the side of the road.

"I own the road," calmly stated the farmer, as he swung the sack of recovered nuts over his shoulder and started for his house."

"My neighbor over there only owns half of the road, but I own all of it right here where I own the land on both sides."

The city man protested that the road was public property, and that it belonged to the state or to the county.

"The town nor the state hasn't bought nothing," the farmer called back.

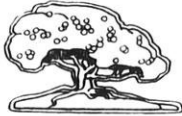
The farmer was absolutely within his rights, says an authority. He owns all of the highway up to the center of the road, and if he owns property on both sides of the road, the whole road belongs to him.

This authority says that the town or county or state has purchased the road only under certain conditions, and these conditions are for highway purposes. The roads have been cut through for traffic only, and the man who picks nuts on the side of the road is making private use of it, and is therefore encroaching.

A farmer is entitled to raise vegetables or grain on the sides of the road, provided it does not interfere with traffic. If cows that are driven over the road nibble on the vegetables the owner of the land has no claim for indemnity.

Nuts are about ready to harvest. Wise indeed is the family that lays in a good supply of butternuts, hickory or black walnuts, depending on what are available in the community.

FREE TO NEW MEMBERS



Native Plants of Wisconsin Suitable for Cultivation

By WILLIAM TOOLE, Sr.
BARABOO

CONTENTS

- Diary of the Native Plants
- Native Plants of Wisconsin
- Our Wisconsin Native Trees
- Cultivating the Native Trees
- Our Native Climbing Vines

Published by
The Wisconsin State Horticultural Society
1922

PRICE FIFTY CENTS



WISCONSIN HORTICULTURE

Vol. XIII Madison, Wisconsin, September, 1922 No. 1



The Wisconsin Garden Book

CONTENTS

- (1) Getting Ready for the Garden
- (2) How to Use the Home Garden
- (3) Lawn Plants
- (4) Garden Soils and Grading-Making
- (5) Sowing the Seed
- (6) Irrigating Your Garden
- (7) Pruning Your Garden
- (8) Stragglers and Regenerators for Home and Market
- (9) Tree Pruning

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FOUR DOLLARS FOR ONE

ANNUAL REPORT, 1921

TABLE OF CONTENTS (in Part)

- Fruit Recommended for Culture in Wisconsin
- Trees and Shrubs Recommended
- The Back Yard Garden, Mrs. Wm. C. Krossing
- EVERYBODY'S GARDEN
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- Flowers for Everybody's Garden, Mrs. C. E. Strong
- Peas and Beans for Everybody's Garden, Wm. Longland
- Fruit for Everybody's Garden, N. A. Rasmussen
- A Winter Garden for Everybody, C. N. Brown
- Insects in Everybody's Garden, Chas. L. Fluke, Jr.
- Off year Apple Bearing, R. H. Roberts
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- Marketing of Wisconsin Apples, M. B. Goff
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- Diating to Control Fruit Insects, S. B. Fracker
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- Truck Crop Insects of 1920, S. B. Fracker

ANNUAL REPORT

OF THE

Wisconsin State Horticultural Society

For the Year Ending July 1, 1921

VOL. LI

Frederic Cranfield, Editor
Madison, Wis.

ISSUED BY WISCONSIN
IMPROVED PRINTING COMPANY
1921

ANNUAL REPORT

OF THE

Wisconsin State Horticultural Society

For the Year Ending July 1, 1922

Contains Forty-one Papers and Addresses on Commercial and Amateur Tree Culture, Vegetable Gardening and Floriculture

VOL. LII

Frederic Cranfield, Editor
Madison, Wisconsin

ISSUED BY WISCONSIN
IMPROVED PRINTING COMPANY
1922

READ BIG OFFER PAGE 43



One Thousand Prizes of \$4.00 Each

We have set out to get 1,000 new members by January 1, 1923. By way of inducement we will give to each new member \$4.00 value (a low estimate) for \$1.00, annual membership as follows:

For One Dollar, currency, P. O. money order or personal check, we will send you:

(1) Wisconsin Horticulture from date, October 1, 1922, to January 1, 1924	\$1.25
(2) A copy of the 1922 Annual Report.....	.50
(3) A copy of either 1917 or 1920 Annual Report.....	.50
(4) The Wisconsin Garden Book .....	.25
(5) Native Plants of Wisconsin, Toole .....	.50
(6) Annual Membership	1.00
Total	\$4.00

- (1) Wisconsin Horticulture: A 16-page monthly magazine, not as good as some other horticultural magazines, perhaps, but better than most of them; at least for Wisconsin people, because whatever it contains is prepared for Wisconsin. There is no pretense of covering all of horticulture, but only Wisconsin horticulture. You will like it.
- (2) The Annual Report: Contains 182 pages; 16 pages lists of fruit trees and flowers recommended for cultivation in Wisconsin. These lists are carefully prepared by experts each with a lifetime experience in Wisconsin, and are revised every year. Addresses and discussions at the two annual conventions. Nothing is published in the Reports except that it has permanent value. The subject matter of a Report five or even ten years old is as valuable as one of yesterday.
- (3) We have a large surplus of 1917 and 1920 Reports and a few of preceding years. As long as they last one copy will be sent each new member. These contain many valuable papers; cloth bound.
- (4) The Wisconsin Garden Book: 55 pages, 5x7½ inches. The simplest, most concise and readable book on vegetable gardening for beginners yet published. It tells you exactly what you want to know, in plain language and in the fewest possible words; seven chapters on vegetable gardening, and two short ones on berry culture and tree fruits for good measure. Written by practical Wisconsin gardeners; published by the State Horticultural Society. Price 25c.
- (5) Native Plants of Wisconsin, by William Toole, Sr.: Five interesting and valuable papers.
 - (1) Domesticating our Native Flowers.
 - (2) Native Shrubs of Wisconsin.
 - (3) Our Wisconsin Native Trees.
 - (4) Cultivating Our Native Ferns.
 - (5) Our Native Climbing Vines.

These are not merely botanical lists of plants. In each paper Mr. Toole tells how to use these native plants. These papers, delivered at our Annual Conventions were considered of such value that the Society has issued them in this attractive booklet. Price 50c.

- (6) Annual Membership in the State Horticultural Society: This is what we are aiming at, why we are offering you \$4.00 for \$1.00, to increase our membership. The Society is doing splendid work. It is not a state "Board" or "Department," bound by red tape, but is close to the people. It is a privilege to be a member. You will receive the paper and one Report a year as long as you remain a member.

On receipt of One Dollar the books described above and pictured on the opposite page will be sent you postage paid; the paper from date of your remittance to January 1, 1924, and a receipt for Annual Membership to January 1, 1924. If you have a neighbor or friend who is a member hand the dollar to him, he will do the rest; otherwise address

701 Gay Building

FREDERIC CRANEFIELD, Secretary

MADISON, WIS.

NOTE: We cannot accept postage stamps.

THE INSECT PAGE

Edited by E. L. Chambers, Assistant State Entomologist

The Japanese Barberry Innocent

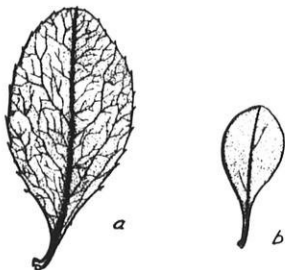
In the July issue of "Wisconsin Horticulture" there appeared on this page an article entitled "Why Eradicate the Barberry?" in which the writer did not make a statement to the effect that the Japanese Barberry was not included as harmful.

Since several complaints have been received from nurserymen who feel that it might hurt the sale of the Japanese variety we are printing here some cuts with explanations, showing the distinguishing characteristics of these bushes, in order that there may be no confusion.

Can the Leaf Hopper Be Controlled?

Two plots, an acre of Green Mountains and one of Rural New Yorkers, in Waupaca County, were sprayed this summer with the home-made Bordeaux (4-4-50) we have been recommending for the control of the potato leaf hopper.

On one side of each was an acre



Leaf of common barberry at left and smooth leaf of Japanese barberry at right.

as a check plot, sprayed with arsenate of lead only, to control the potato bug. On the other side was the balance of the field sprayed with a commercially prepared Bordeaux. These plots were all sprayed at the same time, with the same traction

sprayer and with the same type nozzles. In contrast to two nozzles throwing the spray from each side as was used on the balance of the fields, our home-made Bordeaux plots were sprayed with a special boom designed to reach the under side of the foliage and discs with small openings were used in the nozzles, with two hundred pounds pressure

Home-made Bordeaux—

186 Bu. per A. 265 Bu. per A. Seventy-five gallons of spray were applied per acre at a cost of 54 cents more per acre for the material than the arsenate of lead plot and at about one-half the cost per acre of the commercial product. These plots were all sprayed four times at ten day intervals, beginning



Illustrating habits of growth. Dangerous barberry on left.

to produce a fog spray which would not run off.

The spraying was done by the State Department of Agriculture, co-operating with the Experimental Station, as a spraying demonstration.

The results were as follows:

Rural

Green Mountains New Yorkers
Arsenate of Lead only—

86 Bu. per A. 180 Bu. per A.

Commercial Bordeaux—

128 Bu. per A. 250 Bu. per A.

July 7th, when the plants were about ten inches high.

Keep all aphid and other insects off house plants now. Once they become established it will be hard to rid the plants of them.

Have the old canes been removed from the raspberry patch and the new growth thinned? These thinnings should always be burned to destroy as many insects as possible.

Three Sides of a Question

We have before us an oft repeated question: Can I make money growing outdoor flowers and if so what kinds? This is the substance, if not the exact form, of this ever recurring question: (1) On general principles there is not very much in the game. Most florists, wholesale and retail, have a piece of land where they grow their summer flowers, such as peonies, gladiolus, sweet peas, and possibly dahlias. Small town markets are easily supplied and in larger cities the only secure method of disposal is through retailers who demand a regular and unflinching supply to meet their regular demand. After a midsummer storm outdoor flowers are so bedraggled as to be unsalable for a day or two. (2) For this reason florists are each year growing more and more of this stock under glass, utilizing carnation and chrysanthemum houses that would otherwise be unoccupied at that season. It is not unusual now to see a whole house of snap-dragon, calendula or gladiolus in midsummer. The quantity and quality of bloom is here under control and not subject to the caprices of the elements.

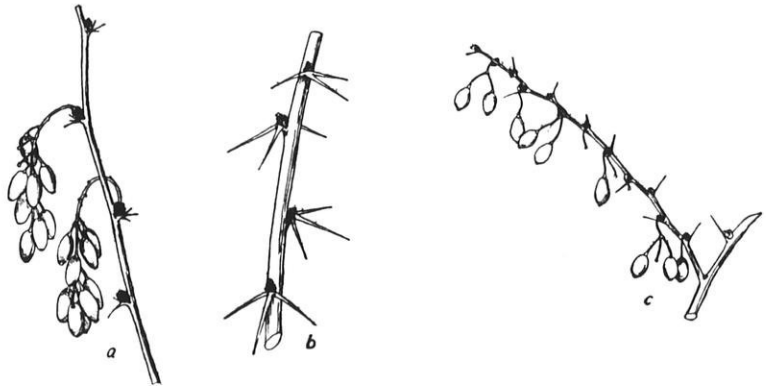
(3) An enterprising person may establish a very good trade in outdoor flowers lasting, in southern Wisconsin, from April to frost with a year or more of preparation; planting certain perennials which require a year to come into bloom. Beginning with early iris a continuous supply of flowers may be had until November. Let's hear from some expert on this. A sidewalk stand or small store may often be had at small cost but the generally accepted plan is to sell to a leading grocery store. The conclusion may be fairly drawn that this is not a line of work to be depended on for a

living, whether wholesale or retail, but a means of making a little money by those who will not be dependent on this for an income.

Great Plains Horticulturists Are Coming to Wisconsin in 1923

Wisconsin will be host to the 1923 gathering of the Great Plains horticulturists.

Prominent horticulturists and others interested in orcharding from adjoining states and provinces will meet in the Badger state some time next summer to plan the develop-



The common or harmful barberry at the left has berries in long drooping clusters (a). In the Japanese barberry shown at the right the berries occur singly or small bunches of two or three (c).

ment and improvement of this important industry. While definite plans have not as yet been formulated, it is thought that the first visit will be to the experimental plots at Oshkosh, where work in pruning and fertilization in their relation to biennial fruiting of apples is being done. From there the party will probably go directly to the Sturgeon Bay country, to study the great cherry industry and the experimental projects carried on by the agricultural staff of the University of Wisconsin.

The Great Plains horticulturists, which is more of a gathering than a society, is four years old. Last year the meeting was held in Iowa, where

apple breeding experiments proved of special interest. Canadian provinces, Minnesota, the Dakotas, Iowa and Wisconsin comprise the territory making up the official membership of the organization. W. H. Alderman of the University of Minnesota is the president and A. F. Yeager of North Dakota is the vice president.

Flowers for Northern Wisconsin AMATEUR

A correspondent asks for a list of shrubs, perennials, bulbs, etc., hardy

on sandy soils in the upper half of the state.

No carefully selected list is necessary. Any or all of the shrubs and herbaceous perennials in our "official" lists, printed in the Annual Report, are as well adapted to northern Wisconsin as to the more southern sections. This is also true of roses. A protection of straw or of evergreen branches is very helpful, even with shrubs, the first year. Perennials as peony, phlox and roses should be covered every year.—(See October Wisconsin Horticulturist.)

Branches of the Wahoo or Burning Bush make excellent bouquets for the table.

Fruit in Vilas County

We present herewith portions of a letter, and our opinions on the same, for the benefit of residents of Vilas and adjoining counties.

"I have recently acquired a small tract of hardwood land in Vilas county. I would like to plant a few fruit trees, say, half a dozen apple trees, possibly half a dozen cherry trees and a like number of pear trees. I might also plant two or three quince trees and possibly some grape vines.

"But before entering into this planting program I would appreciate it very much if you would give me the benefit of your experience as to whether it is advisable to proceed at all in the matter."

From our experience of nineteen years testing varieties, we state with confidence that quince, cherry and grape should be eliminated from this list—none will succeed.

Success with apples will depend largely on local conditions. If the soil is not too heavy and is well drained, the hardier varieties of apples should succeed fairly well, such as Duchess, Patten Greening, Hibernial and Malinda. These are all iron-clad but there is not an apple of good quality in the list unless Duchess is so ranked. If the site has good soil and air drainage, not a pocket in the woods, Wealthy and Northwestern Greening will live for a few years at least. Not very encouraging but we must face the facts.

Twenty-five, or better, fifty years from now, when the country thereabouts has all been cleared up and under cultivation, other kinds may be planted with some hope of success, but it is not and never will be a fruit country, not at least until we breed hardier fruits than any we now have.

Grasses for Highways

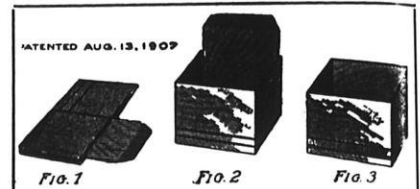
"Our county has just completed a stretch of pavement about one and a half miles long just west of the city. The soil is a clay mixture. What kind of grass seed should be used on the grading alongside the highway in order to prevent washing and the growth of noxious weeds? Would like to know if the seeding can be done now, October 16th."

If the banks are very steep seeding is impractical unless strips of sod are first laid to check washing. So far as the kind of grass to be used, either for highway or lawn, there is but one, Kentucky blue grass, more often called June grass in the north. No matter what "mixture" is used, if it contains any June grass whatever you will have a pure grass sod in the end; it will crowd out all comers. Stronger growing grasses, such as Red Top and Rhode Island Bent are used in mixtures so as to have a ground cover while the June grass is establishing itself. As good results may be had in this case by sowing oats at the time of grass seeding.

It is now too late for this kind of seeding. Sometimes excellent results are obtained by seeding lawns in late September or early October when the season holds open late and the seeding is covered with manure or other mulch early in winter.

Purchase a few good, firm bulbs of daffodils, hyacinths, etc., for growing in pots or boxes in the house. The bulbs should be planted about three inches deep.

Prunus tomentosum and the red berried elder are shrubs that are ornamental in July because of their red fruit. Birds find the fruit very edible and even prefer it to garden fruits of that time of year.



Berry Boxes

Crates, Bushel Boxes
and Climax Baskets
As You Like Them

We manufacture the Ewald Patent Folding Berry Boxes of wood veneer that give satisfaction. Berry box and crate material in the K. D. in carload lots our specialty. We constantly carry in stock 16-quart crates all made up ready for use, either for strawberries or blueberries. No order too small or too large for us to handle. We can ship the folding boxes and crates in K. D. from Milwaukee. Promptness is essential in handling fruit, and we aim to do our part well. A large discount for early orders. A postal brings our price list.

Cumberland Fruit Package Company

Dept. D, Cumberland, Wis.

Quality and a Square Deal

ARE WHAT WE OFFER YOU

Our new 48-page catalog (16 pages in colors) gives you an honest description of FRUITS, VINES, ORNAMENTALS, PERENNIALS, etc., for this climate.

If you are in doubt as to what is best to plant we will be glad to advise with you.

We do landscape work.

The Coe, Converse Edwards Co.

Fort Atkinson, Wis.

Kellogg's Nursery

Janesville

Wisconsin

SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shrubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen. Order direct from a reliable nursery and save money.

County and Township Parks

Your attention is invited to Mr. Hazelwood's article "Country Beautiful," in this number. No doubt our readers may consider some of the thoughts advanced by the author as radical and impractical, as the zoning plan which is being adopted by cities, extended to the country. Who shall say that Mr. Hazelwood is too radical, in other words a "crank"? Our idea is that he is just a few years ahead of his time, a prophet crying in the wilderness.

It should be gratifying to members of this society to know that Mr. A. A. Hirst, State Highway Commissioner, and many others have endorsed the idea of county parks and playgrounds, first brought out by this society.

Country Beautiful

(Continued from page 35)

Everybody truly loves the out-of-doors. Thoreau says that the in-door life breeds insanity, and that the house is in a limited sense a hospital. The world outside is a panorama, the greatest of all movies, and a man should learn to know and love the hills, valleys, fields, and the wild flora and fauna, if life is to be rich, full and complete. Too few of us know the common stars and too few of us know the names and character of the common

wild trees, shrubs, and flowers; too few of us know how to enjoy the beauties of lands we have on all hands in the state. Any agency that will bring about more of an appreciation of the æsthetic should be encouraged.

Bulbs

(Continued from page 39.)

Bulb growing is in the process of becoming very popular in Milwaukee and we may yet show our English cousins something in this line. We have two very active garden clubs which hold monthly shows. The Milwaukee Garden club holds its meetings at the Milwaukee Art Institute and the West Allis Garden club at one of their schoolhouses. We say, more power to their elbow.

Important Notice to Members

We want samples of the Delicious Apple from every part of Wisconsin. Whoever has Delicious, large or small, highly colored or dull, can help by sending two or three specimens to this office NOW. If five specimens are sent same will be preserved and entered for competition at Annual Convention. Postage or express charges will be paid by this society. Address

Frederic Cranfield
701 Gay Bldg. Madison

The Hawks Nursery Company

are in a position to furnish high grade Nursery Stock of all kinds and varieties suitable to Wisconsin and other northern districts.

Will be glad to figure on your wants either in large or small quantities

Wauwatosa . . . Wis.

McKAY NURSERY COMPANY

MADISON

WISCONSIN

Nursery Stock of Quality

for Particular Buyers

Have all the standard varieties as well as the newer sorts. Can supply you with everything in

**Fruit Trees, Small Fruits,
Vines and Ornamentals.**

Let us suggest what to plant both in Orchard and in the decoration of your grounds. Prices and our new Catalog sent promptly upon receipt of your list of wants.

**Nurseries at
Waterloo, Wis.**

WOODEN BOXES and CRATES

One bushel size for apples, onions and other farm products.

Half barrel and barrel size for cabbage, turnips, carrots
and all winter vegetables.

One bushel seed corn crates. Butter and cheese boxes.

Our newly designed coop for shipping live chickens, weighs 30 pounds
and it is the strongest on the market.

LA CROSSE BOX COMPANY

LA CROSSE

WISCONSIN

ANNUAL CONVENTION AND FRUIT EXHIBIT

of the State Horticultural Society, State Capitol
Building, Madison, Jan. 10, 11, 12, 1923

The program will be full to overflowing with good things for both the amateur and professional. You will get only the fossiliferous remains in the Transactions of this Convention which will be published in July, 1923.

The Convention itself breathes life and action. There, and there only, you meet the men and women who are making Horticulture in Wisconsin and get from personal contact inspiration that will last you a lifetime. Don't wait for the program before making up your mind to come. Even if there was no program at all you could afford to come.

A Commercial Fruit Growers Section of the State Horticultural Society is to be organized and a broad plan of work outlined which will be of direct benefit to every grower and consumer of fruit. Everyone who is in the fruit game for profit should attend this conference.

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, November 1922

Convention Will Be Held at Milwaukee

At the last convention the following motion was passed: "The Secretary is hereby given authority to take a mail vote on whether or not the state convention be held in 1922 at *Madison* or *Milwaukee*, in connection with the Markets Exposition as was done this year."

To carry out this plan, the secretary sent out on September 15th, a letter to each member asking for his vote in this matter. To date (Nov. 7th) 110 votes have been received for Milwaukee and 24 for Madison. Since the majority of votes are for Milwaukee the convention will be held at that place. We hope more of our members will attend this year than in previous years. Look over the following program and make your plans to attend.

PROGRAM

WEDNESDAY AFTERNOON, DECEMBER 13TH

2:00—Board of Managers' Meeting, Milwaukee Auditorium, Milwaukee.

THURSDAY MORNING, DECEMBER 14TH

9:00—Social Meeting. Paying Dues.

9:30—Call to Order.
Reading minutes of last convention.

Secretary's Report.
Treasurer's Report.
Report of Standing Committees.

Report of Board of Managers.
Appointment of Committees.

11:00—President's Address, F. F. Stelling, Reedsville, Wis.

AFTERNOON

1:30—"Value of Cooperation," A. A. Brown, Sec'y Dodge Co. Ass'n.

"Standardizing Honey Labels and Packages," B. B. Jones, State Division of Markets.

Report of Label Committee, C. W. Aeppler, Chairman.

"A Standard Honey Container for the State Association," H. F. Wilson.

Open discussion on a uniform and standard container for the state association.

"Box Hive Beekeeping and the Marketing of Apiary Equipment," Dr. S. B. Fracker, State Entomologist.

"Miller Memorial Library," H. F. Wilson, University of Wisconsin.

Address, H. C. Dadant, Dadant Company, Hamilton, Illinois. (Topic to be announced later.)

EVENING

7:30—Beekeeping "Movie."

FRIDAY MORNING, DECEMBER 15TH

9:00—"Progress of the Area-Clean Up Work in Wisconsin," C. D. Adams, State Apiary Inspection Department.

"The Attitude of the State Department of Agriculture Towards Bee Disease Eradication Work," C. P. Norgord, State Commissioner of Agriculture.

"The National Honey Producers' League," Dr. Fracker, Secretary.

"Commercial Beekeepers and their Success"—Representative of the G. B. Lewis Company.

"Some Data on Spring Brood Rearing," Ivan Whiting, Plymouth.

"Plans for 1923 Extension Work," L. P. Whitehead.

AFTERNOON

1:30—"Reinforcing Foundation in Brood Frames," E. R. Root, Medina, Ohio.

Open discussion on How

to Make Our Association More Valuable.

Business Session.

Report of Committees.

Old and New Business.

Election of Officers.

Appointment of Standing Committees.

Wisconsin Products Exposition
Milwaukee, December 14th to 20th,
Auditorium State Association
Booth

Through the splendid cooperation and financial support of the members of the State Beekeepers' Association, the affiliated locals and supply companies of Wisconsin, the *Honey Booth* for the State Beekeepers' Association at the Wisconsin Products Exposition is assured. Your secretary was indeed pleased to have the members respond so quickly in providing financial help as well as samples of honey and takes this opportunity to thank all members, local, and supply companies who donated either money or honey for this booth. A list of those making donations is included.

It is easy for all of us to realize the advertising value of such a booth, but perhaps only a few consider the educational value in such an exhibit. An attractive display of honey—and the committee is going to put forth every effort to make it attractive—will do more to put the public straight concerning *HONEY* than any other plan we could undertake at this time, where the cost would not be more than \$125. What good will it do to advertise our product if the public has not been convinced that we have a *TRUE* product? This brings us back to educational work. It is through educational channels that the public will be convinced of the true value of our product, *honey*. We produce a *first class product*—let's place it in its proper place. The State Association Honey Booth will try to aid in that direction.

Wisconsin Beekeeping

H. F. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association		
President.....	F. F. Stelling	Reedsville
Vice President.....	Conrad Kruse	Loganville
Treasurer.....	C. W. Aeppler	Oconomowoc
Secretary.....	Malitta F. Hildreth	Madison

Annual Membership Fee, \$1.00
Remit to M. F. Hildreth, Secy., Madison, Wis.

HONEY DONATION		
	Ext. Lbs.	Comb Lbs.
W. A. Lumley.....	5	.....
G. A. Gust.....	5	.....
L. Francisco.....	15	.....
A. Grebel.....	10	.....
A. H. Kapelke.....	10	.....
J. L. Robinson.....	5	.....
B. J. Thompson.....	6	.....
L. O. Brainard.....	5	.....
L. A. Loboda.....	5	.....
Carl H. Maass.....	4	.....
Emily F. Creydt.....	1	.....
Frank Yansky.....	1	.....
M. J. Krubsack.....	4	.....
J. C. Hatch.....	2	.....
Edw. Hassinger.....	1	.....
Herman Gullickson.....	1	1
F. E. Matzke.....	12	.....
H. L. Hartwig.....	1	.....
R. A. Klabunde.....	.....	1
H. Lappley.....	5	.....
Alfred Martin.....	5	1
A. V. Pollack.....	10	.....
Pete Cass.....	5	.....
A. F. Haberman.....	2	.....
L. J. Corbeille.....	1	.....
Henry Meyer.....	2	.....
A. F. Schneider.....	6	.....
Theo. Qualley.....	2	.....
Chas. McKinney.....	5	.....
Glen Aspinall.....	2½	.....
C. W. Radloff.....	5	.....
Wm. Hanneman.....	5	.....
Theo. Gentz.....	5	.....
T. A. Moller.....	4	.....
R. A. Schwarzkopf.....	5	.....
Conrad Kruse.....	1	.....
M. A. Shepard.....	2½	.....
Otto & Procknow.....	10	.....
Wm. Michaelson.....	5	.....
Mathilde Candler.....	12	.....
Wm. R. Pember.....	4	.....
F. D. Leonard.....	2	.....
C. E. Zilmer.....	5	.....
Total.....	204	3

MONEY DONATIONS

Individual Members

John J. Tanner.....	\$.50
John Kneser.....	.75
H. G. Gay.....	.50
C. H. Maass.....	1.00
F. E. Matzke.....	2.00
A. E. Jaeger.....	.50
A. F. Schneider.....	2.00
Andrew Stevens.....	1.00
A. H. Kapelke.....	1.00
Emily F. Creydt.....	1.00
J. C. Hatch.....	1.00
H. V. Wilson.....	.50
H. J. Vernik.....	.50
Wm. Sass.....	1.00
A. A. Brown.....	1.00
M. J. Krubsack.....	1.00
W. E. Krause.....	.25
A. R. Tibbetts.....	.50
Wendell Burg.....	.50
Jas. Gwin.....	1.00
A. E. Sherman.....	1.00
Emilie Muller.....	1.50
Frank Yansky.....	1.00
Geo. S. Hall.....	.50
James L. Howard.....	.50
Arthur J. Schultz.....	1.00
Herman Gullickson.....	.50
Wm. Cezar.....	.50

Supply Companies

G. B. Lewis Company.....	25.00
Lotz Company.....	20.00
A. H. Rusch Company.....	10.00

Affiliated Locals

Brown Co. Assn.....	2.00
Milwaukee Co. Assn.....	10.00
Fox River Valley Assn.....	2.00
Sheboygan Co. Assn.....	2.00
Dodge Co. Assn.....	1.00
Shawano Co. Assn.....	1.00
Richland Co. Assn.....	2.00
N. E. Wis. Assn.....	1.00
Rock Co. Assn.....	2.00
Langlade Co. Assn.....	5.00
H. J. Fadness.....	1.00
T. A. Moller.....	1.00
F. D. Leonard.....	1.00
John H. Paas.....	1.00
Conrad Kruse.....	.50
Wm. Michaelson.....	1.00
Mathilde Candler.....	.50

Total\$113.00

The Honey Market and Co-operative Marketing

Many beekeepers of Wisconsin are interested in a state marketing association and a great many have agreed to support such an organization. However, the present market condition in Wisconsin is very unsatisfactory for the reason that beekeepers are offering honey for sale in ten pound pails at prices varying from 10 cents to 25 cents per pound. Wherever this condition exists you are bound to find the industry very much demoralized. It is not necessary to mention the fact that beekeepers who are selling honey as low as 10 cents a pound *retail* are really *not* making enough to cover the time they have given to their bees. This is a well known fact. What is needed is a general uniform price. This price should be set by the State Association at our next annual convention. A Price Committee should be selected to consider the matter of prices for Wisconsin honey, both retail and wholesale.

We are making arrangements with a honey pail manufacturer in Pennsylvania to furnish us with lithographed pails. These pails will be stamped with a state association label and there will be a place on the top of the pail for individual beekeepers to place their own name. It is not expected that these pails will be used before the year 1923. However, every pail of honey under the association label should sell at a uniform price, both wholesale and retail. A scale of prices suggested by the Michigan State Beekeepers' Association is as follows:

LIGHT HONEY

1 to 5 5-pound pails.....	\$1.25
6 to 12 5-pound pails.....	1.10
13 to 25 5-pound pails.....	1.00
26 to 100 5-pound pails.....	.85
101 or more 5-pound pails.....	.80

AMBER HONEY

1 to 5 5-pound pails.....	\$1.00
6 to 12 5-pound pails.....	.85
13 to 25 5-pound pails.....	.75
26 to 100 5-pound pails.....	.65

Honey prepared for the retail market should be heated to 160 de-

grees, thoroughly filtered and packed in new pails neatly labeled.

	Per Lb.
1 60-pound can, light honey.....	\$.15
1 to 5 cases of 2 60-pound cans	.14
6 cases or more.....	.13
f. o. b. shipping point	
1 60-pound can, amber honey	.125
1 or more cases of 2 60-pound cans	.12

Certainly in Wisconsin we ought to be able to do nearly as well, if we cannot do better, and it is suggested that ten pound pails be retailed at not less than \$2 for white honey and \$1.75 for amber honey. Five pound pails should be retailed at not less than \$1.15 for white and \$1 for darker grades. *Are the beekeepers of Wisconsin ready to adopt a uniform container and sell their product at a uniform price?* The prices of the lithographed labeled pails will be about two to three cents more than for the ordinary cans. However, this type of container is very much better than the ordinary pail now in use. Orders for more than 5,000 pails have already been received. Other beekeepers who are interested should write us. We expect to give more definite information on this subject at the convention in December and also in the next issue of "Wisconsin Beekeeping." Beekeepers should come prepared to discuss this matter at the meeting and leave their order for next year's containers.

fare by having annual reports printed, circulars regarding the value of honey, bring in outside speakers, put on honey displays. The money received from individual membership dues is not sufficient to take care of this. Investigations show that other agricultural organizations in Wisconsin are receiving appropriations for this purpose. In some cases these organizations have less than 100 members. We have at present 700 members.

A new beekeeping building at the University so that enough room will be available for teaching work, for a beekeeping museum, for investigational work, a building our beekeepers will be proud to show. Three states received appropriations for this purpose the past season. Shall Wisconsin be at the bottom? Just visit the present housing quarters to convince yourself that there is not enough room to carry on good work in any line of beekeeping work.

Bring up the matter of poison spraying to get the orchardists and horticulturists to cooperate with the beekeeper. Since bees aid greatly in cross pollination of plants and fruit trees, convince the horticulturists and orchardists that it is to their advantage not to apply poison spray while trees are in full bloom.

JAS. GWIN, *Chairman*.
ROBERT SIEBECKER,
CONRAD KRUSE,
Legislative Committee.

Honey Tariff Bill

On September 21, President Harding signed the Fordney-McCumber Tariff Bill, which provides that all honey coming into the United States from foreign countries carry an import duty of 3c per pound. This replaces the import duty of 10c per gallon which has been effective since the 1913 Tariff Bill.

Isle of Wight Disease Bill

This bill regulating the importation of bees into the United States was passed by the Senate, August 23 and has been signed by the President.

The head of the Traveling Library Department of the Wisconsin Free Library Commission reports that a number of copies of new editions of *The Honey Bee*, by Langstroth and Dadant, have been received and are now available for distribution.

The beekeepers have not been taking full advantage of this library which has a considerable number of copies of several standard works on apiculture, including *Beekeeping*, by Dr. Phillips; *The Life of the Bee*, by Maeterlinck, and many others. All residents of Wisconsin are entitled to secure these books for three weeks on an agreement to prepay the transportation charges to Madison when they are through with them. The books may be kept three weeks and renewed for three weeks more if desired.

A State Association Advertising Fund

The Texas Honey Producers' Association has a plan whereby every beekeeper pays into the association a one cent per colony tax for a special advertising fund of Texas Honey. Would it not be well for Wisconsin beekeepers to do something of the kind? One cent per colony is a small amount for each beekeeper to pay, but the total would amount to a great deal. Such a fund, for instance, would permit us to print posters which could be distributed in grocery stores and other places where honey is sold. We could also print a small pamphlet to be handed to individual customers reached by the storekeeper and also the beekeeper. This matter will be brought up at the next annual convention. In the meantime we would appreciate receiving opinions from all beekeepers who are interested.

Through the office of Secretary F. E. Millen, the members of the Ontario Beekeepers' Association have obtained \$60,000 worth of goods, including half a million containers, and \$10,000 worth of bees and queens.—G. B. Lewis Company notes.

To the Members of the State Beekeepers' Association and Officers of Affiliated Associations:

The Legislative Committee of the State Association is trying to line up all beekeeping matters which should be brought before the legislature in 1923 and would like to bring a few things before the members now so that they can think about them before the annual convention.

We believe the following things are needed:

An appropriation for the State Association to help promote its wel-

Honey Booklets

When you sell a big order of honey to the grocer, give him a few copies of "Honey; How and When to Use It." Get your supply today from the American Honey Producers' League, Secretary's Office, Capitol Annex, Madison, Wisconsin. The price is \$4.50 per hundred, or if you cannot use that many, 20 copies for \$1.25. 10% discount to affiliated members of the League.

The Bee and Honey Exhibit at the 1922 State Fair

The 1922 State Fair as a whole, and the Bee and Honey Department in particular, was by far the best in all respects ever presented in the Badger State. The different features combining to achieve this unprecedented success are:

1. *Quantity*, which actually amounted to carload lots.
2. *Quality*, which is now a standing feature, owing to the number of exhibitors.
3. *Variety*. Every single number of the premium list was actually entered and represented and several other features in addition.
4. *Arrangement and decorations*. Although we thought we had excelled in 1921, when Mr. Jos. M. Barr set the pace, the result in 1922 far exceeded our highest expectations, and Mr. Barr candidly said he would not expect first prize for the individual general exhibit. However, he did again land first prize, all of which goes to show the keen and good natured competition prevailing.
5. Last but not least, the friendly rivalry among the exhibitors, and the friendly and social feeling and intercourse among themselves and with the superintendent.

Following is a list of the large exhibitors, and awards to each:

A. L. Kleeber.....	\$163.00
H. H. Moe.....	60.00
F. T. Houghton.....	31.00
Caroline Johnson.....	39.00
Donald W. Reisner.....	68.00
John Kneser.....	102.00
Jos. M. Barr.....	85.00
Charlie Pritchard.....	41.00

Theo. Bronson.....	\$ 34.00
Green County.....	75.00
Grant County.....	78.00
Wood County.....	78.00
Sauk County.....	90.00
Small awards.....	49.00
Total awards.....	\$993.00
Comparison	
1919.....	\$270.00
1920.....	821.00
1921.....	835.00
1922.....	993.00

In addition to these large exhibits two large and creditable commercial exhibits were conducted by the G. B. Lewis Company, Watertown, Wisconsin, and the A. I. Root Company, Medina, Ohio.

Mr. L. P. Whitehead, of the University, exhibited a frame of bees with ripe, sound fruit in the upper part, accessible to the bees, to demonstrate that bees will *not* puncture sound fruit. Mr. C. D. Adams, of the Division of Markets, was with us every day, a useful and interested attendant. The secretary of the State Association conducted the booth of our state organization the latter part of the week and solicited members.

The practical and instructive demonstration of a hive of bees with lectures twice each day were given by Mr. Jos. M. Barr, who held the attention and interest of large crowds practically every day.

We are still lacking one thing to complete our department and that is a daily practical demonstration of uncapping, extracting, bottling and canning honey. So far it has been impossible to carry on such a demonstration because of insufficient room. However, the prospects for having this addition in 1923 are good, as we hope to have a new and larger building then. We also expect to be able to place not less than twenty large exhibits, have office rooms for the Superintendent, Judge and Secretary of the State Association, as well as plenty of space for quality goods in Class 2.

A total of 240 entries was made this year.

GUS DITTMER,
Superintendent.

Prize Recipes**BEE AND HONEY EXHIBIT—STATE FAIR, 1922***Cocoa Spice Cake*—Class 24

- 1 1/4 Cups Honey
- 1/2 Cup Butter
- 2 Eggs
- 3 Cups Flour
- 2 Tablespoons of Cocoa
- 3 Teaspoons Baking Powder
- 1 Teaspoon Cinnamon
- 1 Teaspoon Nutmeg, grated
- 1/2 Cup Milk

Mix flour, spices, baking powder and cocoa together. Cream honey, butter and eggs. Add half of the flour mixture, then the milk and remainder of flour. Bake in layers. For filling—mix 1 cup of granulated honey with one-half cup melted bitter chocolate and chopped almonds. Spread between and on top of cake. Sprinkle top with chopped nuts.

MRS. JOHN KNESER,
Hales Corners, Wis.

Soft Honey Cake—Class 24

- 1 Cup Butter
- 2 Cups Honey
- 2 Eggs
- 1 Cup Sour Milk
- 2 Teaspoons Soda
- 1 Teaspoon Ginger
- 1 Teaspoon Cinnamon
- 4 Cups Flour

MRS. DONALD REISNER,
Waukesha, Wis.

Soft Honey Cake—Class 26

- 1 Cup Butter
- 2 Cups Honey
- 2 Eggs
- 1 Cup Sour Milk
- 2 Teaspoons Soda
- 1 Teaspoon Ginger
- 1 Teaspoon Cinnamon
- 4 Cups Flour

CHAS. PRITCHARD,
Wisconsin Rapids, Wis.

Honey Kisses—Class 26

Beat the whites of 3 eggs, add 2 tablespoons of honey, 2 tablespoons corn starch and enough cocoanut to thicken. Bake in a quick oven.

MRS. J. M. BARR,
West Allis, Wis.

WISCONSIN HORTICULTURE

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No. 4



A ROSEBUD AT THE MILWAUKEE FLOWER SHOW

The Federated Fruit Growers

In July we announced the launching of the Federated Fruit Growers, the result of deliberations of the National Fruit Marketing Committee of Twenty-one appointed by Pres. Howard of the American Farm Bureau Federation, August 1921. We now announce to our members what we believe to be the biggest movement along the line of co-operative fruit marketing ever attempted in this country. The much advertised Citrus growers organization, of California will be a part of it. Prof. Cruickshank, Secretary of the American Pomological Society outlines the movement clearly in a recent letter to members of the A. P. S. It is as follows:

There has been considerable publicity concerning the organization of the Federated Fruit Growers' Inc. This is the outcome of the appointment by President Howard of the American Farm Bureau of the Fruit Committee of Twenty-one. This action culminates a year of deliberation by men of wide experience and representing most of the important fruits and fruit sections of the country. The membership of the Federated Fruit Growers will be made up of *co-operative fruit marketing associations, and not of individuals.*

The most recent development has been a signing of a contract between the Federated Fruit Growers Inc. and the North American Fruit Exchange, whereby the former practically absorbs the latter, effective, January 1, 1923. This appears to show the large caliber of the men in authority in the Federated Fruit Growers Inc. It is generally conceded that this is one of the largest marketing organizations in the United States and the Federated Fruit Growers Inc. have arranged to take it over bodily as the foundation of their marketing plans. Arthur R. Rule, vice-president and general manager of the North American Fruit Exchange

will become general manager of the Federated Fruit Growers Inc. "The arrangement," he says, "marks the beginning of a new day for the American Fruit Grower by enabling him to sell his products co-operatively in all markets. It places at his disposal, an efficient sales service which we have been 11 years in building according to a co-operative plan. It will likewise mean a better quality of products and improved service for the consumers. From member co-operative associations of the Federated Fruit Growers, Inc. and the large permanent clientele of the North American Fruit Exchange, sufficient tonnage is already assured to make the new co-operative sales service a pronounced and continued success from a business point of view." The national co-operative effort of the fruit growers seems to have been initiated with sound judgment and with every prospect of satisfactory development.

The American Pomological Society

The A. P. S. is now a live, going organization with a settled policy and a definite field of work. It might well be named the NEW American Pomological Society except that this would be too suggestive of an ancient hostelry that dabs a little paint on the front door, replaces a broken wash bowl and sets up a new sign board, "The NEW Jones House." The A. P. S. has been rebuilt from cellar to garret. It is the only national organization of fruit growers and that there is need of such a body, no fruit grower will doubt.

During the reorganization period, covering two years, it seemed at one time that we should enter the field of fruit marketing as that seemed to be the crying need of fruit growers or rather apple growers. We soon realized that we were not big enough nor strong

enough to tackle that problem, although we aided materially in the inception of a big movement in that direction. The meeting of fruit growers from coast to coast, held in Chicago, March 1921, called by President Howard of the American Farm Bureau Federation, which resulted in the appointment of the "Committee of 21" or National Fruit Committee was the direct result of the work of the A. P. S. in fact the A. P. S. instigated the movement.

Representatives of the A. P. S. attended this conference, as well as the first meeting of the National Committee. At the latter meeting, it was decided in conference that the fields of the two organizations were not overlapping, but complementary, **but that co-operation between the two would be of benefit to each.**

The Pomological Society being now relieved of the need of entering the field of marketing has turned its attention to other matters vitally concerning fruit growing. These are well stated by Secretary Cruickshank in a leaflet published several months ago and given herewith:

An Invaluable Service to Fruitgrowers

There is a great need in North America for a central organization which will combine the forces of existing fruit bodies and which can act as a clearing house of all information of interest to fruit growers. Much has already been accomplished, but it will take more effort to build up such an organization of sufficient magnitude fully to satisfy this need and to finance its development and work. This can be done through the co-operation of the fruit growers of the United States and Canada.

The American Pomological Society, for over seventy years an influence for the betterment of the fruit industry, is now reorganized with a broader program and on a business basis, with an active executive committee, a board of business managers and a paid secretary with office

facilities. This Society has pledged itself to this end.

The service that will be given members are:

1. The Annual Convention, with valuable program.
2. The report of the proceedings of the Convention, together with the Pomological Annual containing much material indispensable both to commercial and amateur growers.
3. A quarterly bulletin containing other matter of concern to the Society and of permanent value.
4. Letters at frequent intervals which will embody information of current interest.
5. Reports on the size, condition and character of fruit crops gathered and disseminated.
6. A campaign for greater fruit consumption, carried on through all available organizations.
7. Efforts lent to the stimulation of export trade.
8. Affiliation with and service to State, Provincial and local horticultural societies.
9. Cooperation with fruit growers marketing associations
10. Encouragement of better grading and packing.
11. Encouragement of the breeding of new fruits and the thorough testing and dissemination of valuable kinds.
12. Awarding of prizes for meritorious fruits, worthy inventions and for notable contributions to the science and practice of pomology.
13. Making public the best information on the new means and methods in fruit growing.
14. Condensed reviews of new books and bulletins.
15. Establishment of branches in the colleges of agriculture.
16. Registration of new fruits with accurate descriptions.
17. Legislation encouraged and fostered for the extension and safeguarding of the fruit interests.
18. Correspondence with the membership from the Secretary's office.

There is no other organization giving such broad service.

Of these 18 points, it would seem to the writer that numbers 1-2-3-4-5-14 and 18 or seven in all are of direct benefit to members while the others affect fruit growing as a whole and indirectly of benefit to all growers whether amateur or commercial.

In addition to practical everyday help the Society will, in "providing means for the registration

of new fruits; encouragement of breeding of new fruits; awarding prizes for meritorious fruits and for notable contributions to the science and practice of pomology," fulfill a great need and retain the place it has so honorably held for over 70 years as The Supreme Court of Horticulture in the United States and Canada. Membership is really a privilege and the writer predicts that within ten years or less, men and women too, who are fruit lovers or engaged in the more prosaic business of turning fruit into dollars will be seeking membership while now the secretary is soliciting fruit growers to join.

The income of the Society, for running expenses is derived wholly from membership fees. The income from the five thousand-dollar Marshall P. Wilder fund is devoted to medals and other awards. The Society now employs a part time secretary. The addition of 1,000 new members within the coming year would enable the Society to employ a full time secretary thereby doubling or trebling the usefulness of the organization.

It is only (20th Century) human nature to want one hundred cents worth for one dollar. Annual membership in the A. P. S. affords just that and along with it goes the satisfaction of feeling that you are part of an organization that is shaping, in no small degree, the development of fruit growing in America. Your fee for annual membership, five dollars, if paid now will carry you through 1923. Send five dollars to R. B. Cruickshank, Sec. Am. Pom. Society, Columbus, Ohio. F. C.

Keep root crops cool in storage and squash dry and warm.

The Wisconsin Russet Apple

Everybody knows the Golden Russet, many know the Roxbury Russet and the Perry Russet, but not many know anything of the Wisconsin Russet. There really is such an apple, although officially it does not exist. There is nothing in any of the proceedings of this Society that such an apple ever received official recognition, nor does it appear in the fruit lists of the American Pomological Society.

Regularly every year, in September or October and less frequently in December, inquiries come to this office concerning this variety and we regularly reply as above, sometimes adding a portion of a history of the apple, as given by the originator, Mr. A. D. Barnes, formerly an extensive fruit grower and nurseryman at Waupaca, now residing at Adams, Wis. For general information and for purposes of record, Mr. Barnes' account of the origin of the Wisconsin Russet and his description of the tree and fruit, written in 1906, is here given in full.

ORIGIN OF WISCONSIN RUSSET

"Seeds planted at Weyauwega, Wisconsin, in the fifties by William Mathews, in same seed row with Bessie. The two original trees were planted about eight feet apart in original seed row. Both trees were damaged by a burned barn about fifteen or twenty years ago. The Wisconsin Russet standing nearest the barn was burned and blistered three-fourths of the way around the bark and a few years later blew down, the top falling to the south-east, the live wood being on the under side of the tree it did not break off entirely and the top sent up new shoots and branches which bore fruit for many years. A large shoot grew up from the roots and was also bearing fine fruit a

few years ago and I have reason to believe it is yet alive. The tree has had no care for twenty-five years. The old tree is a fairly good producer but the young trees grow too rapidly and make too much wood, hence do not bear young or heavy, but some fruit every year.

The fruit is much larger than the Golden Russet and about the same shape as Perry Russet and nearly as large. Are wide at base with short, heavy fruit stem. Very russety, yellowish green, some of them very green, but turning to yellow at maturity, inclined to wither if not grown in a favorable season. If properly matured will keep longer than any of the other Russets. It is one of the most symmetrical, rapid growing nursery and orchard trees to me known. It has very dark, thick green leaves. The trees grow very few branches, similar to Tetofski, branches thick and strong. The bark is smooth, green, no rough bark or scales on the ten to twelve year olds."

"I feel justified in saying this variety is more free from blight, both in nursery and orchard, than any other variety known and is as hardy as the hardiest."

From about 1885 to 1900, Mr. Barnes collected many "chance" seedlings and propagated them to a limited extent in his nursery and distributed many trees of each throughout central Wisconsin, the Wisconsin Russet among the number. Unfortunately, perhaps, no further effort was made to introduce them to the trade and as a result nearly all have dropped out of sight. If any of our members have grown the Wisconsin Russet (be sure not to confuse it with the old standard Golden Russet), we will be much pleased to have their reports for publication.

How Much Is a Boy Worth?

(You men who are sometimes "dres't in a little brief authority," read these true stories and ponder over them. Once I was in Mr. B.'s place and treated a boy even more cruelly than he did. That was twenty years ago, but his face still haunts me.—Editor.)

TONY

The weekly paper came out with a long account of the Garden Exhibit held at the Town Hall. They said it was a wonderful success, every one was enthusiastic about it, and the exhibit would be repeated on a larger scale another year. There wasn't a word said about how disappointed Tony and Billy were in the exhibit. Perhaps they didn't know anything about them.

Everybody called him Tony, because his last name was rather hard to remember. From seven in the morning until six at night he worked on the tracks as a section hand. Early in the mornings and after supper he worked in his garden. There were a few rows of vegetables and flowers, carefully tended, the rest of the garden consisted of grape vines. Those grape vines and the great shouldered bunches of blue and red grapes were the pride of Tony's heart.

When the placards announcing the Garden Exhibit were hung up in the stores all over town, someone asked Tony if he was going to exhibit some of his grapes and try to win the blue ribbon. Tony's white teeth flashed in a smile. "Sure. I bring the grapes." Then pointing at the placard, he asked anxiously, "This for everybody?" He was assured that anyone was welcome to exhibit. All summer long as Tony worked among his beloved grape vines he sang softly the songs he had heard his father and mother

sing, as they worked in the vineyards in the home across the s as.

The vines set aside for exhibit were given especial care, and only a certain number of bunches were allowed on each vine. Tony and his wife both smiled happily when he cut the bunches and laid them carefully in the basket.

All the exhibits were to be brought to the hall on Friday, so they could be placed in position for the exhibit on Saturday.

Upon reaching the hall, Tony was directed by Mr. B., who had charge of the exhibits, to place his grapes on a certain table. There was nothing on this table, so Tony placed the basket of grapes in the center of the table and hastened away, for the hand-car left promptly at seven.

On Saturday evening, Tony, with his little family all dressed in their best, went to the hall, with their neighbors to see the exhibits. The building was crowded, and they moved slowly along admiring the displays of flowers and vegetables. When they came to the tables on which the fruit was displayed, Tony looked eagerly for his grapes. Fruit was placed on plates and the coveted blue ribbon was attached to some of the grapes, but they were not his—they were just common ordinary bunches. Why, what could be wrong? His beautiful grapes were not even shown on the table.

Just then Mr. B. came up. Tony timidly questioned him as to where his grapes were. Reaching under the table, Mr. B. dragged out the tall basket and thrust it into Tony's hands, saying: "Here they are; if you don't know enough to put them out for display, take them home." For a moment Tony stood there looking at the basket so

roughly thrust into his hands. He did not understand the man's crisp explanation. Then his little son whispered: "He told us to take them home. I guess they don't want us here."

The little group left the hall quickly, and not a word was spoken until they reached home. Then Tony, as he placed the basket of grapes on the table, said: "Why did they say Everybody welcome?"

BILLY

From the day he read the announcement of the Garden Exhibit in the drug store window, Billy made up his mind he would exhibit some vegetables. The boys in the neighborhood whistled in vain to Billy that summer.

Billy really loved a garden, and though it was no particular fun pulling weeds or hoeing on a hot day when all the other boys were going fishing or swimming, Billy thought of those blue ribbons and the other prizes as well, and turned a deaf ear to the alluring stories of what the "bunch" had been doing and were going to do on their next trip. It was an unusually dry summer and Billy declared to his mother that he had carried "most a thousand pails of water on that garden."

As the time for the exhibit drew near, Billy began visiting other gardens. His mother smiled at his cheery whistle, as he came back to his own garden after each visit.

Billy was proud of his garden. His mother smiled, too, when she heard the back door close softly just at daylight on the morning of the day when the exhibits were to be taken to the Town Hall. Billy didn't need to be called that morning. Though he worked steadily, it took him a long time to sort the

vegetables and get them ready for display, but at four o'clock he was at the hall with an express cart piled high with the best vegetables he could find in his garden. Mr. B. was hurrying back and forth, trying to bring order out of chaos. Billy found it hard to get his attention. When he finally stopped long enough for Billy to ask what he should do with his display of vegetables, he snapped crossly, "What do you want to bring things here for at this time of the day, you are too late; take that stuff home," and he hurried away to the other side of the room. At first the boy thought Mr. B. didn't really mean it, for there was still several hours until closing time. But when several men and women came in with exhibits and were given places, and no one paid the least attention to him, poor Billy made up his mind he really wasn't wanted and dragged his basket of vegetables out and loaded them on the little wagon once more. As Billy came dejectedly up the walk, his mother came to meet him, asking anxiously what the trouble was. "They said I was too late, but I wasn't. I guess they didn't care about having my exhibit, 'cause I'm just a boy." And because he was just a boy, he dropped down on the steps and cried.

Caroline Elisabeth Strong.

"Twilight Sketches"

I. N. Traxler a short time ago received a package of beautifully designed booklets, published and edited by his brother, C. J. Traxler, of Minneapolis, Minn. The little publication is "Twilight Sketches." The little booklet contains some fifty pages of verse and prose. It is dedicated by the author, "To my many friends who have been

lights in the darkness for me and to whom are the contents of this book dedicated." The author was born and raised at the old homestead, attended our city schools, afterward graduating in the law department in the State University of Iowa City. He settled at Minneapolis in the practice of law, where he enjoyed for many years a lucrative practice at the bar. His home is still in Minneapolis, but some years ago he became afflicted with defective eyesight, afterward becoming completely blind.

Under the total eclipse of his sight his thoughts very naturally turned to the scenes of his childhood and he has written very vividly in prose and rhyme of boyhood sports and daring neighborhood coon hunts and swimming holes, with now and then a poem in cheerful philosophic strain, enlivened with bits of humor characteristic of his patent submission to one of the greatest tragedies of life—the loss of the sense of sight. Mr. Traxler was at one time local editor of the "Mr. Pleasant Journal" and always wrote with a gifted pen. Clearness and precision marked his youthful composition as it afterwards did his legal arguments often submitted to the Supreme court of his own state when he was in active practice of his profession.

The little poem, "Lights in the Darkness," very well illustrates the patient cheerful philosophy of Mr. Traxler and the broad sympathy and soundness of his view of life.—*From Mt. Pleasant Free Press.*

Judge Traxler will deliver an illustrated talk on peonies at our Convention in Madison, January 10-12.

It is well to plunge flower stems as deeply in water as possible without wetting the flowers.

THE FLORISTS PAGE

EDITED BY

HURON H. SMITH, Curator of Botany
PUBLIC MUSEUM MILWAUKEE, WIS.

State Florists' Meeting

The annual meeting and election of officers of the Wisconsin State Florists' Association was held in the trustees room of the public museum, Milwaukee, Thursday, November 2nd. Eighty-seven registered for the meeting and there were doubtless others who came in too late to register. The morning was given to registration and inspection of the Fall Flower Show offered in the rotunda of the museum by the Milwaukee Florists Club.

In the afternoon the regular business session was held, resulting in much discussion and the election of James E. Taylor, of Oshkosh, as the president for 1923. Mr. Taylor, as vice-president, presided in the unavoidable absence of President Rentschler, of Madison. When elected, he expressed his appreciation of the opportunities open to newcomers in America, having been over from England only eight years himself. Other officers elected: P. N. Overton, vice president; H. Welke, secretary; Wm. Zimmerman, treasurer. The board of directors as now constituted, J. Rindfleisch, Lewis Turner and Fred Rentschler. The by-laws were amended so that the retiring president automatically becomes a member of the board of directors, replacing the member previously longest in service on the board. The state was divided into two districts for the floral telegraph business, A. Leidiger having charge of the southern district, and Mr. R. D. Haentze of Fond du Lac, the northern district. During the after-

noon, the wives of visitors took in shows, but are promised for next year a personally conducted tour of the Public Museum, to see the new wonderful groups and interesting exhibits of natural history that are assembled there.

Thursday evening 160 gathered at the annual State Florists banquet at the Milwaukee Athletic Club,

and a fine visit to the three principal greenhouses was enjoyed. The party of forty-one went first to the Holton & Hunkel greenhouses at Brown Deer, and spent the morning inspecting the huge rose house, the cyclamen range with ten thousand plants in bloom in one house, the many interesting novelties, and the facilities for handling stock. Many of the visitors were interested in the power dirt and fertilizer pulverizer and mixer. They watched two men feed this machine, which does more work in a day than they could do in a week by hand.

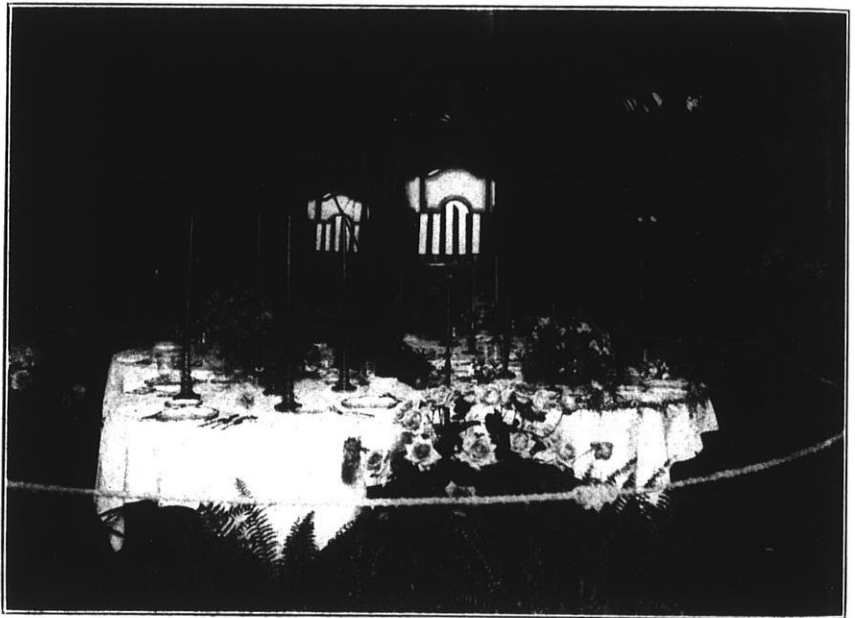


Table Decorations at Milwaukee Flower Show

where a lively program was arranged by the committee. Several vaudeville artists supplied the program and a good dance orchestra helped the merriment until past midnight.

Friday an all-day auto trip for the out-of-town guests was arranged by the Milwaukee wholesalers, Holton & Hunkel, the C. C. Pollworth Co., and Gust. Rusch. Seventy-two miles were recorded

At noon the party drove to Hilgen Spring Park, Cedarburg, where a fine chicken dinner was served. Only words of highest commendation were heard about this part of the program—there wasn't a single hammer in the crowd. The Gilson Company, of Port Washington, showed a film of their power hand cultivator and the Bolens Garden Hoe in action, during the ice cream period.

After dinner the party drove to Wauwatosa to visit the C. C. Pollworth Co. houses. Here a different phase of the industry was seen. The vistas of chrysanthemums were at their best and all enjoyed the unusual variety and large number of blooms. Many might not believe it, but a florist loves flowers more than any other person. The carnation range, too, came in for much praise. As it was getting along toward the shank of the evening, a quick run was then made to Cudahy. Some of the party just missed getting pinched for speeding. The Cudahy Floral Company is exclusively a house of roses, with vast stretches of sturdy plants. The Cudahy packers built these houses regardless of expense, and they are twice as high as the usual house. The manager informed the party that the tall houses were easier to heat than the newer low ones they have built. When Cudahy was left behind it was time to light the headlights and all felt that the Milwaukee wholesalers had given them a very profitable and enjoyable day.

The Florists' page hopes to start a new feature next month, consisting of local Wisconsin items, gleaned from answers to questionnaires to be sent out to State Florists about the middle of the month. Huron H. Smith.

Registration at State Florists' meeting, Milwaukee, Wis., Nov. 2, 1922:

Illinois	
Chicago—Geo. Tomlinson.	
Des Plaines—A. F. Longren.	
Wisconsin	
Appleton—J. H. Boelter,	Miles
Meidam.	
Baraboo—W. A. Toole.	
Beloit—J. Rindfleisch.	
Cedarburg—Ernst Eberhardt.	
Elm Grove—H. Staeps.	
Fond du Lac—Mr. and Mrs. A. H.	
Ferdinand, Mr. and Mrs. R. D.	

Haentze, Mr. and Mrs. Geo. Peterson.
Hartford—Fred Rhodés.
Janesville—Edw. W. Amerpohl.
Kenosha—Lewis Turner, Jr., Henry Mayer.

Madison—Frederic Cranefield, F. B. Klein, J. P. Kolb.
Manitowoc—Walter Hamilton, John H. Steper.

Marinette—Frank Vatter, Geo. Vatter.

Milwaukee — Harold Baumgarten, Chas. E. Dettmann, Frank Eberfeld, Jos. Fritsch, Oscar Golin, Thos. Griebler, Fred Gutermuth, Miss Ruth Haberkorn, Fred Holton, Gust. Holtz, Herman V. Hunkel, O. Victor Janson, Chas. Kamp, Aug. Kellner, Wm. Kennedy, H. Koegler, James Livingstone, Franklin L. Loewe, Wm. Malaney, Wm. Manke, Archie McDonald, Chas. P. Menger, Eug. Oestreicher, Gust. Pohl, C. C. Pollworth, Rudolph Preuss, Gust. Rusch, Mrs. F. Scheinert, Wm. R. Schroeder, Oscar Schurrer, H. J. Seel, Huron H. Smith, Phil Weil, Henry R. Welke, Wm. Zimmerman, Nic Zweifel.

North Milwaukee—Walter Grunwaldt, L. R. Maletzke, Fred J. Manke, Oswald Preuss, E. A. Riebs, A. Reinhardt.

New London—G. O. Blondey.
Oconomowoc—Chas. Oehlenschlaeger, Wm. Rayner, Sr., Otto Sylvester.
Oconto—J. Sylvester.

Oshkosh—H. C. Christensen, W. Buchholz, J. V. Nelson, R. E. Pampin, Jas. E. Taylor, Ward Davis.
Racine—Herman Benz, Rudolph A. Brux, R. E. Miller, G. Wiedebach.

Ripon—Mr. and Mrs. Andrew Brown.
Stevens Point—E. A. Wilson.
Two Rivers—C. Hansen.

Wauwatosa—Alfred Locker, E. F. Stablefeldt.

Illinois	2
Wisconsin	49
Milwaukee	36
Total	87

Milwaukee Fall Flower Show

The Fall Flower Show of the Milwaukee Florists Club demonstrated beyond any doubt that Milwaukee folk are interested in flowers. From Thursday, November 2nd, to Sunday, November 5th, the show was visited by 36,157 people. That they were hungry for information and literature was proven by the fact that over 5,000 of them took away lists of books pertaining to flowers, published by the Public Library. Through the kindness of the various seed houses of the

United States, over 3,000 catalogues were distributed free to those who asked for them.

The show this fall was different in all particulars from the Spring Show. From the cabinet shop of the Museum, twenty-two shelves and tables were fashioned for an entirely new design of installation as planned by Curator Smith. Four standard 54-inch dining tables were made for the center of the rotunda, and these were enclosed by an octagonal railing around which were set 100 Boston ferns, loaned by the Mitchell Park Conservatory. These tables were set with the finest tableware, donated by the Keebler Co., and each one had a different floral setting. A huge central Kentia forsteriana palm was placed to shade the four tables. James Fox, Semmler-Leidiger, Baumgarten, and Charles Menger, each decorated a table, and a choice between them was difficult. Many admired the dainty colonials or place-bouquets at two of the tables. The ensemble was further enhanced by two candelabra from James Fox.

As it was a fall show, chrysanthemums were most in evidence, and autumn foliage and smilax were used by August Kellner in decorating the room. This time the entire second floor was used and the greatly enlarged space enabled a better spacing of exhibits. The spring show was rather crowded.

Nic Zweifel, our Milwaukee carnation king, worked like a trooper, and it is due to the untiring efforts of himself and Alfred Locker that the show was such a success. The Florists Club were all behind the show this fall and co-operation was their watchword. They were all well pleased with the results.

(Continued on page 62.)

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 Frederic Cranefield, Secretary-Treasurer..Madison

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The Annual Convention

Our readers will no doubt be disappointed on opening the paper to find this page bare of a program for the Convention. We plead not guilty. This is written November 11th, along with other copy, and will be submitted to the printing board November 13th. While the program is now in the making, it cannot be completed within two weeks, too late for this edition.

To give our readers an opportunity of judging of the difficulties encountered by the publishers of WISCONSIN HORTICULTURE we cite the history of the Novem-

ber number to date. The copy was handed in October 17th, the first proof received November 6th, the "make-up" handed in November 8th. The "page" proofs, judging by the past, will be received about November 16th and the printed copies delivered about November 27th and will be mailed the day received.

We do not mean to trouble you with our troubles nor to make excuses, but we do want our readers to know that the delay is entirely beyond the control of the publishers. As to where the fault lies is another matter that cannot be discussed here.

Be assured, however, that you will receive a copy of the completed program in ample time to digest it. If it doesn't make you come to the Convention we will weep.

The Convention program will have, as outstanding features, the conference of commercial fruit growers, to be held in advance of the regular convention; the "spray ring" work being carried on in several counties; "Wisconsin Beautiful," and all the usual good papers on other subjects. It will be a horticultural feast. Get ready now to come.

The Lincoln Pear

A member, an enthusiastic amateur fruit grower, claims that the Lincoln pear is blight resistant. His testimony is based on the performance of old trees only. Who else has evidence to offer? We have an idea that all "sure-cure" remedies for fire blight and nostrums, including cutting out blighted wood, will very soon be dumped in the discard and some real work will be done along the line of producing varieties immune to disease. That's

why we want to know the truth about the Lincoln pear.

Wisconsin Beautiful

Many years ago a man prominent in horticultural affairs in Wisconsin remarked to a visitor on the wonderful opportunities open in fruit growing, etc., in our state, but in answer to a question by the visitor as to the natural beauties of Wisconsin replied, in effect, that Wisconsin was sadly lacking in that respect, no striking landscape features, no outstanding scenic beauty, as compared with New York, Maine and other states. At that time the editor, then a youth, accepted these statements as true and only twenty-five years later learned to really know Wisconsin as really Wisconsin Beautiful.

The beauty of our state cannot be told in a few words nor for that matter in many pages, but it exists. We, as members of the Horticultural Society, are in duty bound to aid in the preservation of the beauty which is ours. In future numbers of this paper ways and means for doing this will be set forth. In the meantime read again "Wisconsin Beautiful" in the November number. Mr. Hazelwood knows Wisconsin.

Small Town Stuff

That's a term often used contemptuously by "city folks" with reference to inhabitants of villages and the smaller cities. Said inhabitants "should worry." They don't.

What we had in mind was this: Villages, small towns and rural communities need parks and recreation centers quite as much or more than cities need them. Our files will show that this Society was the first to bring this project to the

attention of the people of Wisconsin. It now has taken hold of the imagination of many people, so we will continue the agitation at our Convention in January. Among others, Mr. A. A. Hirst, State Highway Commissioner, will have something to say.

Anent this particular subject, here is a story. At a certain meeting of a well known horticultural society "country parks" were under discussion. All agreed that the idea was a good one, except one member, a man born and reared on a farm, who later, by the proper exercise of his faculties, acquired considerable money. Having acquired said cash, he bought into a bank and other enterprises in a neighboring village and moved there to live. He at once, apparently, forgot that country boys and girls, country men and women, cared more for their home life than for that of the village and argued with force that there was no need of country parks: "We in Blankville do everything possible for the entertainment and comfort of farmers; we provide parking space and movies," and more to the same effect. This was real "small town stuff" plus acquisitiveness.

Blackbirds Better Than Cherries

"There is another circumstance in which I am very particular, or, as my neighbors call me, very whimsical; as my garden invites in it all the birds of the country, by offering them the conveniency of springs and shades, solitude and shelter, I do not suffer any one to destroy their nests in the spring, or drive them from their usual haunts in fruit time; I value my garden more for being full of blackbirds than cherries, and very frankly give

them fruit for their songs."—*Addison in The Spectator, London, 1711.*

Toads of Some Use in Curbing Certain Pests

Toads have been reputed to aid in curbing the numbers of injurious insects and other similar pests. To ascertain the facts in the case the Biological Survey of the United States Department of Agriculture has analyzed the contents of the stomachs of 502 common toads, and reports that while the findings regarding the choice of food are of interest they thus far fail to demonstrate that toads are of great economic importance. Toads go constantly about their own work of gaining a livelihood, and so undoubtedly fill their proper place in nature. They are never very numerous in one locality, however, and as they can not adopt the methods of birds and traverse wide stretches of land to aid in combating abnormal local increases of crop and garden pests their influence is not strongly felt. The investigation shows that a certain portion of the toad's food is made up of injurious insects and other pests of growing plants, and that the toad performs some service in such places as greenhouses, gardens, fields of small grain, and golf courses. Any harm that toads do in the consumption of beneficial beetles and other insects useful to man is of little economic importance and does not warrant their indiscriminate destruction.

Chicory or French endive may be bleached in a cellar or under the greenhouse bench.

Clean up the garden, remove and burn all weeds and trash. They are splendid harbors for insects over winter.

To Librarians and Others

The Wisconsin State Horticultural Society offers for sale the following surplus copies of its proceedings (Annual Report), all cloth bound and in good condition:

Price per copy—1872 to 1890, \$2.00; 1890 to 1900, \$1.50; 1900 to date, \$1.00; carriage extra.

Vols. 1903 to date come within 1 lb. parcel post rate; earlier vols., 2 lb. rate.

Books will be sent libraries on purchase order or vouchers. Individuals please send cash with order.

Remit to Frederic Cranefield, Secretary, 701 Gay Building, Madison, Wis.

Date	Number of Copies available
1872	3
1874	5
1875	3
1876	3
1877	7
1878	7
1878-1879	4
1879-1880	4
1880-1881	3
1881-1882	3
1883	2
1884	3
1885	4
1886	5
1887	4
1888	5
1889	4
1890	5
1891	3
1892	1
1893	10
1897	1
1899	5
1900	5
1901	5
1902	16
1903	10
1904	29
1905	19
1906	21
1907	24
1908	22
1909	17
1910	4
1911	48
1912	16
1913	12
1914	5
1916	100
1917	100
1920	100

Trees and shrubs may be set in autumn, but as a rule it is better to wait until spring. Large trees may be moved with a ball of frozen earth to advantage late this autumn.

Don't bring the potted bulbs from their cool dark storage until they are heavily rooted.

THE INSECT PAGE

Edited by E. L. Chambers, Assistant State Entomologist

The Fall Webworm

(H. J. NINMAN, Assistant Plant Pathologist)

Although the Fall Webworm is usually not considered as a pest deserving more than usual attention in order to check its ravages on ornamental and fruit trees, there are times when this species of insect becomes so abundant in certain localities that more than ordinary control measures must be applied to check their destructive work.

The writer was notified in August that serious damage was being done to fruit and forest trees by some caterpillar in the vicinity of Maiden Rock, Wisconsin. In connection with other work, the flats along the Mississippi River were scouted from Trempealeau to Maiden Rock during the first part of September. Considerable damage on fruit and forest trees was noticed on the flats and hillsides along the river in all of this region. Between Pepin and Maiden Rock, and especially at Stockholm, damage to black walnut trees was found to be in such proportions that there is danger of total destruction of all this species in that region unless the work of the fall webworm is checked.

Hundreds of the small trees are already dead, and hundreds of the larger trees are in immediate danger. Many of the black walnut trees, from thirty to fifty feet in height, were found to be almost entirely defoliated, and many of the larger branches are dead. In some cases practically the entire tree was covered with the web made by the caterpillars.

The danger to orchard trees is almost as great as to the black walnut trees. Although there are no commercial orchards in this region, the small orchards for home and local use are too valuable to be neglected and given up to parasites without exercising control measures in an attempt to save this class of farm crops.

To Control Weevil

(E. L. CHAMBERS, Assistant State Entomologist)

It is very important to destroy weevil and other insects of stored grain before cold weather sets in.

There are several effective methods of controlling these pests. Perhaps the simplest is the use of carbon bisulphide. This liquid vaporizes into a gas upon being released from its container to form a powerful disinfectant and destroys animal life by smothering and by poisoning the tissues.

This substance is highly inflammable and must be handled with extreme care. Preferably a warm day should be chosen, for best results are obtained when the temperature of the grain is not lower than 65 or 75 degrees Fahrenheit. If the bins are made tight, five to eight pounds of carbon bisulphide to each 1,000 cubic feet of space will suffice. If the bins are not well closed larger amounts will be required. Burlap sacks or cotton waste may be saturated with the material and spread on the grain, or shallow dishes may be filled and placed on the surface, or the grain may be sprayed through a small opening in the bin. The bin should

be left closed for at least thirty six hours, but not longer than forty hours, if the grain is to be used for seed. If this material is used as directed the germination will not be affected.

The use of heat is another very effective means of control. Where a temperature of 130 to 140 degrees Fahrenheit can be maintained for a period of several hours excellent control can be secured without affecting the germination of the seed.

According to the Ohio Experiment Station: "Wheat, after being subjected to 150 degrees Fahrenheit for two hours germinated as well as untreated wheat for the same lots. Peas and beans were raised to a temperature of 140 degrees Fahrenheit for twenty minutes and were apparently uninjured, as they germinated well.

Good varieties of strawberry plants should sell well next spring, as many fields have not grown new runners in the usual quantities.

Butternuts and walnuts could well be grown as a part of farm woodlots or on home grounds. Now is the time to plant the nuts before they become dried. The trees fruit in from five to ten years and are good ornamentals as well as food trees.

Do not use a heavy covering material for perennials. Evergreen boughs and hay are good materials.

November and December are good months in which to read horticultural magazines and books and plan next year's work in garden and orchard. In the planning, provide for a vegetable and fruit garden—one that can be taken care of with the least amount of work and one that has enough but not too much fruit to supply the family during the year.

Small Dairy Herd Supplies Manure to Truck Growers

Truck growers and greenhouse men in the eastern states are finding it increasingly difficult to secure a supply of stable manure, and some growers have adopted the practice of keeping a small herd of cows or other stock for the purpose of supplying manure, and as a means of utilizing surplus or waste material. The problem of maintaining soil fertility under present conditions was discussed at the recent meeting of the Vegetable Growers' Association of America, at Albany, N. Y., and it was the opinion of the vegetable growers and state and federal workers present that the practice of keeping live stock is to be strongly recommended in sections where this can be done profitably.

The head of the Vegetable Garden Department of the Massachusetts Agricultural College reported that: "A study of the census shows that the decrease in horses in Massachusetts from 1910 to 1920 is such that 13,000 fewer acres can now be furnished with 20 tons of stable manure per acre than in 1920. To offset this loss in plant food, which was formerly obtained from stable manure, will require the expenditure of between \$1,200,000 and \$1,400,000. Even then we lack that all-important effect of the inoculated organic matter contained in manure and for which no equally efficient substitute has been found."

While this disregards the cost of the manure formerly used to supply the plant food, it is probable that it was much less than the cost of the fertilizer now purchased. This problem is not confined to any one state, but with a

few local exceptions is being felt throughout the territory in which vegetable crops are grown for the markets.

At the Lexington (Mass.) Field Station, which is conducted under the direction of the State College of Agriculture and Experiment Station, what are termed "manure economy investigations" are being conducted. In these tests the use of stable manure in moderate quantities is being supplemented by commercial fertilizers, soil-building crops, crop rotations, and other means of maintaining soil fertility. These tests have been under way for about three years and are already giving marked results, as indicated by the yield of crops grown upon the land.

Growers of canning crops, such as peas and sweet corn, have for years past followed the practice of utilizing the vines, fodder and other waste in the form of silage for the feeding of sheep, beef cattle or dairy cows, this practice supplying them with large quantities of manure. Renewed attention is now being directed to this practice, and in sections where the European corn borer has made its appearance many growers have found it desirable to erect silos for the utilization of the surplus material, feeding this to their stock, thereby securing manure for their crops, and also largely controlling the corn borer. The United States Department of Agriculture strongly recommends these practices wherever conditions will warrant the keeping of live stock.

Save all the moisture in the soil by cultivation. This gives a good dust blanket which holds the moisture in the soil.

Secure Disease-Free Seed to Avoid Cabbage Black-Leg

Cabbage black-leg is a fungous disease of increasing menace among growers. Its spread through a field can often be traced to infected seed. Many experiments have been tried by investigators in the United States Department of Agriculture for the treatment of cabbage seeds, which have proved the impossibility of entirely eradicating the fungus from infected seeds by any of the ordinary fungicides without reducing the germination and causing injury to the seedlings.

Studies in controlling this disease are described in Department Bulletin No. 1029, on Seed Treatment and Rainfall in Relation to the Control of Cabbage Black-leg, by J. C. Walker, pathologist. These studies have furnished proof that when the seed bed is exposed during wet periods to rain or is carelessly sprinkled, the infection spreads with great rapidity. Under dry weather conditions the disease can be effectively controlled by soaking the seed for 30 minutes in a solution of mercuric chloride made by dissolving one ounce of mercuric chloride in four gallons of water. The seed should be treated in a wooden receptacle only and after treatment should be rinsed in clean water. In view of the fact that seed treatment reduces the number of primary centers of infection and that it is also a preventive against the black-rot disease, it should be practiced. The limitations to success in the control of black-leg by seed treatment should be recognized, however, and special attention given to securing disease-free seed.

Department Bulletin No. 1029 is available on application to the United States Department of Agriculture.

Don't forget to take up rhubarb plants to force in a dark basement this winter.

Protect the south side of all smooth bark trees from sunscald. Wire screens, boards or even corn fodder set on the south side of it will protect the tree enough.

PREMIUM LIST

The following cash premiums are offered for exhibits at the annual convention, Madison, Jan. 10-11-12, 1923:

- (1) Best 25 plates, 5 plates each, 5 commercial varieties for Wisconsin\$12.50 \$7.50 \$5.00 \$2.50

- (2) Best collection of apples, one plate each not to exceed 10 varieties 10.00 6.00 4.00 2.00

- (3) Best plate of each of the following varieties: 1.00 .75 .50 .25
 Ben Davis, Dudley, Fameuse, Gano, Golden Russett, Grimes Golden, Jonathan, King, Malinda, McIntosh, McMahan, Newell, Northern Spy, Northwestern Greening, Patten, Pewaukee, Plumb Cider, Salome, Seek-no-further, Scott Winter, Tolman, Twenty Ounce, Utter, Wagener, Wealthy, Windsor, Wolf River, York Imperial.

- (4) Best tray of any of above named varieties **except** Malinda, Newell, Northern Spy, Patten, Plumb Cider, Twenty Ounce, Utter 3.75 2.50 1.25 1.00

- (5) Best 5 trays of any of the following 12.50 7.50 5.00 3.50 2.00
 Dudley, McIntosh, Northwestern, Wealthy, Tolman, Wolf River, Fameuse, Gano, Salome, McMahan, Seek-no-further, Windsor.

- (6) Best 10 trays of any variety in 5 tray class..... 25.00 15.00 10.00 6.00 4.00
 Separate samples must be furnished for each entry.

- (7) Plate any other standard variety, properly labeled with variety name.

Ten prizes of \$2.00 each will be awarded under this prize number. Any exhibitor may enter a maximum of five plates under this prize number, but each must be of a different variety.

Trays shall be packed "diagonal pack."

The following score card will be used in judging apples:

Trueness to type.....	10	points
Size	15	"
Color	20	"
Uniformity	25	"
Freedom from blemish	30	"
Total		
100 points		

Apples to be exhibited in trays 18 x 11¼ inches and 3 inches deep. Trays will be furnished.

Vegetables

(1) Best collection, not less than 10 entries, 1st, \$5.00; 2d, \$3.00; 3d, \$2.00.

	1st	2d	3d
(2) 6 Blood Turnip Beets.....	\$1.00	\$0.75	\$0.50
(3) 3 White Turnips	1.00	.75	.50
(4) 3 Rutabagas	1.00	.75	.50
(5) 6 Chantenay Carrots	1.00	.75	.50
(6) 3 Winter Cabbage	1.00	.75	.50
(7) 3 Red Cabbage	1.00	.75	.50
(8) 6 Chicory	1.00	.75	.50
(9) 6 Red Onions	1.00	.75	.50
(10) 6 Yellow Danvers Onions.....	1.00	.75	.50
(11) 6 White Onions	1.00	.75	.50
(13) 6 Onions, Large Type	1.00	.75	.50
(14) Largest Onion	1.00	.75	.50
(15) 6 Winter Radishes	1.00	.75	.50
(16) 6 Parsnips	1.00	.75	.50
(17) Hubbard Squash	1.00	.75	.50
(18) 3 Table Queen Squash	1.00	.75	.50
(19) 3 Heads Celery	1.00	.75	.50
(20) 3 Chinese Cabbage	1.00	.75	.50
(21) 6 Salsify	1.00	.75	.50

Rules of Entry for All Exhibits

1. Exhibits must be arranged ready for judges by 1:00 P. M., Wednesday, Jan. 10th. This will be strictly enforced.
2. Five apples constitute a plate, no more, no less.
3. Competition open to all residents of Wisconsin, but premiums paid only to members. Premium winners, if not members, must forward fee for membership before receiving check for premium. All final entries must be made on regular entry blanks which will be furnished by the secretary on application but exhibitors are urged to send lists in advance even if not all entries are filled at convention.

F. Cranefield, Secretary W. S. H. S., Madison, Wisconsin

WOODEN BOXES and CRATES

One bushel size for apples, onions and other farm products.

Half barrel and barrel size for cabbage, turnips, carrots
and all winter vegetables.

One bushel seed corn crates. Butter and cheese boxes.

Our newly designed coop for shipping live chickens, weighs 30 pounds
and it is the strongest on the market.

LA CROSSE BOX COMPANY

LA CROSSE

WISCONSIN

ANNUAL CONVENTION AND FRUIT EXHIBIT

of the State Horticultural Society, State Capitol
Building, Madison, Jan. 10, 11, 12, 1923

The program will be full to overflowing with good things for both the amateur and professional. You will get only the dry remains in the Transactions of this Convention which will be published in July, 1923.

The Convention itself breathes life and action. There, and there only, you meet the men and women who are making Horticulture in Wisconsin and get from personal contact inspiration that will last you a lifetime. Don't wait for the program before making up your mind to come. Even if there was no program at all you could afford to come.

The 1922 bumper apple crop will be reflected in the Fruit Exhibit. It will excel in quantity and quality any previous exhibit. The Delicious apple will be featured, specimens from all over Wisconsin and from other states. Even if you do not care about varieties, the spectacle will be worth the expense of travel to see; red, yellow and green apples against a background of Venetian marble. Come!

Milwaukee Fall Flower Show

(Continued from page 55.)

The largest single exhibitor was easily the C. C. Pollworth Co., and this was no doubt due to the great interest that Wm. Kennedy took in the show. He is a real booster for the flower show, and was one of the first men to offer the help to start these semi-annual exhibits. They exhibited most of the large mums and carnations, besides most of the pompons, some potted plants, roses, ponderosa lemon, and the only blooming orchid in the show. They also showed the two new roses of Fred Lemon, the Angelus and the Commonwealth.

Holton & Hunkel naturally came in with a lot of flowers, being our largest growers. Without their help in potted mums and roses, the show would have been much poorer. Herman V. Hunkel opened up his heart and gave roses till the visitors were breathless with envy. They also showed some fine cyclamen plants, pompons, Satsuma orange, Cleveland cherries, and some very fine lilies-of-the-valley.

Other chrysanthemum exhibitors were Hugo Locker & Sons, Heitman-Oestreicher, Griebler, Riebs Bros., Preuss & Son, Gimbel Bros., Schroeder Floral Co., Reinhardt, Greenwood Carnation Co., Fox Point Floral Co., Sunny Point Floral Co., Kamp and Spinti, E. Welke, of the House of Roses, Haash, Edlefsen Floral Co., and Sylvester of Oconomowoc, Wis.

Though it was early for carnations many fine ones were shown by Hugo Locker & Sons, Preuss & Son, Pohl, Reinhardt, Greenwood Carnation Co., Greenwald Bros., Brueggeman Bros., and Sylvester, of Oconomowoc.

Fine roses came from the Cudahy

Floral Co., through Gust. Rusch, Holton & Hunkel, C. C. Pollworth and Currie Bros.

Unusual exhibits were the snapdragons by Schwebke, the strawflowers by Mrs. Phil. Dettmann, the early sweet peas by Hugo Locker & Sons, the Celestial Peppers of the Waukesha Floral Co., the pansies of Griebler and the Fox Point Floral Co., the cyclamen of the Sunny Point Floral Co., and the many foliage plants of August Kellner.


There was a much larger participation by retailers this fall and baskets of arranged bouquets were shown by Hugo Locker & Sons, Preuss & Son, Kroseberg, Gimbel Bros., Schiller Floral Co., Maas, North Side Floral Co., Gutermuth, Gust. Holtz, Messmer, Zimmerman, Bell Floral Co., and the Edlefsen Floral Co.

Through the efforts of Henry R. Welke, the secretary of the Wisconsin State Florists Association, the annual meeting was staged in the Trustees Room of the Public Museum and all day Friday this was used to a double advantage. The 150 members and their wives reveled in the show and attended their meeting only a few feet away from the exhibit. Even Frederic Cranfield couldn't stay away. He came one day early to be on time, like the farmer that always gets off the street car a block too soon, for fear he will be carried past his stop. The State Florists were unanimous in their praise for the Milwaukee Florists Club and the treatment given them by the Public Museum.

Huron H. Smith.

Ferns may be planted on the east or north side of the house away from the sun and wind.

PATENTED AUG. 13, 1909





Berry Boxes
 Crates, Bushel Boxes
 and Climax Baskets
As You Like Them

We manufacture the Ewald Patent Folding Berry Boxes of wood veneer that give satisfaction. Berry box and crate material in the K. D. in carload lots our specialty. We constantly carry in stock 16-quart crates all made up ready for use, either for strawberries or blueberries. No order too small or too large for us to handle. We can ship the folding boxes and crates in K. D. from Milwaukee. Promptness is essential in handling fruit, and we aim to do our part well. A large discount for early orders. A postal brings our price list.

Cumberland Fruit Package Company
 Dept. D, Cumberland, Wis.

A Word of Caution on Mulches

Thirty years of investigation by the United States Department of Agriculture and the much longer experience of practical farmers have demonstrated that about the only way of conserving soil moisture for the use of agricultural plants in the regions of scanty rainfall is to provide a suitable seed-bed for their germination and early growth and to prevent useless weeds that would otherwise compete with them. Theoretically, covering or mulching the soil for the purpose of preventing the loss of soil moisture is very efficient; practically, it has very narrow limitations.

There are several things required of a soil covering or mulch besides simply preventing the loss of moisture. Among these may be mentioned the following: It must "stay put"; that is to say, it must be of such character that it will not be

Kellogg's Nursery

Janesville

Wisconsin

SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shrubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen. Order direct from a reliable nursery and save money.

Quality and a Square Deal

ARE WHAT WE OFFER YOU

Our new 48-page catalog (16 pages in colors) gives you an honest description of FRUITS, VINES, ORNAMENTALS, PERENNIALS, etc., for this climate.

If you are in doubt as to what is best to plant we will be glad to advise with you.

We do landscape work.

The Coe, Converse Edwards Co.

Fort Atkinson, Wis.

blown away by the high winds common to all arid regions. This rules out all dust and straw mulches, except possibly in orchards or berry patches, and, in them, the straw mulch is frequently objectionable on account of its harboring rodents, especially field mice. A soil covering must let rain into the soil. This rules out the dust mulch which is almost, if not quite, impervious to

ordinary rainfall, as it puddles producing a sheet of paste over the surface that prevents the water from reaching the roots of the crop plants.

A straw mulch, if thick enough to prevent the growth of weeds, will absorb most, if not all, of an ordinary rainfall. The water thus absorbed will evaporate very quickly, as soon as the rain ceases and the sun begins to shine on the mulch, never reaching the roots of the crop plants.

The heating of the soil by the sun's rays and its aeration by exposure to the winds are important factors in the growth of agricultural crops. Many wild woods and swamp plants have been developed through long periods of time in soil open to free access of the sun and the wind, and these conditions seem to have become necessary to their fullest development.

(While this discussion of mulches was quite evidently intended for growers in semi-arid regions, much of it applies to Wisconsin conditions. For instance, it is worth considering whether a heavy straw mulching around fruit trees and in berry fields is a good plan.—Editor.)

Notice to Certain Correspondents

This paper stands for law enforcement. Take your questions about wine grapes and wine making to some other shop, please.

If instead of selling all the cherries canned at Sturgeon Bay last year the cans had been placed end to end in a north and south line beginning at the canning factory the last one would have rested in Main Street, Austin, Texas. This year the end can should be somewhere down in Brazil.

The Hawks Nursery Company

are in a position to furnish high grade Nursery Stock of all kinds and varieties suitable to Wisconsin and other northern districts.

Will be glad to figure on your wants either in large or small quantities

Wauwatosa . . . Wis.

McKAY NURSERY COMPANY

MADISON

WISCONSIN

Nursery Stock of Quality

for Particular Buyers

Have all the standard varieties as well as the newer sorts. Can supply you with everything in

Fruit Trees, Small Fruits, Vines and Ornamentals.

Let us suggest what to plant both in Orchard and in the decoration of your grounds. Prices and our new Catalog sent promptly upon receipt of your list of wants.

Nurseries at Waterloo, Wis.

Fruit Garden AND Home



December 1922

10 Cents

Three Magazines in One At Special Introductory Rates

Treatment in our magazine of the three great subjects, Fruit Growing, the Garden, and Household, is complete, thorough and dependable in each department. These lines merge beautifully in the ideal home, and our Editorial treatment of them is co-ordinated to form a harmonious, interesting and helpful magazine.

Get More Out of Life

Your Fruit and your Garden can be made sources of genuine pleasure and real profit to you. The growing and care of flowers—those smiles of the Creator—provide real enjoyment and recreation. Flowers beautify the home and certainly go a long way toward making life more worthwhile.

And the Home—the beautification and attractiveness of its interior and surroundings—is always the center of our thoughts and the subject of our dreams.

FRUIT—GARDEN—HOME

A well-known nurseryman made the remark recently that, in his judgment, **the greatest opportunity for substantial profit in the entire horticultural and agricultural fields today, and for the next ten years, is in orcharding.**

According to United States census figures, there were, in 1920, 48 per cent fewer bearing apple trees and 46 per cent fewer bearing peach trees than in 1910.

There are perhaps equally as great opportunities for making money in small fruits, grapes, berries, etc., as in tree fruits.

Let **FRUIT, GARDEN AND HOME** and its corps of expert horticulturists help you with your problems concerning fruit growing.

FRUIT, GARDEN AND HOME will provide you a vast amount of practical garden information concerning:

When and How to Plant
Garden Plans
Fertilization
How to Prevent and Destroy Insect Pests and Plant Diseases
Dehydration of Fruits and Vegetables
Cold Frames and Hotbeds
Plant Protection
Cultivation—Advantages of Various Tools and Implements
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How to Store Your Surplus Vegetables
Better start reading this helpful magazine at once. Use the order coupon below.

In our Home Planning and Home Decoration pages you will find discussions of such subjects as:

Planning the Home
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Arrangement and Care of Furniture
Seasonable Suggestions
Time and Labor Saving Equipment and Utensils
Dehydration of Fruits and Vegetables
Methods of Canning and Preserving
Recipes for All Occasions
Dressmaking, Fashions, etc.
Crocheting, Embroidery and Fancy Needlework

You will find in **FRUIT, GARDEN AND HOME**, the home owner's magazine, a wealth of information on various phases of the subjects mentioned, all of which are important and interesting to you and each member of your family.

OUR INTRODUCTORY RATES

The magazine is printed on good paper in clear, easily read type, illustrated with many interesting pictures. Altho **Fruit, Garden and Home** is high class in every respect, and has the appearance of a \$1.50 magazine, yet our Introductory rate is only: 3 years for \$1; 2 years for 70c; 1 year for 35c.

We want your name and the names of your friends on our subscription list. We are endeavoring to make our magazine of real value and interest to you. You will find a subscription order coupon opposite.

FRUIT, GARDEN and HOME

E. T. MEREDITH, Publisher

DES MOINES, IA.

SUBSCRIPTION ORDER COUPON

E. T. MEREDITH, Publisher,
Fruit Garden and Home, Des Moines, Iowa.

Enclosed find \$.....for my.....years' subscription.

Name

R. F. D.....Box No.....Street and No.....

P. O.....State.....

I also enclose \$.....for.....years' subscription for: Name.....

R. F. D.....Box No.....Street and No.....

W.H. P. O.....State.....

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, December 1922

Miller Memorial Library

The first book to be sent in to the Library was a copy of *Die Biene and die Bienenzucht*, by A. V. Berlepsch. This donation was made by C. W. Aeppler, Oconomowoc, Wis.

A first edition of Langstroth on the Honey Bee was sent in by B. P. Sands, Brookline, Mass.

A reprint of Quinby's "Mysteries of Beekeeping" has been sent in by A. G. Rauschelbach, Bay City, Mich.

Mr. A. C. Miller of Providence, R. I., is making arrangements to send us his entire library containing several hundred volumes.

Since our last report in the September issue, the following contributions have been made to the Miller Memorial Library Fund.

Local donations:

Rock County Bee Assn.....	\$ 5.00
Milwaukee Co. Bee Assn.....	5.00
Winnebago Co. Bee Assn.....	5.00
Richland Co. Bee Assn.....	2.00
Baraboo Valley Bee Assn.....	5.00
Northeastern Wis. Bee Assn.	5.00
Sheboygan Co. Bee Assn.....	5.00
Washington Co. Bee Assn.....	5.00

Total\$37.00

By individual beekeepers:

A. H. Seefeldt.....	\$ 1.00
G. M. Ranum.....	3.00
Jos. M. Barr.....	1.00
Conrad Kruse	5.00

Total\$10.00

Miss Clara G. Jones, West Bend, Wisconsin, has offered to contribute the entire library of her father, Capt. Geo. W. Jones, deceased. This library contains a number of splendid old books and numbers of bee journals which are valuable. We hope every beekeeper in Wisconsin will look up old journals and bee books and send them into this office. We shall be glad to pay the freight.

Renew Your Membership

Soon the New Year will be here and the secretary will be sending you a notice to renew your membership for 1923. Why not surprise her by sending your dollar before the renewal notices are sent out? Every member who renews before receiving a notice saves his state association postage expense. **RENEW NOW.**

Lafayette County Beekeepers Organize

The beekeepers of Lafayette County recently organized a county association. They immediately voted to affiliate with the State Association. This is the 44th local association to be formed in Wisconsin and the 33rd local to become affiliated with the State Association. The officers of this organization are: President, Joseph Kurth, Mineral Point; Vice President, Henry Arnsmeyer, Darlington; Secretary-Treasurer, John G. Franz, Darlington. They have eleven members in the State Association.

Newspapers all over the United States have published the half interest purchase of a queen bee. We include the article for our members.

Queen Bee to Spend Her Winter in the South

Amelia, N. D., Oct. 12.—A half interest in Achievement Girl, a queen honey bee of the Amelia apiaries, has been sold to J. M. Cutter & Son, Montgomery, Ala., for \$150, setting a new record for bee values, according to W. A. Crites, manager of the Amelia bee farm.

The queen was mailed to Alabama, where she will spend the winter, to be returned to North Dakota next spring. She was a member of a colony which last summer set one of the three worlds records for honey production, according to Mr. Crites.

Tariff on Honey

There is a proposed reduction of \$2.75 per hundred pounds in rate on comb honey in carloads from North Pacific points to points in Wisconsin, Illinois, Michigan and Minnesota.

According to L. T. Floyd, Provincial Apiarist of Manitoba, honey production gave Manitoba a revenue of \$400,000 in 1922.—Taken from Lewis Bulletin, News Items.

Co-operative Associations

Co-operation means releasing honey when markets ask for it, resulting in increased returns for the producers without adding to the consumers' expenditure. Moreover, co-operative associations stimulate demand for their products through standardization, advertising and by continuous adoption of better marketing facilities.

Co-operative Beekeeping

Wisconsin is noted the world over for the spirit of co-operation which exists among its people. Along with this spirit of co-operation there exists a certain tendency for progressive development which extends to every part of the state. This spirit exists among our beekeepers to an unusual degree and as a result, it is fairly easy to get both moral and financial support for any undertaking which promises good results for our beekeeping industry.

There are today forty-four local beekeeping associations in the state, thirty-three of these being actively affiliated with the state association. These associations working together co-operatively have been able to secure a suitable means of bee disease control and standard grades for honey, which have greatly benefited the beekeepers of the state.

The educational program provided by the University has been fully supported by attendance at the local meetings and the summer conferences. We have given full support

Wisconsin Beekeeping

H. F. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association

President.....	Reedsville	F. F. Stelling
Vice President.....	Loganville	Conrad Kruse
Treasurer.....	Oconomowoc	O. W. Aeppler
Secretary.....	Madison	Malitta F. Hildreth

Annual Membership Fee, \$1.00

Remit to M. F. Hildreth, Secy., Madison, Wis.

to the American Honey Producers' League and to the beekeepers of Wisconsin belongs the credit, through the financial support which they have given, for the placing of the Memorial Library at our University. There still remains, however, a very important matter upon which full co-operation has not been secured, namely, *CO-OPERATIVE MARKETING*. If a proper plan for organizing a marketing association can be developed which will include a standard product, standard containers, standard prices and an advertising program, we can easily sell several times over the total crop produced in Wisconsin in any year.

Our next effort along this line will be to bring about the use of standard labels on containers for the members of the state association. If our beekeepers will unite in adopting a uniform price for the product to be sold under the Association label and in the Association containers, our battle will be half won. Then, if we can unite to support a state-wide advertising campaign to bring our product before the public and will co-operate with one another in a uniform distribution, we will have completely routed the enemy and the field will be ours. In this effort *each local association* should start a campaign in their county to carry out this co-operative plan. One or more local organizations will form a basis upon which to build the entire state. *Have we among our members someone who is willing to develop this plan and put it across?*

H. F. W.

Advertising Honey

The secretary just received the following clipping, taken from a local Fond du Lac newspaper:

FOND DU LAC MARKET'S WHOLESALE

QUOTATIONS BY LOCAL DEALERS.

Eggs, strictly fresh—35c.

Butter, prints, lb.—46c.

Butter, tubs—45c.

Potatoes, new, bu.—35c.

Cabbage, per cwt.—35c.

Onions, lb.—2c.

Peas, dry—5c.

Honey, comb, lb.—25c.

Honey, strained, lb.—15@20c.

Will our local associations please note that HONEY is included? The Fond du Lac County Beekeepers Association, through co-operative effort, brought the proper pressure to have HONEY included in daily market quotations—and note the price. Our other local organizations can do the same. Take this matter up with your local newspapers and see that HONEY is listed in Market Reports. This is one result of co-operative effort or efficient organization.

Honey—Something That Is Sweet, Yet Healthy

Health can be secured by a judicious choice of foods. Honey is the healthiest sweet known and was much sought after by the ancients.

As a food, honey contains vitamins and small portions of practically every mineral element used by the human body.

Honey is refined nectar removed from flowers of various kinds by honey bees. Every flower produces a different flavored nectar and so we may have as many kinds of honey as there are flowers. But as each flower produces only a tiny drop of nectar, it is necessary that there be many thousands of blossoms of one kind in order to get large amounts of a certain kind of honey.

Pure honey is produced in marketable quantities from orange, eucalyptus, tulip trees, basswood

trees, sage, fireweed, alfalfa, sweet clover, white clover, alsike clover, wild raspberry, buckwheat and many other plants.

Pure Wisconsin Honey has its source from clover, wild raspberry, basswood or buckwheat.

Wisconsin clover honey is the finest honey produced both as to quality and flavor. It is light amber colored or may be almost white.

Basswood and wild raspberry honey have a rather spicy flavor which is much preferred by some people. If you have never tasted either of them, buy a jar and enjoy one of nature's tastiest sweets.

Buckwheat honey is very dark in color and has a peculiar flavor which one must learn to like. When one has acquired a taste for it, it is quite desirable.

In choosing honey for table use, the consumer should sample the different kinds that are on the market and select the one that suits. Because one flavor does not appeal to you, do not go away feeling that you do not like honey.

Honey is a natural sweet which has no ill effect on the digestive system.

Honey is one of the most healthy sweets known and is commonly recommended by physicians for patients who are suffering from indigestion because of the ease with which honey is taken into the human system. It is also known that *bacteria* which cause *Typhoid Fever*, *Dysentery* and other human diseases cannot live in honey for more than a few hours. Honey is therefore sure to be free of such disease germs and may possibly be beneficial in the prevention of such diseases.

It is recommended as a preventive for coughs and colds and its constant use will help you to keep well during the winter.

As a spread for children, it may be given to the smallest child without harmful results. It is very beneficial to children as a mild laxative and will help to keep

them well. It is a splendid food to sweeten bread for children who are in the habit of eating between meals as it does not spoil the appetite for other food.

WHEN BUYING HONEY INSIST THAT YOU GET PURE WISCONSIN HONEY, NO OTHER IS JUST AS GOOD. Blended honey containing honey from other states is commonly sold on the market under the label, "Wisconsin honey and honey from other states." Why? Because other honeys are cheaper and a portion of Wisconsin honey improves the flavor.

—H. F. W.

Members of the Wisconsin State Beekeepers' Association may secure a fine little booklet, "How to Sell Honey," free by writing to the A. I. Root Company, Medina, Ohio. This booklet will give you some good information concerning different methods of selling honey and also illustrates the importance of uniform labels, containers and prices. Send for your copy today.

The U. S. Department of Agriculture recently issued a publication entitled "The Insulating Value of Commercial Double-Walled Hives," by Dr. E. F. Phillips. Send to the Secretary, U. S. Department of Agriculture, Washington, D. C.

How Is It With Your County?

Recently about 175 beekeepers of Sheboygan County on the mailing list of the secretary of the county association all received the latest government bulletin on beekeeping, entitled "Beekeeping in the Clover Region." These bulletins are sent out by Congressman Edward Voigt, who requested the mailing list. Each person first received nine bulletins and later the one just mentioned. This method may waste some good literature, but it certainly is getting what the government has to offer into the hands of the beekeepers.

Renew Your League Membership Now

One hundred nineteen members of the Wisconsin State Beekeepers' Association were affiliated members of the American Honey Producers' League during 1922. Several of these have already renewed for 1923. Why not send in *your* renewal now?

Is Membership in the League Worth a Dollar?

The future of the American Honey Producers' League depends entirely on the members of state associations. How many are willing to send an extra dollar a year to the secretary of their state association for the privilege of affiliation with the League?

Advantages

Affiliation with the League carries the following privileges.

1. Free subscription to the League Bulletin which may be expected monthly from now on. Marketing reports are to be included in all issues after this one.
2. Ten per cent discount on copies of "Honey, How and When to Use It," a recipe booklet for distribution to customers. A single order for two hundred of these booklets will save enough to pay the affiliation fee.
3. The right to use warning posters offering a reward for the arrest and conviction of thieves and marauders in apiaries of members.
4. Assistance in the adjustment of claims arising from suspected fraud and misrepresentation.
5. Legal aid in opposing the enactment of state laws and city ordinances injuring beekeeping.
6. Share in an organization which has advertised honey nationally, has distributed 18,000 honey recipe booklets to all parts of the United States, has supported the recent advance in the tariff on honey, reducing competition from cheap foreign honey, and has upheld beekeeping interests in city councils, state legislatures and the United States

Congress.—Notes from League Bulletin.

Annual Meeting of the League

The annual meeting of the League will be held at St. Louis, on February 6, 7, 8, 1923.

A popular program on beekeeping and honey marketing will be carried out and all Wisconsin beekeepers who will be able to attend should write Dr. S. B. Fracker, Secy., State Capitol, Madison, for reservations.

If a good attendance is assured, reduced railway fares will be arranged.

Average Colony Yield Estimated At 53.8 Pounds

The Division of Crop Estimates states that the average yield this season has been 53.8 pounds per colony, as compared with an average of 44.2 pounds, last year.

Production this year is estimated to have been divided as follows:

Comb 28.7%; Extracted 59.7%; Chunk 11.6%; Details by the states will be published in next issue.

Market News Service, Nov. 15, 1922.

Raspberry Honey Wanted

We should like to secure a sample of pure raspberry honey. Any member having such honey should write the secretary.

Value of Honey Bee to Horticulture

T. K. Massie has an able article on page 19, of the October Dixie Beekeeper on the value of the honey bee to horticulture. He shows how necessary the honey bee is to fertilize and cross pollinate the flowers of fruit trees. His estimate is that the bee is of *ten-fold* more value to the fruit grower than to the apiarist and places an estimate of 220 million dollars as their possible economic value. His conclusions are well supported by authorities and references which he cites.—From October Beekeepers' Item.

Richland County Bee Assn. Passes Resolutions

The following resolutions were passed by the Richland County Beekeepers' Association, at its annual meeting October 7, 1922.

I. *Whereas*, the beekeeping industry in Richland County has been jeopardized by the foulbrood plague, a few beekeepers have, or nearly so, been put out of business by this dreaded bee disease, and,

Whereas, The State Bee Inspector, Dr. S. B. Fracker, gave the beekeepers with affected yards two years to free their yards of the aforesaid disease, and,

Whereas, This year being the third, more drastic measures were used, and,

Whereas, The State Department of Apiary Inspection is desirous of working in harmony with the beekeepers,

Therefore, be it Resolved, That we the Richland Beekeepers' Association in Annual Meeting, heartily commend the plan pursued by the State Apiary Inspector.

Be it further Resolved, That we express our appreciation for the work of Messrs. Momsen and Kuenzli, deputy bee inspectors, for their thorough work and the manly way of meeting and treating the members of the industry.

II. *Whereas*, The beekeeping industry is now recognized as tenth in importance among Wisconsin industries by the Wisconsin Manufacturers' Association, and,

Whereas, No other industry is making greater strides toward development, every thing considered, and,

Whereas, The University of Wisconsin is giving a complete course of instruction in beekeeping, and,

Whereas, Said university has a complete equipment of apparatus and equipment for instruction in both class room and laboratory, and,

Whereas, The housing quarters for instruction at said university in beekeeping is very *inadequate* and *far below* the plane of other courses, and,

Whereas, A museum showing all equipment used in earlier beekeeping should be collected for the benefit of beekeeping instruction and Wisconsin beekeepers,

Therefore, Be it Resolved, That we the Richland County Beekeepers' Association in annual meeting assembled, respectfully request that suitable quarters be given for instruction in bee culture,

Be it further Resolved, That a copy of these resolutions be sent to the Assemblymen elect for Richland County and Senator for this district and the Wisconsin Horticulture to be published in the Beekeeping section if space permits.

III. *Whereas*, The beekeeping industry is now recognized as tenth in importance among Wisconsin industries by the Wisconsin Manufacturers' Association, and,

Whereas, The honey production in the state can be increased hundreds of tons from natural resources already present, namely, the clovers, basswood trees, dandelion, buckwheat, berries and fruit bloom, and,

Whereas, It is generally known that bees aid greatly in the cross pollination of these plants and cause an increased production of seed and fruit, and,

Whereas, The beekeeping industry has received *no financial* aid except for the prevention of bee diseases, and,

Whereas, Financial aid is now being given to help promote the interests of other agricultural and horticultural associations,

Be it Resolved, That we, the Richland County Beekeepers' Association, respectfully request an appropriation of an amount to cover the budget now being compiled to be expended through the Wisconsin Beekeepers' Associa-

tion in promoting and advancing the beekeeping industry by means of bee and honey displays, state beekeepers' convention, annual reports and other publications.

Jas. Gwin, Secretary.

Richland County Bee Assn.

These are timely resolutions since the Legislature will convene in January, 1923, and every local association should pass similar ones. Now is the time for our locals to line up such work so that when the Legislature meets, our beekeeping problems can be presented in a systematic manner and receive *proper* consideration.

Honey Recipe Booklets

Honey sales may be stimulated by offering a recipe book as a premium to each purchaser. The best thing of this kind ever issued is the one recently published by the American Honey Producers League—twenty-one pages on the keeping of honey, and its use in bread, cakes and candy making. Honey producers should put this into the hands of every purchaser.

Order from S. B. Fracker, Secretary of the American Honey Producers' League, Capitol Annex, Madison, Wisconsin. The booklets can be secured at the following rates:

20 copies	\$ 1.25
100 copies	4.50
1000 copies	33.00

Ten per cent discount to affiliated members of the league.

For Sale—Fifty stands good healthy bees in movable 8 frame hives, 50 comb honey supers, 100 extracting combs, 2 frame extractor, 30 gal. tank, misc. supplies all new.

This is a clean, up-to-date apiary; inspected Sept. 8, 1922, by Mr. France; 15 years in beekeeping. Good reason for selling. Write for prices, Ernest Ransier, Argyle, Wis.

WISCONSIN HORTICULTURE

Vol. XIII

Madison, Wisconsin, January, 1923

No. 5



ONE OF MR. LIVINGSTONE'S ORCHIDS.

Horticultural Expositions

Council Bluffs, Ia.—The Mid-West Horticultural Exposition, held at Council Bluffs the week of Nov. 13, proved the greatest show of the kind yet held by the horticultural interests of the country. While eighteen states competed for awards, practically every state in the union was represented, as well as provinces of Canada.

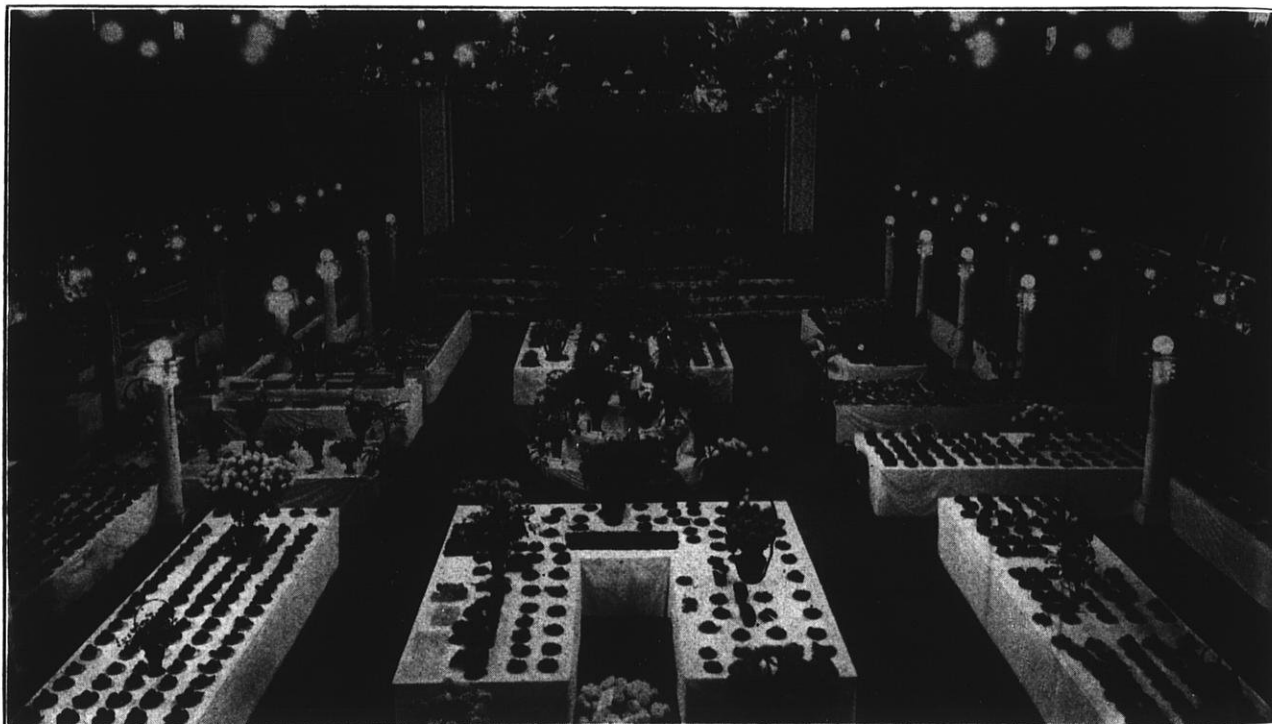
E. O. Worth of Mondamin, Ia., won the sweepstakes trophy cup

Mr. Ward's exhibits were scattered with blue ribbons following the judging Thursday and Friday. The number of points were added and the Eau Claire horticulturist declared highest man Saturday evening.

Second in the grand sweepstakes was Francis Sestier, Des Moines, Ia., and James Hethershow & Son, Des Moines, Ia., ranked third.

High men in the fruit judging contest for inter-collegiate teams,

carloads of potatoes. Nor does the reporter say a word about the "throng of people" who visited the show. If he had done that he would have lied. There were no "throng of people" at any time, in fact, you might have shied a rotten apple down most any aisle at most any hour without fear of hitting anyone, unless it might be Professor Alderman and his judges.



MIDWEST EXPOSITION, COUNCIL BLUFFS, IOWA, NOV. 13-20, 1922.

for apples, with 149 points. D. C. Webster of La Crescent, Minn., was second with 137 points. R. M. Clark of Des Moines was third, with 89 points. M. J. Worth of Mondamin, fourth, with 84 points, and M. E. Good & Sons of Peru, Neb., fifth, with 63 points. The Wilcox florists of Council Bluffs won the trophy cup for best floral display.

Grand trophy cup in the vegetable contest was awarded to Joseph Ward, Eau Claire, Wis., whose collection of vegetables was said by the judges to be the finest ever exhibited in the West.

held in the library Friday, were R. V. Latt, Missouri; D. R. Porter, Ames, and C. A. Boyer, Michigan.

THE SPIRIT OF THE MIDWEST SHOW

The newspaper account you have just read tells about the body of the show and not all of that—but nothing of the spirit. It's that I tried to find. It fails to tell about the quantities of big red apples, the plates and boxes and barrels of fruit, the tons of honey and the

Yes there were people there, fruit growers mostly, and they were there all of the time. I wondered why, for only a few were exhibitors. I felt that after spraying apples and picking apples and barreling or boxing apples, they must, like Solomon, be "sick of apples."

There was a stage, and on it a wonderful band, but these men seemed not to care over much for the music, but instead walked in little groups from table to table, these groups often merging, when

there would be a halt and much talk. I had often asked myself, "What do these exhibitions amount to anyway?" Thousands of dollars expense, hard, grinding work for every one connected with them, and you have a show exceeding in quantity only that of a first-class county fair and one that nobody, hardly, comes to see.

Sitting in a corner of the balcony where one might see it all, I spied an old friend who rarely misses a fruit show held in his own or nearby states. I descended upon him and asked an answer to my question. I got it. It's the very answer that my other self knew but would not permit expression, as to why he came so far to see apples no better than his own. He replied in substance as follows: "I need the inspiration I get from contact with my fellow men. I jog along the whole year as others do, practically alone on my farm, digging into the job every day and unless I can mix with people occasionally, I will grow a shell like a crab, coming out only to feed."

Well, there you have it. Fruit shows and conventions *are* worth while. My friend told me so, and I have always known it. There was something else that he didn't say but that I made up in my own head. The fruit itself, which I have much belittled in this rambling essay, was also an inspiration to him and to other fruit growers; the beautiful apples on snowy white tables and in solid banks along the walls, visualized the beauty, the soul, the spirit of his calling.

I am in the balcony again. I see the great expanse of glowing fruit garnished with flowers, and as I listen to the singing violins and the louder voiced cornets, I spy, just below me in the Auditorium, friend

Reeves in earnest conversation with a florist.

Touching elbows with your neighbors, interchange of ideas, inspiration, that's the Spirit of the Midwest and every other fruit show and convention.

FREDERIC CRANEFIELD.

Life in a Boarding House—It's True, Every Word

I was either five minutes early, or the car was five minutes late. Usually I detest waiting—but, just as I reached the corner, a happy faced woman was talking to a friend and without meaning to "listen in" this is the tale I heard:

Yes, our new house is about finished—we will move next week. My, but I will be glad to settle down for I am as tired of moving as I was of boarding.

Didn't I ever tell you about our experience in boarding instead of keeping house? Well, you see I had made up my mind before Joe and I were married that I was not going to keep house. I had always stayed at home and helped mother, so I wanted to board somewhere so I could have a good time. Joe was willing, and after we came back from our wedding trip we went to a nice family hotel. For the first few days I suppose I was so happy I didn't know what I was eating, but pretty soon the food began to taste as though it had all been cooked in the same kettle and the whole place smelled of cabbage and onions. That was bad enough—but those boarders were worse. Every one of those men and women had troubles, and they wanted to tell them to me. There was one man who said his wife didn't love him any more. He would talk for an hour about how unhappy he was, and that wasn't the worst of

it, he was a music teacher and he had a room next to ours and he would get up and play the violin just as mournfully as he talked. Then there was a woman whose husband was cruel to her and she was getting a divorce. I heard over and over, all those cruel things until I didn't blame him one bit.

One of the girls shed tears all over the place because her best friend had stolen her beau, and a young man who sighed and said all women were a faithless lot because his sweetheart had jilted him for a man with more money. There wasn't any use of me trying to escape them by staying in our room, for the only couple who didn't tell their troubles to me had an adjoining room and they quarreled all the time, so I couldn't even read. Oh, that wasn't all. There was a young woman who took vocal lessons. She worked in an office. So she got up at 4 o'clock every morning to practice, and her yells, yes, I mean it, they were yells, woke everyone in the house. We stayed a month; had to pay in advance, you know, and then I said to Joe, "for goodness sake, let's go to keeping house. I would just as soon live in an asylum as here." Joe laughed and said he was glad I'd gotten enough boarding. He was starved for a good square meal. Pretty soon Joe wanted to buy a home, but I didn't see the need. We rented a nice little home and I was contented. But the owner sold it. And do you know we moved four times since then. Why we would no more than get settled before we would get notice to move, the house was sold.

The place we are living in now is something awful. Why, when the wind blows the bed clothes posi-

(Continued on page 69)

The Federated Fruit and Vegetable Growers, Incorporated

The space given to this movement in WISCONSIN HORTICULTURE may seem to many of our readers "much too much," but it appeals to the editor as the biggest happening in the horticultural field of the United States today. Either this move will succeed or it will fail. If it succeeds on the lines originally laid down, viz., the growers of fruit and vegetables of the whole country, federated for the purpose of a better distribution of crops and a stabilization of markets, it will result in great good to growers and consumers alike. Not a trust, but a federation. Up to date, all proceedings bear the ear marks of success, therefore the publication of these notes, taken from exchanges. If the Federation has actually swallowed the North American Exchange all is well; if it's the other way around, there is apt to be stomach trouble for both parties:

Permanent organization of the Federated Fruit and Vegetable Growers, Inc., was completed at a meeting of the directors in New York on October 21. The following officers were elected to serve until the first annual meeting:

President, J. S. Edwards of California.

First vice president, E. P. Porcher of Florida.

Second vice president, W. B. Armstrong of Washington.

Secretary, C. E. Durst of Illinois.

Treasurer, Alexander M. White of New Jersey.

J. S. Edwards has been a director of the California Fruit Growers Exchange for many years, and is also a director of the Fruit Growers Supply Company. He is president of the Gold Buckle Association, which was the first in the country to establish a pre-cooling plant of its own.

E. P. Porcher is one of the largest orange growers in Florida, and was the originator of the "Deerfield" brand.

W. B. Armstrong is president of the Washington Farm Bureau Federation and a leader in co-operative marketing in the Yakima Valley.

Alexander M. White is the chief owner of Seabrook Farms at Sea-

brook, New Jersey, which has 1,000 acres in vegetables, 1,000 in fruit, and 1,000 in undeveloped land. A large proportion of the vegetable land is equipped with overhead irrigation.

Nicol Heads Executive Committee

The following executive committee was elected: James Nicol, of Michigan, chairman; E. P. Porcher, of Florida; N. R. Peet, of New York; C. E. Durst, of Illinois; H. W. Jeffers, of New Jersey; J. S. Edwards, of California, ex-officio.

Arrangements for taking over the affairs of the North American Fruit Exchange were concluded. This organization conveys its entire business to the Federated Fruit and Vegetable Growers and agrees to discontinue as a sales and distribution agency after Jan. 1, 1923.

The way is now clear for the new grower-owned and grower-controlled national sales agency for perishables to begin sales service on Jan. 1, 1923. J. S. Edwards, president, will devote all his time to the new organization between now and January 1, and the executive committee will also be called into conference to decide questions of policy.

Membership Applications Pouring In

Applications for membership are already being received. The first applicant was the South Haven Fruit Exchange, South Haven, Michigan, which ships from 600 to 800 cars of fruit a year. It is one of the oldest and best established associations in Michigan. Reports indicate that the patrons of the North American Fruit Exchange are favorably disposed toward the new grower-owned agency and will gladly transfer their tonnage to the new organization.

The organization and field service office, which will be located in Chicago, will be opened as soon as the details can be completed. A. R. Rule, formerly general manager of the North American Fruit Exchange, is general manager of the Federated Fruit and Vegetable Growers, Inc.—Exchange.

Celery, Once a Novelty, Now an Important Crop

From a crop that was a novelty and served on the tables of only a few people to an industry that has produced as many as 17,000,000 crates in a year has been the development of celery production within the memory of many people now living. With the rapid increase in the growing of the crop, methods of culture and marketing have materially changed, new diseases and

pests have appeared, and a number of problems have arisen. Because of these new problems and difficulties, the United States Department of Agriculture has just issued Farmers' Bulletin 1269, Celery Growing, by W. R. Beattie, in which are discussed the fundamentals of successful production, including the best methods of growing and handling the crop.

The crop can be grown on almost any type of soil if enough plant food is present and water is supplied during the dry periods, but most of the successful celery growing enterprises are on low-lying muck, or "hammock" soils. Under present day conditions it is not practicable to depend entirely on manure as a fertilizer and large quantities of commercial fertilizer are used, growers in the northeastern part of the country using from 1,400 to 1,800 pounds of high grade plant food to the acre. Florida growers sometimes use as much as three tons to the acre. But not all of the discussion is devoted to the commercial growing of celery. There is a chapter on producing the crop in the home garden, and many of the practices that have been developed are applicable no matter on what scale it is grown.

Copies of the new bulletin may be obtained free by writing to the United States Department of Agriculture, Washington, D. C.

A light spray of lime sulphur applied in early spring will discourage the growth next season of scale insects on shrubs and trees. Examine all shrubs and trees now for signs of these troubles.

Apple trees may be pruned these days if the weather is not uncomfortably cold to work outdoors.

Power Sprayer Proves Successful

By the time this appears in print we will have discussed, at the convention, the subject of power sprayers in the farm orchard and also "spray rings." We feel, however, that the following clipping from a Lake Geneva paper in June last will not be out of place. It comes first hand and as news.

"The power sprayer purchased co-operatively by 11 farmers in the vicinity of Elkhorn and operated by Earl Stearns, has been busy the past week giving the 'petal fall' spray. It consists of 150 gallon tank, 1½ horsepower gasoline engine and spray pump mounted on trucks and equipped with one 50-foot length of hose and a spray gun. It carries up to 300 pounds pressure and the spraying is done at 200 to 250 pounds.

"It works to perfection and all those who have seen it in operation will agree that it does first class work and are immediately anxious to have their own orchards sprayed. However, as the season is short, but few orchards in addition to those of the members can be taken care of. Another year it is likely that several of these orchard rings will be organized and orchards properly taken care of. Rock county has 11 of them and they are giving satisfaction. The cost is very small and it takes no time whatever from the farmer, thus insuring that his trees be sprayed on time and in the right way. It is a true solution of the spray problem for farm orchards."

Old Apples Trees in Wisconsin

For apple trees to bear at the age of more than three score and ten, we believe is somewhat out of the ordinary, and we dare say that not many apples are being grown around Stoughton on trees planted the year Wisconsin became a state; yet when Geo. Leng and wife drove over from Orfordville last Sunday for a visit with their nephew Oscar and family, they brought with them

a bushel of beautiful Golden Russets and Tolman Sweets, picked from trees brought all the way from New York state and set in Wisconsin soil in 1848—74 years ago. When Jordan Leng, father of Oscar Leng, in that year left his home in western York state to help develop the unsettled west, he took with him enough young apple trees to plant a good-sized orchard, and these trees came with them on the lake trip to Milwaukee and thence were hauled by ox team to the vicinity of the Sugar river where he located not far from what later became Orfordville (Rock county), and there he planted an orchard just to the south of a towering limestone hill. Of the trees planted by the pioneer, Father Time has taken toll of all but four, the survivors numbering two Golden Russets, a Roxbury Russet and a Tolman Sweet, which as yet seem quite sound and some of which, Mr. Leng tells us, have crowns fully forty feet across. The apples grown on these patriarchs of the Leng orchard appear exceptionally sound.—Stoughton Hub.

Life in a Boarding House

(Continued from page 67)

tively flap, and when it rained the other night I moved the bed all over the room and then had to hold an umbrella over my head. The roof leaked so I couldn't find a dry spot.

I certainly shall be glad when I get settled in my own home. Does it suit me? Why, my dear woman, it would suit me if it only had four solid walls and a tight roof. After the experience I've had boarding and renting or rather moving, I'm ready to settle down and be a satisfied, contented, happy woman. There comes my car. Good-bye.

CAROLINE ELIZABETH STRONG.

Tulip Bulbs May Be Grown at Profit in United States

Most of the tulip bulbs in this country are imported, but good tulips can be grown here at a profit, says the United States Department of Agriculture, in Department Bulletin 1082, The Production of Tulip Bulbs, by David Griffiths. The bulbs are already being raised in commercial quantities by three or four companies in southern Michigan, by an association in the Willamette Valley of Oregon, by a company in northwestern California, another in the Norfolk region of Virginia and in a smaller way in a score of localities. The Department of Agriculture has been growing them successfully on Puget Sound in the State of Washington.

There is no limit, says the bulletin, to the quantity of bulbs which it is possible to produce in the United States. We have climates that are unexcelled, regions with an abundant moisture supply from October to June, dry summers, fertile sands, inexhaustible loams, and deep friable silts. The tulips already produced experimentally by the Department are as good as the best. They bed, they force, they produce, and they reproduce normally under American conditions. The industry of bulb production on a large scale, however, must develop slowly, for experience is necessary, and it is probable that for a long time the homegrown supply will be only supplementary to existing sources.

Examine house plants frequently for signs of the aphid and scale. Get rid of them early.

If onions are frozen for storage they should be kept frozen till time to use them in the spring.

THE FLORISTS PAGE

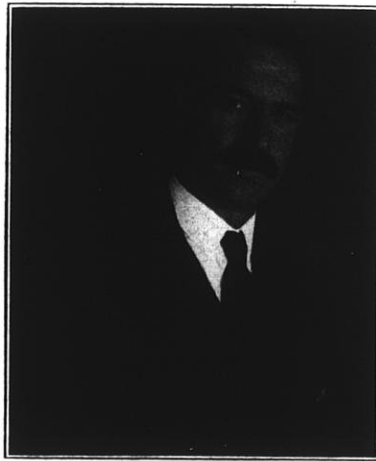
EDITED BY
HURON H. SMITH, Curator of Botany
PUBLIC MUSEUM MILWAUKEE, WIS.

James Livingstone

To know James Livingstone is to like him. Like most of the private gardeners, he has a large heart and is always ready to tell his fellow members of the Milwaukee Florists' Club just how he was able to grow successfully this or that variety of flowers. I suppose it is an unwritten law among private gardeners that information is always free and that an interchange of ideas is good for the business. Among florists it is quite otherwise, and if you can purloin a slip of some valuable stock or annex a new idea without cost, you have shown your business acumen. However, we feel that the old order is changing and noted, on an inspection trip to Holton & Hunkel's plant at Brown Deer, to C. C. Pollworth's at Wauwatosa and to the Cudahy Floral Co. at Cudahy, that advice was sought and given freely. We think that such altruistic organizations for mutual benefit as the Kiwanis, Rotary, Optimists, Lions and Junior Association of Commerce are diffusing the idea of service among all business men, and they have begun to discover that what helps one helps all. Thus the old order changeth, and I think it is somewhat due to the uncompromising Scotch character and kindness of James Livingstone that it is changing among the florists. It is a standing joke among the Milwaukee Florists' Club that he is the only honest man in the club. At any rate, he has been their Treasurer since 1912.

James Livingstone was to the garden born. He was born 51

years ago at Wishaw, Lanarkshire, Scotland, and attained his early training on the Coltness estate at Wishaw. He came to America on the first of September, 1895, working on an estate in Massachusetts for five years. From there he came to Evanston, Ill., where he had charge of the estate of an orchid fancier. There he learned more about orchids than any other Milwaukeean. From there he went to Monticello, Ill., and thence to Lake



JAMES LIVINGSTONE

Geneva, in 1907, where he managed the H. H. Porter gardens for three years. In 1910 he came to Milwaukee to take charge of the private gardens of Fred Vogel, Jr., 1160 Lake Drive, where he has been ever since.

Here he has a long stretch of the lake front and has had a chance to work out several of his own ideas and to breed several of his own varieties. Mr. Livingstone is a very modest chap and it is therefore up to me to say that he is wor-

thy of being termed Wisconsin's Burbank. His new *Amaryllis* is as fine as any we have seen and his chrysanthemums are worthy of commercialization.

If you were to visit his place in the growing season, you could go down through the ravines to the beach and easily forget you were near a big city, instead of in it. The native growth is wonderful and untouched save as the vandal element of the public have trespassed and carried away wild flowers and plants. This section used to be called "Fern Ravine," because of the countless ferns growing native there. They are also countless now, for none are there to count. We can hardly blame the wealthy home owner for wanting to fence in his property on the lake when we see how wild flower destroyers disregard his property rights.

Of course, Mr. Livingstone has beautified the estate with the usual rose borders, bulb ranges and the common things we all like to see. One of the first things he did was to divorce the truck garden from the ornamental plants. As we saw it last summer, the perennial garden was the chief charm of the place. He has had the good taste to hold fast to the old fashioned perennials and has made an informal garden that is worth going miles to see. It is not laid out on any niggardly scale for there are auto roads all through it.

Let me mention some of the species and varieties that are conspicuous plants of their respective seasons. As these have stood the test of the years and the climate, they may be valuable pointers to some of our readers, who have longed for a succession of flowers throughout the growing season.

In May, the Pink Phlox (*Phlox*

sublata) makes flaming borders in the garden. The little Alpine Rock Cress (*Arabis alpina*) is an early visitor. The Yellow sweet Alyssum (*Alyssum saxatile*) captures the early sunbeams and holds them on earth. The Perennial Candytuft (*Iberis gibraltarica*) makes a dense mass of snowy bloom at this time.

In June, the old fashioned varieties of *Paeonia* lord it over the lesser folk of the garden. The beautiful *Pyrethrum roseum* is probably the most striking species of this month. The *Platycodons* (*caerulea* and *grandiflora*) merit much admiration. The Canterbury Bells (*Campanula meadia*, *calycanthema* and *macrantha*) enchant the children who visit the garden at this time. The Sweet William (*Dianthus barbata*) and a variety of Scotch Pinks are much in evidence as are the Centaurea (*Centaurea montana*).

In July, the Delphiniums have the call. Mr. Livingstone has a wonderful bunch of Gold Medal hybrids from England that he has clung to for several years, as well as *Delphinium belladonna* and *grandiflora*. Now, too, we see his pure yellow Gaillardias, of the *Gaillardia grandiflora* type. Burbank's Shasta Daisy vies with its near relative, the Blackeyed Susan (*Rudbeckia newmanii*) in attracting the attention. This month sees too his wonderful Veronicas (*Veronica amethystina* and *V. spicata*).

In August, we see the old fashioned Hollyhocks, sentinels around the edges, mothering the brilliant Perennial Phlox. The varieties of Phlox grown include the famous "Elizabeth Campbell," "Miss Lingard," and "Bridesmaid." The wild *Liatris spicata* furnishes the blazing stars of earthly origin, and *Statice* gets ready to bloom for the

rest of the season. The *Helianthus* appear in August, the Riverton Gem and Riverton Beauty. Last, but most important and wonderful of all is the *Amaryllis Hallii* or *Lycoris squamigeri*. Perhaps there is no plant mentioned in this article that is so beautiful as this *Amaryllis*.

In September, the *Heleniums* have come into their garden glory. *Boltonia asteroides* and *Boltonia latisquamma* give us a taste of how beautiful wild flowers are when cultivated. *Pyrethrum uliginosum* is a striking bloom of this month. The Purple Cone Flower (*Rudbeckia purpurata*) gives us a further example of wild flower beauty. The native False Dragon's Head or Obedient Plant (*Physostegia virginiana*) is the delight of the children. They love to move the blossoms to impossible angles and imagine they are fooling the flower, which don't know enough to move it back into place. September, too, sees a great variety of the showy Stonecrop (*Sedum spectabile*).

These are but a few of the perennials to be seen in the perennial border and no mention has been made of the many showy annuals that are sowed to bloom after the perennials have blossomed and gone.

We said earlier in this article that Mr. Livingstone understood orchids. He has them growing at all seasons of the year and growing to perfection, too, in the greenhouse. We have photographed some of the rarer ones. He has of the *Cattleyas-gigas*, *labiata*, and *Trianae*. He has *Cypripedium insigne* and its hybrids, *Vanda*, *Dendrobiums*, *Lycaste Laelocattleya*, *Laelia*, *Calanthe*, and *Sobralia macrantha*. Mr. Vogel is also fond of orchids and has brought several strange ones

from Panama, the more showy of which are *Stanhopea tigrinum* and *Epidendrum perpuratum*.

The greenhouse is more like a college conservatory than a commercial place, for there is a great variety here. The winter flowering begonias are masses of bloom—the Poinsettias are extra large. He makes a specialty of *Calceolarias* and *Cinerarias*. He has his own varieties of *Chrysanthemum*, such as "Louise Eline," and when it comes to his mammoth *Amaryllis* it will be remembered how we bragged about these in the past.

Mr. Livingstone, as we said before, is modest, but we, in Wisconsin, have given him all the honors (work) that he will accept. He has been a Director of the Wisconsin Horticultural Society since 1908, a member of the Wisconsin State Florists for a dozen years, the Treasurer of the Milwaukee Florists' Club with practically a life tenure, and is much in demand as a floral judge at the Wisconsin State Fair. We only wish Wisconsin had a few more like him.

HURON H. SMITH.

How Shall We Measure Success?

"He has achieved success who has lived well, laughed often and loved much," says a writer in *Heart Throbs*, "who has gained the respect of intelligent men and the love of little children; who has filled his niche and accomplished his task whether by an improved plant, a perfect poem or a rescued soul; who has never lacked an appreciation of earth's beauty nor failed to express it; who has always looked for the best in others and given the best he had; whose life is an inspiration, whose memory a benediction."

Wisconsin Horticulture

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The Wisconsin Products Exposition

At the recent Wisconsin Products Exposition staged in the Auditorium at Milwaukee, December 14th to 20th, the State Horticultural Society put on an exhibit of Wisconsin grown apples. The fruit was contributed by growers from seven different counties of the State. Growers in other counties, no doubt, would have responded had they been called upon. The fruit was shown largely in baskets and barrels, and every effort made to stage a purely commercial fruit exhibit. The exhibit attracted an unusual amount of attention, both from Milwaukee peo-

ple and visitors from up state. It was non-competitive, paid for wholly out of the funds of the Society. Twenty-eight barrels of fruit were shown, and at the close the entire exhibit was contributed to the American Legion for the soldier boys in hospitals. On Wednesday evening the officers of the American Legion sold, at auction, a portion of the fruit to provide Christmas cheer for disabled veterans.

They Fell From Grace

Once upon a time certain residents of Shorewood, a modest suburb of Milwaukee, were brought together by evangelists of this Society (among the evangelists was your secretary) and were brought into the horticultural fold. They were shown the horticultural paths they should follow and the gospel of horticulture placed in their hands. One by one they fell from grace and the local society, organized at great pains, ceased to exist. Now see what they have gone and done:

"STRAWBERRY TREES" SOLD IN SHOREWOOD

"There's one born every minute," said P. T. Barnum many years ago, and from reports just received from the Chicago police the birth rate in Milwaukee of this particular kind of human has not decreased.

According to the story, a "gold brick" artist of the new school has been selling "strawberry trees" to the residents of Milwaukee's exclusive suburb, Shorewood. It is estimated that he cleaned several hundred dollars on this newest of confidence games.

"Don't break your back picking the berries from a plant; grow them on a tree and scoop them into

a dish," was the magic phrase that clinched the sale of the "trees."

The police of Chicago are looking for the "nature faker."

Cabbage Rot, Potatoes Rot and Apples Rot, a Rotten Deal

Somewhere in history, perhaps in the Bible, there is something about a man who dug a pit for the purpose of encompassing the downfall of another and fell into it himself. While the metaphor may be a trifle mixed the editor is willing to admit that he "dug a pit" for the cabbage and potato growers and almost fell into it, saved only by the grace and forbearance of Brother Swingle of the Wisconsin Agriculturist.

In the November number of WISCONSIN HORTICULTURE there were certain opinions expressed concerning the sagacity of Wisconsin cabbage and potato growers in producing a surplus which was wasted, while we were all suffering for fruits of various kinds.

Editor Swingle answers as follows:

"I note an article in the November issue of WISCONSIN HORTICULTURE under the heading 'Something Wrong.' The statement is made that in Outagamie, Racine, and Kenosha counties thousands of dollars worth of cabbage were rotting in the field, because the cost of harvesting and marketing is greater than the price offered for the cabbage. Personally, I have not seen any such waste, although many newspapers spread this report. Three newspapers to whom we have written retracted the story, as they found on investigation that it was not true. Probably some cabbage was left in the field, but this was the early kraut cabbage, which was not contracted for. So

far as I can learn the price paid for kraut cabbage was \$7.50 per ton up to fifteen tons per acre, this being all that the factories figured that they could use. They would, however, pay half price for tonnage over fifteen tons per acre, and those who did not contract with them and who preferred to take a chance without contracts were forced to accept the \$3.50 per ton. This quantity was not great, so far as I can learn.

"Storage cabbage, which is the most important crop, sold from \$5.00 to \$10.00 per ton all through the fall as I know. Last Friday a grower, who owns a storehouse in Kenosha county, sold his entire crop for \$8.00 per ton without having to load it. Last Saturday Peter J. Myers, who owns one of the largest storehouses at Truesdell, Wis., was offered \$6,000 for his 500 tons without having to load. Mr. Myers did not accept the offer, as cabbage is advancing. So, we trust that the condition is not quite so serious as reported. We paid 75 cents per bushel for potatoes at Racine this fall, which were brought to us direct from the farm by the grower. Of course, the bulk of the potato crop must be loaded and shipped and prices certainly are too low. However, as we stated in *The Wisconsin Agriculturist* editorially, there it is something to have grown the largest crop of potatoes in the United States.

"F. B. SWINGLE."

A Seedless Apple, It Is the Bunk

Pomological history shows that the Seedless Apple Bunk appears on the horticultural horizon at approximately 20-year periods, sails across the sky, fades gradually, and sinks slowly and dimly, being held by the tail by the class that are born

"one a minute." The 20-year period is almost due and, sure enough, the first faint streaks of the Great Bunk are visible, this time in the eastern horizon. Last time, 18 years ago, it rose in Colorado.

From the following you will see that the Canadians are using anti-aircraft guns:

Montreal. — Much enthusiasm was evoked at the annual meeting of the Quebec Pomological and Fruit Growing society at MacDonald college, Ste. Anne's, by the announcement of the discovery at Abbotsford of a seedless and coreless apple. The representative of a large fruit distributing firm in Montreal assured the grower of these coreless apples that if the latter would produce the present apple trees from which they were grown and prove that it would reproduce trees by grafts giving similar fruit, he would guarantee a million dollars for it.

Strawberry Growing as a Side Issue

By L. J. Farmer, Pulaski, N. Y.

Our idea is that everybody should have strawberries to eat and that there is no easier or more economical way to get them than to grow them yourself. I have often said that the first thing to do was to grow enough for the family to eat and then if conditions were right and you liked the work it would be well to enlarge your operations and grow them for market. My writings have induced many to grow strawberries who never grew them before. I wish that I might be worthsome day of having that famous saying of Dean Swift's paraphrased for me so that it would read that I had caused two strawberry plants to grow where but one grew before. I believe that the greatest compliment ever paid me was given by a man named Russell Quonce who at a fruit grower's convention once said that "If there were

a few more fellows as L. J. Farmer going around showing people how to grow strawberries, they wouldn't bring anything in market in a few years." However, it has never been my policy to advocate dropping everything else and rush pell mell, head over heels into the strawberry business. As a rule the person who changes too rapidly from one thing to another, does not succeed. My advice is to get a few plants and experiment with them. If they are a paying proposition with you, you can see it yourself, then if there is an opening for growing them for market and you like it, go to it.

STRAWBERRY GROWING FOR THE DAIRYMAN

The tendency among farmers now-a-days is to grow and handle one thing and depend too much on one product to get all the income. This idea is all right in theory but not always borne out by practice. I live right in one of the greatest dairy sections of the country. I know the dairy business from A to Z. It is the hardest business that the farmer ever entered in and yet, it is so dependable, and is the most practical way of keeping up the supply of fertility that I would be loath in advising any one to quit it. Rather I would advise him to do less of it and raise crops with part of the manure that will bring in ready cash; instead of using all the manure to grow corn, hay and other crops to feed to the cows to produce more manure, etc. I was in the dairy business quite extensively for many years. I kept as high as 40 cows on a farm of less than 100 acres. What discouraged me was the little money I got out of it and the fact that I could not keep hired help. One winter I had two men working for me. Soon one quit me. This diverted too much work on the other man and he soon quit. I had twenty-five cows to milk alone by hand for three weeks and during this time I had the grippe and had to call in the neighbors

(Continued on page 75)

THE INSECT PAGE

Edited by E. L. Chambers, Assistant State Entomologist

The European Corn Borer Menace

The European Corn Borer, without doubt, is the most injurious plant pest that has been introduced into this country. Since the summer of 1917, Massachusetts has been the base of this invading enemy which has already reached as far west as Ohio, and threatens to march on to the heart of our corn belt, in spite of all efforts to check it. The larvae, or borers, tunnel through all parts of the corn plant and destroy or severely injure the ears and stalks. Not content with corn alone it attacks similarly potatoes, celery, beets, Swiss chard, beans, spinach, oats, tomatoes, cotton and a host of other plants.

Agricultural experts, who visited the infested areas this fall for the purpose of making a study of the corn borer, fear that from these areas the pests may make an incursion into the great grain and cattle country of the West with disastrous results.

Dr. A. W. Gilbert, the Commissioner of Agriculture of Massachusetts, who accompanied this party, is quoted as saying, "To compare the threatened results of the corn borer to the loss resultant from the World War is not a vain trick of the imagination."

Just how extensive is the damage done to the local consumer by the pest was indicated during the investigation, when prominent market gardeners, milk producers and greenhouse men, whose gross receipts from their business run into five figures yearly, admitted losses in one case of \$1,000, in another

\$5,000, and still another \$7,000 from this particular pest.

It is very difficult to find any extensive fields of celery, beets, beans, rhubarb, or spinach within fifteen miles of Boston that are not infested, although it was exceedingly difficult to find a single borer in a field of these crops in 1917. Some of the celery fields now show as high as 32% of infestation. The method of dealing with this situation is to examine each bunch of celery with extreme care in the washhouse and strip off the outer leaves of every plant that shows perforation, until the fair and unperforated heart is bared. Not infrequently the entire plant proves to be ruined and, outside of the actual loss of plants, the grower has to reckon with the greatly multiplied cost of handling his crop.

At one of the greenhouse establishments near Boston, house after house was seen filled with growing chrysanthemums the stalks of which were so riddled that the proprietor estimated the loss on his season's business at approximately \$7,000.

The corn borer in Massachusetts has two generations—the larva or borer passing the winter nearly full grown within the tunnel made in the host plant the previous summer or fall, and again becomes active upon the return of the warm days of April and May. The first generation of moths emerges about the first week of June, lays its eggs, from which are hatched the first generation of caterpillars which feed, go through the pupa and moth stages, and by the last week in July

the moths of the second generation are ready to emerge and begin laying their eggs.

The female moths of the first generation lay about 550 eggs each, and those of the second generation deposit about 350 each. Since about half the moths are females the rate of multiplication is very rapid. As many as 300 full grown larvae have been collected from a single hill of corn consisting of four stalks. Burning or feeding out to cattle either direct from the field or from the silo all crop remnants and weeds, grass and other volunteer growths that might harbor the pests are the standard control measures. However, deep plowing in the autumn is now receiving favorable consideration, and farmers who plow everything under deeply and cleanly report lessening attacks the following year. The burning to be effective must be done before May 1st, and little headway can be expected unless the entire community co-operate in its control.

Every effort is being made to prevent shipment of infested plants or plant products into Wisconsin from these infested areas by both federal and state quarantines. As much publicity has been given to this menace as possible to acquaint the public with the facts and enable them to recognize the insect before it gets a foothold. The broken tassel with extrusions of sawdust-like material at the breaks is very characteristic. The longitudinal section of a corn stalk shows the characteristic tunneling of the larvae. All insect troubles of this nature should be submitted to the State Entomologist's office for determination to make certain the European Corn Borer is not getting a start in our state.

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Strawberry Growing as a Side Issue

(Continued from page 73)

to do the milking for a time. I then made up my mind that I would get out of the dairy business as soon as I could and I did.

An acre of land that has been manured with rich barn manure and had one crop of corn grown on it, is the ideal place for strawberries. Such a piece of land will bring in from \$500 to \$1500 if set to strawberries; and this sum will not cost near the time and effort that it takes to get the same amount of money from milk or most anything produced on the farm that we know of. The average farmer will tell you that it takes all of his time and that of his hired help to take care of the cows and the crops that are grown to keep the cows through the win-

ter. This is true, but if it will pay to hire help to take care of cows, it certainly will pay to hire help to take care of strawberries. As for the returns, there is no comparison. The argument will be made that there is no time to pick strawberries, they come in haying time and conflict with haying and harvest. This is true to a certain extent, but the major part of the strawberry crop comes in June and can be gathered and out of the way before haying is commenced. Farmers are letting their haying go until later than they formerly did and we know of many who do not begin until July 10th to 15th and by this time all varieties of late strawberries have ripened and are out of the way. Strawberry pickers can be mostly procured in the immediate neighborhood among families who do not grow strawberries. Pickers must be paid better than formerly to conform to other industries. The question of disposition of the fruit is the easiest of all. We find that farmers themselves are the best customers. The strawberry market, like charity, should begin at home. Be sure that your own family has enough then sell all you can to the neighboring farmers, who do not grow strawberries. The surplus can be readily sold in the nearby town or if

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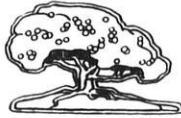
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thought best, shipped to the distant market.

When the strawberry business is carried along in conjunction with dairying and other farm business, some one of the farmer's family should have particular supervision over it.

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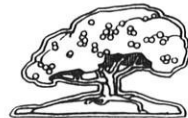
By WILLIAM TOOLE, Sr.
BARABOO

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Native Shrubs of Wisconsin
Our Wisconsin Native Trees
Cultivating Our Native Ferns
Our Native Climbing Vines

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- (9) Tree Fruits.

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ANNUAL REPORT

OF THE

Wisconsin State Horticultural Society

For the Year Ending July 1, 1921

VOL. LI

Frederic Cransfield, Editor
Madison, Wis.

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OF THE

Wisconsin State Horticultural Society

For the Year Ending July 1, 1922

Contains Thirty-one Papers and Addresses on Commercial and Amateur Fruit Growing, Vegetable Gardening and Floriculture

VOL. LII

Frederic Cransfield, Editor
Madison, Wisconsin

WISCONSIN HORTICULTURE
OFFICE OF PRINTING COMMISSIONER
1922

WISCONSIN HORTICULTURE
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READ BIG OFFER PAGE 77



One Thousand Prizes of \$4.00 Each

We have set out to get 1,000 new members by January 1, 1924. By way of inducement we will give to each new member \$4.00 value (a low estimate) for \$1.00, annual membership as follows:

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- (1) Wisconsin Horticulture: A 16-page monthly magazine, not as good as some other horticultural magazines, perhaps, but better than most of them; at least for Wisconsin people, because whatever it contains is prepared for Wisconsin. There is no pretense of covering all of horticulture, but only Wisconsin horticulture. You will like it.
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- (3) We have a large surplus of 1917 and 1920 Reports and a few of preceding years. As long as they last one copy will be sent each new member. These contain many valuable papers; cloth bound.
- (4) The Wisconsin Garden Book: 55 pages, 5x7½ inches. The simplest, most concise and readable book on vegetable gardening for beginners yet published. It tells you exactly what you want to know, in plain language and in the fewest possible words; seven chapters on vegetable gardening, and two short ones on berry culture and tree fruits for good measure. Written by practical Wisconsin gardeners; published by the State Horticultural Society. Price 25c.
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 - (3) Our Wisconsin Native Trees.
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These are not merely botanical lists of plants. In each paper Mr. Toole tells how to use these native plants. These papers, delivered at our Annual Conventions were considered of such value that the Society has issued them in this attractive booklet. Price 50c.

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To Sort or Not to Sort

We are frequently advised to sort stored fruits and vegetables to remove decayed specimens which would otherwise cause loss by infecting their sound neighbors. Now comes an experienced gardener who says more is lost than gained by such sorting; that the mixing of the fruits and vegetables incident in sorting serves to spread the germs of decay through the mass, while if left alone less loss will result. Who is right?

Remember the birds these cold stormy days. Suet in the trees and sheafs of grain or even thrashed grain will bring many birds through the hard winter days.

Jack Dempsey says he will fight any man in the world on short notice. We often feel that way ourselves.

Tall flowers, especially if in a large mass, make a better appearance if placed on the floor or at least below the eye level.

When we build, let us think that we build forever. Let it not be for present delight nor for present use alone. Let it be such work as our descendants will thank us for, and let us think, as we lay stone on stone, that a time is to come when those stones will be held sacred because our hands have touched them, and that men will say, as they look upon the labor and wrought substance of them, "See! This our Fathers did for us."—Ruskin in *Sesame and Lilies*.

Nuts are a food for man as well as squirrels. Even birds will eat them if they can get through the outer shell. Plant a few nut trees next spring. Order them now from your nursery.

Straw covering may be kept from smothering perennials if the branches are laid down first and then straw thrown over them. This gives a circulation of air which is to be desired.

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A Brush Burner

This is the time of the year when the removal of trimmings from the orchard is a problem. I found it so until I tried the following plan: Get a discarded steel stock tank. To the bottom of one end fasten a log chain or heavy wire fifteen or twenty feet long. Hitch a team of quiet horses to this. Inside the tank build a fire of any dry material. You are now ready to drive into the orchard and begin throwing in the green trimmings. They will disappear as fast as one man can pick them up and throw them in. By using reasonable care in stopping the tank in open places there will not be heat enough to damage the trees. Since the horses will drag the tank through the orchard as the work progresses it is not necessary to carry the brush far, to build new fires or have any unburned pieces left.

In the February number the editor asks for experiences with the Wilson Red June apple. I have one Red June apple tree. It is twelve or thirteen years old, hardy, thrifty, fairly blight resistant. Every two or three years it bears a small crop of small red apples of good quality.

RALPH A. IRWIN.

Suet wired on branches of trees will call the birds to the home grounds.

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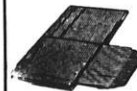


Fig. 1



Fig. 2



Fig. 3

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74 Stark Trees=576 Bu. Apples=\$2,460.00 in Year on Vermont Farm!

C. L. Witherell bought the land where his orchard now stands (near Middlebury, in Northern Vermont) for \$40 an acre. It would have made him a scant living in corn, wheat or ordinary farm crops.

Last year, 74 of his 11-year-old Stark Delicious trees yielded him 576 bushels of glorious apples. And—they added the impressive sum of Two Thousand Four Hundred and Sixty Dollars to his bank account.

He tells us that his Stark Delicious began bearing when 4 years old—and have borne every year since. He now has 1,000 more Stark Delicious 6-yrs.-old that he declares "Will produce a bumper crop this year." On October 21, 1922, he writes: "Just shipped last car Stark Delicious to New York. Got \$6.00 per box for run of Delicious. Special Fancy \$8.00 per box."

ORIGINAL TREE Strain of — Stark Delicious — Sold Only by STARK BRO'S

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E. F. Thayer, Chelan Co., **Wash.**, a former accountant, who banked \$90,350 for his Stark Delicious, Winesaps and Jonathans off 23 acres in 4 years. He writes:—"If I were planting a new orchard, I would make it all **ORIGINAL TREE Strain of Stark Delicious**."

In Clermont Co., **Ohio**, J. J. Bohlander has enjoyed a NET income of \$21,800.00 in 6 years off 12 to 20 acres, **ORIGINAL TREE Strain of Stark Delicious** apples, being his prize-price makers.

Again, in Sullivan Co., **New York**, Chas. Taylor has specialized on Stark Delicious and made 5 acres of common \$40 an acre land bring him over \$9,200.00 in last 5 of the short 10 years he has been an apple grower. He says, "Once people buy genuine Stark Delicious apples they don't want any other kind."

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Supplement to WISCONSIN HORTICULTURE, January 1923

Wisconsin Beekeeping

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Remit to M. F. Fischer, Secy., Madison, Wis.

Renew Your Membership

About 200 of our members have already sent in their renewals for 1923. Every member who renews voluntarily saves postage expense and time for the secretary. We have set our goal at 1000 paid-up members for 1923. **DO YOUR DUTY AS A BEEKEEPER TO DAY, send in you dollar.**

While you are thinking about sending in your renewal to the state association, include another dollar for membership in the American Honey Producers' League. We had an affiliated membership of 117 last year, let's do better for 1923. Send your League dues to your Secretary.

Bee Journals at Reduced Rates for Our Members

The regular subscription price of the American Bee Journal is \$1.50 per year and of Gleanings in Bee Culture is \$1.00 per year. If you send your subscription to your Secretary, you may secure American Bee Journal for \$1.00 per year and Gleanings in Bee Culture for 85c per year. Members, take advantage of this reduction and send subscription fees to the Secretary.

44th Annual Convention

WISCONSIN STATE BEEKEEPERS' ASSOCIATION

Milwaukee Auditorium, Milwaukee, December 15 and 16, 1922.

The annual meeting of the Board of Managers was called at 2 p. m. December 13, Committee Room A, Milwaukee Auditorium. Our President, Mr. F. F. Stelling, being in Europe,

the Vice President, Mr. Conrad Kruse, took charge of the meeting. He appointed the following Committee on Credentials: Mr. H. J. Rahmlow, Mr. Wm. Sass, Jr., Mr. A. H. Seefeldt. The Committee, after carefully going over credentials, reported the following qualified delegates:

1. Richland County Beekeepers' Association—James Gwin.
2. Sheboygan County Beekeepers' Association—L. T. Bishop.
3. Price County Beekeepers' Association—H. J. Rahmlow.
4. Washington County Beekeepers' Association—A. H. Seefeldt.
5. Milwaukee County Beekeepers Association—John Kneser.
6. Shawano County Beekeepers' Association—William Hanneman.
7. Dodge County Beekeepers' Association—A. A. Brown.
8. Baraboo Valley Beekeepers' Association—Frank Hanley.
9. Fond du Lac County Beekeepers' Association—William Sass, Jr.

The Board of Managers voted to have Mr. Mangin act as a representative for the Brown County Beekeepers' Association and, since no delegate was present for Dane County, the Board also voted to have Professor Wilson act as delegate for Dane County. A little later Mr. George Jacobson, representing Fox River Valley Beekeepers' Association; A. E. Jaeger, representing Jefferson County Association, and William Procknow, representing Northeast Wisconsin Beekeepers' Association, and Alvin Schneider representing Wood County, arrived, making a total of fourteen delegates present. Other beekeepers present, but not acting as delegates, were A. J. Schultz, Fond du Lac; Edw. Hassinger, Jr., Greenville, and E. S. Hildemann, Belle Plaine.

Because of the large amount of business to be acted upon, it was voted to dispense with the reading of the minutes, with the exception of the recommendations made by the Board at the 1921 Convention.

After careful consideration and lengthy discussion the Board of Managers voted to make the following recommendations to the State Association:

1. We recommend the adoption of a uniform standard label and uniform lithographed pail for members of the State Association to contain the very best fancy Wisconsin WHITE honey.
2. We recommend the adoption of a standard honey poster for members of the State Association.
3. We recommend the adoption of a uniform honey booklet for members of the State Association.
4. We recommend the carrying

out of the plan as presented by the Legislative Committee through their Chairman, Mr. James Gwin, and urge that every member and local association make a special effort to help the committee in this work.

5. We recommend that the annual convention for 1923 be held at Milwaukee in connection with the Products Exposition, 1923, Dec. 1 to 8, and that our annual summer meeting be held in connection with the Chautauqua as arranged by the University.

6. We recommend that our association send a delegate to the American Honey Producers' League meeting, Feb. 6, 7 and 8, at St. Louis, the selection of the delegate to be left to the officers of our association.

7. We recommend that the Governor, Hon. J. J. Blaine, be asked by our association to declare a HONEY WEEK next Fall, the time to be set by our Label and Lithographed Container Committee.

8. We recommend that those affiliated locals who have sent in their annual report and whose membership is below the required ten be retained on the files of the State Association; second, that those affiliated associations who failed to report be asked to send in their annual report not later than a certain time, the time to be specified by the secretary, and if they fail to make such a report in due time, that their affiliated privileges be taken away.

9. We recommend that the secretary's salary be increased to \$250 a year.

10. We recommend that the secretary be authorized to make immediate reservation for a HONEY BOOTH for the State Association at the Products Exposition in 1923.

11. We recommend that the secretary prepare a directory for 1923, including a constitution and by-laws, and that a committee be appointed to secure advertising to finance the directory, such a directory not to be published until the advertising finances have been collected.

12. We recommend that a minimum price of \$2 for a 10-inch lithographed honey pail and \$1.15 for a 5-inch lithographed honey pail be established.

13. We recommend that the officers of the association and the Executive Committee co-operate with the Label and Lithograph Container Committee and that all of these officers and committees be allowed to take whatever steps are necessary to carry out plans for establishing these prices, drawing up of contracts, including in the work of these people the carrying on of correspondence with members

using glass jugs and bottles with the hope of establishing a uniform price for glass containers as well as lithographed containers.

14. We recommend that the State Association make an annual donation of Ten Dollars (\$10) to the Miller Memorial Library.

15. We recommend the adoption of Mr. Bishop's plan to publish an eight page journal for the members of the State Association, providing this plan can be worked out so that it will not cost more than 50 cents per member.

The meeting adjourned at 5:45 p. m.

Thursday Morning

The Convention was called to order at 9:45 a. m. by Vice President Conrad Kruse. The minutes of the previous convention were read by the Secretary and approved by the Convention. The Secretary's report, including reports of the affiliated associations, Secretary's correspondence, and the Honey Booth, were read and approved by the Convention. (These reports will be included in detail later.)

The report of the Legislative Committee, given by James Gwin, Chairman, was as follows:

Your Legislative Committee, after looking into various legislative matters in which the State Association is concerned, has the following report to make.

There are four matters in which the Wisconsin State Beekeepers' Association is concerned:

1. The development of the Association itself.

2. The Apiary Inspection Department of the State Department of Agriculture, which includes eradication of bee diseases.

3. The marketing problems and enforcement of the honey grading regulations as carried on by the State Department of Markets.

4. The Beekeeping Department of the State University, including Extension, Research and Educational work.

State Beekeepers' Association. Up to the present time, our organization has never received any appropriation from the State to promote its welfare. Investigations show that other agricultural organizations on the same basis as our association in Wisconsin are receiving grants from the State. For your information we will include facts concerning these associations. In checking over this list, you will note that our organization has a greater paid-up membership than all but three of these associations, and that some associations with much smaller paid memberships are receiving appropriations of some kind.

Your committee recommends that the Wisconsin State Beekeepers' Association make every effort to have

Association	Appropriation	No. of Members	Dues	Affiliated Locals
Agr. Exp. Station..... (Issue Annual Report)	\$5,000 (June)	695	\$1 50	Co. orders
State Horticultural Society.... (Issue Annual Report)	9,000	1,600 (about)	1	900 affiliated members at 50c
Cranberry Association	250	56	1	
(Issue Annual Report)	250			Spe. Aid
Wis. Potato Growers' Ass'n.... (Issue Annual Report)	4,000	300	1	
State Dairymen's Ass'n..... (Issue Annual Report)	6,000	4,000		(Approximately)
Wis. Cheesemakers' Ass'n..... (Issue Annual Report)	600		1	
Wis. Cheese Producers'..... Federation (appears in guide)	1,000	(Factories) (Farmers) 4,000	175	10 per factory 6 local branches
Wis. State Poultry Breeders Ass'n.	5,000	About 400	1	
Livestock Breeders' Ass'n.....	9,000	From 300 to 800		1 Adults 50c Jr. members
Wisconsin State Beekeepers' Ass'n.		752	1	About 561 affiliated members

*State Dairymen Association. Two classes of members, those that pay the fee of 50c and also every member of a cow testing association in Wisconsin is a member of the Wisconsin Dairymen's Association by virtue of his membership in a local cow testing association.

a bill presented at the State Legislature at the coming session, asking for \$1,500 for the development of our organization. Upon investigation we find that the proper plan of procedure to follow will be to pass a resolution requesting such a grant and present this resolution to the members of the legislature. It will then be necessary to have someone introduce the bill. (Bill 175A introduced by Assemblyman Perry during 1921.) The Legislative Committee asks each member individually and every local association to write his Senator and Assemblyman to support this bill. If you do not know who your Senator and Assemblyman are, stop at the Secretary's desk, where there is a list of all Senators and Assemblymen.

The State Department of Agriculture. Our main support has been given to the Department of Agriculture because of the eradication of bee diseases. We all have benefitted by the disease control work carried on through the State Apiary Inspection Department by Dr. Fracker and his assistants, and your committee suggests that this association inform the members of the Legislature that it is in favor of continuing the appropriation for bee disease control work. We also believe that the change in the law, which Dr. Fracker will explain, will be made.

The Department of Markets. We believe the Department of Markets has been doing very good work in enforcing the honey grading rules and regulations and should notify our Legislature that this organization feels it highly important that this work be continued. Every member of this State Association should give his

moral support to this work and notify the State Department of Markets of any violation of the rules.

The State University. A large part of our program during the past six years has been due to the assistance rendered by the University officials and the clerical service provided for the organization work of our association. The Beekeeping Department of our State University is one of the most important in the United States and we should be proud of the progress it has made. Complete projects in beekeeping extension, beekeeping research and beekeeping instruction have been carried out for our beekeepers and a very full line of equipment has been provided for this work. However, we do not believe that the present housing quarters are at all adequate for our beekeeping department. Three states received appropriations for this purpose the past season. Wisconsin should provide a suitable building for the beekeeping work and your Legislative Committee recommends that the State Association take immediate steps to ask the Legislature at the coming session to appropriate sufficient funds for a new beekeeping building at the University.

This report was accepted by the Convention and all members in attendance pledged their support to help the Committee carry out their program.

The Treasurer's report was read by Treasurer C. W. Aeppler, and was referred, with the Secretary's financial report, to the Auditing Committee, the members of which were Miss Jennie Matzke, Mr. F. J. Mongin and Mr. A. E. Jaeger.

The Chairman appointed at this

time A. A. Brown, Ivan Whiting, Edw. Hassinger, Jr., and James Gwin as a Resolution Committee.

The first address given was that of the Chairman of the Convention, Mr. Conrad Kruse. (This paper will be published later.)

Mr. E. R. Root, Medina, Ohio, then gave a vivid account of the beekeepers' meeting in North Dakota, which he attended on December 10th. The beekeepers of North Dakota organized a state association at that meeting and notes taken of Mr. Root's talk will be published later.

Attendance at this session—65.

Afternoon Session

This session was opened at 1:50 with a paper on the "Value of Co-operation," by A. A. Brown, Secretary of the Dodge County Beekeepers' Association. Mr. Brown outlined clearly the beekeepers' present troubles and ended with the following story:

"After all has been said concerning the beekeeper I am reminded of the story of two colored fellows who got into a wrangle over the sale of a mule. It seems Moses sold Rastus a mule. In about two weeks Rastus came to Moses and demanded he take the mule back and give him his money he paid for the mule.

"Moses said, 'See here, Rastus, wha' fo' you want your money back?'

"'Ah wants ma money back 'cause that mule's blind.'

"'When ah lets him out 'o de stable, he walks right onto a big pile of stone and nearly breaks his laig befo' I see could extricate him. Then he walks straight into my barb wire fence, he did, and cut he's self most to pieces. I see no mor'n got him straightened about an' he walks right plumb against the basement wall of my barn. I tell you'se that mule am blind, and I wants back my money.'

"'Say, Rastus,' said Moses, 'Dat mule ain't blind, he just don't give a dam.'

(Watch for this paper; it will be printed in one of the future issues—it will help you.)

Mr. C. D. Adams then gave the report of the Label Committee's work during the past year. Mr. Adams pointed out the absolute necessity of a trademark carrying a guarantee that would gain the consumers' confidence. He told of his experiences with the bottling concerns, and of the little faith these companies have in Wisconsin beekeepers, due to the fact that our beekeepers do not fill orders *trus* to sample. If ever we are to demand the confidence of the bottlers, brokers and consumers, it must be through a guarantee backed not only by the individual, but also by a co-operative group of individuals. The Label Committee, after carefully con-

sidering all labels submitted, felt that the one now used by C. W. Aeppler was most satisfactory from all angles—distinctiveness, advertising value and attractiveness—and recommended the adoption of this label. (The complete report of the Label Committee will be published later.)

Professor H. F. Wilson, in his talk, "A Standard Honey Container for the State Association," presented a plan for a standard lithographed container to be used by the members of the State Association. He pointed out that a lithographed pail would cost several cents more than the ordinary tin pail but the fact that it bore a label which could not be torn or washed off and would remain on the pail indefinitely was worth the difference. He also stated that the advertising value alone of such a container would more than offset this difference. Blanks containing prices of these containers were distributed and members were given an opportunity to state how many pails they could use. A detailed account of this plan will be printed later affording members unable to attend the convention an opportunity to order lithographed pails.

Mr. Aeppler was then called upon to explain the condition under which he would be willing to give his label to the State Association. Mr. Aeppler stated: "The actual cost to me for plates, engravings, copyrighting and registration was \$120. The engraver did all the work under a magnifying glass, spending two days in picking out the cells under a microscope. I am glad to donate my time, idea and personal work on this label if the State Association feels it wants this label as its trademark, providing they allow me \$120, which I have actually paid out. You may have the label, which I have registered and copyrighted, with the good will of the originator."

The meeting was then thrown open to a public hearing conducted by Mr. B. B. Jones of the State Department of Markets to decide whether or not the beekeepers of Wisconsin shall use standard sized containers. The paper presented by Mr. Jones at this time will be published later.

(Similar hearings for beekeepers will be held at Appleton, January 16; Eau Claire, January 17; Lancaster, January 22; Madison, January 31; and the final results will be published in this paper as soon as all recommendations have been made.)

Mr. Allen Latham of Norwichtown, Conn., gave a very interesting talk on his honey candies and honey sandwiches. His "Yankee" style combined with a pleasing personality afforded the beekeepers an entertaining, as well as valuable hour. The recipes given

by Mr. Latham were secured and will be included in a later issue.

Since Mr. Norgord was compelled to leave Milwaukee early Friday morning, he was called to address the beekeepers at this hour. Our members enjoyed his sincere remarks and expressed by a resolution their appreciation of the generous sympathy and support he has given to the beekeeping problems of Wisconsin. Mr. Norgord showed his genuine interest in the work when he stated, "We want to make this state *SAFE* for honey producers and we believe we shall accomplish this task. The State Department of Agriculture stands ready to help the beekeepers in every way it can. I am glad to be with you today and I hope you will have a successful beekeeping season this coming year."

The following telegrams were received and read to the convention:

"To the members of the Wisconsin State Beekeepers' Association:

"Fond du Lac extends cordial invitation to your Association to select Fond du Lac for 1924 summer meeting. Will do anything reasonable to further its success. (Signed)

"FOND DU LAC ASSOCIATION OF COMMERCE.

"E. T. Markle, Secretary."

"To the members of the Wisconsin State Beekeepers' Association:

"Deeply regret cannot be with you. Family ill. Urge standard pails. Go forward together. United we stand, divided we are stuck (Signed)

"I. C. PAINTER,

"Wausau, Wis."

Attendance at this session—152.

Evening Session, December 14

Beekeeping Movie. The film on bees, prepared by the U. S. Department of Agriculture, was kindly loaned to us by the G. B. Lewis Company and it with a film of the Lewis plant were shown to about 50 beekeepers and 200 persons visiting the Exposition. (Because of the interest shown by the public in these films, they were run each night during the Exposition.)

Morning Session, December 15

The meeting was called to order at 9:15 a. m.

The first paper, "Box Hive Beekeeping and the Marketing of Apiary Equipment," by Dr. S. B. Fracker, emphasized the important relation of the distribution points of equipment to bee disease control. (Dr. Fracker's paper will be published later.)

Mr. H. C. Dadant then, in his talk on "Comb Building," carefully traced the evolution of the manufacture of comb foundation, and illustrated different types of comb. (Mr. Dadant's

complete paper with pictures will be published later.)

For the benefit of students from the Milwaukee County School of Agriculture, Mr. Aeppler was asked by the chairman to give a talk on beekeeping as a profitable business. (Notes on this talk were taken and will be published later.)

Dr Fracker then gave an outline of the work being done by the National Honey Producers' League. (This paper will be included in a later issue.)

Professor H. F. Wilson in his paper on the Miller Memorial Library expressed his appreciation of the interest shown by Wisconsin Beekeepers and the financial help they had given in securing the library. He also explained how it would be possible for beekeepers to secure books from this library.

In his paper, "Past, Present and Future of Beekeeping," Mr. E. W. Atkins gave many interesting historical references. (We are glad to have a copy of this paper on file to publish for our members.)

Mr. Ivan Whiting gave some interesting observations in his talk, "Some Data on Spring Brood Rearing." Mr. Whiting illustrated his notes with charts. (We hope to get a copy of this paper for publication.)

"Plans for 1923 Extension Work," by L. P. Whitehead, Extension Apiculturist at the University, was the next paper on the program but because of lack of time, this talk was not given. Mr. Whitehead has filed a copy of this paper with this office and it will be published later.

Attendance—112.

Afternoon

This session was called to order at 1:55 p. m.

The first number was a talk by E. R. Root, "Reinforcing Foundation Brood Frames." (Mr. Root has promised us a paper on this subject for publication in our journal). In addition to his talk on the subject of brood frames, Mr. Root made the following remarks:

"I would like to endorse what Mr. C. W. Aeppler has said. The most serious menace today is the fact that honey is not selling at a fair price and there is danger of the price going down due to the beekeepers' unbusinesslike policy. The producers must join with the supply men because if you producers fail, we supply men fail. It is true your problems are our problems and whether supply manufacturer, honey bottler or honey producer we must join hands and work together. I like your Mr. Gwin's term U S and Company and that is what we must work for. Unless you cooperate, you will be forced out of

business. Beekeepers, you must recognize the different trade channels, you must make a distinction in wholesale quotations, brokers' quotations, and the retail market. The supply manufacturers are advertising but we can only scratch the ground. Every individual beekeeper must co-operate in advertising if we are ever going to place our industry on a solid foundation. I believe you will be taking a good step by adopting the standard lithographed container for your members."

Mr. Allen Latham at the request of the beekeepers then explained his method of rearing queens. (An abstract of this talk will be included in a later issue.)

The report of the Auditing Committee was as follows:

"We have looked over the financial statements of the Treasurer and Secretary as well as the record books and find them O. K."

The convention accepted the report of the Auditing Committee.

A motion was then made and carried that each recommendation of the Board of Managers be considered separately.

The secretary then read:

Recommendation No. 1. "We recommend the adoption of a uniform standard label and uniform lithographed pail for members of the State Association to contain the very best fancy Wisconsin *White Honey*."

A motion was made and carried to adopt this recommendation.

Recommendation No. 2. "We recommend the adoption of a standard honey poster for members of the State Association."

A motion was made and carried to adopt this recommendation.

Recommendation No. 3. "We recommend the adoption of a uniform honey booklet for members of the State Association."

Professor Wilson was asked to explain this recommendation and he gave the following: "In connection with a uniform container and poster for the members of our association, we thought it would be advisable to also have a honey booklet issued as an organization booklet, such a booklet to contain recipes, facts concerning honey, and any other information that the members might feel was desirable. The printing of such a booklet would be taken care of by the State Association and members could secure copies at cost through the secretary's office."

Mr. Gwin: "I would like to add in this connection, members, that it is not compulsory for you to use either the uniform container, poster or booklet, but it is a PRIVILEGE."

A motion was made and carried to adopt this recommendation.

Recommendation No. 4. "We recommend the carrying out of the plan as presented by the Legislative Committee through their Chairman, James Gwin, and urge that every member and local association make a special effort to help the committee in this work."

A motion was made and carried to adopt this recommendation.

Recommendation No. 5. "We recommend that the annual convention for 1923 be held at Milwaukee in connection with the Products Exposition, 1923, December 1 to 8, and that our annual summer field meet be held in connection with the Chautauqua as arranged by the University to be held at MADISON, AUGUST 13 TO 18."

A motion was made and carried to adopt this recommendation. (The dates for next year's convention will be DECEMBER 6 AND 7.)

Recommendation No. 6. "We recommend that our association send a delegate to the American Honey Producers' League meeting, February 6, 7 and 8, at St. Louis, the selection of the delegate to be left to the officers of our association."

Mr. A. A. Brown explained by request this recommendation, stating: "In previous years, members, although our organization is affiliated with the American Honey Producers' League, we have never sent a delegate to but one of the meetings of the League. Your Board of Managers felt that we should send a delegate this year and thus we made the recommendations you have just heard."

A motion was made and carried to adopt this recommendation.

Recommendation No. 7. "We recommend that the Governor, Hon. J. J. Blaine, be asked by our association to declare a HONEY WEEK next fall, the time to be set by our Label and Lithographed Container Committee."

A motion was made and carried to adopt this recommendation.

Recommendation No. 8. "We recommend that those affiliated locals who have sent in their annual report and whose membership is below the required TEN be retained on the files of the State Association; second, that those affiliated associations who failed to report be asked to send in their annual report not later than a certain time, the time to be specified by the secretary, and if they fail to make such a report in due time, their affiliated privileges be taken away."

The secretary offered the following explanation concerning this recommendation since a number of members did not understand what it covered: "You will recall that all affiliated local associations are required to file an annual report with the secretary's office about fifteen or twenty days previous to the annual conven-

tion to permit the secretary to check over the membership standing of the various locals. In the report of affiliated locals, you will note (this report published in this issue) that five locals failed to make any report and nine locals are below the required rating (each affiliated local is supposed to have ten of its members on the state association membership roll.) To give the secretary some power in this connection, your Board made the recommendation you have just heard."

A motion was made and carried to adopt this recommendation.

Recommendation No. 9. "We recommend that the secretary's salary be increased to \$250 a year."

A motion was made and carried to adopt this recommendation.

Recommendation No. 10. "We recommend that the secretary be authorized to make immediate reservation for a HONEY BOOTH for the State Association at the Products Exposition in 1923."

A motion was made and carried to adopt this recommendation.

Recommendation No. 11. "We recommend that the secretary prepare a directory for 1923, including constitution and by-laws, and that a committee be appointed to secure advertising to finance the directory, such a directory not to be published until the advertising finances have been collected."

A motion was made and carried to adopt this recommendation.

Recommendation No. 12. "We recommend that a minimum price of \$2 for a 10-lb. pail of honey and \$1.15 for a 5-lb. pail of honey be established for association members using the State Association lithographed container."

A motion was made and carried to adopt this recommendation.

Recommendation No. 13. "We recommend that the officers of the association and the Executive Committee co-operate with the Label and Lithograph Container Committee and that all of these officers and committees be allowed to take whatever steps are necessary to carry out plans for establishing these prices, drawing up of contracts, including in the work of these people the carrying on of correspondence with members using glass jugs and bottles with the hope of establishing a uniform price for glass containers as well as lithographed containers. We also recommend that the present Label Committee be continued for another year as the Label and Container Committee."

A motion was made and carried to adopt this recommendation.

The convention after adopting this recommendation passed the following motion: "We have confidence in our Committee and Officers and will be

satisfied with their judgment in this matter."

Recommendation No. 14. "We recommend that the State Association make an annual donation of \$10 to the Miller Memorial Library."

A motion was made and carried to adopt this recommendation.

Recommendation No. 15. "We recommend the adoption of Mr. Bishop's plan to publish an eight page journal for the members of the State Association, providing this plan can be worked out so that it will not cost more than 50 cents per member."

A motion was made and carried to adopt this recommendation.

A motion was made and carried that the election of officers be taken up before the reports of the various committees since a number of members were forced to catch trains Friday afternoon.

The Nominating Committee, which consisted of the delegates of the local affiliated associations, nominated the following members for the office of president: I. C. Painter, Wausau, and James Gwin, Gotham. A proper vote being taken, Mr. Gwin was found to be elected.

A motion was made and carried that the secretary be instructed to cast a unanimous ballot for James Gwin as president.

The Nominating Committee then named A. A. Brown, Juneau, and Wm. Sass, Jr., Fond du Lac, for the office of vice president. A proper vote being taken, Mr. Brown was elected vice president and a motion was duly made and carried instructing the secretary to cast a unanimous ballot for Mr. Brown as vice president.

A motion was made and carried that a unanimous ballot be cast for C. W. Aeppler, Oconomowoc, as treasurer, and Miss Malitta D. Fischer, Madison, as secretary.

A motion was made and carried that the present Label Committee act as the Lithographed Container Committee for the following year.

Although the members had adopted a uniform container, they had not decided as to the colors for their lithographed container. Considerable discussion followed in this connection and there was a great variation in opinion as to what color combination would be most distinctive.

A motion was made and carried that since the Label Committee had thoroughly investigated all types of labels during the past year and felt that Mr. Aeppler's label was most satisfactory, that the members adopt this label as their State Association label and have confidence in the committee, authorizing the same committee to make the selection of colors.

A motion was made and carried to allow Mr. Aeppler the actual cost

of engravings, plates, copyrighting and registration of trademark, which amounted to \$120.

A motion was made and carried that the Label and Lithographed Container Committee go to the extra expense of trying out several different color schemes in working out a satisfactory combination for the lithographed container.

The Resolution Committee then gave the following report:

Resolution No. 1. "Whereas, Many beekeepers in different parts of the state have suffered because fruit trees have been sprayed in full bloom, thereby killing the bees visiting the trees and depleting the colonies below honey gathering strength; and

"Whereas, The bees are known to be of GREAT VALUE to the growers of pollinators; and,

"Whereas, No schedule of spraying calls for spraying while the trees are in full bloom, but distinctly warns against such spraying; and,

"Whereas, It seems advisable to attempt to remedy this condition by educating the fruit grower;

"Be It Resolved, That we petition the Wisconsin Horticultural Society to use its good offices in co-operating with the Wisconsin State Beekeepers' Association in educating and persuading the fruit growers not to spray trees in full bloom."

Resolution adopted.

Resolution No. 2. "Whereas, The State of Wisconsin is one of the best honey producing states in America; and,

"Whereas, There is being created, through extension work from the College of Agriculture, through the state and local beekeeping associations, and through the apiary inspection work of Wisconsin, a thirst for beekeeping information, and keen desire for assistance from our Beekeeping Department at the College of Agriculture; and,

"Whereas, The State of Wisconsin is rapidly forging ahead in its disease eradication work, thus making beekeeping safe in Wisconsin, and therefore creating a greater number of potential beekeepers; and,

"Whereas, The University of Wisconsin has been selected as the home of the Dr. C. C. Miller Memorial Library, thus nationally recognizing Wisconsin as a leading honey producing state, by conferring this honor upon her; and,

"Whereas, The Beekeeping quarters at our State College of Agriculture are wholly inadequate, for proper instruction, research and laboratory work;

"Therefore, Be It Resolved, That we, the Wisconsin State Beekeepers' Association, in its 44th Annual State Convention assembled, earnestly re-

quest the Wisconsin State Legislature, the University Board of Regents, and Dean H. L. Russell of the College of Agriculture, to seriously consider the needs of the beekeeping industry and the needs of the beekeepers of the State of Wisconsin, and we pray that immediate action be taken by the proper authorities to provide a beekeeping building at the University of Wisconsin to meet the needs set forth in this resolution, and doing credit to our State."

Resolution adopted.

Resolution No. 3. "Whereas, There is no uniformity throughout the State as regards prices charged by beekeepers for honey; and,

"Whereas, This big discrepancy in prices throughout the State has a demoralizing effect upon the industry as a whole; and,

"Whereas, There seems to be a desire among our beekeepers to have our established and uniform price throughout the state on the several grades of honey;

"Therefore, Be It Resolved, That a committee of five be appointed by the Chair to work out a plan tending to carry out the above provisions of this resolution."

Resolution adopted.

Resolution No. 4. "Whereas, Miss Malitta D. Fischer has given the Wisconsin State Beekeepers' Association most efficient and faithful service as its Secretary; and,

"Whereas, Her salary does not begin to compensate her for the services rendered and being rendered;

"Therefore, Be It Resolved, That we, the Wisconsin State Beekeepers' Association, extend a vote of thanks to her for this service, and that we collectively and individually pledge our support and co-operation to enable her to carry out the duties of the office"

Resolution adopted with a unanimous rising vote of thanks.

Resolution No. 5. "Whereas, The beekeeping industry is making rapid strides and honey is an important agricultural crop in this state; and,

"Whereas, The honey bee is our most important pollinating insect, thereby being an important factor in fruit production, clover seed production as well as in the production of other agricultural crops; and,

"Whereas, The beekeeping industry being fostered by the Wisconsin State Beekeepers' Association, is hampered in its development for lack of financial assistance; and,

"Whereas, Other agricultural organizations in this state are receiving state aid for the development of their particular industry; and,

"Whereas, The State Beekeepers' Association has a paid up membership of 755, and an affiliated member-

ship in county locals of 584, being surpassed in membership by only three of our agricultural associations receiving state aid;

"Therefore, Be It Resolved, That we, the Wisconsin State Beekeepers' Association, in its 44th Annual Convention assembled, request our 1923 State Legislature to GRANT OUR ASSOCIATION \$1,500 State Aid per year for the promotion of bee culture, and the welfare of the beekeeping industry in Wisconsin."

Resolution adopted.

A motion was made and carried that the secretary take immediate steps to send resolutions to the proper parties at the proper time.

The matter of establishing prices for members of our association was again considered and Mr. Aeppler presented the following plan: "All local associations should hold a special meeting at a time specified by the Price Committee. The secretary will notify the secretaries of local associations of the time for holding such a meeting, which will probably be during the middle of July. At this meeting, the local associations will gather information concerning prospects for a honey crop, local conditions, and use this as a basis to determine prices. The local secretary will wire these prices to the state secretary, who will compile the reports which will be presented at the meeting of the Price Committee of the State Association. The members of this State Association Price Committee will meet just as soon as the secretary has the local reports compiled, the time of this meeting being preferably around July 22. The Price Committee of the State Association will after carefully considering the recommended prices of the various county associations, recommend a set of prices for all members of the State Association. It is absolutely necessary that all delegates present at this meeting pledge their full support to this plan if it is going to succeed."

A motion was made and carried that the State Association adopt this plan and allow the expenses of the members of this committee to be taken from the treasury of the association.

That this convention go on record as urging the Division of Markets to discontinue the use of the word *ungraded* in the honey grading regulations was the next motion made and carried.

A motion was made that a vote of thanks be given to Mr. Kruse for his splendid help and work as chairman during the convention. The members expressed their appreciation by a unanimous rising vote.

The meeting was then turned over to the new president, Mr. James

Gwin, who addressed the members as follows:

"Your President is happy to have the opportunity to stand before you and feels honored not in holding this position but in the confidence you have bestowed upon him. I want you to know that I will do all in my power to promote beekeeping as a business for state association members. W. S. and Company. But I ask a few favors of you. I ask that you be more careful in piling up work for our secretary, make more of an effort to relieve her of some of the distressing work she has been doing and you can do this by giving more rapid response and co-operation. You all know, if you don't you had better find out, what she is doing. Before you leave this meeting today, say to yourself, 'I am going to get at least one new member to join our organization.' Take that determination home with you and keep it with you until you have sent in at least \$1 to our secretary."

"The convention has taken away the appointive power of the Chair so far as the Label Committee is concerned and the present Label Committee will be the Label and Lithographed Container Committee for 1923. This committee, C. W. Aeppler, Oconomowoc; Dr. Robt. Siebecker, Madison, and C. D. Adams, Wauwatosa, as appointed last year, will therefore continue for 1923.

"The Executive Committee as appointed last year, I believe, will serve our organization this year, and I therefore reappoint L. T. Bishop, Sheboygan; I. C. Painter, Wausau, and A. H. Seefeldt, Kewaskum.

"As a Uniform Price Committee, I will appoint C. W. Aeppler, Oconomowoc; F. J. Mongin, Green Bay; Edw. Hassinger, Jr., Greenville; A. A. Brown, Juneau, and our Secretary, Miss Fischer, Madison.

"As the committee to carry out the work of securing advertising to finance our new directory, I appoint A. A. Brown, Juneau; E. W. Atkins, Watertown, and Mrs. Martha White, Pewaukee.

"Now that all the committees have been appointed, I would like to say a few words, not as your President, but as Chairman of the Legislative Committee. All you delegates here representing local associations, should as soon as you return, urge your local to draw up resolutions concerning the needs of our state association and Wisconsin beekeepers, get all of your members to sign such resolutions, petitions or whatever you choose to call them, and then see that those resolutions are sent to your representatives and senators. Get your members to send in resolutions individually. Make up the resolutions as you please, write

them in pencil on any kind of paper, but for goodness sake, get them to your representatives and senator. Whether or not we get an appropriation for our association depends upon how hard we work. Remember to give your support to this work."

The Secretary then addressed the members as follows:

"I wish to thank the members of the Wisconsin State Beekeepers' Association for the splendid support both moral and financial they have given during the past year. The work carried on by the secretary's office would not have been possible had not the members so generously responded. We have an active campaign before us and if we are to carry on the true purposes of our organization, we must have the help of not only 100 or 200 of our members but of ALL of our members. We are working to get 1,000 Wisconsin beekeepers to join the state association and should we succeed, our organization will truly be in a position to carry out its aims, which are as follows:

"1. To develop genuine friendliness and good fellowship among fellow workers.

"2. To stimulate progressive beekeepers.

"3. To serve the mutual interests of all beekeepers.

"4. To advance beekeeping as a science and means of livelihood.

"I am glad Mr. Gwin asked each and every one of you to get at least one new member and I feel sure you will all join in this campaign for 1,000 paid up members for 1923."

Mr. A. A. Brown then asked the beekeepers to send in more news items for Wisconsin Beekeeping, sending in suggestions as well as criticisms from time to time.

A motion was made to adjourn and the convention adjourned at 5:45 p. m.

Members, after reading the proceedings, what do you think of the 1922 convention?

You will agree, will you not, that a number of very important problems have been started for 1923. If enough of our members will stand back of the uniform container, uniform poster, and honey booklet project, we ought to do much towards establishing a fair price for Wisconsin Honey, stabilizing and strengthening the Wisconsin Honey Market and bringing about a proper means of distribution of honey in this state. Just how successfully these problems are worked out depends upon the support of our members.

Report on Affiliated Associations

Report blanks were sent to each affiliated association, 33 in all, on October 10th, asking that these be filled

in and returned to the secretary's office by November 20th. Up to the time of the convention 28 reports were received. No reports were received from Clark, Marinette, Rusk, Vernon and Waukesha Counties' Associations.

The following associations were found to be below the required membership in the state association: Barron, Price, Chippewa, Door, Grant, Green, Waushara, Wood and Walworth Counties' Associations.

The following new associations affiliated with our state organization this year:

- Name of Assn.—
- Rock County Bee Association.
- Ozaukee County Bee Association.
- Barran County Bee Association.
- LaFayette County Bee Association.

Report of Extension Committee

Eighty-four meetings were held from Dec. 1, 1921, to Dec. 7, 1922, with an average attendance of 19.

During the same period two two-day bee schools were held:

Bee School	Attendance
Jan. 31—Grant Co., Lancaster.....	32
Feb. 1—Grant Co., Lancaster.....	14

The fourth annual Beekeepers' Chautauque was held at Green Bay with a total registration of 211.

One hundred ninety-two new members were secured for the state association.

Four new associations were affiliated.

Clerical and Stenographic Report of Secretary

Total letters	685
Total pages of manuscript.....	189
Receipts written	763
Stencils cut	39
Mimeographed letters	4,158
League circulars	225
Envelopes addressed	5,699
Cards made out for file.....	192
Invitations sent out.....	583
Envelopes for invitations.....	583
Programs for convention (summer meeting inclusive).....	2,777

Membership Report

Members paid for 1922.....	694
Members paid for 1923.....	71
(Includes those received up to Dec. 13)	
Members paid for 1921 but not 1922	255
Lady beekeepers who are members	34

Reports From Affiliated Associations

	No members.....	State members..	meetings	Average attend- ance	Amt. of order...	Amt. saved.....	No. of members ordering
1. Baraboo Valley.....	29	14	6	30	.....	.....	..
2. Barron County.....	34	7	1	16	.....	.....	..
3. Brown County.....	29	18	3	20	\$ 90.00	\$ 16.20	4
4. Chippewa Valley.....	17	9	1	13	.....	.....	..
5. Dane County.....	22	18	2	14	.....	.....	..
6. Dodge County.....	48	32	4	56	437.07	65.26	15
7. Door County.....	17	6	..	..	.....	.....	..
8. Fond du Lac County.....	58	30	5	22	500.00	90.00	15
9. Fox River Valley.....	27	10	2	17	10% on Catalog price sav'd	.....	..
10. Grant County.....	13	6	2	9	200.00	40.00	..
11. Green County.....	18	7	3	26	.....	.....	..
12. Jefferson County.....	28	10	1	31	500.00	85.00	20
13. LaFayette County.....	11	11	1	14	.....	.....	..
14. Langlade County.....	38	10	2	26	.....	.....	..
15. Marathon County.....	38	33	5	15	.....	.....	..
16. Milwaukee County.....	50	28	5	28	2,889.07	761.40	35
17. North East.....	48	22	3	29	.....	.....	..
18. Ozaukee County.....	19	12	2	14	.....	.....	..
19. Price County.....	20	9	3	13	500.00	75.00	10
20. Richland County.....	21	10	2	11	.....	.....	..
21. Rock County.....	47	12	10	14	400.00	60.00	7
22. Shawano County.....	24	18	6	9	380.00	75.00	10
23. Sheboygan County.....	42	19	5	31	400.00	50.00	20
24. Walworth County.....	10	5	2	18	.....	.....	..
25. Washington County.....	38	13	4	19	200.00	15%	..
26. Waushara County.....	28	6	1	6	25.00	.....	3
27. Winnebago County.....	23	12	..	..	.....	.....	..
28. Wood County.....	20	6	2	30	600.00	75.00	..

Financial Report of the Treasurer, C. W. Aeppler

	Dr.	Cr.
1922.		
Jan. 3—Balance on hand	\$ 221.94	
Jan. 3—To H. F. Wilson, memberships	96.00	
Jan. 3—By M. F. Hildreth, salary, December		\$ 15.00
Jan. 3—By M. F. Hildreth, expense to 1921 convention		16.41
Jan. 3—By Treasurer Wis. Coop. H. P. Association		25.00
Jan. 3—By C. P. Dadant, Miller Memorial Library		40.00
Jan. 3—By H. F. Wilson, expenses		22.65
Jan. 3—By Democrat Printing Company		59.40
Jan. 3—By Democrat Printing Company		11.50
Mar. 7—To M. F. Hildreth, memberships	412.00	
Mar. 7—By Democrat Printing Company		22.27
Mar. 7—By M. F. Hildreth, salary, Jan.-Feb.		30.00
Mar. 7—By M. F. Hildreth, stamps, Mim. Tags		17.95
Mar. 7—By Wisconsin Horticultural Ass'n, Affil. 568 Mem.		284.00
Mar. 27—By Wisconsin Horticultural Ass'n, Affil. 31 Mem.		15.50
Mar. 30—By M. F. Hildreth, salary, March		15.00
Apr. 29—By Wisconsin Horticultural Ass'n, Affil. 13 Mem.		6.50
June 16—By Wisconsin Horticultural Ass'n, Affil. 36 Mem.		18.00
June 16—By M. F. Hildreth, salary, April and May		30.00
July 17—By Democrat Printing Company		4.50
Sept. 8—By Democrat Printing Company		4.00
Sept. 28—To Malitta D. Fischer, memberships	220.00	
Sept. 29—By Malitta D. Fischer		48.28
Sept. 29—By Malitta D. Fischer, salary, June, July, August and September		60.00
Dec. 13—By M. Fischer, stamps		3.50
Dec. 13—By M. Fischer, salary, October and November		30.00
Dec. 13—To M. Fischer, 58 member 1 Ass'n affiliated	62.00	
	\$1,011.94	\$ 779.46
Balance		232.48
	\$1,011.94	\$1,011.94

Financial Report of the Secretary

EXPENDITURES

Salary

1921 Dec.	\$15.00	
1922 Jan.	15.00	
Feb.	15.00	
Mar.	15.00	
Apr.	15.00	
May	15.00	
June	15.00	
July	15.00	
Aug.	15.00	
Sept.	15.00	
Oct.	15.00	
Nov.	15.00	\$180.00

Expenses of Office*	\$ 187.81	
Miller Memorial Library	40.00	
To help Coop. Assn. finance booth (1921)	25.00	
Exposition Expenses (1921)	22.65	
Wis. Hort Assn. affiliation of members**	324.00	
Total expenditures	779.46	
Balance	232.48	
	\$1,011.95	

*Expenses of Office (Itemized)		
Stamps (Mar. 4)	\$5.50	
" (Sept. 26)	18.00	
" (Dec. 9)	3.50	\$27.00

Mimeographing

Mar. 4	9.95	
Sept. 26	10.60	20.55

Travel to Convention

1921	16.41	
State Fair	19.68	36.09

Convention Tags

Paper, Envelopes, Etc.	2.50	
Democrat Ptg	59.40	
" "	11.50	
" "	22.27	
" "	4.50	
" "	4.50	101.67

\$187.81*

RECEIPTS

Membership Fees		
766 Members at \$1	\$766.00	
5 Members at 50c	2.50	
1 Member at \$1.50	1.50	
4 Assn. Affiliated	520.00	

Balance of 1921	790.00	
	221.94	

\$1,011.94

**Wisconsin Horticulture

Mar. 7 568 Members	284.00**
Mar. 27 31 Members	15.50
Apr. 29 13 Members	6.50
June 16 36 Members	18.00
648 Members	324.00**

HISTORY OF OUR ASSOCIATION

Any member having any notes on the early history of this association should forward them to the secretary's office. The Committee for securing advertising for the new directory is now trying to assemble material for such a directory and would appreciate any notes our members may have. If you want your name included as a full fledged member, pay up your dues at once.

All Set
for
One
Thousand
and One
Members
in 1923

You can put it
across if you will
— send in your
renewal.

GET A NEW
MEMBER

Do It Now!

WISCONSIN HORTICULTURE

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No. 6



HYACINTH

Methods and Uses of Grafting

W. H. Alderman and Wilson
McGrath

Division of Horticulture, University
Farm, St. Paul, Minn.

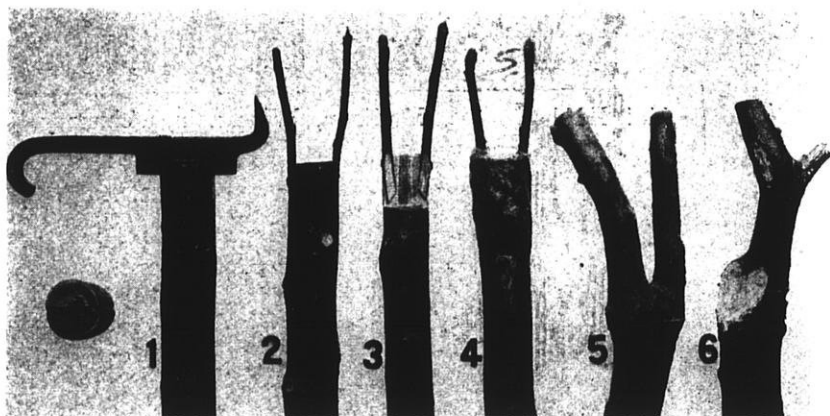
The art of grafting trees and plants has long been known to horticulturists, and has been used for three general purposes. The first is in the production of nursery trees, when the variety desired is grafted or budded on a seedling root; the second is in top working trees of a worthless variety in order to change them to a valuable one or to grow several sorts on one tree. The third use is in the treatment of trees injured by disease or girdled by rodents.

The principle involved in all grafting is to bring together the growing parts of the scion and stock in order to effect a union at the point of juncture. The stock is the plant or root that the grafting is to be done on; the scion is the new wood that is to be grown. The growing part of all hardwood plants (except those with large central piths, such as palms) is located in the inner bark or the cambium layer lying between the wood and bark. Thus, in making any graft, it is necessary that the cambium

layer of the stock and scion touch in one or more places. It is also essential to exclude the air from the union to prevent the cut surface of both stock and scion from drying out and dying before a real union can take place. This is ac-

complished by the use of grafting wax which is applied thoroughly over all cut surfaces of both the stock and the scion at the point where the graft is made. All grafting operations except as otherwise noted in the following discussion should be performed in the early

spring just before the buds start into active growth. *Collecting Scion Wood*—The scion, or part to be grafted into a tree, should be selected from a strong, healthy shoot of the last season's growth. It is best to col-



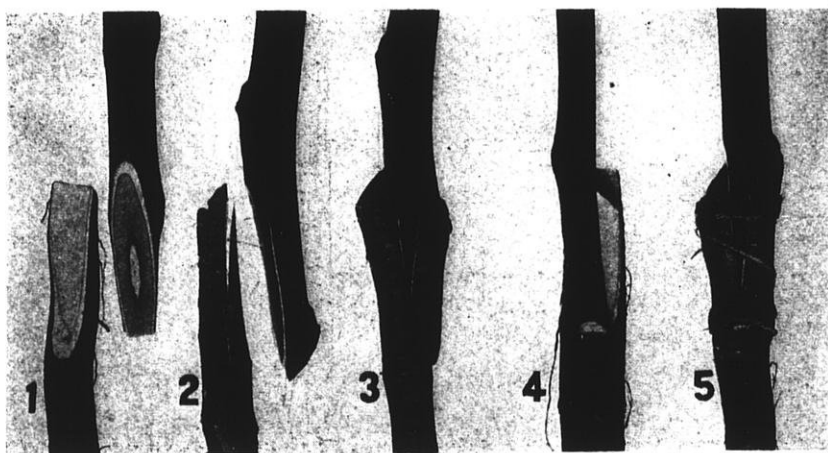
CLEFT GRAFTING: 1. Stock cut off and grafting chisel in position to open cleft. 2. Scions in place. 3. Top stock cut away to show scions in proper position. 4. Graft completed and waxed. 5. Both scions growing at end of first season. 6. Growth from one scion cut away to prevent crowding. At left of 1 is a view from above (cross section) of scions in place.

lected these shoots during the early part of the winter and pack them away in a cool cellar in damp sawdust to prevent their drying out. If they are allowed to remain on the tree until the time of the grafting, they may be injured by severe winter weather or the buds may have started to swell during the first warm days of spring. It is important that the scion-wood be absolutely dormant. In preparing the scions for grafting, two or three inches of the base of the shoot is usually discarded because the buds are poorly developed, and the tips are not used because the wood is soft and pithy.

Grafting Wax—A good grafting wax may be made by using the following ingredients:

- 4 parts resin
- 2 parts bees-wax
- 1 part tallow

Melt the ingredients over a slow fire. If the resin is in lumps, it

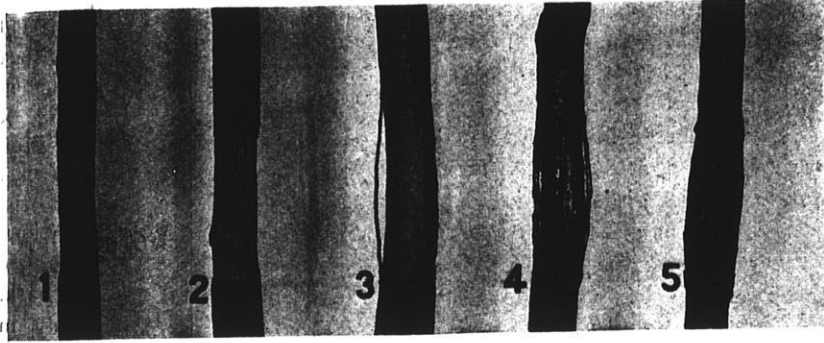


WHIP GRAFTING: 1. First bevel cut through top of stock and bottom of scion. 2. Tongue cut in both before joining as in 3. 3. Side view. 4. Front view showing bark in contact on one side. 5. Completed graft tied with waxed string and ready for packing in damp sand or sawdust.

should be pulverized before it is put over the fire to facilitate melting. All particles of the resin should be completely melted before the wax is removed from the fire. Allow it to cool somewhat and pour into a tub of cold water. With the

vided. Either the ordinary bladed hand-saw, commonly sold for pruning purposes, or the swivel blade pruning saw is good for this purpose. In no case would the pruning saw with teeth on both sides be recommended, as one is almost cer-

making a whip graft, the stock should be cut off just above a smooth spot free from knots. A smooth beveled cut from an inch to an inch and a half long should be cut at the top of the stock. If the stock is small, this cut may extend clear across, but when a branch three-eighths inch or more in diameter is to be worked, it is better to make the beveled cut along one side of the stock and not reaching quite to the pith. Next, a tongue should be cut beginning about one-third of the distance from the tip of the bevel, and cutting downward about one-third of the length of the original beveled cut. Avoid starting the cut through the pith. To secure a smooth surface on the inside of the tongue, it should be cut and not split. The scion may now be similarly prepared, beginning the first beveled cut opposite the base of a bud and making sure that the cut is approximately the same length as in the stock. After the tongue is cut in the scion, the two pieces are fitted firmly together, care being taken that the inner bark along one side is in contact. The scion should be cut about three to four inches long and should carry three or four buds. The two pieces are then bound together with ordinary



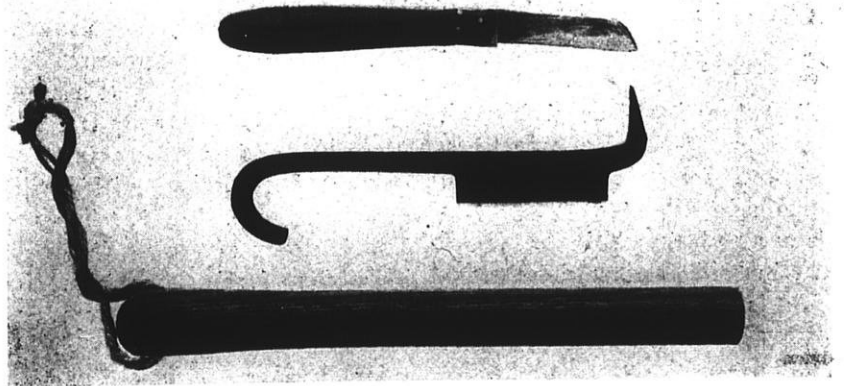
BRIDGE GRAFTING: 1. Girdled tree trunk. 2. Girdled area cleaned and ready for scions. 3. Scions in position. 4. All parts waxed. 5. Growth at end of first season.

hands well greased to prevent sticking, it may then be pulled and worked like molasses candy until it assumes a smooth grain, when it may be rolled into suitable sized balls and put away on waxed or oiled paper until ready for use. It will keep indefinitely.

Grafting Tools—Very few special tools are required for successful grafting. One essential thing is that the knife be sharp and have a smooth cutting edge. A knife with a straight edge similar to the one shown in the illustration is preferable to a round pointed knife. For top working large trees, a grafting chisel is almost a necessity. A local blacksmith can readily make one from an old file. A curved handle as illustrated in the cut is a convenience, enabling one to hang the tool over a limb when not in use. The mallet for driving the grafting chisel into the stub may be readily improvised from any convenient piece of wood. A good pruning saw should be pro-

tain to injure the tree with the back of the saw when the cutting is done in close quarters. A good pair of hand pruning shears about nine or ten inches long is also a great convenience in grafting work and is pretty nearly a necessity to one who has any amount of pruning to do.

The Whip Graft—Perhaps the most useful of all forms of grafting is the whip graft, which may be used in small branches in top-working trees or for root grafting in nursery tree propagation. In



GRAFTING TOOLS: Knife (top), grafting chisel (center), mallet (bottom).

cotton twine and thoroughly covered with wax about the union and on the top of the scion. The wax may best be used by melting it and applying with a brush or swab. After growth is well started, the string binding the two parts together should be slit along the back of the graft to prevent girdling.

In the propagation of nursery trees, seedling roots are secured and cut up into about four-inch lengths. Each piece of the root is then used as a stock and a scion about six inches long is whip-grafted to the upper end of the root. The two are then bound together with waxed string* or waxed strips of cloth. Waxing is unnecessary since the grafts will not dry out when packed in damp material and are later planted in moist ground. The whip grafts are then tied up in bundles and packed away in a cool cellar in damp sand or sawdust. The grafts should be made during January or February, and by the time they are taken out of the cellar for planting in the nursery, it will be found that the union and the cut surfaces at the bottom of the root will be nicely covered with a heavy callous. In planting the root grafts, they should be firmly set in an upright position with the upper bud projecting above the top of the ground. They may be set in rows four feet apart and six or eight inches apart in the row.

Cleft Grafting—The cleft graft is used in top-working large trees, the branches of which are an inch or more in diameter. The limbs that are to be grafted are cut off squarely with a saw at a point which is free from knots. The

stub is then split downward through the center by means of a grafting chisel and then the crack held open by the wedge shaped portion of the chisel. The scions are prepared by cutting the base in a wedge shape, having the inner edge of the wedge narrower than the other. The wedge is then set into the cleft in the stock with the thin edge toward the inside and set at a slight angle so that the bark on the outer part of the wedge crosses the cambium layer of the stock at least at one point. Unless the stock is very small, two scions are usually placed in the cleft and the area of the union covered with wax. The scion tip and the open crack down the sides of the stock must also be thoroughly covered with wax. It is not necessary to tie or bind these scions in place as the spring of the wood holds them firmly. In top-working large trees it is not advisable to top-work the entire tree in one year, but to extend the process over two or three years, thus removing not more than a third or a half of the entire tree-top at one time.

Bridge Grafting — The bridge graft is used entirely for repairing injured trees and not for propagation. Its most frequent use comes in the treatment of trees which have been girdled during the winter by mice or rabbits. It is also useful in saving trees that are severely affected with collar rot. It has also been successfully used by tree surgeons when they have wanted to cover a filled cavity quickly with growing tissue. It is simply a bridging over of the girdled space by means of scions which are inserted both top and bottom and which will, when united with the stock, transport food materials downward across the girdled area,

and keep the tree alive. In making the bridge graft the girdled surface should first be trimmed to a clean, smooth cut edge, both top and bottom. The scion wood is then selected of sufficient length to reach entirely across the girdled area. The base of the scion is cut clear across with a beveled cut about an inch and a half long. After this cut is made, the scion should be measured against the girdle to find its proper length and then the upper part of the scion should be beveled similarly to the bottom and on the same side. The bark above and below the girdle is then slit with a knife and the edges are loosened. The beveled base of the scion is then inserted in the slit in the bark below the girdle with the beveled cut on the inner side against the wood of the tree. It is pushed firmly downward until the entire bevel is embedded in the slit bark. It should then be held firmly in place with one hand while with the other hand, grasping the scion near the top it should be bent in a bow shape until the upper bevel can be inserted into the upper slit of the bark and pushed upward into place. The now straightened scion should stand reasonably close to the trunk. Both the top and the bottom of the scion should then be tacked firmly to the tree by a small slender brad. Repeat this process until the trunk of the tree is surrounded by these scions about an inch and a half apart. The point of union at both ends of the scion should be thoroughly waxed and it is usually best either to wax or to paint the bare wood of the tree to keep it from drying out.

Sometimes it is impossible to attach the lower part of the scion to the base of the tree because so much of the cambium layer has

*Waxed string may be prepared by dipping a ball of No. 18 cotton string into melted grafting wax until thoroughly saturated. Waxed strips of cloth are similarly prepared.

been destroyed by disease. In such cases small trees may be planted close to the trunk and grafted into the main tree above the affected tissue. The small trees are cut to the proper height, the top beveled, and then slipped under the edge of the cambium layer, after which it is treated as a bridge graft. Many valuable trees have been saved in this way and the method has been found quite effective in saving collar rotted trees.

In a few years these scions will increase in size until they completely cover the girdled trunk with a shell of new, actively growing wood and bark. Trees treated in this way will not suffer in the slightest degree even during the first season after grafting, provided most of the scions make a successful union.

Behold Our Idol Has Feet of Clay

For twenty years or more I have, in private conversation, insisted that Luther Burbank was not as great as he claimed to be; that he was a supreme egoist, a man of only ordinary horticultural ability and in no sense a scientist. I have claimed and still claim that he has produced little or nothing, either through selection or cross breeding, of value to the fruit, flower or vegetable growers of the Middle West and Eastern states, whatever may be the case in the Far West. The Rural New Yorker at the time of the introduction of the wonder-berry challenged Burbank to prove that it was in any sense different or better than a plant which grows wild in Mexico.

The U. S. Department of Agriculture in a bulletin on spineless cacti issued at about the time of the great furor over Burbank's marvelous creation showed that spineless

cacti were common in all desert countries. The Burbank plum originated in Japan. There is a pretty story about the origin of the Burbank potato, how the barefoot boy selected potato seeds from his mother's garden, etc. I have heard a different story about the beginnings of the Burbank potato. I will submit this story to Mr. Burbank on request, but only on condition that he release same together with his reply for publication in Wisconsin Horticulture.

To have said these things in the past would have been considered rank heresy. Burbank has been exploited by every penny-a-liner and cheap pulpit orator in the country as next to God as a creator. That he permitted this is evidence of his weakness; that he formerly used the term Burbank's Creations on the title cover of his catalog in capitals placed him in the same class as cheap nursery fakers. However, advertising pays.

I have held my peace with such patience and fortitude as I could summon, knowing that the idol-worshipping public would pay no attention to anything I would say further than to smile.

But certain events have occurred during the past year that are enlightening. Read the following:

"My quarrel with Luther Burbank is not as a horticulturist; but as a self-styled scientist, he is a complete faker. No man of scientific integrity would permit himself to be sensationalized in the columns of the Sunday supplement as Burbank has done. He conducts all his work in secret and refused to be investigated by learned societies and organizations, which is contrary to all laws of science. The Carnegie Foundation appropriated \$10,000 for a complete investigation of his work and sent a rep-

resentative to California, but after a few months he declared the attempted investigation was a waste of money, for Burbank kept no records of his researches and experiments and had nothing to teach science about the laws of plant growth." —Professor W. M. Barrows, Ohio State University.

I am actuated in this by no other motive than to influence our readers to look a little below the surface in the case of Burbank, to place a proper valuation on what he has really accomplished, but at the same time remember he is not a superman nor even a scientist.

Peter Gideon, groping in the dark, found the Wealthy apple, which has been worth millions to the Middle West; he was a humble seeker after truth and made no boasts. Charles Patten, through 50 years, laid foundations for a race of hardy fruits on which Beach built the superstructure. Hansen, of South Dakota, whom a kind providence has spared, has produced fruits hardy on the wind-swept prairies of the Dakotas. All these men were or are modest and retiring, working faithfully, content that they had been of some little service to their fellow men. What has Burbank done for us?

—Frederic Craneheld, Editor.

A pleasing innovation was the floral exhibit, especially the show of roses, carnations and orchids staged by the Milwaukee Florists' Club. This was a voluntary offering on the part of the club. The M. F. G. also sent, on their own account, two delegates, Alfred Locker and Wm. Kennedy. Mr. Fred Rentschler, of Madison, exhibited cyclamen in wide variety of color and form, and John Hauser, of Bayfield, thirty varieties of everlastings. The florists are knocking at our door.

THE FLORISTS PAGE

EDITED BY

HURON H. SMITH, Curator of Botany
PUBLIC MUSEUM MILWAUKEE, WIS.

Wisconsin Florists' News Notes

Blessed is the man who expects nothing, for verily, he shall not be disappointed. Sixty-five questionnaires were mailed to selected florists of the state association and four answered. The honor roll, therefore, stands as follows: On the return mail came a reply from Wm. A. Toole, of Baraboo; Jacob J. Kolb, of Beaver Dam, was a close second; Chas. Oehlenschlager, of Oconomowoc, made a special call to our office; and John Rindfleisch, of Beloit, sent the last response. We probably ought not take this as a decided frown upon our efforts to produce a news sheet of an intimate character. We have decided to charge it off to the holiday rush and offer another chance about the 21st of January.

The answering correspondents were well distributed so that such answers as were obtained are doubtless representative. We had expected ten answers out of 65, as we had ten promises to answer. However, only one of the promises materialized, John Rindfleisch, and in that one case we would have been willing to lay a fair-sized bet that he would answer. He impresses one as just the sort of a man whose word is as good as his bond. It is only fair to say that only two Milwaukee florists were asked to answer, though neither did.

The questionnaire was divided into four topics and was complete in so far as the writer was able to make it so. Subheads were: Personnel, growers' problems and sta-

tistics, retailers' problems and statistics, and conventions.

The personnel questions were designed to bring out the activities of the florists over the state in their home life and interrelations with others in the business. It demonstrated that the correspondents were active in going out to flower shows like the one in Milwaukee and Pohlman day at Morton Grove, and were taking along their foremen. They were also making greenhouse inspection trips and stock-buying trips. None of them had any salesmen out for the holiday trade. None reported any serious illness or death, alleging that they could stand a few more in their vicinity. There were no engagements or weddings announced. There had been no florists' meetings locally, nor luncheons, nor get-together meetings, except one we knew about personally, the banquet of the Milwaukee Florists' Club at the Calumet Club, January 2d. The writer was visiting the Missouri Botanical Garden at St. Louis at that time.

Growers' problems and statistics brought out a diversity of opinions even with so few replies. Jacob Kolb and Chas. Oehlenschlager reported now boilers installed in their hot-water systems. No new equipment for outside work such as tractors, power dirt pulverizers, or power cultivators was reported. It was the consensus of opinion that cement was best for benches, though one stipulated cement bottoms and wooden sides. One correspondent stated that cement benches were

best for propagating, but that it was necessary to water more frequently where they were used.

The answers to the statistical question regarding the amount of glass in the neighborhood are not much value since so few answered. Oconomowoc growers use about 32,000 feet of glass. Oconomowoc reported a new florist. One of Sylvester's men, Albert Niesen, is building a greenhouse 35 by 160 feet.

Weather influences during December were reported as normal and poor, according to localities. Coal was plentiful with all correspondents. One used Franklin county, Illinois, mine run coal, the rest Indiana mine run. One reported that mine run was the best for all purposes, the fine dust for banking and lumps for quick firing. All users reported hot water. Kroeshell and Ideal were the type of boilers used.

All reported shipments as satisfactory, but that the express service could be improved. All reported business better this year than last, ranging in their estimates from ten to twenty-five per cent. Two report no specialties in stock. Jacob Kolb reports that his specialties are mums and geraniums. Charles Oehlenschlager reports that he specializes on *Asparagus sprengeri*. None are producing any new seedlings.

One reports trouble with cyclamen diseases, and as he has not specified, we take it that it is a fungous disease. Can anyone help with a remedy for blight or damping off of cyclamen? One reports his greatest trouble from the midge on his mums. He controlled this by spraying every day at four in the afternoon or later, for a period of

(Continued on page 86)

R. J. Coe

"Death has taken from us our long-time fellow member, co-worker and friend, R. J. Coe, who has within and outside the Horticultural Society done so much to promote the happiness of others."

"We shall sadly miss his counsel, his companionship and helpfulness."

Such, stripped of formal terms, are the resolutions passed at our convention, written by his long-time friend and fellow worker, William Toole, Sr.

There is little that can be added that will better express the loss we have sustained, the genuine sorrow in the hearts of all who knew Mr. Coe and our appreciation of all he did for us.

"Who has done so much to promote the happiness of others." These are no idle words and the author in these eleven words spoke what was in the hearts of us all.

We who knew R. J. Coe longest could not envisage him as a mere dealer in plants, a nurseryman; we knew him as a lover of plants, of fruits and flowers and as one whose greatest pleasure in life was to enable others to enjoy them.

"We shall sadly miss his counsel, his companionship and helpfulness."

Quiet, unobtrusive, without ostentation, his counsel was wise, sound, helpful. Whenever we were in trouble we turned to R. J. Coe. Wise counsel, dear companionship and helpfulness to every one.

R. J. Coe became a member of this Society in 1883. He served as Treasurer from 1893-1900; Vice President 1905; President 1906-1908; Member of Executive Committee 1912-1921; member of Trial Orchard Committee at intervals from 1908 to 1918. We feel that

the following account from the Fort Atkinson Union of January 12th will be read with interest by our members:

RENSELAER JAY COE

Rensselaer Jay Coe was born in Stockbridge, New York, July 6, 1849, and was the eighth and youngest child of Rensselaer and Sarah Powers Coe. He was educated in a country district school and in the Oneida Seminary. He came to Fort Atkinson at the age

**R. J. COE**

Born July 6, 1849; died January 6, 1923

of 23 and started in business as a nurseryman and fruit grower. In 1874 he was married to Lenna Converse and to them were born two daughters, Zella, now Mrs. W. R. Clark, and Sarah, now Mrs. C. J. Telfer.

He identified himself early in life with the Wisconsin State Horticultural Society and served that society in the capacity of president, vice president and treasurer.

In 1902 the nursery company known as Coe, Converse & Edwards Company was formed and he was made its president, a position he has held since its inception.

For many years Mr. Coe was a

member of the Wisconsin Society Sons of the American Revolution and from young manhood he was an active member of the M. E. church, and was honored by that institution by being elected to many offices of responsibility.

The Wisconsin State Horticultural Society, recognizing his ability and what he had done to advance the horticultural interests of this state, conferred its highest honors upon him by making him an honorary life member. Few men have obtained such recognition from this society. In 1921, Mr. Coe received a testimonial from the University of Wisconsin in acknowledgement of the splendid service he rendered to his state.

He died at his home in Fort Atkinson, January 6, of heart failure, due to an illness which started in 1916. He leaves to mourn his death a wife, two daughters and three grandchildren.

Mr. R. J. Coe was a successful business man, a good citizen, and a true Christian. He did not enter the nursery business simply for making money, but because he delighted in raising flowers, shrubbery and fruits. In his childhood he showed a taste for this occupation. It comes very close to the ideal when a man can take up for his life's vocation the kind of work he likes and is capable of doing. This gives opportunity to render a real service. Mr. Coe was more interested in providing good nursery stock for his customers and in improving its utility and beauty than in the profits he made from his business. No greater compliment can be paid a man who views his business in this way.

Dr. H. L. Russell, Dean of the Wisconsin College of Agriculture,

(Continued on page 93)

Wisconsin Horticulture

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 Secretary W. S. H. S., Madison, Wis.

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 W. J. Moyle.....Union Grove

For Term Ending December, 1924.

A. K. Bassett.....Baraboo
 C. I. Brigham.....Blue Mounds
 Wm. Longland.....Lake Geneva

For Term Ending December, 1923.

Paul E. Grant.....Menomonie
 J. F. Hauser.....Bayfield
 Richard Marken.....Gays Mills
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The Annual Convention

The "1922" annual convention and fruit exhibit was held in 1923, January 10-12.

Whatever scant account of the event that is given in these pages is for two purposes only, as a matter of record and for the benefit of such members as were unable to attend. For those who were in attendance nothing that must be condensed within a few paragraphs can be of value or even interest.

THE FRUIT SHOW

The rotunda, which is nearly 300 feet in circumference, was banked with trays of apples, leaving only scant room for entrance; within, a circle of tables covered with plates of apples and at intervals round tables covered with flowers. It has often been said that

our Capitol building cannot be "decorated," that it is too beautiful in itself. Be that as it may, we decorated it, we added to the beauty of marble, of statuary, of grand staircases and balconies, that which no quarry of Italy, Greece or Vermont nor the skill of artists and artisans can produce, the unsurpassed and unsurpassable beauties of the rose and the apple.

D. E. Bingham and Lester Birmingham, representing Sturgeon Bay, had the largest exhibits. A. K. Bassett (Ski-Hi) was next. Other large exhibitors were Arno Meyer, Waldo; Ed. Stoerber, Madison, and the Kickapoo Development Co. The list of premiums awarded, amounting to \$1,012.50, is given on another page. The largest amount previously awarded was \$566 at the 1920 show.

THE CONVENTION

The convention proceeded smoothly and without a single hitch or break from beginning to end. President Christensen is a firm believer in beginning on time and going through to the end of each lesson as set down in the book (program).

Of the thirty names on the program for papers only four failed to appear. Death called Hon. J. H. Hazelwood on the first day of the convention. Mr. Cannon was called out of town on business that could not be neglected; Mr. Magness wrote, after the program was printed, that it would be impossible for him to attend. The fourth was Mr. Arno Wittich, who had a better excuse than either Cannon or Magness; announcement in another column.

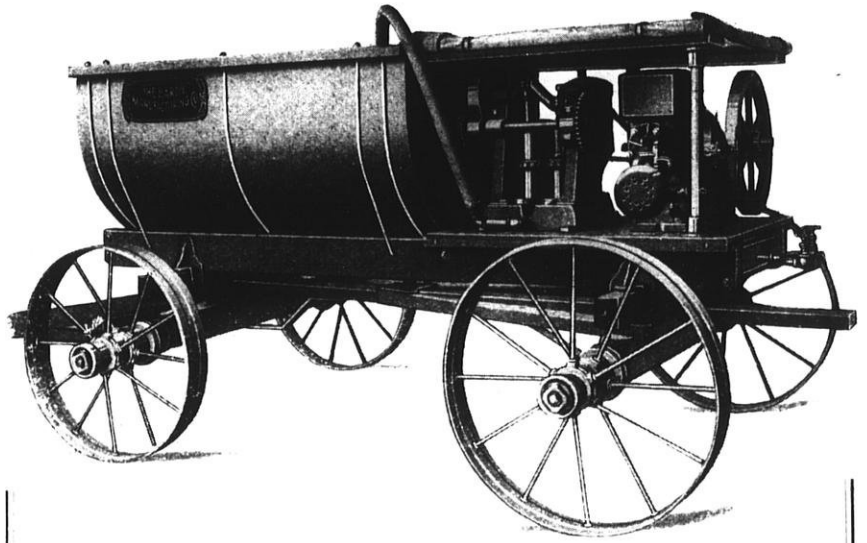
The double program worked out to the apparent satisfaction of everybody present, at least no dissatisfaction was expressed.

The regular session provided, all through, a wide range of topics of interest to all classes. The commercial fruit growers met in separate session Thursday afternoon and Friday afternoon and discussed subjects of special interest to large growers of fruit. Their sessions attracted fully one-third of the members in regular attendance at the convention. This plan seems to the editor to be most excellent. The regular sessions were not interfered with in any way and the C. F. G.'s who at one time felt that they needed a separate organization have found that they are happier within the fold. Such seemed to be the feeling of the majority at least of the members. The following remarks by Mr. Goff of Sturgeon Bay, who was the original proponent of the idea, are lifted from the reporter's transcript:

Mr. Goff: I should like to say just a word if it is in order at this time. Those of you who were at the summer meeting know the move that was made toward getting a commercial program at the winter session, and the program you have is rather definitely the result of that movement. The committee which was appointed at the summer meeting held several conferences and one committee meeting and with the assistance of the secretary arranged the program which you have this winter. The faults of that program, if any, are chargeable squarely to this committee and not to the secretary. We want to get the apprehension out of your mind, if any of you have such apprehension, that the intention of the commercial men in this matter is to dominate this meeting. I would not be surprised if there was a feeling on the part of some of the members that the commercial men want to run

away with this meeting, but I assure you that such is not the case. The commercial men merely ask that the program have enough commercial matter in it so that they might easily get a delegation to attend. From Door county we have at this time eleven people in attendance. Before the day is over I think there will be twelve. While that is not a large delegation, it is a start. It is larger than I believe we have had in years past. The best results of having a commercial program will not show the first year. It should be given an opportunity to develop, but there is just this thing that that committee would like to have before your mind, and that is that the program of the society should take into account all interests. There is no intention, so far as I have heard it expressed, of having the commercial men have a separate department of this society. Personally, I have always been opposed to that. I do not believe in departments, I do not believe in dividing, I think there is ample room for all to work together in one organization, and if the different interests want programs of their own, for instance, if we should have three divided half-day programs instead of two, certainly that would be profitable, anything at all to satisfy everyone. The only stand the commercial men have taken is that they would like to have an opportunity to talk commercial fruit growing by themselves at any time when such a discussion might be tiresome to those not particularly interested in that line. Do not let anyone raise the suggestion that the commercial men want to dominate this meeting and want to run away with it. I want to tell you that that is positively not the case.

That seems to state the case fair-



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ly from one viewpoint and there seems to be no good reason why the plan should not be continued indefinitely or until a better can be found.

Speaking from a neutral standpoint the editor rises to say that Mr. Goff's fears or apprehensions or those that might have been held by others were needless. No class or combination of classes can run away with the convention or the society; it's too big for that. It is comforting to know that there is no such thought. It is quite likely that we will have in the near future a commercial florists section and, who knows, a vegetable section. Then while these different sections, each with two sessions of one-half day each, are engrossed in their own particular problems the others will be enjoying a real program, one

bigger and better than that just finished. So we will all live happily as one big family. The only obstacle to complete satisfaction is the axiom that no body of matter can occupy two positions at one period of time. There were many in attendance at the general session Friday afternoon who wanted to hear Professor Roberts at the C. F. G. section, and, if the truth were told, more fruit men who hankered to be downstairs in the general session.

Considerable space has been given to this subject, but, we feel, no more than is justified. This problem faced us and it could not be brushed aside. The solution is in sight. It has already resulted in the addition of 326 names to our membership roll, all fruit growers of Door county.

PREMIUMS AWARDED AT FRUIT SHOW, MADISON, JAN. 10-12, 1923

A. K. Bassett, Baraboo, 53 Entries

25 plates, 5 com. var. for Wisconsin .....4th	\$ 2.50
Collection apples, not to exceed 10 var. ....1st	10.00
Plate Ben Davis .....3rd	.50
Fameuse .....1st	1.00
Gano .....2nd	.75
Golden Russet...3rd	.50
Jonathan .....2nd	.75
McIntosh .....1st	1.00
Newell .....1st	1.00
N. W. Greening..1st	1.00
Pewaukee .....1st	1.00
Salome .....1st	1.00
Seek-No-Further 2nd	.75
Scott Winter ...1st	1.00
Utter .....3rd	.50
Windsor .....1st	.50
Wolf River .....1st	1.00
Delicious .....1st	1.00
Tray Ben Davis .....3rd	1.25
Fameuse .....1st	3.75
Gano .....4th	1.00
Jonathan .....1st	3.75
McIntosh .....1st	3.75
N. W. Greening..1st	3.75
Pewaukee .....1st	3.75
Salome .....1st	3.75
Seek-No-Further .1st	3.75
Scott Winter ...1st	3.75
Wolf River .....1st	3.75
Delicious .....1st	3.75
5 trays McIntosh .....1st	12.50
N. W. Greening..1st	12.50
Tolman .....3rd	5.00
Wolf River .....1st	12.50
Fameuse .....1st	12.50
Salome .....1st	12.00
Seek-No-Further 3rd	5.00
10 trays McIntosh .....3rd	10.00
N. W. Greening 1st	25.00
Fameuse .....3rd	10.00
Salome .....1st	25.00
Windsor .....2nd	15.00
Plate any other var., 2 premiums @ \$2.00...	4.00
Total.....	\$227.00

L. B. Irish, Baraboo, 13 Entries

Plate McMahan .....4th	\$.25
Newell .....3rd	.50
Scott Winter ...2nd	.75
Tray N. W. Greening..4th	1.00
Scott Winter ...2nd	2.50
Total.....	\$ 5.00

H. H. Harris, Warrens, 10 Entries

Plate Fameuse .....4th	\$.25
McIntosh .....4th	.25
N. W. Greening..3rd	.50
Wealthy .....3rd	.50
Tray N. W. Greening..2nd	2.50
Total.....	\$ 4.00

Arno Meyer, Waldo, 30 Entries

25 plates, 5 com. var. for Wis.....2nd	\$ 7.50
Coll. apples, not to exceed 10 var. ....2nd	6.00

Plate Fameuse .....2nd	.75
Golden Russet...1st	1.00
McMahan .....3rd	.50
N. W. Greening..4th	.25
Salome .....4th	.25
Seek-No-Further 3rd	.50
Twenty Ounce ..1st	1.00
Wealthy .....1st	1.00
Tray Golden Russet ...2nd	2.50
McMahan .....3rd	1.25
Salome .....3rd	1.25
Seek-No-Further .2nd	2.50
Wealthy .....1st	3.75
5 trays N. W. Greening 3rd	5.00
Wealthy .....3rd	5.00
Salome .....2nd	7.50
McMahan .....1st	12.50
Seek-No-Further 1st	12.50
10 trays N. W. Green..2nd	15.00
Wealthy .....3rd	10.00

Plate any other standard var., 2 premiums @ \$2.00.....	4.00
Total.....	\$101.50

D. E. Bingham, Sturgeon Bay, 57 Entries

25 Plates, 5 com. var. ....1st	\$ 12.50
Coll. apples, not to exceed 10 var. ....4th	2.00
Plate Gano .....4th	.25
Grimes Golden .1st	1.00
Jonathan .....3rd	.50
King .....2nd	.75
McIntosh .....3rd	.50
McMahan .....1st	1.00
Newell .....2nd	.75
Patten .....1st	1.00
Seek-No-Further .1st	1.00
Scott Winter ...3rd	.50
Tolman .....3rd	.50
Utter .....2nd	.75
Wagener .....2nd	.75
Windsor .....1st	1.00
Wolf River .....2nd	.75
York Imperial .2nd	.75
Delicious .....3rd	.50
Tray Fameuse .....2nd	2.50
Gano .....3rd	1.25
Grimes Golden .2nd	2.50
Jonathan .....2nd	2.50
King .....2nd	2.50
McIntosh .....2nd	2.50
McMahan .....1st	3.75
Seek-No-Further .4th	1.00
Scott Winter ...3rd	1.25
Tolman .....2nd	2.50
Wagner .....2nd	2.50
Wealthy .....4th	1.00
Windsor .....2nd	2.50
Wolf River .....3rd	1.25
York Imperial .1st	3.75
Delicious .....2nd	2.50
5 trays McIntosh .....3rd	5.00
N. W. Greening..4th	3.50
Wealthy .....2nd	7.50
Tolman .....2nd	7.50
Wolf River ...2nd	7.50
Fameuse .....2nd	7.50
Gano .....2nd	7.50
McMahan .....2nd	7.50
Seek-No-Further 2nd	7.50
Windsor .....1st	12.50

10 trays McIntosh .....2nd	15.00
N. W. Green..3rd	10.00
Wealthy .....2nd	15.00
Tolman .....2nd	15.00
Fameuse .....1st	25.00
Gano .....2nd	15.00
Windsor .....3rd	10.00

Total..... \$241.00

Mrs. J. H. Cooper, West Allis, 8 Entries

Plate Ben Davis .....1st	1.00
Golden Russet ..2nd	.75
Northern Spy ...1st	1.00
Pewaukee .....2nd	.75
Tray Ben Davis .....1st	3.75
Golden Russet ..1st	3.75
Pewaukee .....2nd	2.50

Total..... \$ 13.50

Will J. Platten, Green Bay 12 Entries

Plate Ben Davis .....2nd	.75
N. W. Greening..2nd	.75
Tolman .....4th	.25
Wolf River .....3rd	.50
Wealthy .....4th	.25
Tray Ben Davis .....2nd	2.50
Tolman .....3rd	1.25
Wealthy .....2nd	2.50
Delicious .....4th	1.00

Plate any other var., 1 premium 2.00

Total..... \$ 11.75

F. B. Sherman, Edgerton, Wis. 14 Entries

Plate Ben Davis .....4th	\$.25
Golden Russet ..4th	.25
Jonathan .....4th	.25
Pewaukee .....3rd	.50
Salome .....2nd	.75
Windsor .....4th	.25
Tray Salome .....2nd	2.50

Plate any other standard var., 2 premiums @ \$2.00..... 4.00

Total..... \$ 8.75

L. E. Birmingham, Sturgeon Bay, 56 Entries

25 plates, 5 com. var. for Wisconsin .....3rd	\$ 5.00
Coll. apples, not to exceed 10 var. ....3rd	4.00
Plate Gano .....1st	1.00
Grimes Golden .2nd	.75
King .....1st	1.00
McIntosh .....2nd	.75
McMahan .....2nd	.75
Newell .....4th	.25
Patten .....2nd	.75
Seek-No-Further .4th	.25
Scotts Winter ...4th	.25
Tolman .....1st	1.00
Utter .....1st	2.00
Wagener .....3rd	.50
Wealthy .....2nd	.75
Windsor .....2nd	.75
York Imperial .3rd	.50
Delicious4th	.25
Tray Fameuse3rd	2.25
Gano2nd	2.50
Grimes Golden .3rd	1.25

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" McMahan	2nd	2.50
" Seek-No-Further	3rd	1.25
" Scotts Winter	4th	1.00
" Tolman	1st	3.75
" Wealthy	3rd	1.25
" Windsor	1st	3.75
" Wolf River	2nd	2.50
" York Imperial	2nd	2.50
" Delicious	3rd	1.25
5 trays McIntosh	2nd	7.50
" " Wealthy	1st	12.50
" " Tolman	1st	12.50
" " Fameuse	3rd	5.00
" " Gano	3rd	5.00
" " Seek-No-Further	4th	3.50
10 trays McIntosh	1st	25.00
" " N. W. Green	4th	6.00
" " Wealthy	1st	25.00
" " Tolman	1st	25.00
" " Fameuse	2nd	15.00
" " Gano	3rd	10.00
" " McMahan	1st	25.00
" " Windsor	1st	25.00
Plate, any other stand- ard var., 1 premium ..		2.00
Total		\$253.25

R. A. Irwin, Lancaster, 12 Entries		
Plate Salome	3rd	\$.50
" York Imperial	1st	1.00
Tray Fameuse	4th	1.00
" McIntosh	4th	1.00
" N. W. Greening	3rd	1.25
5 trays N. W. Greening	2nd	7.50
Total		\$ 12.25
E. H. Stoeber, Middleton, 21 Entries		
Plate Fameuse	3rd	\$.50
" Gano	3rd	.50
" Pewaukee	4th	.25
" Plumb Cider	1st	1.00
" Tolman	2nd	.75
Tray Pewaukee	3rd	1.25
" Gano	1st	3.75
" Tolman	4th	1.00
" Windsor	3rd	1.25
5 trays Gano	1st	12.50
10 trays Tolman	3rd	10.00
" " Fameuse	4th	6.00
" " Gano	1st	25.00
" " Seek-No-F'rth'r	2nd	15.00
Total		\$ 78.75
Kickapoo Development Co., Gays Mills, 16 Entries		
Plate Grimes Golden	3rd	\$.50
" Jonathan	1st	1.00
" Wagener	1st	1.00
Tray Ben Davis	4th	1.00
" Grimes Golden	1st	3.75
" Jonathan	3rd	1.25
" Wagener	1st	3.75
" Windsor	4th	1.00
Plate any other stand- ard var., 1 premium ..		2.00
Total		\$ 15.25
E. J. Rooney, Baraboo 2 Entries		
Plate Delicious	2nd	.75
Plate any other stand- ard var., 1 premium ..		2.00
Total		\$ 2.75

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Albert K. Fritz, Middleton, 11 Entries		
3 White Turnips	1st	\$ 1.00
3 Winter Cabbage	1st	1.00
3 Red Cabbage	2nd	.75
3 Yellow Danvers On- ions	3rd	.50
6 Winter Radishes	2nd	.75
Hubbard Squash	3rd	.50
Total		\$ 4.50

John Woolf, Stoughton, Wis., 7 Entries

6 Blood Turnip Beets..3rd	\$.50
3 White Turnips .....3rd	.50
3 Red Cabbage .....1st	1.00
6 Parsnips .....2nd	.75
Table Queen Squash...2nd	.75
6 Salsify .....2nd	.75
Total.....	\$ 4.25

Jas. Livingstone, Milwaukee, 4 Entries

6 Red Onions .....1st	\$ 1.00
6 Onions, large type...2nd	.75
Largest Onion .....2nd	.75
Total.....	\$ 2.50

H. C. Christensen, Oshkosh, 6 Entries

Coll. not less than 10 entries	\$ 5.00
6 Chantenay Carrots...1st	1.00
6 Yellow Danvers Onions .....2nd	.75
6 Parsnips .....1st	1.00
6 Salsify .....1st	1.00
Total.....	\$ 8.75

N. A. Rasmussen, Oshkosh, 13 Entries

6 Blood Turnip Beets..2nd	\$.75
6 Chantenay Carrots ..2nd	.75
3 Winter Cabbage ....2nd	.75
6 Chicory .....1st	1.00
6 Red Onions .....2nd	.75
6 Yellow Danvers Onions .....1st	1.00
6 White Onions .....1st	1.00
6 Onions, large type...1st	1.00
Largest Onion.....1st	1.00
Hubbard Squash .....2nd	.75
3 Table Queen Squash.1st	1.00
Total.....	\$ 9.75

Mrs. E. E. Schneider, 124 N. Hancock St., Madison, 12 Entries

6 Blood Turnip Beets..1st	\$ 1.00
6 Chanteroy Carrots ..3rd	.50
3 Winter Cabbage ....3rd	.50
6 Red Onions .....3rd	.50
6 White Onions .....2nd	.75
6 Onions, large type ...3rd	.50
Largest Onions .....3rd	.50
6 White Radishes ....1st	1.00
6 Parsnips .....3rd	.50
Hubbard squash .....1st	1.00
Total.....	\$ 6.75

E. L. Roloff, Madison, 3 Entries

3 White Turnips .....2nd	\$.75
6 Salsify .....3rd	.50
Total.....	\$ 1.25

One of the most encouraging features was the largely increased number of young men and women in attendance. It shows that the society is alive and leading the way to better things.

Wisconsin Florists' News Notes

(Continued from page 86)

two weeks. One reports his greatest trouble from green fly, which he controlled by hydrocyanic gas fumig.

No one reported any change in their rose stock. One has added Yellow and White Mistletoe mums. One reports dropping Oconto, Gloria, Pacific and Supreme mums and adding Sunshine, Sunray, Chadwick and Smith Advance mums. One has added Joys White, Edna and Maine Sunshine carnations.

Retailers' problems were not handled as well as they might have been, for two of the correspondents were distinctly growers. Two, however, were centrally located in their city and possessed good facilities for display. Special feature windows were usually left standing a week, with cut flowers changing two to three times a week. Large ice boxes were the rule, though one reported ice used for only four months of the year. All reported a cash basis of business, but that what little charge business done had been satisfactory. Trouble in charge accounts, according to the largest retailer reporting, amounted to less than one-half of one per cent, a truly Volsteadian average.

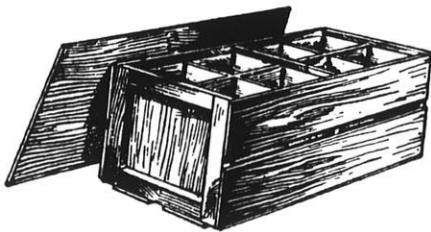
The matter of discounts to funeral directors was evidently a sore spot, and all said none given, but with qualifications. One does not favor discounts to directors in the home town, but thinks that if any agency business is done with small towns near that the funeral director is the best bet and entitled to a 20 per cent discount. One gives a 20 per cent discount, and one gives a similar discount to meet the competition of florists who do the same thing. Some report competition from Madison, Arlington Heights,

Ill., and St. Paul, Minn., in the funeral business, none of whom, however, give as much as 20 per cent. One large firm, however, gives 30 per cent and pays half the express and half the telegraph and telephone tolls.

All report that stock is better, cheaper, and in better demand than last year. None of the correspondents has attempted to do much with the florist telegraph delivery. All report an active demand for dried flowers such as statice, bittersweet, wreaths, etc., also a demand for florists accessories and supplies such as vases, fancy baskets, etc. Potted plants are in demand, but no calls for window boxes. Two correspondents handle flower and grass seeds, and one carries considerable stock.

Everyone favored a definite program for both conventions and had a good deal to say on the conduct of members at conventions. One reported that conditions were so rotten at the last summer convention that his wife declares she will never go again. Another says, "Whosoever loves his wife leaves her at home." One had no wife, and one asked, "Who would stay with the six children?" Evidently at the last fall convention, which was a success so far as good behavior was concerned, the wives felt that no definite provision had been made for them. If the board of directors or the program committee could plan and print in advance a definite program, with time left for a discussion period at the close of each address or paper, it would be a welcome innovation to the majority of the members. Further opinions are requested on this subject. Where there is so much smoke, there is surely some fire.

Huron H. Smith



Berry boxes and crates, either in the flat or made up complete; Climax grape and peach baskets; till or repacking baskets; bushel and half bushel shipping baskets, and tree protectors at remarkably low prices.

Send for our circular and prices before placing your orders.

SHEBOYGAN FRUIT BOX CO.

SHEBOYGAN, WISCONSIN

R. J. Coe

(Continued from page 87)

in conferring upon him an honorary degree given by the Regents of the University of Wisconsin, in part, said: "R. J. Coe, widely known fruit grower and eminent nurseryman, has been concerned with upholding and upbuilding the dignity of the business and calling of horticulture ever since his residence in Wisconsin. One of the farm institute pioneers, his genial, human kindness made him loved by every one of his associates and won him a host of friends in his audiences throughout the state. His hobby as well as his business has been fruits, flowers and shrubbery. As a nurseryman he has won an unimpeachable reputation extending over nearly half a century. His influence has helped to inspire confidence in reputable nurserymen

everywhere. His quiet, yet forceful nature has placed him among those men who stand not only for accomplishment, but for character and true, sane leadership in agriculture." This is a high tribute to pay to any man who has rendered a good public service.

Mr. Coe's home relationships were ideal and his influence in his community and state was exemplary.

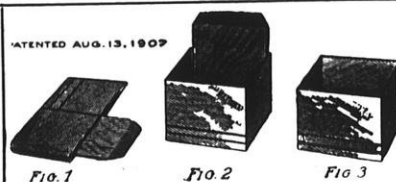
Kellogg's Nursery

Janesville

Wisconsin

SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shrubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen. Order direct from a reliable nursery and save money.



PATENTED AUG. 13, 1909

FIG. 1

FIG. 2

FIG. 3

Berry Boxes

Crates, Bushel Boxes
and Climax Baskets

As You Like Them

We manufacture the Ewald Patent Folding Berry Boxes of wood veneer that give satisfaction. Berry box and crate material in the K. D. in carload lots our specialty. We constantly carry in stock 16-quart crates all made up ready for use, either for strawberries or blueberries. No order too small or too large for us to handle. We can ship the folding boxes and crates in K. D. from Milwaukee. Promptness is essential in handling fruit, and we aim to do our part well. A large discount for early orders. A postal brings our price list.

Cumberland Fruit Package Company

Dept. D, Cumberland, Wis.

The Opgenorth Line of Berry Box Material



United Fruit Package Co.
SHAWANO, WIS.

VENTILATED LINE

Ventilated Folding Boxes
Ventilated Boxes Made Up in Crates Complete
Ventilated Sides and Bottoms for Growers Who Wish to Make Up Their Own Material

PLAIN LINE

Improved Plain Folding Boxes
Plain Boxes Made Up in Crates Complete
Plain Sides and Bottoms for Growers Who Wish to Make Up Their Own Material

K. D. Crates Requiring One Nail to Complete

A Postal Card Will Bring Our Samples and Price to You

The Hawks Nursery Company

are in a position to furnish high grade Nursery Stock of all kinds and varieties suitable to Wisconsin and other northern districts.

Will be glad to figure on your wants either in large or small quantities

Wauwatosa . . . Wis.

Judge Traxler, of Minneapolis, came early and won our hearts from the first. His kindly manner, his lovable personality and patience under his great affliction, total loss of sight, endeared him to all of us. And then, the marvel of it all was

DELICIOUS APPLE TREES

Direct from
Stark Bros. Nurseries

Can give you special
introductory prices

L. B. IRISH, Baraboo, Wis.
Salesman for Stark Bros.

his lecture Thursday evening; this man standing before us and describing accurately, to the minutest form of petal or shading of color, one hundred varieties of peonies as the pictures were thrown on the screen! We had heard of "Traxler's Fragrant Peonies" and assumed that Traxler was a nurseryman exploiting a new type. Now we know the fragrance is all that is left for Judge Traxler, all peonies to him are fragrant.

There were too many good things on the program, not enough time for discussion. Some time, perhaps, the secretary will learn to cut down on speakers and write "discussion" oftener.

*Hundreds of
Thousands*

of WEBSTER'S NEW INTERNATIONAL

DICTIONARIES are in use by business men, engineers, bankers, judges, architects, physicians, farmers, teachers, librarians, clergymen, *by successful men and women the world over.*

Are You Equipped to Win?

The New International provides the means to success. It is an all-knowing teacher, a universal question answerer.

If you seek efficiency and advancement why not make daily use of this vast fund of information?

400,000 Vocabulary Terms. 2700 Pages. 6000 Illustrations. Colored Plates. 30,000 Geographical Subjects. 12,000 Biographical Entries.

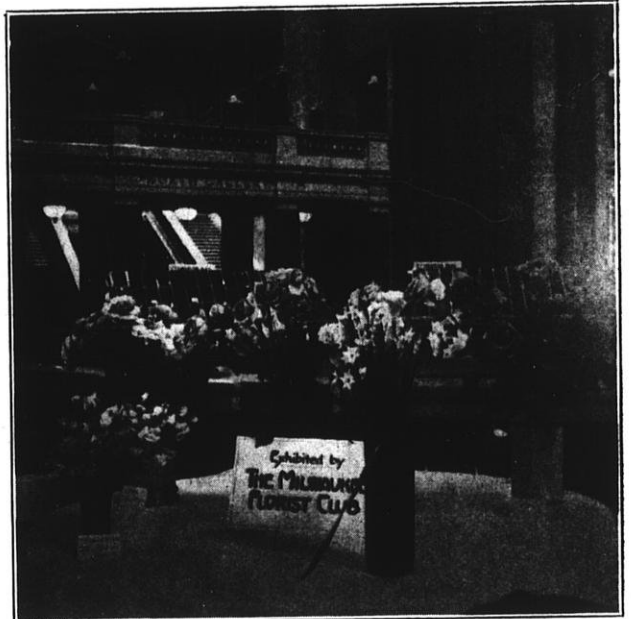
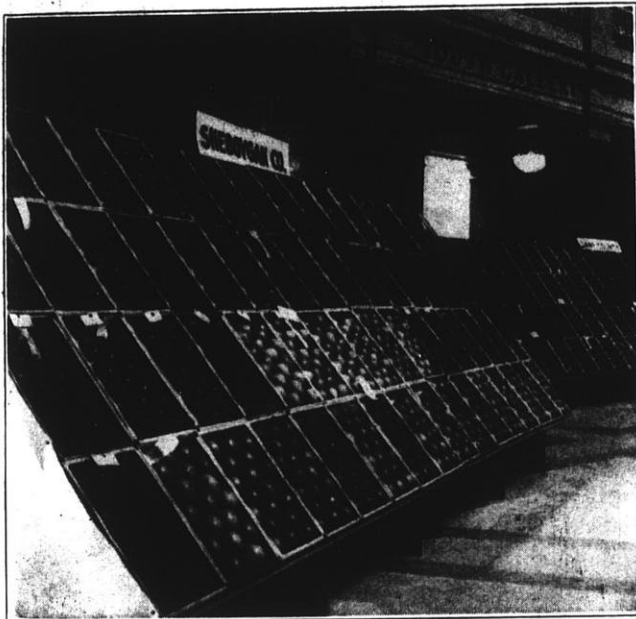
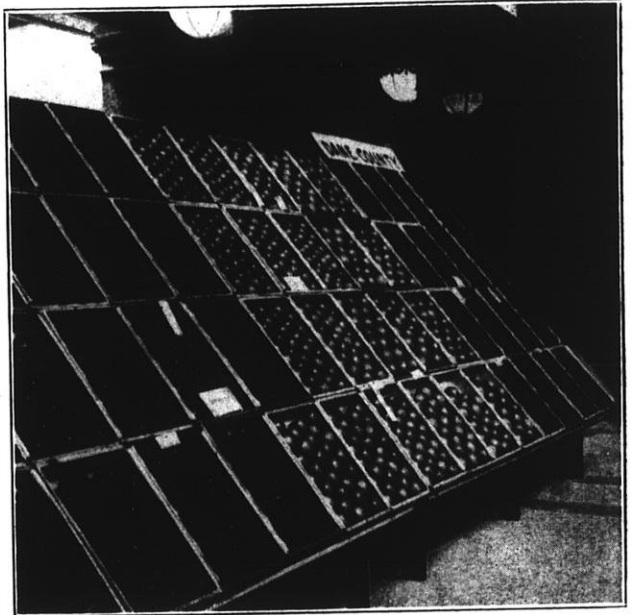
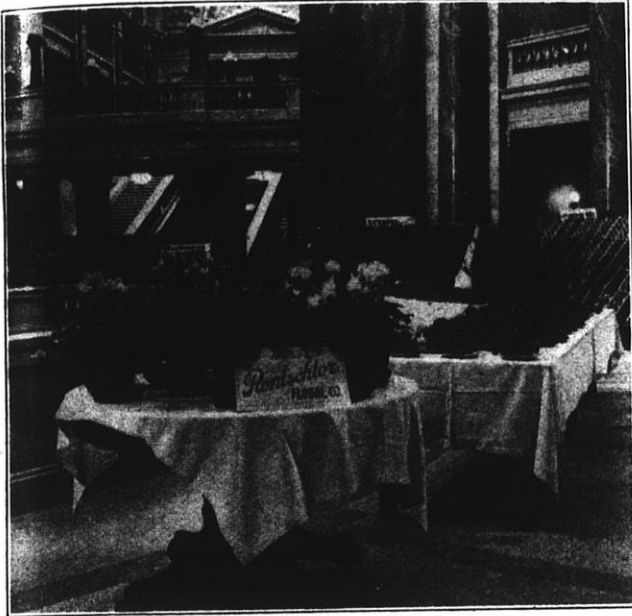
Regular and India-Paper Editions.



Write for specimen pages, illustrations, etc. Free, a set of Pocket Maps if you name this paper.

G. & C. MERRIAM CO.,
Springfield, Mass.

We sell advertising space only to reliable firms



Glimpses of the Fruit Show, State Capitol January 10-12, 1913. Our regular photographer failed to get satisfactory large views. These are enlargements kindly furnished by Dr. Elsom from snap shots taken for his own satisfaction.

Ninety-eight members registered for badge and button and nearly all were in attendance through all the sessions. Twenty-five to thirty did not register.

The badges were all right, the identification buttons all right, but the identification lists were too lengthy, only a giraffe could read the top lines.

Then there certainly ought to be a question box; in fact, if nothing else was provided but a question box we could have a fine meeting. Let's try it.



Stark Tree Orchard of
C. L. Witherell, at
Middlebury, Vt.—
3500 Stark
Delicious
Trees

← Average Size Stark
Delicious, Grown
on a Genuine
ORIGINAL
TREE
Strain
Tree



74 Stark Trees=576 Bu. Apples=\$2,460.00 in Year on Vermont Farm!

C. L. Witherell bought the land where his orchard now stands (near Middlebury, in Northern Vermont) for \$40 an acre. It would have made him a scant living in corn, wheat or ordinary farm crops.

Last year, 74 of his 11-year-old Stark Delicious trees yielded him 576 bushels of glorious apples. And—they added the impressive sum of Two Thousand Four Hundred and Sixty Dollars to his bank account.

He tells us that his Stark Delicious began bearing when 4 years old—and have borne every year since. He now has 1,000 more Stark Delicious 6-yrs.-old that he declares "Will produce a bumper crop this year." On October 21, 1922, he writes: "Just shipped last car Stark Delicious to New York. Got \$6.00 per box for run of Delicious. Special Fancy \$8.00 per box."

ORIGINAL TREE
Strain of —

Stark Delicious

—Sold Only by
STARK BRO'S

Bears Wondrous Money-Crops in 44 out of 48 States!

Go into almost any state you wish and you'll see Prosperity sitting on the front door step of growers who have planted ORIGINAL TREE Strain of Stark Delicious.

Near Fitchburg, Mass., A. A. Marshall is getting wondrous crops and record-prices (\$7.00 for 75 Delicious apples in a carton) for his harvests from his 6,000 tree orchard. His 8 and 9-year-old ORIGINAL TREE Strain of Stark Delicious trees bore about 20 bushels each this past summer.

E. F. Thayer, Chelan Co., Wash., a former accountant, who banked \$90,350 for his Stark Delicious, Winesaps and Jonathans off 23 acres in 4 years. He writes:—"If I were planting a new orchard, I would make it all ORIGINAL TREE Strain of Stark Delicious."

In Clermont Co., Ohio, J. J. Bohlander has enjoyed a NET income of \$21,800.00 in 6 years off 12 to 20 acres, ORIGINAL TREE Strain of Stark Delicious apples, being his prize-price makers.

Again, in Sullivan Co., New York, Chas. Taylor has specialized on Stark Delicious and made 5 acres of common \$40 an acre land bring him over \$9,200.00 in last 5 of the short 10 years he has been an apple grower. He says, "Once people buy genuine Stark Delicious apples they don't want any other kind."

Investigate this remarkable apple tree—WRITE FOR THE BIG, 80-PAGE, 4-COLOR MASTERPIECE 1923 CATALOG. Learn, too, about—

Stark's Golden Delicious

2-Year-Old Trees Bear in 33 States

This variety bore fruit when 2 years old in 33 different states—and bore crops last year in 11 different states despite 3 frosts and 2 freezes.

Of it, O. O. Sutton, Pres. of River-view Orchard Co., W. Va. (who has 1,000 Stark's Golden Delicious) says:—"It is to be the apple sensation of the century."

Chas. Riedenbaker, Burlington Co.,

N. J. says:—"The best apple grown." ALL his 250 Stark's Golden Delicious, 3rd summer, bore big crops this year (1922). One yielded 80 apples. Many bore when only 18 months. "Very large and fine color."

And Prof. Paddock, Ohio's noted State Horticulturist, frankly admits, "Stark's Golden Delicious beats anything I ever saw."

Get all the facts—WRITE for FREE Copy of Big, 80-Page 1923 "Prize Fruits" Book.

STARK SEED "Bore Heavy Vegetable Crops Despite 50-Day Drought." "This drought ruined almost all of the gardens and crops around here, but our vegetable garden—planted with Stark Seeds—weathered it well and bore heavy, all through the dry season," writes Mr. Ulrich Southheimer, Rushland, Penn.

Our Big 64-page Edition of Stark Bro's 1923 Vegetable and Flower Seed Catalog is now ready. WRITE for FREE Copy.

Address Box W. H.

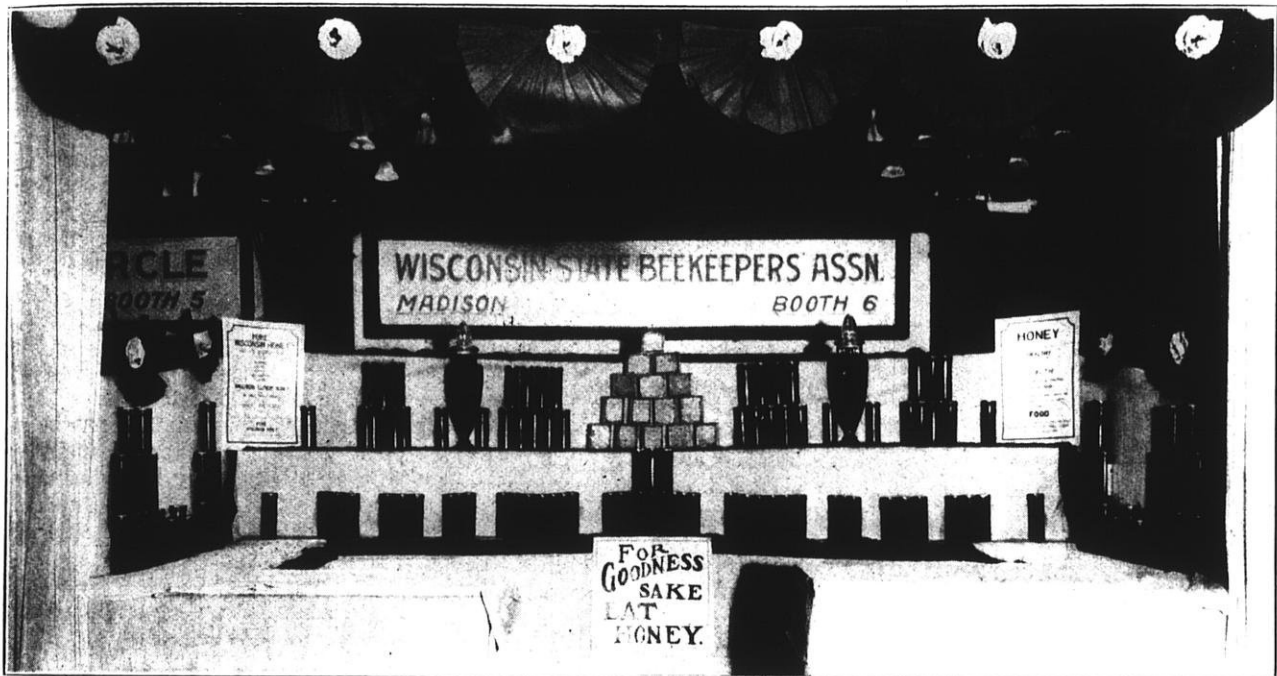
STARK BRO'S At LOUISIANA, MO. — For Over 107 Years

Oldest in America—Largest in World

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, February 1923



Our Honey Booth at the Wisconsin Products Exposition 1922

Our members will recall that last September an appeal was made to all members, local organizations, and supply companies to donate money and honey for the purpose of permitting our association to maintain a booth at the Wisconsin Products Exposition. Those of our members who attended the convention will remember having seen the state association booth; but since only about 12 per cent of our members were present at the convention, a picture of the booth is included in this issue. I believe the members as well as visitors at the exposition will agree that this picture does not do our booth justice. The color was yellow and white, which blended very well with the golden honey. In arranging the exhibit it was found that the display was much more effective when not so many jars were used. The jars were so arranged that an electric light was directly back of the group

of jars, showing very well the beauty and color of the honey. Many persons who passed the booth made remarks admiring the clean, distinctive and dignified appearance of the exhibit.

About forty-five members submitted samples of honey they wished to sell. Whenever an interested buyer visited the booth, all samples were submitted, the only identification mark on each sample being a number. The buyer did not know whose honey he was buying, but made his choice entirely according to the flavor he desired. If the buyer selected No. 10, No. 10 was looked up on the records, the price stated, and if satisfactory to the buyer, the honey was sold. You will find in the financial report the exact amount of honey sold at the booth. All display jars were sold at Milwaukee, since the committee in charge did not feel it practical to ship the honey back to Madison, pay express charges and then sell it at Madison. The samples of honey are still on file and whenever we learn of interested buyers, samples

are submitted by mail. You will be interested to know that arrangements have just been completed for a sale of 15,000 pounds of extracted honey to one of the Milwaukee dealers. All commissions received on honey sales will be reported from time to time in this paper.

It is impossible to distinguish between the advertising value and educational value of such an exhibit of honey, as any honey display that enlightens the public advertises HONEY. An attractive display of honey will do a great deal to put the public straight concerning honey. Space will not permit the including of all questions asked by the people who passed the booth, but the number of questions certainly indicated that our beekeepers have a big problem to solve in educating the public to eat more honey. Someone that was capable of answering such questions was at the booth most all of the time, enabling our association to give those interested true answers to their questions. There should be no

(Continued on page 55.)

Wisconsin Beekeeping

H. F. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association

President.....James Gwin, Gotham
 Vice President.....A. A. Brown, Juneau
 Treasurer.....C. W. Aeppler, Oconomowoc
 Secretary.....Malitta D. Fischer
 Annual Membership Fee, \$1.00
 Remit to M. F. Fischer, Secy., Madison, Wis.

The 1923 State Fair

Now is the time to make your plans for the season of 1923. If you have never exhibited at the state fair, now is the time to make a start. Write to Mr. Gus Dittmer, Superintendent of the Bee and Honey Exhibit, Augusta, Wisconsin.

Beekeepers' Summer Meeting

Plan now to attend the Beekeepers' Chautauqua and field meet to be held at Madison on August 13 to 18, 1923.

This will be one of the most important meetings ever held in Wisconsin. During this week we will dedicate the Miller Memorial Library, which will make this meeting a rational event.

Miller Memorial Library

We are proud of the splendid manner in which our Wisconsin beekeepers have given to the Miller Memorial Library, but now and then we learn of some beekeeper who has sold a lot of old journals to the junk man or else has burned them up. We hope that our beekeepers will in the future send these to the *Miller Memorial Library* instead of throwing them away. If you will ship by express or freight collect, we will pay the charges.

Legislative Committee

Your legislative committee held a meeting, January 20th, to formulate a definite plan for securing \$1,500 state aid for the welfare of this association and petitioning the board of regents and legislature for a building at the university that will be satisfactory for the proper de-

velopment of beekeeping instruction and research.

Local associations that have not already done so should get out resolutions being sure to have as many individual beekeepers as possible sign these petitions. Send them to your legislators just previous to the time our bill is brought up.

Label and Lithograph Container Committee

Your label and lithograph container committee held a meeting, January 6th, and definitely decided on the color scheme for the new lithographed honey pail. The background will be a pearl white, the word HONEY will appear in red, all other printing in black. If the cost is not too great, the flowers and leaves will appear in natural colors.

The following clippings were made from the January issue of the *American Bee Journal*:

Fruit Growers Demand Bee Inspector

The fruit growers around Yuba City, California, have requested County Horticultural Commissioner H. P. Stabler to try to get a bee inspector for their county and also to get a more liberal distribution of bees throughout the county for pollination of fruit.

Honey Week

Salem, Oregon, recently observed "Honey Week" with special displays in the local store windows and with honey on the menu of the noon luncheon of the Chamber of Commerce. The object was to increase public interest in the best of sweets. Western newspapers gave considerable space to the event.

Report of Honey Sold Through Secretary's Office

Our members will remember that a "Have You Any Honey to Sell" report blank was included in the August number of *Wisconsin Beekeeping*. About seventy of our members took advantage of this service and reported the amount of honey they had to sell. A list was

compiled and all members desiring to buy honey were furnished with the names of members who had honey to sell. As a result of this one member purchased 5,520 pounds extracted honey from five members. This same member purchased 8 cases of comb honey. Another member purchased 120 pounds, another 2,580 pounds from two members, another one case of comb, another 32 cases of comb, and another 1,500 pounds.

This makes a total of 9,720 pounds of extracted and 41 cases of comb honey.

About thirty copies of the list were sent to interested buyers, and, although we have not received reports from a number of members who sold honey, we have heard indirectly that several thousand pounds of honey was marketed as a result of this plan.

State Association Letterheads and Envelopes

All members who are interested in securing letterheads and envelopes should write the secretary's office for sample copies if they have not already seen the new stationery. We can make the following prices:

LETTERHEADS	
100 sheets.....	\$.75
200 sheets.....	1.25
300 sheets.....	1.75
500 sheets.....	2.80
1000 sheets.....	5.45
2000 sheets.....	10.90

ENVELOPES	
100 envelopes.....	\$.60
200 envelopes.....	1.15
300 envelopes.....	1.65
500 envelopes.....	2.50
1000 envelopes.....	4.90
2000 envelopes.....	9.40

IMPRINTING

The cost of imprinting the individual member's names will run about 1c per sheet and per envelope in small quantities. In lots of 500 we can get this imprinting done for about \$3.00 and for lots of 1,000 about \$4.50 or \$4.00, depending on the amount of imprinting.

The following quotations are approximate and will vary, depend-

ing on the amount of imprinting to be done. The company from whom the stationery was purchased promises to give our members the lowest possible quotation on imprinting, providing enough orders are turned in at the same time to make it worth while. We shall be glad to furnish the stationery and have the member have his local printing company take care of the imprinting if the member so desires. Imprinting 200 envelopes and

200 sheets, about.....\$2.75
 Imprinting 500 envelopes and
 500 sheets, about \$3.75 or.... 4.00

Dodge County Beekeepers' Association has placed an order for 500 letterheads and 500 envelopes for use of the association. One member has ordered 500 sheets and another member has purchased 200 letterheads and 200 envelopes. Send your orders in as soon as you can.

Our Booth at Exposition

(Continued from page 53.)

question concerning the value of having someone answer questions properly; members will agree no doubt that such educational work is a *medium* of advertising. The educational and advertising value cannot be estimated in dollars and cents; we can only say that since the total attendance for the week of the exposition was 100,000 persons, we must have placed the product of our members before at least 75 per cent of that number or 75,000. Does this mean anything to you?

The state association through guaranteeing to the buyer that the honey is absolutely true to sample is taking a step to win back the confidence of the dealers. Several of the larger bottlers in this state have made remarks similar to this one, "I have no confidence in Wisconsin beekeepers because they do not sell honey true to sample." It is this problem your association is trying to solve, and we are finding that buyers will purchase more readily honey that is backed by an organization guarantee as well as the indi-

vidual guarantee. Since your association is not financially incorporated for marketing honey on a large scale, we are more or less limited in what we can do in this direction. However, we should take advantage of all opportunities to exhibit honey at fairs and agricultural shows.

As secretary of this association I want to thank every individual, local association and supply company that donated either money or honey for this booth. The following financial report will show that this undertaking was self-supporting and there is a small balance to be turned over to the treasurer. *May our members respond as well in 1923.* (The dates for the 1923 exposition are December 1st to 8th.)

Malitta D. Fischer.

The following donations were received after the report given in the November issue of Wisconsin Beekeeping:

Honey Donations

	Lbs.	Lbs.	
	Ext.	Comb	
Jos. B. Hesseling.....	10		
Antigo Honey Co.....	10		
A. R. Tibbetts.....	2½		
Jacob Hotz.....	2½		
Geo. N. Hidershede.....	2½		
William Horton.....	1		
A. W. Pommerening....	1½		
Pauline Baseman.....	6		
E. C. Rothe.....	10		
Albert Peterson.....	1½		
Chas. Jakal.....	1½		
Walter A. Ross. (1-lb. jars)	6		
S. J. Riesterer. " " "	4		
Chas. W. Stone " " "	6		
Nat. Carlson... " " "	3		
O. B. Hjorth... " " "	3		
L. Kehoe..... " " "	2		
John Kneser... " " "	6		
Roy Wolford.. " " "	9½		
Anna Taylor.....	5		
C. W. Glauque.....		12	
Albert Peglow.....	19		
Golden Dew Honey Co... 5			
Jennie Matzke.....	1		
	109½	12	
From Nov. Report.....	204	3	
	313½	15	
1 jar broken.....	1½	4 sec.	
	312	11	
Aug. Lotz.....	10		
	322		

Money Paid Out by Secretary

For Booth	\$125.00
Glass Jars	8.02
Exhibitors' Conference Trip to Milwaukee	9.26
Banquet—Exhibitors	2.50
Lumber for shelves.....	3.00
	<hr/>
	\$147.78
Spoons	\$.25
Paste .....	.20
Picture and plate.....	3.00
Wiring and lights.....	6.00
Special bulbs.....	2.00
	<hr/>
	\$159.23
Balance	\$ 23.62
	<hr/>
	\$182.85

Money Donations

Locals	
Washington Co. Assn.....	\$ 2.00
Marathon Co. Assn.....	1.00
Members	
A. H. Seefeldt.....	.50
John W. Peters.....	.50
Chas. Jakel.....	.50
Albert Peglow.....	1.00

From November Report..... 113.00

Total received\$118.50

At Milwaukee	
W. E. Reim (Hustisford)....	1.00
Received for commission on 120 pounds honey sold.....	.60
40 glass jars at .40	16.00
12 " " " .35	4.20
2 " " " .....	.75
32 " " " .40	12.80
3 " " "	1.15

Commission on 9 cases comb honey at 25c per case..... 2.25
 8 cases display jars at 3.20.... 25.60

\$182.85

Address of Vice-President at the 1922 Convention

Fellow Beekeepers, Ladies and Gentlemen:

It is two years since I have had the opportunity to mingle with you, and to say that I am glad to be here again would be putting it mildly. Our program for this hour reads "President's Address," but that feature is impossible since our president, Mr. F. F. Stelling, is at present in Hamburg, Germany, studying beekeeping conditions there.

There was no paper prepared before his departure, so it befalls the vice president to substitute a message.

It certainly is gratifying to see so

many of our prominent beekeepers, men and women, at this convention.

Our state association, if I am correctly informed, has lived through 44 (1878) seasons of sunshine and rain and from a very small beginning has grown through the proper guidance of its leaders and splendid cooperation of its members to almost a thousand strong. The pioneer builders have certainly laid the foundation well or it could never have supported this grand superstructure that our organization now is. Though our membership has soared to near the thousand mark (750), and the membership of the locals is well-nigh double that number, there still remain six or eight thousands of Wisconsin beekeepers who are verily strangers within our own doors.

Surely it behooves each and every one of us to not sit here in blissful contentment, but to pray and work for and with that brother or sister beekeeper until they are one among us. The fact that most of the non-members are beekeepers with but a few colonies, notwithstanding, let us remember our own "first time."

CONSTRUCTIVE EXPANSION—THE HONEY FLORA

Though the possibilities of growth for this organization are great indeed, the possibilities for expansion of the beekeeping industry in Wisconsin are all but limitless. Due to the foul brood and a few bad winters, the average increase for the past ten years has been but 1,200 colonies annually, which is not by any means keeping pace with the number of acres of land being cleared.

Within the past few years, since more funds are available, Dr. S. B. Fracker's department, in cooperation with Professor Wilson's department, is doing splendid work which goes far toward making beekeeping safe in Wisconsin.

There is great need for more bees in Wisconsin to gather up and store nature's most wonderful delicacy.

The amount of nectar wasted for want of bees to gather it amounts almost to a crime and at the present

rate of increase of 1,200 colonies per annum, allowing six acres of clover and pasture per colony, it will take us 750 years to stock up Wisconsin's clover and pasture alone. I'm going to repeat J. J. Wilder's words from "Dixie Beekeeper," November, 1922: "Boys, we must increase this business a thousand colonies next year!"

It is true that a few localities are now stocked apparently to the limit and expansion would mean outyards at a considerable distance over dirt roads, which is seldom satisfactory unless the roads are patrolled.

The beekeepers in such a locality still have recourse to Hubam.

The sweet clovers growing along roadsides and in waste places may or may not amount to more than "a drop in the bucket," but Hubam grown as a clover crop in orchards and in all cornfields certainly gives wonderful results. Personally, I can say that my own bees gathered Hubam honey from my own fourteen-acre cornfield on Armistice Day, November 11th. This can only be possible on well-limed soils and it behooves all of us who are farmer-beekeepers to actually prove to our neighbors by demonstration the value of lime on acid soils for sweet clover.

Also we can demonstrate the value of a legume cover crop in corn for next year's oats seeded to clover.

This new seeded clover in oats can withstand any amount of drouth and will bloom the first season. The question of soils and liming is of paramount issue and every beekeeper should familiarize himself and his community with this all-important subject of liming.

THE BEES THEMSELVES

Great as is the need for the liming of our soils for clover insurance, and the study of our honey plants in general, it is hardly overshadowed by the need of improvement among the bees themselves.

With honor and all due respect to the master minds that are now and have given their all to our cause,

we often speculate as to whether bees see and smell and hear, but do not know much about it.

Bees are geologically as old as we are, and they are among the highest forms of the invertebrates and they may have developed a sense or senses of which we know nothing. We cannot measure them by anything we know. We have too long talked and written of bees as though they necessarily have the same senses and means of communication which we have. The fact remains that the bees today are identically the same as they were in the days of Samson.

The amount of nectar lost annually just because it is a few millimeters beyond reach of the Italian bee's tongues is a stupendous amount. Certainly, a long lasting crown of glory awaits the Christopher Columbus or the Luther Burbank of beedom.

MARKETS

With a systematic expansion of our industry and the consequent increase in production, we must very soon be brought face to face with a huge marketing problem and some think we already have quite a problem before us to market the honey now produced.

I am not here to say whether the price of honey is too low or too high, but I will say that some of us beekeepers are not entitled to a reasonable profit above the cost of production. Are all of us entitled to the cost of production, plus? Emphatically, no! Any man that does not keep the cost of production within reasonable bounds need not look for any profit.

Too many of our bright and shining stars of beedom devote their entire time to the caring for a hundred or less colonies and then cuss and damn their neighbor because he doesn't sell at their so-called living price. I thoroughly believe that every able-bodied and able-minded man should do a man's work and not charge up a full year's labor bill to a hundred or less colonies when three or four times that many could have been well cared for.

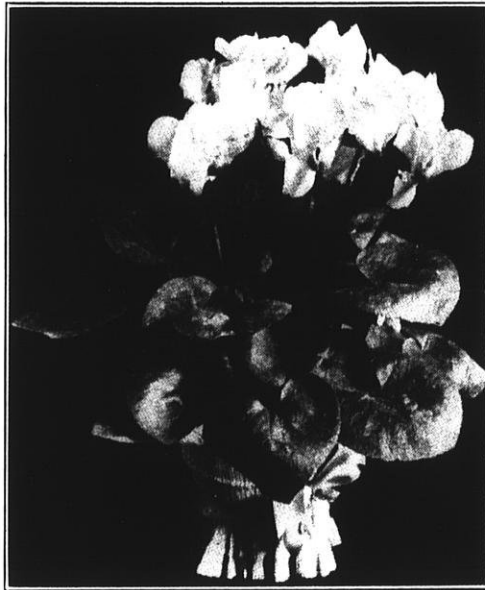
(To be concluded in March.)

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CYCLAMEN

How to Care for Injured Shade Trees

FRANZ A. AUST

Well-kept shade trees are of such great value to the individual home grounds and the community at large that no reasonable amount of money or effort should be spared in properly caring for them. Proper care does not ordinarily require a great amount of technical and scientific knowledge, but rather the application of plenty of common everyday "horse sense." The greatest lesson to learn is that it costs comparatively little to properly treat injuries at the time they are made and that such treatment is necessary for the health and beauty of the tree and adds to its economic value and length of life.

DIRECT INJURY

The most general direct injury to shade trees in Wisconsin is the result of sleet storms, and injury due to improper pruning by owners or wire-using companies. Injuries due to sleet storms may be repaired to a great extent if proper care is given the tree as soon as possible after the storm is over. Injury on the part of wire-using companies may be lessened by proper pruning and care, or entirely avoided by carrying the wire properly through, beneath or around the tree.

INDIRECT INJURY

Indirect injuries are decay or other diseases of the tree and insect attack. These are usually caused by the broken limbs and split or peeled places in the bark through which the fungi and insects may enter. Wounds should always be treated immediately after the wound is made.

The most valuable shade trees in Wisconsin are the elm, basswood, pin oak, red oak, Norway maple,

green ash, and hackberry. For streets with wide lawn strip between curb and walk the hard and red maple are also valuable. The soft maple, Carolina poplar, Norway or Swedish poplar, and box elder are fast growing trees, but short lived and easily broken by storms. Usually if trees of the latter group are badly injured by storm or disease, it is best to remove them and plant longer lived trees.

IMMEDIATE, CAREFUL WORK GIVES BEST RESULTS

When trees are badly injured the best thing to do is to get expert advice and help from an experienced and reliable tree surgeon. If it is necessary to do the work yourself, get the best information possible and follow directions closely. When damage is caused by sleet or snow, the sooner the trimming and repair work is done after the ice or snow is off the tree the better. The broken parts will heal quicker and less damage will be done to the remainder of the tree through falling branches or other natural injury. The impossibility of doing the work at this time should not cause longer delay than is absolutely necessary. Delaying the work because of the fear that the tree will suffer through bleeding is unwarranted, as serious injury will not result if the wound is given proper care.

In trimming trees, the motto "safety first" is not enough. It should be "safely all the time." When a ladder is used be sure that both ends are secure before starting to climb.

Tree rots are caused by small plants called "fungi." They reproduce themselves by very tiny spores that float through the air and may find a favorable place for growth wherever the outer protective cover-

ing of bark is removed or injured. Therefore, the number of possible openings through which infection may take place should be kept as low as possible. It is through openings such as these that the elm canker and serious heart-rot fungi may gain a foothold. Because of the damage likely to result from such wounds, never use spurs such as are used in climbing telephone poles.

REPAIR WORK

Repair work may be summarized as follows:

(1) Remove all branches impossible to repair, also all dead wood or injured bark.

(2) Restore to its original position every branch which remains sufficiently attached to warrant such procedure. In some cases it will be necessary to use block and tackle.

(3) Fasten the branch securely by bolts, hooks and cables.

(4) Trim and smooth ragged edges so that rapid healing may take place. See Fig. 4.

(5) Disinfect and waterproof all cut surfaces. (See treatment of wounds.)

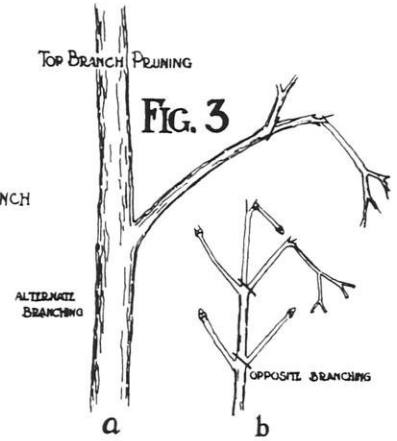
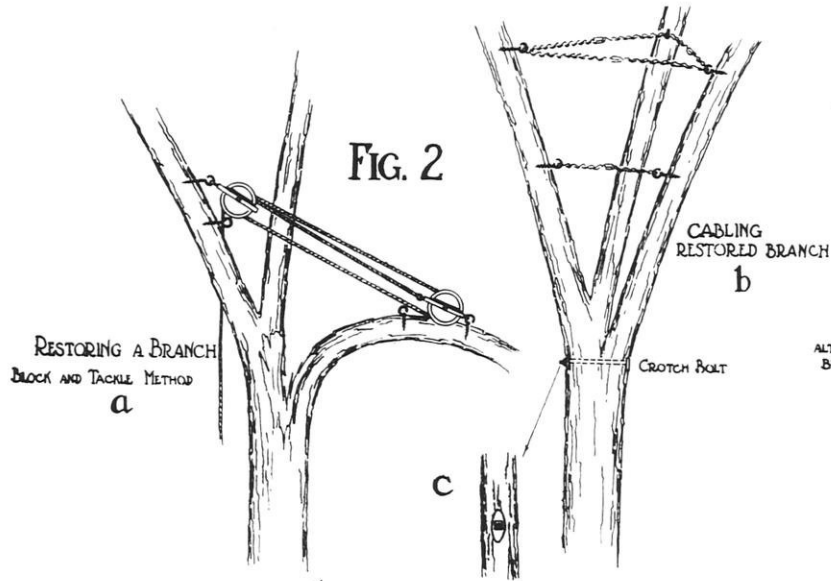
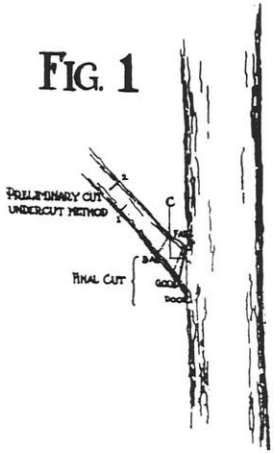
(6) Keep the tree in as healthy a condition as possible.

(6) Watch for serious defects and apply the proper care at once.

HOW TO REMOVE BRANCHES

Branches in breaking usually either split in the crotch or break across the grain. The latter is almost impossible to repair and usually requires removal of the branch. Such branches should be cut back if possible to a point where there will be a remaining twig or bud to continue the growth of the branch so as to eventually replace the portion removed. See Fig. 3.

When removing branches two or more inches in diameter they should be undercut. See Fig. 1. This con-



sists of making a preliminary saw cut from the under side of the branch at a point usually 6 inches to a foot beyond the point where the final cut is to be made. This cut should be made as deep as possible. A second cut should be made from the upper side of the branch 2 or 3 inches beyond the first cut and continued until the limb falls. By this method the branch may be removed without splitting down the side of the branch or tree trunk. In removing the stub the cut should start as close to the supporting branch as possible and take a direction which will bring it out on the lower side about $\frac{1}{8}$ to $\frac{1}{4}$ inch from the supporting branch. This makes the direction of the cut nearly parallel to the direction of the supporting branch. See Fig. 1.

In cutting back a branch to a remaining twig or bud, the cut should start $\frac{1}{8}$ to $\frac{1}{4}$ inch above the base of the branch or bud to be left. See Fig. 3. Its direction should be such as to provide for natural drainage of the wound. Stubs should never be left on the tree.

When large branches or portions of a tree are to be removed it is well to use a rope to lower the branch to the ground in order to avoid injury to the remainder of the tree.

TREATMENT OF WOUNDS

Wherever a branch is removed it is well to treat the wound with a disinfectant and preservative material. Lead paints should not be used, as they are liable to kill back the cambium layer and retard healing. Good preservatives are: asphaltum paint, which can be bought at almost any hardware store or paint shop; carbolineum, which can be bought at most seed stores, or a good grade of coal-tar creosote. A good mixture to use in coating the

surfaces of wounds in order to prevent the entrance of fungi and insects is made by mixing melted asphaltum with an equal quantity (by weight) of coal-tar creosote. Asphaltum used alone must be applied while hot or diluted with turpentine to the consistency of paint. If applied while hot a wire-bound brush must be used. If creosote or coal tar is applied to cherry, plum or peach trees, the exposed edges of the bark should first be given a coat of shellac, otherwise slight injury will occur to the growing parts, thus retarding healing.

RESTORING BRANCHES TO ORIGINAL POSITIONS

Branches split down can be restored if one-fourth of the circumference bark is entirely intact and not torn from the wood. See Fig. 2a. This is usually not a difficult task if carefully planned and engineered. First place a lag screw hook in the broken branch two to twenty feet above the break, the distance being determined by the load to be lifted. A second hook should be placed in a similar position in an unbroken branch. These are to be used in attaching the block and tackle. Two additional hooks are placed just below the first set. The cable or chain, which will ultimately hold the branches together, is to be attached to these hooks. The size of the lag screw will depend on the size of the branch to be pulled back in place. Six or eight-inch branches can be pulled back on a half-inch caliper screw hook; for heavy oak branches a $\frac{3}{4}$ inch caliper would be required. If larger hooks are necessary $\frac{7}{8}$ or 1 inch floor hooks for a hay fork can be used.

In order to place the screw hook in position it is necessary to bore a hole into the branch using a bit

one size smaller than the screw hook. Screw the hook into the branch until there is just room enough to slip the wire or chain, which will be used to hold the branch or the block and tackle, between the branch and the end of the hook. *Never attach block and tackle to the branches of the tree by means of chains, ropes, or wires wrapped around the branches.* This procedure is very likely to injure the bark at the point of contact. Branches may even be entirely girdled and utterly ruined by such practice.

The size of the block and tackle to use will depend upon the weight of the branch to be pulled back into shape. Sometimes where man labor only is available it is necessary to use 2 or even 3 sets of tackle attaching the lead rope of the first set to the movable block of the second set and again the lead rope of the second set to the movable block of the third set. In this way two men can move a branch weighing over two tons.

Before putting the branch back into position it is usually best to treat the exposed surfaces as directed in *Treatment of Wounds*.

HOW TO MAKE A WIRE CABLE

In making a wire cable it is best to use No. 12 galvanized soft annealed wire which is usually procurable at any hardware store. The wire should always be of the best quality *galvanized* obtainable. After the branch has been pulled as nearly as possible into its original position the wire with a seven inch end projecting is hooked over one hook and then threaded back and forth between the hooks until the required number of strands are secured. It is then cut off leaving an end 7 to 10 inches long which is bent downwards. For a medium-sized

branch for which a $\frac{3}{8}$ inch hook is used, six or eight strands will be sufficient. For a larger branch where $\frac{1}{2}$ or $\frac{5}{8}$ inch hook is necessary 12 to 16 strands are needed. For larger hooks 18 to 20 strands should be sufficient. A short iron bar is placed between the wires and they are then twisted into a compact cable. The loose ends are then twisted about the cable. A cable made in this way of the best grade of galvanized wire should last from 10 to 12 years. However, the cable should be inspected at intervals of two or three years to see that it is in good condition or if it needs replacing.

Where the branches are particularly large or there is likely to be twisting by the wind it may be necessary to place additional cables to prevent the swaying of the branches. Judgment must be used in placing these additional cables. They are usually placed 6 or 8 feet above the first cable or cross-cabled to other branches of the tree. See Fig. 2b. It is very often desirable to place bolts through the tree just below the broken crotch. The heads of the bolts should be placed through iron washers or diamond-shaped plates and these counter-sunk through the cambium layer. See Fig. 2c.

Wherever branches which are 6 to 8 inches in diameter are bolted together, it is desirable to cap the crotch with a cement cap or watershed. However, it is always best to have this work done by someone experienced in this kind of work.

HEADING BACK BADLY BROKEN TREES

If a great number of the branches of the tree are broken so that the tree is badly deformed, the undamaged branches should be cut

back. See Fig. 5. In heading back the tree, the same precautions should be taken as in the removal of the branches. Ornamental trees as a rule should not be headed back heavily unless storm or other injury makes it absolutely necessary. A tree will require careful annual pruning for five or six years after heading back. The first season it will usually develop six to eight branches at every large cut. See Fig. 5a. These branches should all be removed except a carefully selected one which is to become the future leader. Care should be taken to select a vigorous branch so located that the wound will be protected and heal rapidly.

TOOLS FOR TREE PRUNING

The ordinary pruning tools necessary for this work are a good hand saw with plenty of set, a pole pruner such as is used in orchard work, and if possible, a curved-bladed saw attached to a 10 or 12-foot pole, bit and brace, a short bar, pliers, paint brush, and necessary ladders. For heavy cable work a safety belt is essential.

COMPLETED WORK SHOULD BE WATCHED

It is of greatest importance that trees once repaired be carefully watched. The directions given in heading back trees should be carefully followed. Old wounds should be waterproofed at least every two years. Cables require watching to see they do not rust out. If a cable or chain shows signs of rust paint it with asphaltum paint.

PERSISTENT LEAKS AND SCARS

It must be borne in mind that wounds on elms and maples "bleed" more freely than wounds on other trees. In such cases it is preferable to thoroughly waterproof the wounds after "bleeding"

has completely stopped. This will usually occur in late May or early June.

Old wounds on elm trees and sometimes other trees will continue to leak year after year. This may be due to any one of many causes. If thorough cleaning, disinfecting and waterproofing does not cure the leak consult a competent tree surgeon.

Scars if not too large will eventually heal over. In a young tree an inch scar may heal over in a single season.

High Bush Cranberry.

A correspondent asks about the "Bush Cranberry" and if it is identical with the cranberry we eat with turkey.

Without doubt this correspondent has in mind *Viburnum opulus*, commonly called High Bush Cranberry in many localities, especially in our Great Lakes region. It is also known as Arrow Wood. It in no way resembles the true cranberry, *Vaccinium marocrocarpon*, a trailing vine, and botanically the two are widely separated.

Both the common and the Japanese Snowballs are *Viburnums*. *Viburnum opulus* commonly grows to a height of ten to fifteen feet and the fruit, reddish globular berries, are borne in compact clusters, each a comfortable handful. The fruit was widely used by the pioneers for jelly and jam. *V. opulus* is a handsome shrub and is highly ornamental in September and October when the fruit ripens. It is plentiful along streams and in moist woodlands in Wisconsin.

Nurserymen do not feature the real High Bush Cranberry, preferring the kinds conspicuous for their bloom.

THE FLORISTS PAGE

EDITED BY

HURON H. SMITH, Curator of Botany
PUBLIC MUSEUM MILWAUKEE, WIS.

State Florists in February

It is the order of the editors of this magazine that this department shall only be permitted one page for this issue, so without further ado, but with much more material, we must begin to concentrate. The February questionnaire brought three times as many answers as the first one, and fanned the spark of hope for better cooperation in the future. It is hoped to make this monthly report of the florists' happenings a regular feature, and also to furnish special articles for nearly every issue, such as the report of the Spring Flower Show, which the Milwaukee florists voted to hold next year in the Museum-Library rotunda. But according to our genial editor, Mr. Cranfield, he will have to cap this natural gas well and see that we do not run away with all of the space.

We were glad, this time, to hear from O. F. Eskil, of Iron Mountain, Mich., who belongs to the Wisconsin State Florists' Association, as well as from an entirely new list of correspondents. In fact, only two of the people who answered the first questionnaire responded this time.

Under the questions relating to the personnel, we find several of the florists with sickness in their families, such as scarlet fever, the grip, colds, etc., nothing serious. There were no marriages reported, nor engagements, so we presume Cupid is delaying his round-up till June. We also note that some of the members have been active in attending shows at Minneapolis, Indianapolis, Chi-

cago, Milwaukee and Morton Grove. The questionnaire shows, too, that the state florists have their quota of members in the local Rotary, Kiwanis and other civic clubs. About 17 of the state florists attended the annual meeting of the Wisconsin State Horticultural Society at Madison, January 10th to 12th, and the Milwaukee Florists' Club exhibited flowers there. Fred Rentschler entertained three of the Milwaukee club at a Thursday Rotary luncheon, Alfred Locker, Wm. Kennedy, Sr., and Huron H. Smith. The Milwaukee Florists' Club have gone on record as favoring a greater participation in these annual horticultural meetings.

Growers' problems and statistics.

The question of fertilizers brought forth the information that in general it is hard to get the right kind, although one reported that he "grows his own," meaning that he has a dairy herd probably. All agreed that cattle manure was the best. Other fertilizers used were: Blood and bone, ground bone, wood ashes, hydrate of lime, shredded horse manure and sheep manure. If there are other important fertilizers omitted, we would like to hear from others who failed to answer this questionnaire. P. N. Obertin, of Racine, reported four new greenhouses to be built for his plant, 20 by 100 feet. Other views on the best coal showed that mine run is still the most popular, and for varieties Pocahontas, Consolidated Elkhorn screenings, Wabash 4th vein, Harrisburg and Carter-

ville, Indiana, 4th vein, in the order named, more voting for Pocahontas. The matter of heating showed some divergence of opinion. Hot water was the opinion of the last questionnaire. This time steam seems to have the call. Some say steam for midwinter and hot water for fall and spring. Others say hot water for general greenhouse and steam for roses. A few named their specialties: Cudahy Floral Co., roses; Heitman & Oestreicher, carnations; Matthewson's of Sheboygan, begonias and bedding stock, and Wm. A. Toole, Baraboo, pansies and hardy plants. Some trouble from a cyclamen midge is reported. It cannot be controlled by tobacco extract sprays. Eskil, of Iron Mountain, Mich., reports doubling his stock of mums and adding 20 per cent to his carnation stock. Cudahy Floral Co. reports 25,000 roses planted.

Retailers' problems and statistics. It seems to the writer that the retail florists are not getting near all they might get from the State Florists' Association. Too few belong. The cost is trifling and the contact with growers would be invaluable to them. Many of the growers are retailers, hence we get answers to our questions in this way. It seems that cool cellars are more in use than ice machines or refrigerators. This lot of correspondents find charge accounts profitable, and also favor discounts to funeral directors. All report stock higher and in better demand. Most of them report a good demand for baskets, vases and greeting cards, wreaths and artificial flowers.

Huron H. Smith.

Our Tongue Twister

See Schwan Seel Stair Staeps Shuerr.

The Effect of Spraying on Bees

H. F. WILSON

Since the beginning of the practice of spraying with poisons to destroy insect pests, beekeepers at one time and another have suffered very serious losses by having their bees poisoned. There has been some discussion back and forth among beekeepers and fruit growers as to whether or not bees were poisoned in any great numbers from spray applied while the trees were in full bloom.

I, myself, have been undecided in this matter, but a few cases called to my attention by Wisconsin beekeepers compels me to believe that bees will work on arsenical sprayed trees and do die as a result of feeding on nectar, spray liquid and pollen from sprayed trees.

I am going to cite only one example to show the effect of poison on bees. There are others, but I think this one will prove the point. In 1920, Mr. W. A. Price* published the results of a number of experiments carried on by himself which were conducted in a definite and scientific manner giving results which are indisputable. In preparation of the experiments large wire screen cages were built around three apple trees about 12 years old. The ground beneath the cages was covered with cheese cloth to catch the dead bees as they fell. One tree was sprayed with lime sulphur and arsenate of lead; another was dusted with sulphur, and a third was used as a check. Then a colony of bees was placed in each cage. Mr. Price writes: "These three colonies were normal, healthy colonies with plenty of stores at the beginning of the experiment. The bees were not compelled to work the

blossoms for food; and their activities generally were such as would arise from choice. In front of the hives in the sprayed and dusted trees there were piles of dead bees. This may be explained on the basis of death occurring in the hive and the bodies being carried out by the other workers. There were no dead bees in the hives at the end of the experiment. The spot directly in front of the hive and the floor near the walls contained the large majority of the dead bodies, but the entire floor of the cage was always well littered with dead. Those found directly under the trees probably died on the blossoms and later fell to the floor."

The experiment was started April 3, 1919, and was completed May 15, 1919. At the end of the experiment there were 3,689 dead and 15,726 live bees, or a mortality of 19 per cent in the check cage. In the experiment with the sprayed tree there were 11,627 dead and 7,223 live bees, or 69 per cent mortality, showing 50 per cent of the bees killed by the poison spray.

In the experiment with the dusted tree there were 4,716 dead and 5,536 live bees, or a mortality of 46 per cent. As there were 19 per cent dead with the check tree, 27 per cent of the bees in this test may be said to have been killed by poison.

These experiments do not take into account the other insects which were undoubtedly killed by the poison. With this evidence at hand, it is quite plain that spraying trees in full bloom reduces the possibility of cross-pollination to a very appreciable degree.

IS IT NECESSARY TO SPRAY TREES IN BLOOM?

Now that we have shown the value of bees to the fruit grower and the losses which occur when

trees are sprayed with poison during the fall bloom period, should we spray when the trees are in full bloom?

We know that it is necessary to spray against both insects and plant diseases in order to secure good fruit. Experiments carried on at the Wisconsin Experiment Station show that with the possible exceptions of cherries, it is more desirable to spray tree fruits at some other than the full bloom period. In all spray bulletins sent out from the experiment station you will find this definite recommendation, "*Never Spray Fruit Trees When Many of the Blossoms Are Open.*"

Our recommended schedule for spraying fruit trees is as follows:

1. (Pink spray.) Just before the blossom buds open.
2. (Calyx spray.) As soon as most of the petals have fallen, and before the calyx cups close.
3. Ten to fifteen days after second spray.
4. July 20 to July 25.

In addition to the four applications listed above two other applications are frequently of great benefit.

"Pre-pink spray." When leaves of opening buds are about the size of a squirrel's ear use regular spray.

"Second brood codlin moth spray." Applies to late varieties August 20 to 25. Use arsenate of lead only. In very hot, clear weather lime sulfur may cause injury to the fruit. Under such conditions Bordeaux 4-4-50 may be substituted.

Sir Horace Plunkett, nominated to the Irish senate, has arrived in the United States. If we were nominated to the Irish senate we think we would do the same thing. —American Lumberman.

*Bulletin 247, Purdue University Agr. Expt. Station.

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Spray Rings

The day of deliverance for the farmer and his orchard is at hand. We have abused the farmer in the past for maintaining neglected, pest-ridden orchards that not only occupied valuable land, but also disseminated disease. At the same time we knew very well that, in that day, there was no feasible method at hand by means of which farmers could properly and economically care for their orchards. It was an illogical procedure we admit, but it attracted attention to the subject. The purchase of a hand-power sprayer, \$15 to \$25, only partly solved the difficulty. A lack of knowledge of proper time to spray and, greatest of all, loss of time in the busiest season of farming was the deterring factor. Very few

farmers cared to undertake the job of orchard renovation and spraying and they should not have been censured for failure to undertake it.

Now, thanks to the work done by the horticultural department of the university in cooperation with county agents, a way has been found whereby any farmer, or rather group of farmers, who have bearing orchards may count the orchard, in a single season, as an asset where formerly it has been a liability.

The spray ring is the answer. Much has been said, but little has been written about the spray ring. It is very simple. It's neighborhood cooperation. This is the plan: A community where there are a dozen to fifteen bearing orchards of 25 to 100 or more trees each, all within a radius of about two miles, club together to buy a power sprayer costing \$350 to \$400.

Spray materials, arsenate of lead and lime sulphur, sufficient for all the orchards, are bought in one order. A man who knows how and when to spray is hired by the day to spray the orchards twice, possibly three times. That's all there is to it. All except that it needs somebody to start it, somebody who is willing to use a little time for the good of his neighbors as well as for himself. In Rock, Jefferson and La Crosse counties, where the movement has progressed farthest, County Agents Glassco, Coyner and Spreiter have been the moving spirits. Other counties in southern and western Wisconsin, where old orchards are abundant, are waking up. Sauk county, which probably has more farm orchards than any other county in the state, has no county agent. That is no reason why these orchards should remain in neglect. The farmers in Sauk and other counties can do this work them-

selves if they will. While this particular branch of extension work is carried on by the horticultural department of the university, we understand, that in common with this society, lack of funds will not enable the department to answer all calls for help sent in.

We want to express the conviction most emphatically that no county or community need wait for outside help to establish spray rings.

The work is now beyond the experimental stage. It has been proven successful wherever tried. Neglected orchards sprayed thoroughly have borne profitable crops. If others have done it, why not you? There are two good reasons why this society cannot take an active part in the work at present. We have no funds and we consider that this work belongs to the horticultural department of the university. Overlapping of departmental activities does not work out well. Of two departments involved neither knows what the other is doing and both may be doing the same thing. There is nothing in this, however, to prevent us from offering advice and urging everybody to go ahead. We will offer suggestions regarding the kind of pump to buy, try to get a low figure from dealers, and do the same with spray material. The rest you must do yourselves. Please don't say it can't be done. It has been done. If cash is not readily available for the outfit your local banker should not hesitate to carry your notes for six months. That also has been done. If your banker refuses you will know where to take your business next time. It may be the greatest or the least of your difficulties to find a man to do the spraying. In many places it has been easy. In any event, you will never know until you have tried.

Apology

The excellent article in the February number should have been credited to the horticultural department of the Minnesota Agricultural College. Credit is also due the Minnesota Horticulturist, in which it was printed in February, 1922.

If you want to know about grafting you will find answers to all your questions in this paper. Also the illustrations are especially good.

Regulations Concerning Local Societies

The following regulations concerning local societies were adopted by the Board of Managers in session February 8th:

The secretary shall prepare a charter for local societies to be approved by the board. This charter shall then be issued to every eligible local society now established and to others on application. In order to receive a charter the local must: Have ten or more members; pay dues of fifty cents for each member to secretary of state society in the month of January of each year for the ensuing year; make an annual report to the secretary of the state society in January, embracing number and character of meetings held during preceding year; number of exhibitors; names and addresses of principal officers for ensuing year.

The practice of paying local societies a sum of money once each year for premiums awarded at local exhibitions is continued with changes as follows: Each local society on application may receive a bonus of one dollar a member, not to exceed twenty-five dollars, to be applied on premiums paid at an exhibition of fruits, flowers or vegetables or all three, such exhibition to be sponsored by and held wholly

under the auspices and jurisdiction of the local society and no part of the bonus to be paid to others than members of the local society. No money to be paid before July 1st. A report must be made of the premiums awarded, the names of the premium winners and the amount paid to each, and such other facts as will enable the officers of the state society to determine if the exhibition was successful.

This is to be considered as an official notice to all local societies.

Frederic Cranefield, Sec.

Cash for Your Time

We now have a few more than 2,400 paid members. That's mighty few for the state of Wisconsin. The main reason we have so few is because so few people know about the society. Members themselves are the ones who bring us new members. In fact, aside from new "locals," probably 90 per cent of our increase each year comes through old members. We get a certain amount of notice through the newspapers of the state, so that many people learn there is such an organization as the State Horticultural Society. But most of them are apt to conclude it something for

Charmingly Airy Columbines

Some years ago, while still a kid, among my various collecting fevers was that of catching butterflies. The ones that fascinated me most were the long-tailed Papilios. The long spurred Columbines or Aquilegias with their beautifully colored nodding flowers and long spurs always remind me of my boyhood butterfly friends. We have them (the Columbines I mean) in a mixture of many beautiful shades and colors, also yellow, rose pink, and blue and white separate, as well as heavy plants of our native red and yellow variety.

Price, 25c each, \$2.50 per doz., \$15.00 per 100, carriage paid.

Place your order now while you have time to plan your garden needs. The pay may be sent, if you prefer, after the plants are received. Send for my illustrated catalogue.

"Hardy Plants for the Home Garden"

Here are described the best of the hardy perennials as well as other plants and seeds.

W. A. TOOLE Garry-nee-Dule Baraboo, Wis.

experts only. Members, then are our mainstay in spreading the gospel of horticulture. While we are asking you to let all your neighbors know about the benefits of membership we realize that you are entitled to some compensation for doing it. On page 112 you will find certain offers to members for securing new members. Show your neighbor your copy of WISCONSIN HORTICULTURE. Tell him, or her about the two volumes of Transactions. The Garden Book and "Native Plants" all for one dollar. Getting that dollar ought to be easy. When you have it send us half of it and keep the other half for your time. Try it once.

"When will their eyes be opened? When will priests go forth into the highways and the hedges, and preach to the plowman and the gipsy the blessed news that there, too, in every thicket and fallow field, is the house of God,— and there, too, the gate of Heaven?"

—Kingsley in Alton Locke.

THE INSECT PAGE

Edited by E. L. Chambers, Assistant State Entomologist

White Pine Blister Rust

H. J. NINMAN

Assistant Plant Pathologist

Since the discovery of the white pine blister rust in Polk county in 1916, and the location of serious outbreaks during 1917 and 1918 in several of the counties in the north-western part of Wisconsin, much has been done to check the spread of this fungus disease. Half a dozen members of the State Horticultural Society have recently asked for information as to the progress of the work.

From 1916 to the spring of 1920, the policy was followed of eliminating the most serious sources of infection by the complete eradication of all the white pines in the infested farm woodlots. The rapid reduction in the amount of disease showed this method was worth while, but a continued increase of infection in Minnesota compelled Wisconsin to give up hope of permanent eradication of the rust. Methods of local control have, therefore, taken the place of a drastic eradication plan during the past three years.

Fortunately the blister rust cannot spread directly from pine to pine, but undergoes one of its stages on currant and gooseberry bushes. The spores formed on the Ribes leaves can spread only short distances and injury to pine can therefore come only from currants and gooseberries close to the pine trees.

Since 1920, therefore, the policy of eradicating all gooseberries and currant bushes, wild and cultivated, in and near valuable pine stands, and the destruction of individual

diseased white pine trees has been put into practice. This policy is being carried out by a co-operative plan in which the owner of white pine does a part of the eradication of gooseberry and currant bushes on his own land, while the state, in co-operation with the Federal Bu-

reau of Plant Industry, completes the work. This plan is highly satisfactory, as there is no money required from pine owners unless they prefer to pay cash in preference to doing any of the work themselves.

No apprehension need be felt that the control of the disease will cause any considerable curtailment of the planting or growing of the economic varieties of gooseberry or



Young white pine affected with white pine blister rust.

A1 Quality Products Produce Class A Crops

CREAM CITY SPRAY MATERIALS

Arsenate of Lead
Calcium Arsenate
Nicotine Sulphate

Lime Sulphur
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BOOKLET FREE—"What Nitrate
 Has Done in Farmers Own
 Hands."

S. H. Burton, Western Distributor
 Washington, Ind.

currant plants. Let us briefly consider the fundamental conditions prevailing in Wisconsin in order to understand more clearly the relation between the blister rust and the two kinds of fruit in question.

The present white pine areas are small compared with the vast areas of other coniferous and hardwood trees, and with the cleared land. This holds true even in regions previously covered by white pine. The destruction by the axe, fire, and intensive pasturing is almost total over thousands of acres, only a few ornamentals and the large stumps in farm woodlots show that such areas were once the scene of a pinery. In other regions the white pine (five-

leafed pine) is confined to the river bottoms and adjacent banks. The grand total of white pine stands is much less than would be desirable, but it is well worth saving.

In view of the fact that the spores of the blister rust produced on the gooseberry and currant leaves are the only organisms which can cause infection on the pine, and the fact that these spores can seldom be carried by the wind more than one-fourth of a mile without losing their germinating powers, it will be seen the area free of gooseberry and currant bushes needs to be but slightly greater than the stand of pine itself.

At present the combined area in which the planting of economic gooseberry and currant bushes is not recommended comprises only a fraction of one per cent of the state, and it is doubtful whether such area will ever be more than five per cent of the total of the state. Even in pine regions there will always be abundant room so that pine owners need not go more than a mile or two to buy gooseberries and currants direct from producers.

On account of the prevailing con-

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Nursery Stock of Quality

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Have all the standard varieties
 as well as the newer sorts. Can
 supply you with everything in

**Fruit Trees, Small Fruits,
 Vines and Ornamentals.**

Let us suggest what to plant
 both in Orchard and in the dec-
 oration of your grounds.
 Prices and our new Catalog sent
 promptly upon receipt of your
 list of wants.

**Nurseries at
 Waterloo, Wis.**

ditions as stated above it becomes evident that excluding economic gooseberry and currant bushes to such a limited extent can have but little influence on the sale of these plants. However, on account of susceptibility and large leaf surface

of the ornamental varieties of currant bushes, these shrubs should not be bought in pine regions.

Educational work is now actively being carried on which will give the public a clear understanding of the subject. Being acquainted with a few fundamental facts and keeping them constantly in mind will be helpful to nursery agents as well as to landowners. The following suggestions are therefore submitted:

(1) The fungus causing the disease of white pine blister rust is unusually destructive to our best timber and ornamental tree and is attacking a crop which requires about sixty years to mature.

(2) It has been demonstrated beyond a doubt that the disease caused by this fungus can be controlled at a small cost by eliminating the gooseberry and currant bushes.

(3) It is therefore important that landowners should not allow these shrubs to exist within one-fourth mile of any white pine trees, and nursery agents should not attempt to sell such stock where the planting would have to occur within such distance from white pine.

(4) Only the white pines, i. e., the pines having five leaves (needles) in a fascicle are subject to the blister rust. Of these only the eastern white pine is a native of Wisconsin.

(5) Neither a profitable crop of gooseberries or currants, nor an attractive ornamental currant bush, can be grown near a pine grove infected with blister rust, because these shrubs suffer greatly from defoliation.

Only the best advertise in the Wisconsin Horticulture. Read the ads.



For Efficient Gardening

Bolens Power Hoe and Lawn Mower Tractor

Will do your seeding, weeding, cultivating and lawn mowing. Designed to work in narrow rows. Patented arched axle for clearance. A tool control for close work. Attachments all have snap hitches making them instantly interchangeable. Differential drive. The picture shows 13-year-old Ward Rasmussen doing the work of four wheel hoe operators in the gardens and nurseries of N. A. Rasmussen, Route 5, Oshkosh.

Endorsed by leading growers.
Write for catalog.

GILSON MANUFACTURING CO.
220 Park St.

Port Washington, Wisconsin

What the American Rose Society Has Done and is Doing

BY J. HORACE McFARLAND
Editor The American Rose Annual

Literature recognizes the rose as the queen of flowers, and convention assumes that it is the universal flower. Yet, after all, the rose is hardly known in America in the way of which a familiar fruit—the apple, for example—is known. True, it is recognized on sight, but real knowledge implies more than mere recognition.

America is only just beginning to do what has long been proceeding abroad in actually organizing the rose, so that it shall be the familiar friend of the people, the loved flower that is truly universal. France has long had an association of rose folks who promote interest in the culture of the rose.

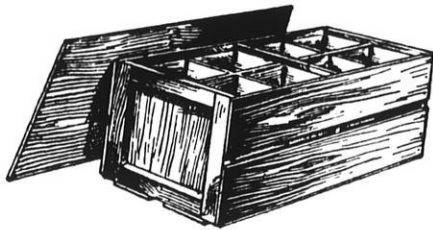
It is in England, however, that the most and the best attention has been given to the society form of rose organization. The National Rose Society is a large and strong organization, supported by both the amateur and the professional growers of the rose.

But great as is the English rose organization, with its vigorous daughter in Australia, it does not

accomplish one thing which bids fair to make its younger American prototype uniquely valuable to the nation. The American Rose Society is responsible for the institution and promotion of rose-test gardens in which are planted on equal terms all attainable varieties. The public secures in consequence opportunity to select those roses which have done best in the particular location of the garden. As these gardens already exist in such widely separated climatic zones as Washington, Ithaca, Hartford, Minneapolis and Portland (Oregon), it will be noted that data of great value is thus being made available.

It is expected that similar test-gardens will be established in each location offering a distinct zone relating to rose prosperity. In addition, rose show gardens are promoted, these being planned to display the beauties of the flower, rather than for testing. It is the hope of the American Rose Society to have every community of a thousand or more population establish a rose garden open to the public, either in a park or in some similar public place.

Another result of rose organization in America is the stimulation of the production of roses used in



Berry boxes and crates, either in the flat or made up complete; Climax grape and peach baskets; till or repacking baskets; bushel and half bushel shipping baskets, and tree protectors at remarkably low prices.

Send for our circular and prices before placing your orders.

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SHEBOYGAN, WISCONSIN

and for our climate, which differs radically from the moister and more equable climates of England and France. A few years ago, barely 5 per cent of the roses in American commerce were of American hybridization, and even the major part of the plants used were "made in Europe." Now there are many superb sorts that are credited to the United States, and twice in six years the coveted Bagatelle gold medal awarded in Paris has gone to Los Angeles, while the sturdy climber named American Pillar has become an English favorite.

The Federal Department of Agriculture is working directly with the American Rose Society toward the production and dissemination of truly American roses—"dooryard roses," as the lamented Dr. Van Fleet called them. One of his notable productions has been named Mary Wallace in honor of the daughter of the secretary of agriculture, and the department has made a contract with the American Rose Society for its equitable dissemination. Other roses of novel

character and great beauty, believed to be peculiarly adapted for widespread culture, will be sent out in the same way.

Perhaps the greatest service of rose organization yet done by the American Rose Society is its publication each year of an interesting and carefully edited digest of rose progress and rose experience. Beginning in 1916, the American Rose Annual has been issued for seven years, and its 1923 publication will be available in March. Each annual is a cloth-bound volume of about two hundred pages, finely illustrated, and containing only original material, obtained from the members of the society who tell their experiences. Each volume is complete and distinct, with no duplication, and it is little wonder that some of the issues, supplied only to members and not available in book stores, are already at a premium, two issues being out of print.

The American Rose Annual records all rose progress, describes all new varieties and illustrates many of them, follows discoveries and re-

search in rose protection from insects and diseases, tabulates the results of variety trials, and collects in entertaining form the rose gossip of America. It is small wonder that it is called the best rose book in the world, for it is the production of the best rose amateurs of the country.

Another item of rose service by this organization is provided in its committee of advising and consulting rosarians, including recognized authorities all over the nation who cheerfully answer in helpful detail rose inquiries sent to them by members. Costly mistakes are thus avoided and troubles are often rectified by the larger experience thus available.

Rose organization is further served by the American Rose Society in the sending out each autumn of a members' handbook, which includes brief minutes of the doings of the society, late rose news, and a geographic list of members by which one may learn just who his rose neighbors are.

(Continued on page 111.)

The Opgenorth Line
of
Berry Box
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United Fruit Package Co.
SHAWANO, WIS.

VENTILATED LINE

Ventilated Folding Boxes
Ventilated Boxes Made Up in Crates
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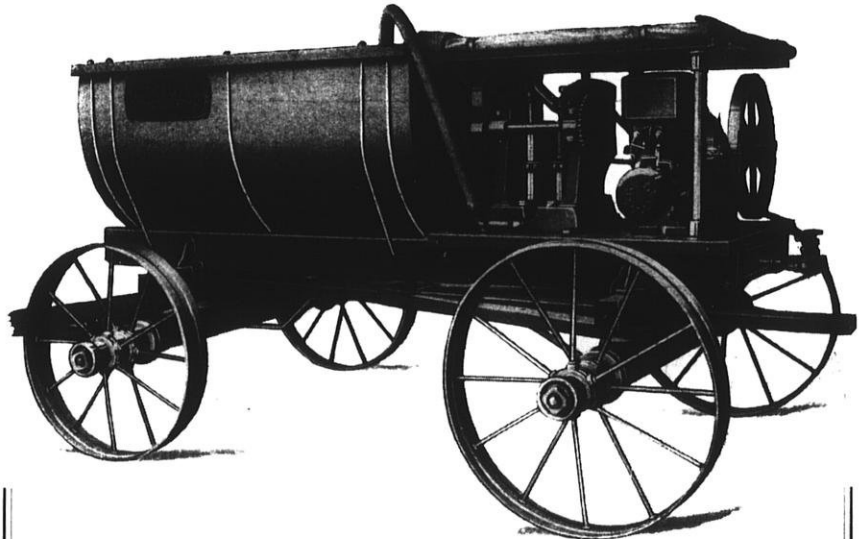
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*are in a position to fur-
nish high grade Nursery
Stock of all kinds and
varieties suitable to Wis-
consin and other north-
ern districts.*

*Will be glad to figure on
your wants either in
large or small quantities*

Wauwatosa . . . Wis.

Geraniums and other soft wooded plants may be rooted by placing the cuttings in a glass of water in a warm place. A little charcoal in the water helps to keep it sweet. They should be set in the sun.



THE HARDIE

is the leader in the **SPRAY RING** movement.

Write us for particulars and prices.

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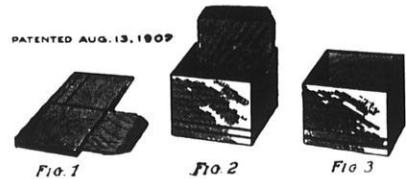
A small farm well tilled will give better returns than a large acreage poorly cared for. If more farmers would learn this lesson, which the

gardener learned long ago, we would have better farms and the owner would likely have more ready money.

BERRY BOXES

Crates, Bushel Boxes and Climax Baskets

AS YOU LIKE THEM



We manufacture the Ewald Patent Folding Berry Boxes of wood veneer that give satisfaction. Berry box and crate material in the K. D. in car load lots our specialty. We constantly carry in stock 16-quart crates all made up ready for use, either for strawberries or blueberries. No order too small or too large for us to handle. We can ship the folding boxes and crates in K. D. from Milwaukee. Promptness is essential in handling fruit, and we aim to do our part well. A large discount for early orders. A postal brings our price list.

Cumberland Fruit Package Company

Dept. D. CUMBERLAND, WIS.

Kellogg's Nursery

Janesville Wisconsin
SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shrubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen. Order direct from a reliable nursery and save money.

The American Rose Society (Continued from page 109.)

Rose lovers anywhere are eligible for participation in organizing the rose in America through membership in this active and growing society, which now includes associates in forty-eight states, 26 foreign countries and 1,126 communities. To join the fraternity, involving no duty but that of rose love, it is only necessary to send \$3.00 to John C. Wister, Secretary, 606 Finance Building, Philadelphia. He will at once send the current Rose Annual

Kinkade Garden Tractor and Power Lawnmower

A Practical, Proven Power Cultivator for Gardens, Suburbanites, Truckers, Florists, Nurserymen, Fruit Growers.

American Farm Machine Co.,
2585 Uni. Ave. S. E.
Minneapolis, Minn.



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and handbook, as well as a card of membership which has an admission value to certain rose shows.

Local Societies

Now is a fine time to organize a local society. We have now twenty-four locals in addition to the State Florists' Association and the Beekeepers. Eight of these are in La Crosse county. We can take care of all who come. One person in a community with the right idea can turn the trick. Send to this office for sample copies of the paper, a form for constitution and by-laws, then call a meeting at the schoolhouse or your own house. Ten members are required for a charter.

Minnesota Fruits

We Grow Extensively Originations of the

Minnesota State Fruit Breeding Farm

New Strawberries
New Raspberries
New Plums

Also Standard Varieties

Our 16 page illustrated catalog free.

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Frank P. Daniels, Prop.

LONG LAKE Box 130 MINN.

"We Answer Questions" is our slogan. Any question relating to any branch of horticulture will be answered promptly and without charge. No stamps need be enclosed for reply. We keep in touch with all the experts in the country. Try to stick us.

A new "page" or department is in the making and will appear in April or May if present plans do not fail. Unless we are mistaken, it will prove the most interesting page in the paper. Keep guessing.

CASH FOR YOUR TIME

To the Members of the State Horticultural Society:

May I have a little of your time? I will pay cash for it. This Society has not in the past offered any premiums, discounts or clubbing rates as the monthly paper, annual report and the privilege of membership seemed to be well worth a dollar a year.

We are now departing from this established policy in the effort to extend the influence of the Society by increasing the membership and the Secretary has been authorized to extend the following offers to you, as members, to secure new members.

Your help is respectfully solicited.

PAY FOR SERVICES RENDERED

The following premiums are offered to members of the State Horticultural Society for securing new members. Do not offer prospective members any cash discount or other inducement except "Wisconsin Horticulture," "Garden Book," "Native Plants" and two Reports, 1922 and 1917, all of which will be sent them free. We fix no penalty for departure from this rule; we place you on your honor.

Do not solicit outside of Wisconsin. While we do not refuse memberships from other states, we do not solicit them. The benefits of this Society are first for citizens of Wisconsin.

Aside from these, there are no "don'ts"; the rest is DO.

Renewals not accepted. Change of name from one member of family to another is a renewal.

One who was formerly a member but who has not paid for one year or more, will be considered a new member. Gather in the backsliders.

WE WILL PAY IN CASH

For each and every new member, secured thru your personal solicitation, Fifty Cents. Send fifty cents to this office with name and address of new member, retaining balance for your service. To aid you in securing new members, you are authorized to offer the prospect all of the premium books, etc., free, postage paid.

Remit by P. O. Money Order, Draft or Personal Check. Postage stamps not accepted. Write names and addresses plainly.

CLUB PREMIUMS

In addition to the cash bonus, the following club premiums are offered:

NO. 1

If you secure but one new member, you may substitute for cash premium your own membership extended 6 months; or a copy of Native Plants.

Write names and addresses plainly. Do not forget to sign your name.

NO. 3

For 20 new members, in addition to cash bonus, the books named in Offer No. 2; and a life membership. (Conditional: Applicant for life membership must be vouched for by a member in good standing. Blanks on application.)

For less than 20 members retain 50c each. No other premiums.

Write names and addresses plainly. Do not forget to sign your name.

NO. 2

For 10 new members, in addition to cash bonus, your membership extended one year and a copy each of the "Garden Book," "Native Plants," and 1917 and 1920 Reports.

For less than 10, retain 50c each, but books sent only for ten members.

Write names and addresses plainly. Do not forget to sign your name.

NO. 4

For 50 new members, in addition to cash bonus, all of the premium books; choice of your membership extended 5 years, or an extra cash bonus of Five Dollars. For less than 50 retain 50c each.

Write names and addresses plainly. Do not forget to sign your name.

Use your copy of "Wisconsin Horticulture" when soliciting.—extra copies on application. If you do not care to solicit, please send in a few names of prospects so that we may solicit by mail. The whole object of this campaign is to extend the influence of the Society, not to make money.

I extend to you my thanks in advance. If you will go out and get the new members it will be the business of this office to hold them.

702 Gay Building, Madison, Wis.

FREDERIC CRANEFIELD,
Secretary.

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, March, 1923.

Renew Your Membership

About 400 of our members have sent in their renewals for 1923. Every member who renews voluntarily saves postage expense and time for the secretary. We have set our goal at 1,000 paid-up members for 1923. Do your duty as a beekeeper today. Send in your dollar.

Dr. Phillips Talks by Radio

While at St. Louis attending the league meeting, Dr. Phillips gave a talk on "Bees and Honey" at a local radio station. Several Madison beekeepers reported that they heard Dr. Phillips.

Apis Club Show

The beekeeping students at Madison staged a bee show at Agricultural Hall on February 17th. Moving pictures, a skit in which the boys attempted to rob a farmer of his bees, a honey exhibit, and a *honey candy* and *honey sandwich* booth were included. Demonstrations showing the use of modern bee equipment were also given.

Beekeepers' Chautauqua and field meet, Madison, Wisconsin, August 13th to 18th.

Miller Memorial Library

Have you shipped those old bee books and journals to this library? Do this today. Address to H. F. Wilson, freight collect.

Some valuable collections of journals were recently received from two of our members, F. B. Sherman, Edgerton, and B. J. Thompson, Rock Elm.

Reports indicate that bees in general throughout the state are wintering in good condition.

State Fair

The Wisconsin State Fair will be held August 27th to September 1st, inclusive. The premium list for the Bee and Honey Department is now ready and all beekeepers should

prepare now to exhibit. The Wisconsin Bee and Honey Department of the state fair offers \$1,517 for this year, the largest amount of premiums offered for bee and honey exhibits in the United States. Write to Gus Dittmer, Augusta, Wisconsin, for a copy of the 1923 premium list.

American Honey Producers' League Convention Held at St. Louis, Feb. 6, 7, 8

Seven state associations sent official delegates to this meeting and beekeepers from three other states attended, the total registration being 42. Prof. H. F. Wilson was re-elected president and the executive committee reappointed Dr. S. B. Fracker as secretary for 1923. Your association was represented by your secretary, who was forcibly impressed with the program the league has outlined for 1923. It is a program that every member of our organization should back. Here are a few of the things the league is planning to undertake:

1. Preparation of a series of articles concerning the value of honey, such articles to be furnished to members at cost of mimeographing. It is expected that the members will have these articles inserted in their local newspapers. Many newspapers would be glad to publish without charge educational articles concerning honey and bees could they but secure the proper material. In this manner the league hopes to carry on a nation-wide advertising campaign to secure greater distribution of honey.

2. Through its legal bureau it will continue to help beekeepers solve their legal problems.

3. The league will continue to furnish warning signs to its members. Several cases where these signs were of considerable value were reported and in one case the thief was caught and sent to jail for a period of ninety days. The claim for the \$100 reward was filed and has been paid by the league. The protection afforded through this de-

partment is alone worth membership fees and every Wisconsin beekeeper should take advantage of it.

4. One of the most important problems brought before the convention was the discussion of national color grades for honey, to be based upon definite description as to what water white, white, light amber and dark grades actually are in trade channels. Dr. Phillips presented the matter exhibiting some three hundred samples from the very lightest to the darkest honeys found in the United States. The beekeepers present were asked to decide the number of color grades and the following were selected: Water white, white, light amber, amber and dark; two additional supplementary grades, extra white and extra light amber, were included for optional use in western states. After setting these colors, each beekeeper was asked to examine all samples and to group the samples according to the grades decided upon. An average of opinions given was taken and the government departments will use this average as a foundation for determining a set of national color grades.

A copy of the league bulletin is sent to all league members monthly and a report of the St. Louis convention will be sent as soon as issued.

The Wisconsin section has 70 paid-up members for 1923 in the league. *Every one of our members should be a member* in order to make *beekeeping* a truly national industry. *Join today. Send your dollar to the secretary.*

Melitta Fischer, Secretary.

Secretaries of local associations should report *change of officers immediately* to the state secretary.

The members of the Texas Honey Producers' Association received rebates of \$2,000 on their purchases during 1922. Wisconsin beekeepers could do equally as well if they wanted to.

Wisconsin Beekeeping

H. F. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association

President.....James Gwin, Gotham
 Vice President.....A. A. Brown, Juneau
 Treasurer.....C. W. Aeppler, Oconomowoc
 Secretary.....Malitta D. Fischer
 Annual Membership Fee, \$1.00
 Remit to M. F. Fischer, Secy., Madison, Wis.

Address of Vice-President at the 1922 Convention

(Continued from last issue)

There are many, many ways of keeping down the cost of production; labor I have mentioned; foulbrood is an item to be reckoned with, but by far the greatest factor is winter losses. From scientific data now available, we know that every factor contributing toward winter losses is absolutely controllable by the beekeeper.

Standardized containers and labels for the entire association would go a long way in the right direction. This also would have a great tendency to standardize prices throughout the state.

Then the buying of supplies through local organization saves a considerable amount. Advertising collectively would be much more effective and certainly much more efficient than advertising as individuals, and, by the way, how many individuals advertise at all?

ORGANIZE

This brings us right to the climax of organizing and building together. "United we stand, divided we fall" applies just as well in beekeeping as anywhere else.

The local gathering of beekeepers is the first step in the direction of better organization and cooperation of those engaged in this line of industry.

From this stepping stone the effort should go on up through county, district and state associations, all affiliated with one strong central head such as this association now is.

If you want to sell your honey at a remunerative price, organize!

If you want to do away entirely with foulbrood the country over, organize!

Not only can you secure greater discounts from dealers by clubbing orders and buying through your locals, but also save considerably on freight. A properly functioning organization will prevent the glutting of markets in certain sections, which has been our greatest weakness in marketing so far. Fortunately many beekeepers are learning to feed the market instead of dumping. As Mr. George W. York says, "There is never overproduction, but there is underdistribution."

We have the greatest potential honey-producing state in the Union. Let us burn no bridges behind us. We have a perfect assortment of the finest grade of raw materials, Wisconsin's dairy industry, and consequently, the clovers, and our fine climate. So, let every member of a local consider himself a builder of our growing industry.

Yes, we are all builders, bridge builders, improving the way for those that come after us like the

Aged man on a lone highway
 That came one evening cold and grey,

To a chasm vast and deep and wide.
 The old man crossed in the twilight dim,

For the roaring flood had no terror for him,

But he turned when safe on the other side

And built a bridge to span the tide.

"Old man," said a fellow traveler near,

"Why waste your time in building here?"

Your journey will end at the close of day,

You never again will pass this way.
 You've crossed the chasm deep and wide,

Why build this bridge at eventide?"

But the builder lifted his old grey head:

"Good friend, in the way I come," he said,

"There cometh after me today,
 A youth, whose feet must pass this way.

That roaring flood that is naught for me,

To that fair youth may a pitfall be.
 He, too, must cross in the twilight dim,

Good friend, I am building this bridge for him."

Conrad L. Kruse,
 Loganville, Wisconsin.

Members wishing to advertise in the 1923 association directory should write the secretary for details. Space will be sold at from \$7 for quarter page to \$20 for full page (inside pages).

Value of Cooperation

A. A. BROWN, Juneau, Wis.

Fellow Beekeepers, Ladies and Gentlemen:

The subject of cooperation is the most important one occupying the minds of the agricultural producers in this country today. The deplorable conditions they have been forced to face has caused, the thinking ones at least, to take a look beyond their line fences to see what is wrong, or at least to see if his neighbor is in the same fix. He finds that conditions similar to his are universal in the agricultural world. The more he thinks about it, the more he realizes that he alone cannot solve the producers' problems; he sees it is a he man's job, and one that requires careful study. The future of any industry is assured success when the producers therein stop long enough to study their problems and unitedly set out to solve them. That is what is happening today. A few years ago the raisin growers of California found themselves facing bankruptcy, when the regular marketing system failed to find an outlet for 7,000 tons of raisins, 2,000 tons in excess of average normal demand. What happened? The price knocked them down, but not out. When they hit the ground they were forced, as producers, to stop, to think, to study, and fight for their existence. They found all had the same problems. They found they were the victims of a decadent marketing system. They united and cooperated to solve their own raisin problems and as a result they produced and

found a profitable market for over 150,000 tons of raisins last year, not because of prohibition, as some would have us believe, but because they all cooperated and solved their problems by proper application of business principles.

The above citation could be duplicated with a dozen or more agricultural commodities and with every manufactured article you buy. What do we find in the beekeeping industry today? Producers disunited, facing the same problems, and very few looking over the line fences. Ours is an infant industry when you stop and consider what it would amount to if we all were united and applied business principles as did the raisin producers of California. As beekeepers we have not learned our A. B. C.'s. Look back; what has been accomplished? Then look forward, make comparisons, and see what lies before us. What a contrast!

Since you are now in a thinking mood let me guide your line of thought along several lines, and discuss the value of cooperation to the beekeeping industry.

The first topic I wish to discuss is

EDUCATION

Education in the beekeeping industry is of two kinds; one is education of the beekeeper along all lines concerning him as a profitable producer of honey, the other is the education of the fellow who is not a beekeeper.

Education in the first instance is bringing to the beekeeper every kind of information to make him a better beekeeper, while education of the other fellow requires effort on our part to acquaint him with the economic value of honey bees to agriculture, and the value of honey as a human food.

There are numerous agencies working for our interests, yet a large majority of the beekeepers fail to appreciate their efforts in our behalf. Were it not for a few progressive beekeepers we would be without this help. The agency nearest us for education of the beekeeper is the county association. Through the local association we

come in contact with our neighbor beekeepers across the way, and discuss beekeeping problems. It gets us to looking over our line fences, and starts us to thinking along similar lines—a healthy state of affairs. Through it we learn the other fellow's point of view; his successes; his failures. His experience may benefit us, and our experiences may benefit him. At our local meeting we are able to bring to our beekeepers speakers of wide experience, technically and practically trained in the science of beekeeping. Individually, we could not hope to get this valuable assistance. We find experts available to answer our thousand and one questions if we but make an effort to avail ourselves of the opportunity, at our colleges of agriculture, the country over, made possible only through some type of cooperative effort of a few of our best beekeepers. At these institutions we find research going on to find new truths concerning beekeeping practices. They publish their findings, which come to us in bulletins and circulars. Through the local associations the names of beekeepers are supplied these institutions and the state association for their mailing lists, to whom are mailed beekeeping literature. Thousands of beekeepers are sent information in this way.

We likewise find our national government concerned about our problems and carrying on research work of a national nature for the benefit of our industry, besides preparing bulletins for free distribution on every phase of practical and scientific beekeeping. All these bulletins have reached everyone in my county known to have bees, through the local association.

Statewide beekeeping problems are looked after by our state association, the beekeeping departments at our colleges of agriculture and the departments of economic entomology in our state departments of agriculture. It is through these agencies we get assistance in our educational work, in our disease eradication work, our marketing problems, and any other beekeeping problem we set out to solve.

None of these agencies were created without the cooperative effort of some of our beekeepers. They all deserve our united support for what they have done, and for more effective work for our benefit in the future. With a united backing of all the beekeepers you have a big enough imagination to appreciate what tremendous good could be accomplished by all these agencies for our good and the good of the beekeeping industry. We cannot expect something for nothing, hence these agencies need our financial as well as our united active cooperation and moral support.

The next topic I have in mind is

PRODUCTION

Production of honey is in a large measure out of our control. The good Lord looks after the weather conditions and nectar secretions of our honey plants.

Greater returns in honey production are possible in two ways, namely, increased production or cheaper production. Through cooperative buying we are able to take advantage of discount prices on supplies. Likewise, through cooperation are we able to assure ourselves of a greater supply of nectar by appealing to proper authorities to refrain from destroying honey plants along highways and railway right-of-ways. Furthermore, through cooperation are we able to introduce the growing of honey plants, such as Hubam and sweet clover, into our communities for bee pastures. Through cooperation in our local and state associations we are able to bring to our beekeepers better beekeeping practices which increases production and lowers the cost. Through proper cooperation the commercial beekeepers are able to take advantage of all the bee pastures available and not overstock some and understock others—a vital question with many.

The next topic for discussion is

MARKETING

This subject is the one that is receiving more attention by our agricultural producers today than heretofore. Seems queer, but the agricultural producers are the only ones

that turn the fruits of their labor over to someone else to market for them. You do not find this true in the commercial world. Henry Ford markets his own car. John D. Rockefeller markets his own products. Every producer of a commercial article sees to it that he gets all the profit accruing from the manufacture and sale of that article. Why the farmer, who is the greatest producer in the world today and the producer of products we all must have, necessities of life, should allow such a state of affairs to exist is beyond my comprehension. He gets the small share of the consumer's dollar, from 35 to 50 cents, due to his own fault, for in Denmark the farmers who cooperatively market their products get from 65 to 90 cents of the consumer's dollar. Quite a contrast. Something for the farmers in America to study.

What is true with the farmers in general is true with our beekeepers. Get a crop of honey larger than local consumption, what happens? Underbidding and underselling the other fellow, driving the price of honey down below the cost of production. No industry can exist under these conditions. Don't misunderstand me as condemning our present marketing agencies. They grew up to meet a need that the producers themselves fail to supply. I hate to think what would happen to us as beekeepers were they to suddenly quit handling honey. I do believe, though, that the honey producers can evolve a more efficient marketing system for honey than now exists. How much concerned is the jobber, or broker, about your business as a beekeeper? He does not care particularly what you get for your honey. He is concerned about his profit for handling it. If he does not get honey to handle he will handle something else. Honey is far from being the only product handled by jobbers who assist you in marketing it. Don't you believe a marketing system that is vitally concerned about your welfare as a beekeeper will do you more good than the one you now have? What would come nearer to such a system than one belonging to and developed

by the honey producers themselves? I don't advise knocking the other system in the head and dragging it out body and soul, for it is impossible to build a permanent structure on an old foundation. Set about laying your own foundation and building your own marketing structure and soon the old one will crumble from disuse. That the honey producers of this country are in need of a marketing system for the good of the industry is beyond question. They are sorely in need of a commodity marketing organization, supported and controlled by the producers themselves, patterned after the successful commodity organizations we have operating today, selling raisins, oranges, grapefruit, cherries, cranberries, wool, tobacco and other products. I am not here to present such a plan nor even suggest one, but with such a plan and all united I do wish to further discuss what could be accomplished in a cooperative way in marketing. I think marketing the biggest problem and the most vital one to the welfare of agriculture. As producers of honey we get along fairly well with the help of fate and the good Lord, but when it comes to marketing our products we know nothing; probably because the good Lord has laid down on the job. If we will look about us and see what successful commercial concerns are doing we can get some idea what we, as honey producers, must do to push our industry. The first thing we note is

STANDARD PACKAGES

Nothing goes so far to sell an article as the attractiveness of the package or container it is in. I wonder how much gum Mr. Wrigley would sell if he was as careless about putting it on the market as we beekeepers are with our honey. Would the United Raisin Growers of California have sold 150,000 tons of raisins last year if they had not put same up in an attractive package? An article well packed is half sold. The looks or the appeal to the consumer's eye is a psychological factor we cannot get away from in the sale of anything. I am inter-

ested in an orchard as well as bees, and I find a poor apple, red in color, sells much easier than the best green apple ever grown. The consumer seems to think good looks is associated with other good qualities. They forget the old saying that "beauty is but skin deep," which is as true with apples as with anything else.

(To be continued in next issue)

Meetings in January

The extension apiculturist at the beekeeping department, University of Wisconsin, held the following meetings during January:

	Attend- ance
Jan. 2 Black River Falls.....	19
Jan. 3 Whitehall	16
Jan. 10 Madison	30*
Jan. 13 Juneau	22**
Jan. 15 Greenwood	21
Jan. 17 Wausau	17
Jan. 18 Clintonville	15
Jan. 19 Shawano	25
Jan. 25 Milwaukee	—

*At this meeting the Dane County Beekeepers' Association voted a donation of \$25 to the Dr. C. C. Miller Memorial Library.

**Dodge County Beekeepers Association voted to donate \$10 to the Dr. C. C. Miller Memorial Library.

Premium Lists for Local Fairs

Mr. L. P. Whitehead, beekeeping specialist, has prepared a list of premiums for bee and honey exhibits at county fairs with suggestions for arranging such exhibits. Local secretaries who have not received copies of these premium lists and beekeepers who may be interested should write this office for sample copies.

Have you ordered your letterheads and envelopes? Prices were given in the February issue.

Attention Beekeepers: Why not advertise in WISCONSIN HORTICULTURE? It reaches every member of your association and two thousand others, all good prospects. Rates \$1.00 an inch, \$10.00 a year. Try it. Send copy to Frederic Crane-field, Secretary, 701 Gay Building, Madison, Wis.

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No. 8



Pruning the Home Orchard

F. CRANEFIELD.

Reprinted from Wisconsin Horticulture, March, 1914.

The home orchard may be on the farm, the summer home of the city man or in the back yard of a city lot.

Many of the best of these are of the back lot kind but wherever found usually need pruning.

The best time to prune these or any other fruit trees is in March or April, after zero weather is over and before growth starts.

Tons of books and bulletins have been written on pruning—all of them are good but are mostly for the expert.

The following rough and ready directions are meant for the amateur and deal wholly in the "how" rather than the "why",—in other words "first aid to the injured."

In the home orchard the trees may be from one to fifty years old but whatever the age it is a safe bet that the trees need pruning. Use a saw, not an ax. The common or barnyard variety of saw will not answer, neither will a carpenter's saw no matter how good it may be for sawing lumber. It's too wide. Also it isn't set right for cutting live wood. Buy a real pruning saw for seventy-five cents, one of the "half-moon" kind. It's one of the "half-moon" kind pictured elsewhere in this number. It's like a Japanese saw—it cuts only on the pull stroke. That's because most of the branches on trees that need sawing are more than shoulder high and you can pull down easier than push. Quite simple. Keep this saw exclusively for pruning; hand it to your wife when you are through and she will slip in a bottom drawer where it will not rust.

The Veterans

The forty or fifty year old trees may need pruning; first of all cut dead branches (cut close to the trunk) then as many more as needed to let in light and air. Don't fuss with cutting out a lot of little stuff, but take out a big branch, no matter how big, clear down to the base of it and then another. Don't be afraid. In this way you will let light and air into the top getting the maximum of results with the minimum expenditure of time.

If, after taking out about one-third of the top by this method, you still have time and patience to climb into the tree much more good



These old timers have been pruned but not cut to pieces. Very often a fifty-year-old apple tree will be entirely free from saps, sprouts and brush. Let it alone.

work can be done by thinning out lots of the small stuff with saw or shears. Next spring give these old-timers the surprise of their lives by a heavy root-pruning using a plow for the purpose. Plow wide, deep and as close to the trunks as ever you can. Don't cry or call me a fool if you cut a few roots, there will be plenty left.

Next year will begin a new life for these old unproductive trees, new growth both at top and bottom. Lots of so-called "water sprouts" will start from the main branches where the big cuts were made. Be unscientific again and

leave some near the center of the tree. The books tell you to "remove all water sprouts." Don't do it, you need some of these lusty young shoots for a new top. While the old branches are bearing these "sprouts" will develop into stout bearing wood and your tree is born again.

Now the great trinity in orcharding is cultivation, pruning and spraying. You have attended to the two first—the last will be treated later.

The Young Trees

Perhaps it was planted only last year or the year before. No matter if but a year planted the trees need *some* pruning or rather training. Don't cut back the branches in the center of the trees as this will only lead to a multitude of side shoots that must be cut out later. Thin the main branches instead having some regard for the future shape of the tree for you are laying the foundations now. Don't be confused or discouraged by the books and bulletins you have read. These are all of them all right in every particular but are intended for the expert.

In these much stress is laid on "distributing the branches evenly" so as to have a "well balanced head."

Well, take it from me you can't do it. An apple tree isn't a white oak and you can't change nature. The oak will keep a main stem, giving off branches with beautiful regularity but an apple tree is a squatty and round headed critter and no matter how long it lives in 97½ times out of 100 all the branches will come from one spot after 20 or 30 years, just sitting altogether on top of a trunk 2 or 6 or 4 feet from the ground.

It does not follow from this that you should shut your eyes when thinning the branches in the young trees for you can often save bad crotches by just a little forethought. The bad crotches are the sharp V shaped ones and the deuce is to pay when the top of your young tree consists of two branches forming such a sharp angle. Cut off one even if it takes away half of the



Here is a branch from a twenty-four-year-old tree. Such trees require much pruning but it may be well to take it in installments. Eventually this brush would be suppressed by nature but we can't afford to wait. This is an extreme case.

top. Also eliminate the worst V's when practical in thinning the branches.

This thinning process applies to trees five to ten years old, the longer neglected the more thinning is needed. The best way is to thin a little each year.

The Middle Size Trees

These are the trees 8 to 10 years old and never pruned. Such trees have too many branches, too much "brush" in the tops.

The remedy is about the same as in the cure of the fifty year old veterans but we should not cut quite so heavy; better spread it over two or even three years.

Mostly the tops consist of a lot of thin, starved branches so dense that a bird can't get in to build a decent nest.

No fruit buds will form under such conditions and if the tree is ever to pay its board it must be pruned.

Select two or three of the largest branches that fill the center of the tree and cut them out, it may look like murder but it must be done.

That will be about all the first year except cutting out dead and broken branches.

During the summer watch for the sap sprouts that will start from the big cuts and rub them off, we don't need them for renewal of tops in these younger trees. Next year remove more branches until light and air can penetrate.

It is understood in every case that the branches be cut close to the trunk or main limb and no stubs left.

Pruning

This rather breezy article on pruning was written nine years ago purely for the amateur. The same questions are coming in now as



Some pruning saws. The one having a curved blade is a favorite among experienced growers.

then and always from owners of neglected trees. Now the directions in this "treatise" are very crude indeed and are not at all in accordance with rules laid down in scientific bulletins. So much the worse for the bulletins; the bulle-

tins are always for the expert. My desire is to help the fellow whose awakened conscience urges him to take care of the trees which he has so long neglected. These trees usually contain too much wood, whether two years planted or twenty years, the first job is to get rid of this surplus growth without ruining the trees. After that, careful scientific heading back of branches so as to increase the bearing surface may be practiced if desired.

The one exception is in the case of some very old apple trees that have not suffered from accidents. These trees, and there are thousands in this state, are not "brushy" but on the contrary have a few large, well branched limbs and a multitude of fruit spurs. Why prune such trees at all? Pruning, after all is 99 per cent common sense. The one per cent is a good saw.

Standard Varieties of Vegetables for the Home Garden

From Seed

Bean, dwarf: Currie's rust proof wax, yellow pod; Refugee, green pod.

Beet: Crosby's Egyptian.

Cabbage: Wakefield for early; Danish ball head, late.

Carrot: Chantenay.

Cucumber: Long Green.

Lettuce: Grand Rapids, loose leaf; May King, head.

Onion: Yellow Globe Danvers; Red Globe.

Pea: Laxtonian, early; Gradus midseason.

Radish: Early Scarlet Globe, early; Icicle, later.

Spinach: Bloomsdale savoy.

Sweet Corn: Early Bantam.

From Plants

Cauliflower: Early Snowball.

Celery: White Plume.

Tomato: Earliana, Bonnie Best.

W. S. H. S. Garden Book.

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

Greetings

This new editor of this new page extends greetings to members of the Woman's Auxiliary and all women of the Horticultural Society. We are not saying a word to the men of the society because—the editor of Wisconsin Horticulture said, “for the present at least, you must confine yourselves to one page,” and as we are quite sure the men won't read this page why waste space? For the benefit of those who were not present at the informal meeting at Mrs. F. X. Shoen's hospitable home in Madison, I will just quote a bit from a little speech made by one of the members. It voices the sentiments of all members present. “I am sure we would all be more interested in the Woman's Auxiliary if we were reminded of it twelve times a year in Wisconsin Horticulture instead of once or twice.”

“Through our letters to this page we would become better acquainted—we would look forward to the conventions as a meeting place.”

“There are many women in this society who never come to the meetings, perhaps if we had this page and they read about us every month they would become interested and every new member is sure to bring new ideas that will be helpful to us all.”

In closing I want to remind all members who were present at that meeting, of the fervent promises made to me while they were under the mellowing influence of Mrs. Shoen's delicious coffee, salad and sandwiches. I am patiently waiting for “Proof.” *Right Now!*

Mrs. C. E. Strong, Editor.

Nonsensical Nonsense

When Mrs. Toole called me up the other day and said I was delegated to write something for this page right away, I truthfully told her that my thoughts were very scarce this winter. To prove this fact I am going to give you some of the “Nonsensical Nonsense” I hear in my every day life.

One day last week an auto tire agent came to the door and inquired for Mr. Bassett. I told him he was near the road some place cutting scions from fruit trees. At this he remarked, “That's a good idea, for the fellows ought to be shot who go around nailing signs on fruits trees.”

Little Jess doesn't go to school in the winter but has her lessons at home. While I was ironing this morning she read to me about Benjamin Franklin. Suddenly she stopped and after a long pause she said, “But mamma, if there were seventeen children I don't see how they ever found names for all of them.”

A lady from some distance came to buy apples. In a few days she came back much excited about her pocketbook which she claimed she had left in the cellar. She was quite indignant because I did not produce it. Some three months later she came again. This time in a much better mood. As she alighted from the car she said, “I wouldn't come on such a bad day, but ven I made my bed dis morning I turned the mattress over and dere was my pocketbook I thought I had lost in your apple cellar. You see, I am afraid of my man taking it and I had seven dollars and fifty

cents in it so I must of hid it and forgot where until I turned my mattress and there it was. I came to tell you so you wouldn't be worrying no more.”

We have a couple of new mothers, modern, up-to-the-minute, if you please, women in our neighborhood who are creating much amusement by their new and proper methods of raising babies. When asked what method I used to raise such bright and healthy children I confessed we used the “C” method, which consists of catagoric, castoria and castor oil. The bottle of catagoric was kept on the attic shelf the bottle of castoria on the cellar shelf and the good old castor oil bottle was kept ready at hand, on the bedroom shelf. Since the children cut their teeth we keep good apples in convenient places and they do the rest.

Thanking you for your kind attention I will let the next lady talk now.

Mrs. A. K. Bassett.

You Will, Will You Not?

FLORA RICH TOOLE

With the awakening of spring and the urge of the season's many and varied interests, assuredly no better time could be found for “our page” to make its bow and appeal for recognition.

The short cut in time or efficiency which has proven helpful during the season of house cleaning and re-furnishing; the tasty dish that tempted the lagging appetites of friend husband and the children; the gardens of our wintertime dreams; the call of the out of doors and the broader matter of our welfare surely furnish scope enough to arouse the interest and cooperation of every member and friend of our auxiliary.

Mrs. Strong has very generously undertaken the editing of our page and I know we will all show our appreciation by contributing our full share to its columns.

Other duties may claim all our time and energy during some periods of the year; then let us each take the time some day and send Mrs. Strong a nice newsy budget of ideas which she can use from month to month at her own discretion. I know she will "rise up and call you blessed" for every little "filler."

Don't you tell her I told, but she says if you do not respond promptly she will dig up some item of news about you which you are fondly hoping no one will ever know and print it in HORTICULTURE. And she says she is *strong* on digging. There, now, don't all try to talk at once, but everybody "get right up in meetin'" and I know we will have what little brother calls a "howlin' success."

Boosting for Fay's Prolific Currant

HARRY SLYE, Baraboo.

In looking over the annual reports of the Wisconsin State Horticultural Society, for a number of years past, I have noticed quite a number of varieties of currants listed and recommended for culture in Wisconsin, but no mention is ever made of the most excellent variety—Fay's Prolific.

I am willing to admit that perhaps they may be right in not recommending this variety in a general way for cultivation, but in view of its many excellent qualities I feel justified in making this statement, that I am quite positive that I can take Fay's Prolific and get far more satisfactory results than with any other variety that we have at the present time.

Now this probably has the appearance of two contradictory statements, and as such it needs some explanation. The simple fact of the matter is this, the Fay currant requires the best of care, and much attention, more so probably than any other variety and if any of the many details of its cultivation are neglected, it is sure to resent all such treatment and the final results will surely show it.

The smaller fruited varieties of currants will usually, to some extent, shift for themselves, and stand neglect, but not so with the Fay. Among the more important details of their care, is that they require a support of some kind, and must be tied up to it which, by the way is an item of no small account if you happen to have many bushes. They also should be sprayed thoroughly, not only for currant worms, but also for plant lice and the various fungous diseases. Good cultivation at the proper time and plenty of fertilizer are also necessary, as well as a severe pruning annually.

We have grown the Fay for many years, and right along by the side of them, under the same conditions of soil and cultivation we have tested out nearly every known variety in common use. Among these were Red Cross, Red Dutch, Pomona, Wilder, Long Bunch Holland, Victoria, London Market, and Perfection and I do not hesitate to state that the Fay was head and shoulders above them all. The only one that I could consider as a competitor at all was Perfection.

While the bush of the Fay, in itself, is quite inferior to most other varieties, and it is also true that we must have a bush before we can have any fruit; still it is the fruit that we are ultimately after, rather

than the bush and the Fay can certainly produce the most desirable fruit of them all. The various qualities we look for in the fruit are color, size of berry, size of bunches, ease of picking, flavor, productiveness, etc. As to the first two qualifications, which, by the way, are all important ones, the Fay will surely win out. The question of fine bunches and easy picking would probably be slightly in favor of Perfection. I have never heard of the flavor of the Fay being questioned, and as to production, I will have something to say later on. It is doubtful whether sweetness, or mildness as it is usually termed, in a currant is a desirable quality as the acid is probably its most valuable asset and we must depend almost entirely upon something else as a sweetening agent for currants.

Now, as to their productiveness. Our worthy friend, Mr. F. M. Edwards, of the Fort Atkinson Nursery, Company, admits that they are a good currant, but contends that they are short on yield and that they are not nearly as prolific as their name would imply; and also suggests that the latter part of their name should be thrown in the discard without any argument. Mr. Edwards may be right about this, as they probably will not average up, year after year, with some of the other varieties in productiveness. However, I would like to add that in looking over some of my old records I find that I picked from a single bush in 1915, seven standard quart boxes, and that the net weight was 10.6 pounds. Of course a yield like this is unusual, but it demonstrates what can be done and that a good yield is possible. However, in the interest of

(Continued on page 123)

THE FLORISTS PAGE

EDITED BY

HURON H. SMITH, Curator of Botany
PUBLIC MUSEUM MILWAUKEE, WIS.

Spring Flower Show

The breath of the blizzard strove valiantly to prove that spring was yet afar, but undaunted, the Milwaukee Florists Club staged their four-day spring flower show in the rotunda of the Museum-Library building, March 15th to 18th. Under many difficulties, a very creditable showing was made in this their second spring flower show. Snow drifts made it impossible for more than 25 growers and dealers to participate. Most of our growers are outside the city limits and auto traffic has been seriously hampered even in the city limits. Those having garages with an alley entrance, have been unable to leave even the garage, and the unusual conditions have taken their toll of the tires among those who are able to run.

The Milwaukee press has been very kind to this show and as we have progressed have given us more and more space, realizing the civic pride that is involved. Seven large cuts were published in the four days and twelve columns of space were donated to the show. Such publicity would involve a financial outlay of over a thousand dollars, and the florists are to be congratulated on staging a feature that appeals so strongly to our press. Even national conventions to Milwaukee have drawn less space.

This publicity has been reflected in the attendance, for despite the failure of street car service and the blizzard conditions, 31,412 came to see the show in four days. Had

the weather been fine, no doubt the attendance would have doubled. At any rate, this is an increase of 11,412 over the first spring flower show on the same dates in 1922, though it is 4,745 less than the fall show of 1922, when nature smiled.

The main feature of this show has been the four tables in the center of the rotunda, decorated for dinner. The finest linens, china, glass and silverware were provided and seven florists shared the tables. Chas. Menger and Son duplicated their splendid showing of the fall and set up a St. Patrick's Day table, which they renewed on Saturday. By use of green dye, they had all placements in keeping with the holiday. A fine centerpiece of green carnations, green freesias, green sweet peas, and asparagus plumosus was supplemented by bowls of green sweet peas for favors. Shamrocks were the place cards and green candles in green holders completed the picture.

Not through malice aforethought, the North Side Floral Company fixed the adjoining table with a *Calendula* design. Shades of St. Patrick, but here was the "Orange King" *Calendula* putting up a bold front on the Irishman's holiday. Being only flowers, they could get away with it. The place cards at this table were dark red glass miniature flower baskets.

The other two tables were shared by different florists. Baumgarten and Gutermuth each had a table for the first two days and were succeeded by Semmler-Leidiger and

Wm. Zimmerman for the last two days of the show. Each of them furnished some ravishing centerpieces.

As usual, Gus Kellner and Company set up the show with the help of Nic Zweifel and Huron H. Smith. The museum installed flood lights from the dome, making the lighting much better than at any former show. Both the main and second floors carried exhibits and the stock this time was the finest that has ever been seen. The Laddie Carrations this year were 14 inches in circumference. Kellner and Company, besides doing the decorating, brought their usual quota of rare foliage plants, such as Japanese Maples, Silky Oaks, Guavas, California Privets, Funkias, Cinerarias, and such. They also contributed many planted boxes of tulips and hyacinths.

Holton and Hunkel showed some fine little Nurune Japanese Azaleas, hyacinths, tulips, Lily of the Valley, daffodils, various narcissi, Easter lilies, potted Cinerarias, and cut roses. The Pollworth Co. sent cut Columbia, Premier and White Ophelia roses, lilies, daffodils, narcissi, and many carnations. Hugo Locker and Sons showed fine sprays of the General Pershing Freesia, potted Cinerarias, and a wonderful display of sweet peas in variety. The Greenwood Carnation Co. lived up to their name in furnishing carnations. Heitman & Oestreicher furnished carnations, as did Reinhardt, Schroeder, Marke, Brueggeman, and Otto Sylvester of Oconomowoc.

Praefke showed some uncommonly fine *Primula obconica*, growing in boxes and pots. Kamp and Spinti furnished the sturdiest

Calendulas we have ever seen. The Cudahy Floral Co. sent in roses. Riebs Bros. furnished snapdragons and a dozen vases of very fine, longstemmed varieties of sweet peas in bundles of 75 each. Gutermuth sent in potted plants and baskets. Lietz furnished potted and cut bulb stock. Welke Bros. furnished a table and sent in potted Cinerarias and a floral basket. Gimbel Bros. sent in two fine baskets, one of the best St. Patrick's baskets of the show, the other containing our only orchid of the show, several sprays of Dendrobium. Gust. Pohl sent in potted plants and cut carnations, and Oswald Preuss sent in several potted plants.

As we write this, there is scarcely any traffic outside on Grand Ave., yet the last hour 832 visitors came to see the show. There must be a compelling interest to induce one to leave his fireside on a day like this and it proves that Milwaukee likes flowers. It upholds our contention that folks like to see and smell flowers to gratify their aesthetic sense. There are no signs at this show warning the public not to handle the flowers. The Milwaukee Florists Club expect the \$2,000 worth of stock to be a complete loss, so far as salvaging any of the exhibits is concerned. But they realize that the desire for intimate possession follows such free acquaintances as are made here. Many visitors were observed with notebooks, jotting down their favorites. Stacks of seed catalogues and book lists were given to interested visitors by the library officials. By their cooperation, twelve shelves of books about flowers were placed in a nook of the ro-

tunda, and reservations were made for these after the show closes.

The down town merchants have twice postponed their Spring Style Show, waiting for more propitious weather, but the florists came through as advertised and deserve a lot of credit for their show under difficulties.

Huron H. Smith.

Save the Bees, We Need Them

The following resolutions offered by the Wisconsin State Beekeepers' Association were adopted by this society at the annual convention, January 10th-12th. The beekeepers of the state are to be commended for their stand on this question. A few of their members favored the introduction of a bill in the present legislature providing a penalty for spraying fruit trees when in bloom, but better counsel prevailed. The beekeepers placed confidence in the fairness and common sense of the fruit growers and chose to depend upon an appeal to us rather than to attempt the enactment of a law.

Every fruit grower who enjoys even a fair portion of common sense and an elementary knowledge of spraying knows that the period of full bloom is not the best time to spray. The best time is after the blossoms have dropped. Why, then, be contrary? We need the bees. Let's protect them instead of wilfully destroying them:

Whereas, Many beekeepers in different parts of the state have suffered because fruit trees have been sprayed in full bloom with an arsenical poison, thereby killing the bees visiting the trees and depleting the colonies below honey gathering strength; and

Whereas, The bees are known to

be of great value to the fruit growers as pollinators; and,

Whereas, No schedule of spraying calls for an arsenical spray while the trees are in full bloom, but distinctly warns against such spraying; and

Whereas, It seems advisable to attempt to remedy this condition by educating the fruit growers;

Be It Resolved, That we petition the Wisconsin Horticultural Society to use its good offices in cooperating with the Wisconsin State Beekeepers' Association in educating and persuading the fruit growers *not* to use an arsenical spray when the trees are in full bloom.

Transplanted Peonies

For twenty-five years and more I have had in my yard a beautiful row of peonies. Two years ago I had the same reset but no blossoms since. Plants look healthy but do not bloom. What shall I do? Is there such a thing as "running out"?

Old peony plants when disturbed and broken up require at least two years and sometimes four or five years to recover and bloom freely again. It is comforting to know that they always come back and finer than ever. The only treatment advised is for the grower and not for the plants; use patience.

Although rather out of season we show this month a picture of our exhibit at the Wisconsin Products Exposition, at Milwaukee, Nov. 14-20, 1922. We feel certain that this exhibit was well worth while. Thousands of people learned that apples are really grown in Wisconsin.

Do you want to buy or sell? Advertise.

Wisconsin Horticulture

Published Monthly by the
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 16 N. Carroll St.
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FREDERIC CRANEFIELD, Editor
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Wisconsin State Horticultural Society

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 Remit by Postal or Express Money Order. A dollar bill may be sent safely if wrapped or at- tached to a card. Personal checks accepted.

Postage stamps not accepted.

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With Pleasure

We introduce, with pleasure, a new department and a new associate editor, The Women's Auxiliary page edited by Mrs. C. E. Strong. We bid you welcome; we have been waiting and watching for you for a long time. This is your house and your home and without you it has lacked cheerfulness and com- fort. May you never depart.

The Garden Book and Other Books

One stormy day early in 1918 two men skilled in gardening, Prof. J. G. Moore of the state university and Frederic Crane- field, secretary of the state horticultural society, met to lay plans for an intensive back yard garden campaign for the season then near at hand.



Weed Flowers

*The gardener plants the garden beds
 With rows and rows of seeds.
 But we like best the little flowers
 The gardener says are weeds.*

*We must not pick the garden flowers;
 So over all the ground
 God plants the weed flowers just for us,
 When gardeners aren't around.*

Reprinted from the Youth's Companion, Boston
 Copyrighted 1922, by Perry Mason Company, Boston
 Verses and Drawing by Elisabeth B. Warren

It was war time when everyone was keyed to a high pitch and working at top speed. As a part of this garden plan for the state there was issued a series of leaflets written in simple terms and con- taining the most elementary facts about garden making.

One year ago the state hortical- tural society brought together these seven leaflets, Getting Ready for the Garden; Hints for the Home Gardener; Early Plants; Garden Soils and Garden Making; Sowing the Seed; Insure the Har-

vest; Protect Your Garden, in book form, added two chapters on fruit growing for the home and named it the Wisconsin Garden Book. The claim has been made and not yet disputed that this book is the most concise and readable book on home gardening for the beginner ever published. Even experienced gar- deners have praised it highly and found it helpful. Every member in good standing in 1918 received a copy of these publications but those joining since have not had them. The Garden Book and an-

other, equally valuable. "Native Plants of Wisconsin," by William Toole Sr., being a compilation of five excellent papers from the annual reports of 1918-19-20-21 and 22, are offered for sale at 25 cents for the Garden Book, and Native-Plants at 50 cents, but we would much rather give them away. Premium notices are printed in this issue. However, if any member prefers to buy their books we are ready to sell at the prices named. The Garden Book has been adopted as a text book by eight public schools and three agricultural schools in the state. A special price is offered to schools when twenty-five or more copies are ordered.

Charmingly Airy Columbines

Some years ago, while still a kid, among my various collecting fevers was that of catching butterflies. The ones that fascinated me most were the long-tailed Papilios. The long spurred Columbines or Aquilegias with their beautifully colored nodding flowers and long spurs always remind me of my boyhood butterfly friends. We have them (the Columbines I mean) in a mixture of many beautiful shades and colors, also yellow, rose pink, and blue and white separate, as well as heavy plants of our native red and yellow variety.

Price, 25c each, \$2.50 per doz., \$15.00 per 100, carriage paid.

Place your order now while you have time to plan your garden needs. The pay may be sent, if you prefer, after the plants are received. Send for my illustrated catalogue.

"Hardy Plants for the Home Garden"

Here are described the best of the hardy perennials as well as other plants and seeds.

W. A. TOOLE Garry-nee-Dule Baraboo, Wis.

Write for Wisconsin Horticulture, short articles preferred. We want, and get, the real stuff from our members, actual experience, not theory. Don't be selfish, let all of us know. Ask questions, always ask questions.



Exhibit State Horticultural Society at Wisconsin Products Exposition, Auditorium, Milwaukee, November 14-20, 1922

THE INSECT PAGE

Edited by E. L. Chambers, Assistant State Entomologist

To Control the Asparagus Beetle

Use a *strong* mixture of arsenate of lead at the rate of at least three pounds of the powdered form to fifty gallons of water. During the cutting season it should be applied only to certain of the slender and worthless shoots allowed to grow as trap plants. Leaving such plants scattered throughout the patch, the beetles will collect and confine their feeding for the most part on them and can thus easily be poisoned. Hand picking may be practiced in very small garden areas. Air-slaked lime dusted upon the plants while wet with dew will kill the larvae or young stages of the beetle.

In case defoliation threatens the plants after the cutting season is over a thorough spraying or dusting of the entire area with a strong mixture of the arsenate of lead will destroy the bugs and prevent the plants from being defoliated. In spraying asparagus it should be borne in mind that the leaves are very narrow and do not readily catch and hold the poison unless applied as a very fine (mist) spray directed against each plant from both sides. In home gardens one tablespoonful to a quart of soapy water is effective.

In large cutting fields it is probably best to make clean cuttings in which case the female beetles are forced to lay their eggs upon the new shoots which are in turn cut in a day or two so that the eggs are destroyed.

There are two species of beetles concerned. The eggs of the twelve-spotted asparagus beetle, the less

common species are laid singly and in preference upon the old and fruiting plants. Instead of being fastened endways to the stem or leaf as are the eggs of the common or blue asparagus beetle, they are attached sideways. Upon hatching, the larvae feed chiefly upon the pulp of the berries and therefore are not of great importance as destroyers of foliage as are the common species. Consequently it is where the plants are being grown for seed that this species is particularly destructive. The adult beetle feeds upon the tender shoots in early summer and later upon the leaves and eats out irregular areas in the bark of the stems.

If poultry have the run of the asparagus beds they will take care of the beetles early in the season.

Winter Entomology

We are sometimes asked whether the state entomologist's staff has anything to do in winter or whether they spend it "waiting for spring." The summer force of over eighty in the field is reduced to six in winter, and the few remaining find themselves more than busy. Here are some of the office activities since the frosts drove insects into winter quarters last fall:

Papers and bulletins prepared and published include a revised spray calendar (bulletin 36), a tobacco wildfire control bulletin in cooperation with the experiment station (bulletin 348), a list of Wisconsin nurseries (bulletin 53), the biennial report of the department (bulletin 52), a technical synopsis

of the squash bug tribe, and half a dozen articles in various periodicals. The bulletins mentioned are available for distribution.

All importations of rose stocks amounting to 51,000 plants were inspected and packing house inspections for crown gall were made in all nurseries growing apple trees. Reinspections were made of properties showing San Jose scale in the summer.

One or more of the staff were present at the state beekeepers, potato growers, horticultural, and cranberry conventions, at national entomologists' apiary inspectors' horticultural inspectors', and beekeepers' meetings, at conferences on barberry and white pine blister rust work, and at about one hundred local farmers' institutes and other similar meetings.

In anticipation of the work of 1923 the nurseries have been sent directions and regulations for the more complete control of raspberry anthracnose and strawberry root lice; tobacco growers are in correspondence with the office on sterilization of seed in wildfire infested districts; materials have been secured and notices sent in connection with the Whitewater and Rochester San Jose scale outbreaks; sources of arsenic and banana oil for the grasshopper campaign have been looked up and the town chairmen notified; and bales of barberry literature have been sent out. The work of the pest reporting service is already in full swing and the reports are tabulated as they arrive each week. Plans are drawn to accomplish, during 1923, the reduction of tobacco wildfire to the lowest possible point, elimination of severe losses from grasshopper and leafhopper outbreaks, improvement of the raspberry anthracnose

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situation, and progress in the control of grain rust, white pine blister rust, and San Jose scale.

Don't waste your effort next summer in gardening in competition with trees and shade. It can't be done successfully. Hoeing, watering and fertilizing cannot make up for lack of sunlight. Many gardeners try to make this substitution and fail. Good garden tracts may be spoiled by worthless, often self-planted, trees or shrubs. Cut them out so your vegetables will not have to compete with them for sunlight, food, and water. You will probably find, also, that your back yard looks better without them.—W. S. H. S. Garden Book.

Fay's Prolific Currant
(Continued from page 117)
good quality, it is better not to have an excessive production of fruit. Of course in Wisconsin, we have quite a wide range of climate to reckon with and conditions in southern Wisconsin are far different from those in the northern part of the state. So it follows that one must take into consideration their latitude. However, the Fay currant seems to be entirely hardy here in Sauk county, so it is quite safe to assume that it would thrive over quite a large portion of the state.

In concluding, I would like to say that this article was not written with the intention of criticising or finding fault in any way, but rather it is offered in the hope of bringing that most excellent variety of currant to the attention of those fruit growers who are looking for the best there is and who are willing to pay the price in good care and hard work.

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Nursery Stock of Quality

for Particular Buyers

Have all the standard varieties as well as the newer sorts. Can supply you with everything in

Fruit Trees, Small Fruits,
Vines and Ornamentals.

Let us suggest what to plant both in Orchard and in the decoration of your grounds. Prices and our new Catalog sent promptly upon receipt of your list of wants.

Nurseries at
Waterloo, Wis.

The beginner in gardening is apt to attempt too much. A small garden well tilled is better than a larger one neglected.—W. S. H. S. Garden Book.



For Efficient Gardening

Bolens Power Hoe and Lawn Mower Tractor

Will do your seeding, weeding, cultivating and lawn mowing. Designed to work in narrow rows. Patented arched axle for clearance. A tool control for close work. Attachments all have snap hitches making them instantly interchangeable. Differential drive. The picture shows 13-year-old Ward Rasmussen doing the work of four wheel hoe operators in the gardens and nurseries of N. A. Rasmussen, Route 5, Oshkosh.

Endorsed by leading growers.
Write for catalog.

GILSON MANUFACTURING CO.
220 Park St.
Port Washington, Wisconsin

And Then Black Rot Blew In

A correspondent who lives along the banks of the Mississippi river in Grant county, a choice grape growing section, writes:

"Have about an acre or acre and a half of Concord grapes, and lost the entire crop last two years on account of black rot. Never saw them look better than they did the last year up to the time they were about three-quarters grown. Then this rot hit them and I lost the whole crop. This rot is something new in this part of the country. Nobody ever sprayed grapes here and always had good crops up to two years ago and just seemed like the wind blew this disease in. Some of the vineyards are not bothered much with it and others it hits hard. Mine is one of the latter. If you can give me any advice as to how to save this year's crop it sure will be appreciated."

The answer is by Prof. Leon K. Jones, department of plant pathology, College of Agriculture.

Black rot of grapes occasioned considerable injury to grapes in several sections of the state during the past season. Spray the plants thoroughly with Bordeaux mixture, 4-4-50, (you may use the commercial product, following directions for preparation given on container) three or four applications as follows: (1) when the second or third leaf is showing; (2) soon after blossoms have fallen; about two more applications of spray are necessary and should be made at intervals of ten to fourteen days.

Added effectiveness in control may be obtained by: (1) destroying infected fruit by carrying them away in the fall or plowing under in the spring; and (2) train vines so as to allow for maximum air drainage.

Faking the Blueberry Business

After experiments extending over 16 years, the United States Department of Agriculture, has established the culture of the blue-

berry as a commercial industry and has bred varieties with berries more than three-fourths of an inch in diameter. The most outstanding cultural characteristic of the blueberry is its requirement of an acid soil. It does not thrive in ordinary rich garden soil that has a neutral or alkaline reaction.

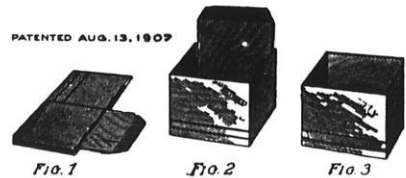
The department's testing plantation for hybrids is at Whitesbog, near Browns Mills, New Jersey. About 20,000 different hybrids have been fruited thus far. Propagation material of some half dozen of the best of these hybrids has been placed in the hands of several nurserymen but only one of them has carried the propagation to the point of offering plants for sale, and only one variety of these hybrids, Pioneer, is as yet commercially available.

Unfortunately a few nurserymen are taking advantage of the work that has been done in the domestication and improvement of the blueberry to deceive the public by advertising blueberries in a very misleading manner. One nurseryman at Rochester, New York, has been using in an advertisement an illustration of a hybrid blueberry taken from a publication of the Department of Agriculture issued in 1916. The illustration is used in such a way as to lead the reader to believe that this firm has for sale blueberries of the kind shown in the illustration, when as a matter of fact ordinary wild blueberries, first transplanted to a nursery, are furnished in response to the advertisement. Furthermore advertisements issued by this firm give very misleading information. One of their advertisements, in the February number of a well known garden (Continued on page 127.)

BERRY BOXES

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AS YOU LIKE THEM



We manufacture the Ewald Patent Folding Berry Boxes of wood veneer that give satisfaction. Berry box and crate material in the K. D. in car load lots our specialty. We constantly carry in stock 16-quart crates all made up ready for use, either for strawberries or blueberries. No order too small or too large for us to handle. We can ship the folding boxes and crates in K. D. from Milwaukee. Promptness is essential in handling fruit, and we aim to do our part well. A large discount for early orders. A postal brings our price list.

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WISCONSIN HORTICULTURE
701 Gay Building Madison, Wis.

HARDY PERENNIALS

FOR SALE:—Hardy Perennials. 175,000 hardy perennials, containing many varieties and colors. Strong, well rooted, field grown. Prices, \$3.00 to \$5.00 per 100. Write for price list. Straw flowers \$10.00 per 1000. Chequamegon Flower Gardens, Washburn, Wisconsin.

FOR SALE:—Hardy Wisconsin grown perennial plants and strawflowers in season. Grown by J. F. Hauser, Superior View Farm, Bayfield, Wis.

STRAWBERRY PLANTS

FOR SALE:—Strawberry plants, 200 best 3 varieties, \$1.25. Progressive and Superb everbearing strawberries, \$1.75 per 100. Fresh, live plants, true to name. Postage paid. C. R. Tuttle, Baraboo, Wis.

FOR SALE:—Dunlap and Warfield Strawberry plants in quantities. Write for prices. Minn. No. 775. While they last 50 for \$2.50 postpaid. Hollis Sullivan, Taylor, Wis.

SEEDS

FOR SALE:—Strawflowers. Easy to grow from seed. Why not grow your own strawflowers? Helichrysum, mixed colors, 10c per large pkt. Pkt. each of 10 colors, 50c. Gomphrena or red clover, pkt. 10c, Acroclinium, pink and white mixed, pkt. 10c; Annual Statice, mixed colors, 10c per pkt. One full pkt. each of Helichrysum, Gomphrena, Acroclinium and Statice for 25c. W. A. Toole, Garrey-nee-Dule, Baraboo, Wisconsin.

FERTILIZERS

FOR SALE:—Pulverized Sheep Manure, 100 lb. sacks. A little goes a long ways. 1 bag, \$3.50; 5 bags, \$15.00; 10 bags, \$25.00. C. C. Pollworth Co., Milwaukee, Wisconsin.

LANDSCAPE GARDENING

Landscape Work Done. Plans drawn and blue prints made. New building sites laid out; foundation plantings of shrubbery and Evergreens; old home grounds beautified. We furnish trees, shrubbery, and perennials for you. We specialize in Evergreens for Lawn de-

coration and Farm Windbreaks. We do work anywhere in the State. Lake Rest Nursery, J. W. Roe & Son, Oshkosh, Wis., Fond du Lac Road.

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Stock of all kinds and
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Cabbage and Cauliflower

**The BEST Seed Grown in Denmark and Awarded the
Highest Honors in the Danish Government Trials**

If you really appreciate Good Cabbage and Cauliflower
Seeds send for my price list at once.

We are the largest Cabbage Seed Importers in Wisconsin.

STANDARD SEED COMPANY

Peder Back, Owner, Racine, Wisconsin

Where plants which transplant with difficulty, such as cucumbers and melons, are started indoors, or when it is desired to have the plants unusually large before setting out, flower-pots are frequently used. Instead of setting the plant from the seed box into a larger box it is put in a small flower-pot. It may remain in the pot until set in the field, or it may be moved to a larger pot. Various devices are used as substitutes for pots. Two of the more common are the hot-tomless strawberry box and a tin can with the bottom removed and

the side split, so that it may readily be removed from around the plant. The strawberry box is better than the can for this purpose.—W. S. H. S. Garden Book.

Unless you have had previous experience do not waste much time on cauliflower, peppers, egg plant or other crops that are hard to grow or of doubtful value. These crops so often fail due to weather conditions or slight errors in culture that it is usually advisable to give their space to more certain crops.—W. S. H. S. Garden Book.

Buy Gladiolus and Iris Now

FOR SPRING PLANTING

Fine collection Gladiolus, 50 cents dozen.
Six kinds Iris, two each, \$1.00 dozen.
Peonies for fall delivery, all best kinds at moderate prices. Write for prices and state kind wanted.

STONE CREST GARDENS
Eau Claire, Wis.

One Dollar

- (1) Membership in The State Horticultural Society for one year.
- (2) A copy of the 1922 Annual Report containing 28 papers; official lists of fruits and flowers adapted to Wisconsin.
- (3) A copy of the 1920 Annual Report to first comers, to others the 1917 Report.
- (4) A copy of The Garden Book, 55 pages; the best garden book for beginners ever written.
- (5) A copy of "Native Plants of Wisconsin" by William Toole, Sr. 5 papers; native climbers, shrubs, trees, ferns, flowers, 54 pages.
- (6) Wisconsin Horticulture, a monthly magazine one year.

All for One Dollar: Currency, draft, money order or personal check but *not* postage stamps.

Once a member you are privileged to solicit memberships; commission fifty cents for each member secured. Remit to

Frederic Cranefield, Secy.

701 Gay Building, Madison, Wis.

Make Haste Slowly

No matter what kind of soil you have in your garden it must not be worked when it is wet. If it is it will be hard, lumpy and wholly intractable all season. You will lose and not gain by working soil before it is fit to work—W. S. H. S. Garden Book.

If your garden is anywhere but on a side hill you can probably advance by several days the time when it will be fit to work by a little dig-

Kickapoo Orchard Tract For Sale

Twenty acres, 18 acres planted. Two acres spring of 1913, 16 acres spring of 1914. Varieties mainly Wealthy, Mackintosh and Fameuse. A few Dudley and other varieties. Will sell undivided one-fourth interest for \$2200; one-half interest for \$4400. Terms Cash.

J. N. BIDWELL, Care Wisconsin Horticulture

701 Gay Building, Madison, Wis.

ging and ditching so as to carry off the surface water. This should be done as soon as the frost is out of the ground.—W. S. H. S. Garden Book.

Faking the Blueberry Business

(Continued from page 124.)

magazine, states that "by repeated transplanting, we perfected the root system of the plants;" that "now, you may grow blueberries as easily as any other garden berries;" and that "starting with our nursery-grown plants assures success under all conditions." These statements give a very erroneous and misleading idea of the conditions necessary for success in blueberry culture.

"Alas! The day is sped. I have asked the fleeting moment to tarry, and it laughed, and shook its gossamer wings at me, and flew by on its mad way to eternity."

William J. Locke.

It is well to remember that although trees on the north side of the garden do not shade it yet their roots often extend far into the plot and take food and moisture from the soil, making it unprofitable to plant fruits and vegetables near the base of the trees.—W. S. H. S. Garden Book.

GLADIOLI

In two splendid collections, 1/4 inch and larger.

One each Crimson Glow, Flora, Le Marechal Foch, White Glory, Mrs. Dr. Morton, Helen, Franklin, Rose Bud, Prince of Wales, Evelyn Kirtland, Pride of Goshen, Postpaid, \$1. One each Golden Measure, Maine, Louise, Postpaid, \$1.50.

P. A. LAESER, SUN PRARIE, WIS.

WISCONSIN NURSERIES

Our Motto:

Give fools their gold and knaves their power;

Let fortune's bubbles rise and fall;

Who sows a field or trains a flower;

Or plants a tree is more than all.

—Whittier.

At it Twenty Years. Catalog for the asking.

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Union Grove, Wis.

Kellogg's Nursery

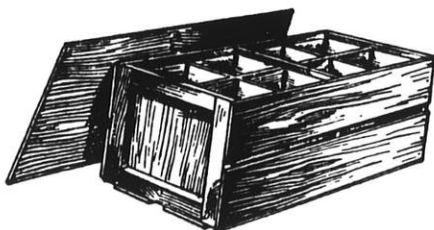
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Wisconsin

SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shrubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen. Order direct from a reliable nursery and save money.

For the average family garden one packet of seed is enough except possibly peas and beans. By careful sowing one packet of most of the vegetables named is more than enough for the first planting and some may be saved for later planting.—W. S. H. S. Garden Book.



Berry boxes and crates, either in the flat or made up complete; Climax grape and peach baskets; till or repacking baskets; bushel and half bushel shipping baskets, and tree protectors at remarkably low prices.

Send for our circular and prices before placing your orders.

SHEBOYGAN FRUIT BOX CO.

SHEBOYGAN, WISCONSIN

Unrest Is Not Exceptional Nor Dangerous

The following by Lothrop Stoddard in "The New World of Islam," seems to fit exactly the situation in our Society at the present time:

"Unrest is not an exceptional phenomenon; it is always latent in every human society which has not fallen into complete stagnation, and a slight amount of unrest should be considered a sign of healthy growth rather than a symptom of disease.

"A healthy organism well attuned to its environment is always plastic. It instinctively senses environmental changes and adapts itself so rapidly that it escapes the injurious consequences of disharmony."

It is possible to have a garden without starting part of it indoors, but it is usually more expensive or less satisfactory.—W. S. H. S. Garden Book.

Distinctive Landscape Gardening



**SUCCESSFUL
for Three Generations**

Frank M. Edwards Co.
210 21st St. Milwaukee

The Garden Plan

What kind of a house would a carpenter build without a plan? How would a garden which was planned, row by row, while the planting was being done compare

with one carefully planned in advance of planting? A good plan saves much valuable time at planting because the gardener doesn't have to stand around and figure out where things are to go.—W. S. H. S. Garden Book.

Care of Young Plants. The young plants will need careful attention as regards proper light, heat and water. Keep the seed box where it will get abundant light. Insufficient light results in spindly plants. It is better to have the temperature a little low than too high. High temperatures mean soft, spongy plants which are less likely to give good results when set out.—W. S. H. S. Garden Book.

One inch, display advertisement one month, one dollar; one year ten dollars. Can you beat it?

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, April, 1923.

Do Not Forget

1. That you are expected to prepare an exhibit for the Beekeeping department at the Wisconsin State Fair. Write to Gus Dittmer, Augusta, Wisconsin, for details and list of premiums.

2. Those old bee journals and books you were going to pack up and send to the Miller Memorial Library, Madison, Wisconsin. *Do it today.*

3. That now is the time to make your plans to attend the Beekeepers' Field Meet and Chautauqua to be held at Madison, August 13 to 18. This will be the best and biggest meeting ever held. We expect more noted beekeepers to be present than at any previous meeting. A. I. Root is planning to be with us. Judge George Grim, Jefferson, Wisconsin, son of Adam Grim, is going to tell us about his father's experience in the early days.

4. To get that new member. We are still four hundred members short of our thousand for that new directory. Will you help?

5. To send in your order at once for labels.

6. That your state association can supply you with letterheads and envelopes bearing the new state association trademark at very reasonable prices.

7. To get a permit from Dr. S. B. Fracker, State Capitol Annex, Madison, Wisconsin, in case you want to move or sell your bees.

Cooperation Will Sell Honey

Since the report given in the February issue the following commissions on honey sold through the secretary's office have been received:

	Amount sold.	Commission received
Feb. 15	120 lbs.....	\$.60
Feb. 15	4,920 lbs.....	24.60
Mar. 15	5,160 lbs.....	25.80

This is an example of what cooperative marketing will do. You will note that your association has received commission on 10,320

pounds of extracted honey and 9 cases of comb honey. Not one pound of this honey was sold for less than 10¾c per pound wholesale, f. o. b. shipping point. We have received a request for 10,000 pounds of honey and are now making an attempt to complete this order. We are continually receiving reports that some of our beekeepers are retailing their honey at 12c a pound. Is there any excuse for this?

Mr. C. D. Adams Reports

"Mr. Whitehead and myself have conducted about forty county beekeepers' meetings. The beekeepers at almost every meeting were enthusiastic about the lithographed honey pail and there is no question about the success of this venture. There unquestionably will be orders received from 90 per cent of the counties visited."

"The State Department of Agriculture is being petitioned by a number of counties to include them in the foulbrood clean-up area. The Washington County Board has appropriated money to help defray the expense of the clean-up and Ozaukee County Board is expected to do likewise in the near future. Both local associations have been quite earnest in their requests."

Mr. L. P. Whitehead, extension apiculturist reports:

"The beekeepers of Juneau county met at the Court House in Mauston, March 13, and organized a county association. The following officers were elected: President, Frank Riley, Elroy; Vice-President, Louis A. Loboda, New Lisbon; Secretary-Treasurer, Willard Franke, Mauston. The association voted to affiliate with the state association. This is the 45th local association to be formed in Wisconsin and the 34th local to become affiliated with the state association.

"The Baraboo Valley Association is receiving splendid support

from their county fair officials. In addition to the competitive bee and honey exhibit which pays cash premiums, the association is to receive \$50 for exhibiting in a separate booth an educational display of bees and honey."

Members having any honey to sell should write the secretary for a "Have You Any Honey To Sell" blank. Fill in the blank and return to the secretary, who will help you sell your honey, if possible.

Notice

Members of the State Beekeepers Association should write to M. F. Fischer, Secretary, Madison, for samples and price list of Association labels.

Honey Sandwiches and Honey Candies

An outlet for a small percentage of the honey crop is in the sale of candies into which honey enters as an ingredient. It is difficult to cook honey without ruining its flavor. Some varieties suffer less under heat than others. By a few experiments one can find whether his own brand of honey will stand heat sufficiently well to use it in cooked candies. A delicious pulled candy can be made with a honey flavor as follows: Put two cups of white sugar with a generous half cup of water and a small pinch of cream of tartar to boil. If a thermometer is available, boil it till the temperature is nearly 300. If no thermometer is available, boil it until it begins to turn yellow, but do not burn it. Now without removing from the stove stir in half to one cup of heavy honey and cook until dropped into water it forms a firm ball. Stir constantly with an egg-beater while the candy is boiling with the honey in it. This keeps down the temperature and protects the honey. It is hot work and requires watchful care.

Pour the candy when done into
(Continued on page 2.)

Wisconsin Beekeeping

H. F. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association

President.....	James Gwin, Gotham
Vice President.....	A. A. Brown, Juneau
Treasurer.....	C. W. Aepler, Oconomowoc
Secretary.....	Malitta D. Fischer
Annual Membership Fee, \$1.00	
Remit to M. F. Fischer, Secy., Madison, Wis.	

League Pays Reward

The treasurer of the American Honey Producers League was authorized by the league convention at St. Louis to make payment of \$100 reward offered by the warning posters for those who maraud apiaries. Miss Edith Saunders secured evidence which resulted in the conviction of a man who had stolen a gasoline engine from the honey house of an apiary in New York. The honey house and apiary were posted with American Honey Producers League signs offering a reward for information leading to the arrest of anyone molesting the apiary in any way whatever.

Many members of the league at the meeting expressed their opinion of the value of these posters in preventing depredations. In some cases a series of robberies of supers and other materials had stopped immediately after the putting up of the signs. The New York case is the first one in which a claim for a reward has been made.

It was found necessary by the league to place the warning poster fund on a self-sustaining basis. Hereafter members of the league may secure these warning posters in which a reward is offered for two years from the date of purchase at one dollar each. In case the apiary is molested or supers disturbed and someone besides the owner presents evidence which leads to the conviction of the party molesting the yard the league pays \$100 reward to the person providing the information. These posters may be secured from the American Honey Producers League, Secretary's Office, Capitol Annex, Madison, Wisconsin.

Dr. S. B. Fracker.

Honey Sandwiches

(Continued from page 1.)

buttered tins and begin to pull as soon as it can possibly be handled. Do not let it get hard before pulling. It pulls into a creamy candy of delicious texture and flavor. Cut and wrap in waxed paper, or dip the pieces in chocolate coating.

Dipping honey candies of any sort into chocolate yields a most delicious confection. Incompleted sections can be used up to great advantage. Slice the combs into thin slices being careful to allow one uncut row of cells to the slice. Cut the comb vertically and on a slant so that the cells on one side will not be cut to leak. Cells are not opposed exactly, but offset each other. Hence the need of the slanting cut. Let the slices drain over a rack and then dip in chocolate setting to cool on waxed paper or oil-cloth. These honey bars are very rich and make an excellent addition to the school lunch. Get the grocer next the school house to sell them for you.

Candied honey, especially if fine-grained can be made into delicious candy by cutting into small pieces and coating with chocolate. Roll the cut pieces in powdered sugar to help in the handling of them. Stir the honey when it is ready to candy to make it grain smooth. Pour it into shallow boxes made of clean boards screwed together and coated inside with melted paraffine. When the honey is hard, remove the screws and take off the sides and ends of the box and slice the honey with a sharp thin knife. Some New England beekeepers are selling a lot of this candy. They make a variety by mixing chopped nuts with the honey, and also by placing half nut-meats on the dipped pieces.

One can use only a small amount of honey in candy-making, but the prices obtained for the products make that part of the honey crop bring in a good profit.

If a beekeeper lives within reach of the State and County fairs he can dispose of a good lot of honey

by setting up a stand at the fairs. If you fail the first time do not give up. There are many kinks to be learned and one of them is the picking of the site for the stand. If possible pick a stand under a tree or in the shade of a building, where the crowd is always moving. Don't let your stand be placed in a stagnant corner, nor between objectionable faker stands. Outside is better than in a building, but one may run up against bad weather. I prefer the outside even to chance a rain.

Whatever form of stand you contrive, make it clean. Cover with white enameled cloth and have clean white pieces of linen to cover your goods, exposing only enough to advertise the wares. You may have to use netting to keep off flies and bees. Keep your person clean, shaving each morning and using clean linen daily. Have aprons made of good white duck and put on a clean one each day. Make the very cleanness of your stand invite the best trade.

The honey-sandwich so far as I know is an invention of my own, which like all good things went through an evolution. I first sold honey at fairs back in the late eighties before my college days. At first I sold honey to be eaten plain. I simply sliced the sections from corner to corner and sold honey on a stick. So many people expressed the desire for something to go with the honey that after a year or so I bought crackers by the barrel and let anyone who wished have two crackers with his honey.

Crackers go well with honey but both are dry eating and really need something to thin them down. It occurred to me that soft rolls would be much better than crackers and so I next essayed using rolls. The experiment was crowned with success. Of course my first attempt at honey sandwiches was crude and it was two or three years before I got them to the stage of perfection I desired.

The frankfurter or weiner roll is too long and rather narrow. It

also has pointed ends. The ideal roll is shorter than the weiner roll, has blunt ends and is slightly wider. Bakers use a tin or sheet iron which holds five rows of twelve rows each of the weiner roll. By placing on this sheet iron six rows of ten rolls each, seeking to make the rolls of uniform width, the resultant roll is ideal for honey sandwiches. The rolls should bake with their sides grown together so that they can be handled by tens. When broken apart they have soft sides. The best weight of rolls comes from using about one pound of dough to the dozen, rather less than more. Fourteen ounces of dough make a very decent roll. The roll must be of sufficient body to hold well a slice of honey and yet not make so thick a sandwich that it is difficult to eat from the hand.

Rolls left over must be re-packed using good clean cloths, slightly moistened. It is not wise to use rolls over three days old, better take them home and feed them to the live stock.

The honey-sandwich is the greatest thing in the world to use up unfinished section honey. A section of honey netting 8 or 9 ounces will make seven good sandwiches. A full weight section will make ten or eleven good sandwiches. It is not wise, however, to skimp on the honey and when a customer says he is fond of honey cut him a double thick slice. He will come back several times during the fair.

Cut from thick pine a block of wood eight inches long and four wide, then another four inches square. Nail the smaller to one end of the larger so that you have a block with two steps. You can thus have two cakes of honey on the block one set higher than the other. You can thereby have two grades of honey ready, and it will surprise you to find how many people will ask you to make the sandwich from the darker honey.

One cannot learn the kinks of honey-sandwich selling all in one day, but can inside of two or three

years become fairly expert. I have made and sold in one day 3,600 sandwiches, and would never think of starting in at a large fair with less than 100 dozen rolls. A crowd of 40,000 will usually mean that you must have at least 100 dozen. I once sold 100 dozen to a crowd of only 8,000. Unless you live where honey-eating people dwell you will have to teach people to eat honey sandwiches. If there are lots of honey lovers in the crowd all you will have to do will be to make the sandwiches.

I believe that it will pay to run hot coffee with the honey sandwiches. Get a good grade of paper cup so that no dishwashing will be necessary.

Previous to the war the honey sandwich sold for five cents, but for the past eight years it has sold for ten. One can make good money now selling at five, but if the market stands for ten one can make more money with less work. The beauty of the whole thing lies right here—the beekeeper by means of the honey sandwich gets more for his low grade sections than he gets for his fancy sold in the usual way.

Allen Latham.

Value of Cooperation

(Continued from March Issue.)

What we have got to do as beekeepers is to unite back of a cooperative selling plan and put our product upon the market in a uniform, neat, attractive container. Such a container may cost more than the ones you are now using, and others may say the prices of honey will not stand added burden of the cost of a good container, but I say and am convinced in my own mind that you will not have to pay for the container you use if it is a good one; the consumer will be glad to do so. You put up a ton of honey in every conceivable kind of container and let me put up a ton of honey of like quality in a neat, attractive container, and I will sell my ton of honey at a better price than you will, do it quicker, and with less effort. In your case, the consumer

buys your honey and gets the container; my consumer buys both my honey and my container, because both appeal to him.

Along with a uniform attractive container, we must have uniform quality of the product; the product must be standardized, so the consumer can be assured of the same quality at all times. We must teach the consumer to associate quality with the style, size or color of container. After we have done this the package will do most of the selling.

Closely associated with quality and package is a uniform brand or label. This assists and is a powerful influence in selling.

No one beekeeper can accomplish this single handed. We must all get together. By cooperating in the purchase of our standard containers I am satisfied they will cost us less than we now pay.

After we have the quality honey neatly put up and labeled we must advertise; not just honey, although that will help, but Wisconsin honey. We must convince the people honey is a good human food. All the honey producers will assist in advertising honey, but our job is to convince the consumer that Wisconsin honey is *THE* best honey. After they once taste it they will know it is. Just get them to taste our honey; that is the big job. We have got to advertise, and do it collectively. Mr. Wrigley spends twelve millions of dollars annually advertising his little insignificant stick of gum. One electric display sign in New York City costs him \$106,000 a year. He has done more to keep the jaw joints of our American people in good working order than any man I know. When we aren't chewing Mr. Wrigley to fortune we are chewing money into the pockets of several other gum companies. When advertising will build an immense fortune for anyone out of a stick of gum, made from the sap of a tree or a waste material, having no food value, what would it do for as good an article as is honey? Do you know we produce very little more honey now than we did thirty years ago? This is true in Wis-

consin as well as in the United States as a whole. Was honey any better then than it is now? No, probably not as good. Why did not honey production and consumption keep pace with the increase in population? Advertising, I believe, did it; advertising of syrups, candies, jellies, fruits, ice cream and other forms of sweets that have replaced honey.

Do you know why there is such a tremendous consumption of hen eggs while one hardly ever eats a goose egg? Because the goose covers her egg as soon as she produces it and says nothing about it, while the hen leaves hers exposed to view and cackles about it. She advertises. It is about time the beekeepers quit playing the role of a goose.

About one-third of our honey crop leaves home. Our per capita consumption of honey is about two pounds. Think of it. Yet we come here and kick about not being able to move our crop. If cooperation and advertising has increased raisin consumption in this country from 5,000 to 150,000 tons in less than ten years, what could be accomplished for honey under similar plans? If we doubled our consumption the drones would have to go to work. Even then we could not meet home demand and the outside market would have to go without. We would then have no serious market problem. One cent a pound on honey would give us an advertising fund in the United States of upwards of \$750,000. We as honey producers would have to advance this money until consumption increased, then the demand for honey would be so great the consumer would reimburse us in increased price he would be glad to pay. Mr. Wrigley doesn't spend twelve million dollars of his money to get you to chew gum. He adds this advertising to overhead and you pay to induce yourself to chew gum. We can convince the consumer he wants more of our honey and make him pay for the convincing. We must, however, loan him some money to put into this convincing or advertising fund. Later we take the pot as fast as he antes.

Through a commodity marketing organization, we, as producers, could regulate the flow of honey on the market as the market demanded it. This would prevent flooding of the market at any one time, and instead of selling our honey seasonally, as is now done, we could distribute our production over the entire year. By feeding the market as consumption absorbed it, we would be able to keep up the price and prevent speculation which is like a two-edged sword injuring the producer as well as the consumer. It is the small quantity above the demand that lowers the price. By controlling the movement of honey, as demand required you would put yourself in a position of quoting the price on honey, while now you are obliged to take what the other fellow has a mind to give. You aren't in a position to do otherwise. You can always strike a better bargain if the other fellow comes to you.

With all the honey under control of our own marketing organization, we would be in a position to supply demands anywhere with honey, direct, thus cutting out the excess transportation burdens now accruing, when honey follows a zigzag route from producer to consumer. Besides, we would be in a position to cut down overhead by shipping in carload lots. The cost of disorganized economic distribution of honey is a burden that could be saved through an efficient system. Honey can be more efficiently marketed and distributed than is now the case, as the Texas beekeepers have demonstrated.

Through cooperation we would be in a position to have reports on honey production the world over assembled, compiled and interpreted for us, thus keeping us posted on our own business ourselves and not being dependent upon the other fellow not particularly concerned with our business and apt to misinform us for his own selfish ends. In this way we could get our probable production, the probable production of our competitive countries, the probable demand here and abroad, thus enabling us to quote fair prices on

honey for our own lookout and the interest of the consumer. We should not be too selfish; we should always see the consumer gets a square deal; we need him.

The last topic, though not the least important, is the question of the control and eradication of disease. Individually we cannot hope to conquer disease; especially is this true with American foul brood. We cannot keep our bees in the straight and narrow path, for they will rob. Disease is another cause for our decreased honey production in Wisconsin and elsewhere. United effort of all beekeepers is essential to wipe out disease. Seems funny we must have a law and police powers to compel a beekeeper to protect his own business.

The recent action of congress of prohibiting the importation of bees likely to have Isle of Wight disease, due to pressure brought upon it by beekeepers the country over, is but one example of the enormous value of cooperation.

After all has been said concerning the beekeeper I am reminded of the story of two colored fellows who got into a wrangle over the sale of a mule. It seems Moses sold Rastus a mule. In about two weeks Rastus came to Moses and demanded he take the mule back and give him his money he paid for the mule.

Moses said, "See here, Rastus, what fo' you want your money back?"

"Ah wants ma money back 'cause that mule's blind."

"When ah lets him out o' de stable he walks right onto a big pile of stone and nearly breaks his laig befo' I'se could extricate him. Then he walks straight into my barb wire fence, he did, and cut he's self most to pieces. I'se no mor'n got him straightened about he walks right plumb against the basement wall of my barn. I tell you'se that mule am blind, and I wants back ma money."

"Say, Rastus," said Moses, "dat mule ain't blind; he just don't give a damn."

A. A. Broun, Sec.,
Dodge County Bee Ass'n.

WISCONSIN HORTICULTURE

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No. 9



SHOWY LADY SLIPPER

Our Song Birds and Bird Songs

MRS. E. L. ROLOFF

What is a bird without its song? To anyone who is a lover of birds, and upon making the acquaintance of a new bird, the first thought that comes to one is to hear its voice, its song. Firstly, for the pleasure the song itself gives and, secondly, to make the better acquaintance of the bird and to thus be able to identify him, either in the bird chorus in the morning, or in a solo of his own sung from the tree tops, when otherwise, without the song, we might not know of the bird's existence in our vicinity. Many of our most beautiful and beneficial birds might even escape our notice if it were not for their song.

According to the classification of our birds, the family of "Land and Song Birds" is the largest and most interesting of our bird families, and nearly all of them have a voice of some kind, from the faintest little squeak of the humming bird and the almost inaudible wheeze of the waxwings up to the most wonderful creations of bird songs of the thrushes.

Although we hear bird voices, calls and songs, at all times of the year, it is during the two months of May and June that song birds are at their best, for at this time most birds are nesting and in full song and to a bird lover to be awakened at daybreak by the tuning up of the first few voices of the earliest birds, and in a few moments the chorus is swelled to twenty-five or fifty different birds—all singing at the top of their voices, and one is able to identify each one of them, is indeed a great pleasure.

The robin is usually the choir leader. He starts with a few little chirps, and then bursts out in full

song, soon followed by songsparrow, meadow lark, Phoebe, mourning dove, flicker, vireos, bob white, pewee, wood thrush, wren, oriole, brown thrasher, catbird, purple martin and many, many others; thus the orchestra which performs the "glad spring symphony" is made up of the individual voices of an endless variety of soloists, each bird singing his own song, no two alike. Of these the wood thrush has been called "the great tone artist"; the red eyed vireo, the "obligato accompanist"; the songsparrow "the melodist"; and the partridge "controls the drums."

To best study our song birds will be to take them up in families. Of these, the family of finches, sparrows and grosbeaks is the largest and most important one and, to a certain extent, our best common songsters, surpassed only by the thrushes. The list includes the purple finch, goldfinch, rose breasted grosbeak, chewink, indigo bunting and the song, vesper, field, fox and white throated sparrows. These are all fine songsters; the song sparrow alone is unexcelled in variety of song motive and in accuracy of pitch. The stout, conical bills of the finches and sparrows are instrumental in giving a certain character to the voice. The song of the goldfinch, which is commonly called the "wild canary," is very similar to that of the canary, especially his call notes, "cheep, cheep," given in a rising inflection of nearly an octave, and then "per-chic-o-ree" while he is on the wing in an undulating flight, always breaking out with the song on the crest of the wave-like curve. The purple finch is considered the most perfect and lovely warbler we have. Of the sparrows, that of the white throated

or Peabody bird's song is remarkable for its rhythm and its pure, clear-whistled tones. Anyone who can whistle can imitate it—"Old-Sam Pea-bo-dy, Pea-bo-dy, Pea-bo-dy." The field and vesper sparrow's songs are unusually clear, plaintive-like whistles ending in a diminuendo trill. The vesper sparrow singing at eventide after sundown, two or-three long silver notes of peace and rest, ending in some subdued trills and quavers, which has given to him his name, vesper sparrow. He sings from a high perch, without interruption for a half hour or more. The fox sparrow whistles a beautiful, loud, clear whistle as he scratches, with both feet at once among the leaves on the ground for food; his real song, however, is heard only in his more northern home. The little chipping sparrow's incessant high pitched trill can not perhaps be called musical, but he is such a splendid neighbor which helps greatly to make his song a welcome one. The song sparrow is the "flower of the family," a musician of exceptional ability. He sings under all conditions of weather and at all times of the day. Can there be anything more fresh and pleasing than to hear his first song on a bright March morning? The chewink has a sweet call note, "che-wink," and a sweet little song of "see-to-whee-e-e-e?" The rose breasted grosbeak is another splendid songster similar to the robin.

The thrush family, which is a large one, is represented here by the wood thrush, olive backed thrush, veery robin and bluebird. Of these the song of the bluebird is the first one to greet us in the spring of our migratory birds returning from the southland. Blue-

birds never take a position as if to sing. Their so-called song is rather a plaintive, sentimental call consisting of three notes, "pu-ri-ty, pu-ri-ty," which seem always to be directed at his mate and yet nothing is more pleasing and welcome to us than these first call notes of the bluebird. The song and call notes of the robin are perfectly familiar to all of us and, sometimes, later on in the season, when he brings his whole family and relations to our strawberry patch, are we not sometimes tempted to label them as "very noisy nuisances?" But after all, what a host of good cheer we find in his music when we hear his first song in the spring. When—

"In the sunshine and the rain;

I hear the robin in the lane.

Singing "Cheer-i-ly, Cheer-i-ly,

Cheer up dearie! Cheer up dearie!

Cheer-i-ly, Cheer up, cheer!"

The thrushes are the birds of real melody and will afford one more delight, perhaps, than any other class. The wood thrush stands at the head of songsters, clear as the finest golden toned flute, his "u-o-lee, u-o-lee" sung at eventide from a near by fence post or branch of a tree once heard is never forgotten.

The brown thrasher, catbird and wren comprise another family of very fine songsters; that of the brown thrasher is the most varied contribution to the bird chorus. While singing he is usually perched on the topmost bough of a tree. His voice is loud and clear and produces a wide variety of notes. He sometimes sings for half an hour from the same perch, usually in the morning and occasionally at other times of the day. The catbird, who is called the northern mockingbird, is another beautiful songster if he

wishes to be. He is a mimic and improvises as he sings, imitating all birds and sounds that take his fancy. Even catcalls are put in anywhere, and are used as scoldings when he is so inclined. And the little house wren who sings to us nearly all day long, the most enthusiastic, rippling, laughing song—how could we get along without him?

The vireo family, consisting of the red-eyed, yellow throated and warbling vireo, produce constant and cheerful bird songs. The red-eye's "you see it! You know it! Do you see me?" can be heard at all times of the day, singing and feeding as they go. The vireos are birds of the tree tops, gathering their food, insects, from the foliage and smaller branches of trees.

Of the family of orioles, bobolinks, blackbirds and meadow larks, the Baltimore oriole sings notes of joy from the tree tops. His voice is that of the bugler that heralds actual spring; and the meadow lark, who does not know and love the song of the meadow lark? His "Spring o' the y-e-a-r, I see y-o-u, You ca-a-a-n't see me-e-e!" has a breezy sound, as fresh and wild as if the wind were blowing through a flute, and in answer to this, all the red winged blackbirds, large flocks of them, join in chorus as if in a foreign language, "O-ka-lee! Conk-a-ree, Conk-a-ree," from the near-by tree tops. A little later we hear the notes of a rollicking medley, from the near-by hayfield. It is the bobolink, the soloist of comic opera. It is said of him that "he is a great singer, but the latter part of his song is a species of musical fireworks."

The woodpeckers are not singers, but their bills are really the equiva-

lent of drum sticks with which they rap out a rolling tattoo, a summons to their lady loves. They are the members of the drum corps. Both the downy and the hairy woodpeckers have a metallic call note, "Peenk, Peenk." The flicker is the noisiest of the woodpeckers. He announces his arrival by a long, loud call, "Kee-er! Kee-er," a thoroughly melodious April sound. His song is a long, monotonous clamor, "yif-yif-yif-yif-yif" incessantly.

Purple martins have pleasing voices, which sound more like rippling bird laughter and happy, cheerful social twittering, than an attempt at singing. The warbler family, consisting of about twenty-five or more species, warble all day as they flit and feed along in their migrations, most of them being with us only about ten days in the early part of May. Their feeble little voices are pitched very high, and no musician will consider them good songsters. The yellow warbler in his "Swee-see-see-see," and the Maryland yellow throat in "Witchety, witchety, witch," are perhaps an exception in that their voices are loud and penetrating.

We have several more soloists in nature's orchestra belonging to smaller families, but must not be omitted. Foremost of these is the quail or bob white. How we all love to hear the happy whistle of "Bob, Bob White." But the sad part of it is that we hear him less and less as the years go by. Is he being exterminated? If so, should we not all join our forces before it is too late and appeal for his better protection?

Our flycatchers are not songsters and yet the monotonous little call

(Continued on page 137)

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

Right Now

A personal letter from the editor of this page to the women of the Wisconsin State Horticultural Society. It includes an explanation and an apology, interspersed with a sort of a treatise on the word *now*.

Once upon a time a small boy wanted a drink of water. His mother, busy at that moment, said, "Yes, in a minute." "I don't want it in a minute," howled the small boy. "I want it in a dipper and I want it right *now*."

Like the small boy, the editor of WISCONSIN HORTICULTURE wants the copy for May issue "right *now*."

If he would only wait a minute, or a few days, or perhaps even a week, there would be something helpful, interesting or amusing for both him and you (it's coming and you will have it in the June issue)—but that doesn't help "right *now*."

I can't even have the pleasure of blaming someone else for being in this predicament. I am the sole and only person to blame—new editors, like new cooks, need to follow directions carefully lest the results prove disastrous.

There isn't time to go out and "dig" up anything. "Now" means immediately—and at this date March 30th with the snow anywhere from one to three feet deep, there is no pleasure in digging, especially when various people are telling you once a minute, if not oftener, "how on earth do you ever expect to get well if you keep on doing such foolish things as that." Digging is out of the question.

But I can see neighbor Smith looking longingly at that blank page, ready, even anxious, to fill it, so the only thing to be done is to write something myself for the page *now*!

That word "now" rather fascinates me, there is such a lot to such a small word. Just think of all the work we could accomplish if we did it "now" instead of after a while. Suppose right "now" you sit down and write up all your bright ideas, witty thoughts and interesting experiences and send them to the editor of this page (finish reading this letter though first, because there are some other things I want you to do). Right now is an excellent time to further the work started in National Garden week, if we expect to see our particular part of the universe blossom like the rose.

Do not get the idea that someone else is doing the work and that it isn't necessary for you to do anything. Remember you count one and if you are enthusiastic sometimes you count two or three, especially if your enthusiasm carries over the weeding, watering and hoeing period that always comes before the blooming period. Just get busy in your own garden and then urge your neighbor to do the same. Don't forget that a little interest and friendly cooperation is appreciated by your neighbor. By the way, did you know that the word neighbor was taken from the Dutch words "neb boor" meaning the nearest farm and sometimes that nearest farm was fifteen miles away. Your neighbor doesn't always live

next door. That's one of the things I hope to see demonstrated on this page—being neighborly.

And right "now" I believe I have the best opportunity I will ever have to try and interest every flower grower and flower lover in the amateur exhibit of flowers at the state fair. We have had some fine exhibits, but we want them to grow larger and better every year and we need *your* help. In these days of good roads and automobiles, distance doesn't hinder bringing an exhibit to the fair in fine condition. Right "now" won't you decide you are going to be one of those who will have some fine blooms on exhibition and help make a real flower show?

I wonder how many of you know that the state fair is a splendid place for flower lovers to meet and talk over their success or failure in growing the particular flowers they are interested in? Come and get acquainted. We folks at the fair want to meet you and hear you say, "I believe I can beat that exhibit next year." Earnest, friendly competition is the thing that helps in flower shows, as well as in some other things. I believe I have written enough to fill the page, so I will stop right "now."

To the Members of the Woman's Auxiliary

MRS. E. L. ROLOFF

Now that our friend and editor of WISCONSIN HORTICULTURE, Mr. Cranefield, has granted us a page for the Woman's Auxiliary, let us all come forth with the best that is in us to assist our auxiliary editor, Mrs. C. E. Strong, who was appointed to that position at our last annual meeting. Let us send in items of our experiences, even if

they seem ever so small to ourselves. They may be helpful to some of our members.

With the arrival of the spring-time as homemakers, our thoughts naturally wander in many directions, both indoor and out. What are we doing or what are we planning to do? Something new in our home or perhaps in the garden? How about our meals? This brings to mind several of our favorite desserts—one a *new* lemon pie that friend husband thinks delicious, especially so at this time of year when the good spring air sharpens the appetite. The recipe is as follows:

- One cup sugar.
- One (scant) tablespoon flour.
- Four eggs
- One lemon.

Separate the eggs and beat the egg whites very stiff, then add one-half cup of the sugar. Then take the four egg yolks, beat and add the remaining one-half cup of sugar into which the tablespoonful of flour has been mixed, and the grated rind and juice of the lemon, stir well and boil until it thickens, then take off from the fire and quickly whip into it one-half of the four egg whites and sugar previously whipped—then pour into a baked crust, and pile the remaining egg whites on top (with a spatula) in as many little mountains as you wish to cut pieces. Then set in oven to brown. A nice flaky pie crust is made of one cup flour, pinch salt, one-half cup lard, mixed well with a fork; then add three tablespoonfuls of water. This makes two crusts.

We hope that you will all try this and if you like it we may send in another.

Beautiful Homes

HOLLIS SULLIVAN

We hear a lot about Wisconsin, the beautiful, these days. While much of this beauty is natural, some of the pretty places have been made by people who loved the beautiful enough to work for it. There are lots of beautiful homes that have been planned and fixed up nice by the owners not so much to make Wisconsin beautiful as to satisfy their own desire for beauty. Every home owner or renter that dresses up his home grounds is helping to beautify his home community and also our state.

The writer had the pleasure of visiting Fort Atkinson not so long ago and was very much impressed with the beautiful homes there. In walking about the town we saw that the yards had been landscaped systematically. By systematically I don't mean every one alike, as like the next as two peas in a pod. Sometimes we see such planning and planting where one property owner owns several lots and fixes the houses and yards exactly alike. Such places get monotonous and sometimes confusing. While going to school in Minneapolis several years ago I was staying in a house that was one of a group which were all built from the same blue-print. The yards were planted the same and about the only way in which these places differed from each other was on the numbers over the doors. Being in somewhat of a hurry one night as I was returning from school I ran up the steps of No. 16 instead of No. 18 and hustled up to where my room should have been. I threw the door open and was very much surprised to see that my room was occupied and was politely told that it was not my room at all, but

that if I had a room around there it must be in one of the other of those duplicate houses. I begged pardon and went in search of my own room this time taking time to look for the number and not trusting appearances which are confusing. Later I was told that some one made that mistake every little while with these places.

But in Fort Atkinson it was different. There may have been a few houses that were built from the same blue-print, but if there were they were planted enough differently so their similarity was not noticeable. As we walked along the streets the party that was with me kept saying that it must be different farther out or in some other part of town and we kept walking, trying to find some place that had not been fixed up with flowers, vines, shrubs and trees.

After we had satisfied ourselves that the town had been well planned we took another walk around to enjoy the different plantings. It happened that the party with me knew every plant by both their names and we spent a very pleasant time in enjoying what had taken all the people of the town years to bring to its present state of beauty.

Neither of us had ever been in a town that was as beautifully planted as was Fort Atkinson, so we made up our minds to ask some one how it all happened, anyhow. So we stopped a man who seemed to be an old timer and asked him. He said he didn't know for sure but he thought that R. J. Coe had a lot to do with it.

The beautiful streets and lawns of Fort Atkinson will remain for generations a memorial to the skill and gracious spirit of R. J. Coe.—(Editor.)

THE FLORISTS PAGE

Edited by *Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.*

Beloit's Florist

Today we are far down in Rock County, Wisconsin, where the Rock river sweeps through the center of Beloit, with a majestic spring flood-tide, recalling the upper reaches of our own mighty Wisconsin river. We feel the dignity of this town long linked with Wisconsin's early history. We parade the campus of Beloit college and spy a date of 1847 on a cornerstone. We contemplate the struggling freshwater college, with its illustrious alumni and noted early educators, now coming into its rightful heritage and appreciation and besieged with applicants for entrance in a bustling city of 25,000. Boys and girls together learning the business of the world and life, and thus early not forgetting the little courtesies and attentions that all girls dream about. We see a florist's delivery truck back up to Chapin Hall, and read the name of John Rindfleisch on its sides. Yes, our John, director of the State Florists Association.

What is more, we find out that he is the only grower in the neighborhood, and has spread out till he is not only supplying the "Town and Gown" folk, but is shipping to Delevan, Lake Geneva and all points east. He even had the stuff to save Janesville from an Easter Lily famine. To our query about business during Easter, he responded that he was cleaned out. He had less than a dozen Baby Ramblers and very little of any Easter stock left. He

had gauged the public appetite to a nicety—lucky man—and how the rest of us would like to emulate him!

We seized our Graflex and note book to be "Paige-d" out to the greenhouses. John is very proud of his plant and has a right to be. Very little time he spends in his



John Rindfleisch and J. P. Phillips in greenhouse.

store, half a block from the Hotel Hilton and right next to the swellest new undertaking parlors we have seen in Wisconsin. He owns his downtown store and offers nothing but the choicest stock. But his heart is in the greenhouse, where he and his son-in-law, Grover A. Phillips, have things figured down to a gnat's eyebrow. Their charts and plans with temperatures and bed plans, overlook none of their precious plant children. It looks more like a patient's hospital chart, with pulse readings and per cents of diseased stock listed. The origin of all the seed is marked on the chart, so that good seed houses become known by the way their children have behaved.

John certainly picked an ideal spot for a greenhouse. A long, wide strip of ten acres on the

banks of the Rock river, directly across the river from the million and a half dollar plant of the Fairbanks Morse Co., furnishes an ideal site with a good slope for drainage, plenty of moisture for growing, and a sandy soil which miraculously stays cool during the discouraging hot summer weeks.

Mr. Rindfleisch lives on one end of the tract with his numerous progeny, and has built up a greenhouse with all the comforts of home. His trucks and machines drive into a warm garage at the shipping end of the plant, behind the boilers. Consequently little time is lost in starting during sub-zero weather.

The houses are not of the hastily constructed mushroom type of growth. As John proudly said, they are rat and mouse proof. All walls are concrete, extending down into the ground for four feet. Steel and iron are the framework for the glass and sash, and cypress is the bench stock. We noticed, however, a big stock of iron posts, which are ready to be set to receive the cement benches



View of his plant from top of his house.

next summer. He also pointed out his plans for expansion of the plant towards the river.

There are now eight large houses 30 by 100 feet and three small ones 15 by 100 feet, flanked outside by rows of cold frames and pansy beds. In the summer,

his acres are a thing of beauty with hardy perennials such as dahlias, gladiolus, paeonias, delphinium, phlox and others. His soil seems to be the best of any in Wisconsin for gladioli and huge flaming swords of all colors reward his care.

John has arranged his plant so that it is all on the ground floor. He has taken advantage of the natural slope to locate his Kroschell boiler and his Moninger boiler at the bottom of the slope, so that there is a natural gravity return of hot water. The coal is put in at the highest point of the plant and also proceeds downhill to the furnaces. The ashes only move two feet to a truck backed up to the open outside door. It was quite evidently all carefully planned out in advance, so that the fewest men could do the most work easily. His bulb house forward was solid cement with two small ventilating windows and four feet of earth on the floor, and no marauding rodents ever find their way to that room. In summer this is his cut stock refrigerator.

Naturally in a college town, a little bit of everything must be carried. Beloit folk look to him for their cabbage and tomato plants, bedding stock, and you'll even find the lowly parsley hobnobbing with the aristocratic carnations, clinging to the edge of the beds and benches. In a general purpose establishment like this, you must not be surprised at anything you see. With the many college functions and entertainments, there is a demand for interior decorations and you will find John has the indestructible rubber plants, the Kentia palms,

ivy grown in huge balls and pyramids, ferns, smilax, Norfolk Island pines, tubs of Bougainvillea, asparagus sprengeri, and other foliage plants to satisfy this demand.

Three houses are devoted most of the time to carnations. His varieties are Matchless and White Enchantress for white; Laddie, Pink Enchantress and Ward for pinks; and Beacon for red. However, he intends to substitute Edna for his reds. Three houses are held for chrysanthemums in the fall and winter, with 18 varieties in numbers to a total of seven thousand plants. Golden Queen, Oconto, Mrs. C. C. Pollworth, Smith Imperial, Richmond, Chieftain, December Gem, Pink and White Seidewitz, Engelhardt, Yellow and White Mistletoe, Yellow and White Chadwick, Nargory, Chas, Razer, and Golden Wedding are his large varieties. Some dozen varieties of Pompons are grown besides.

Among other things, he grows fifteen thousand geraniums. He grows his Freesias in narrow beds high up against the sides of the house, taking them out only every second year for division. They are merely dried up and mulched till it comes time to grow next season. General Pershing, Purity and Rainbow are his Freesia varieties.

One special crop of his is Matricarias. He grows three benches of fine ones every year, all of which he sells to Clem Pollworth in Milwaukee for Decoration Day trade. This stock gets to be four feet high when marketed and 3200 of them are on the way for May 30, 1923. In his smaller houses, one may see some of the

thriftiest violets we have ever seen, all of one kind—the single, sweet-scented California violet.

“We could go on indefinitely describing his various stock, but we are afraid the editor will accuse us of trying to use too much space. This time we think he will let us get by, for we believe he seconds the motion to tell all our State Florists friends what John Rindfleisch is doing in Beloit.

Huron H. Smith.

A Prophecy

“If the day should ever arrive (which God forbid!) when the people of the different parts of our country shall allow their local affairs to be administered by prefects sent from Washington, and when the self-government of the states shall have been so far lost as that of the departments of France, or even so far as that of the counties of England—on that day the progressive political career of the American people will have come to an end, and the hopes that have been built upon it for the future happiness and prosperity of mankind will be wrecked forever.”

—John Fiske, historian, in 1888.

Thirty-five years have elapsed since Fiske wrote this and our dual form of government still stands, but who shall say he was a false prophet? Year by year the states not only permit but invite intervention in local affairs. State lines are fast disappearing.

Editor.

Coal Ashes

Heavy soils may be much improved by a liberal use of coal ashes. Unless much wood has been burned in the furnace in addition to the coal there is no danger in using too much. It is better to sift the ashes to remove clinkers which prove a source of annoyance when hoeing. Coal ashes contain little or no fertility. —Wis. Garden Book.

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Annual Plea for Annuals

Each year we ask you to remember the annuals. By all means plant trees for shade, shrubs and perennials for ornament, but don't fail to provide for a daily bouquet of the choicest of flowers from your garden from the middle of July to November.

Iris, peony, phlox and all the best of perennial flowering plants are much to be desired; a little study will enable one to have flowers from these from "frost to frost" and the plants to live on and on. No home is quite complete without a peony at least. But these plants are mostly for the front yard; annuals should be grown in the garden. Early May is the best time to sow seeds of

annuals. Reserve a strip of good soil in the vegetable garden, rake and pulverize the soil just a little better than for onion seed, scatter the flower seeds thinly in shallow drills, much the same as you would sow radish seed, cover lightly and wait. One packet of each kind is more than enough. Four to six feet of row is all that anyone needs of one kind.

After the plants are one-half inch in height thin relentlessly, leaving a plant every four to six inches, depending on the kind. Ordinary vegetable garden culture is all that is needed, hoeing, thinning, weeding and perhaps watering. This little flower garden will yield armfuls of flowers if the blooms are cut as they appear and not allowed to seed. What should you plant? Asters, above all. Asters in midsummer, grown from hothouse reared plants, seem out of season. The aster belongs to the autumn, cool nights and misty days. Aster seed planted in the garden in early May will produce flowers in abundance in early August and until frost cuts them down. Also nasturtium, poppy, calendula, corn flower, mignonette, candytuft and as many more as time and money and your love of flowers dictate.

Self Respect Outdoors

Speaking to such of our members who live in the country, and there are many of them. Others may read if they care to do so.

Children who are well trained in manners and good conduct, when freed from home restrictions, often behave in a most unbecoming manner. Likewise, older people. There seems to be

a temporary lack of self-respect. Do we not who live away from cities, even though we are self-respecting individuals indoors, somewhat lose our self-respect when we are outdoors?

The front yard is neglected, grown up to weeds and grass, there is not a tree for shade, the few shrubs, if there are any, are allowed to care for themselves. The house and barns are good, farm implements are plentiful and up-to-date with one exception, there is no lawn mower. It is said that to be well dressed enables one to maintain self-respect and confidence. I maintain that a lawn mower will do more to create self-respect in the farm home than any doctrine or discipline. Through its use the lawn will become well dressed and when the lawn is trimmed it will be observed at once that dead trees or bushes must be removed. So one thing leads to another and when we turn in at the front gate we are rather proud of the appearance of our place; self-respect outdoors.

Taking Out the Water

Not satisfied with selling delicious fruit fresh and in cans, Door County growers contemplate putting it into tabloid form. The Wisconsin Dehydrating Company of Milwaukee, aided by Sturgeon Bay fruit growers, are promoting the Northern Food Preserving Company, capital stock \$200,000. Most of us when boys helped mother pare, core and quarter apples, which were then threaded on a string and hung back of the kitchen stove where all the flies on the farm sought a night's lodg-

ing. These later appeared as dried apples, appeared all winter and most of the summer.

The world has moved since then and we now dehydrate apples and pretty much everything else that grows out of the ground. Some of these dehydrated vegetable products are very good, some are eatable and some are neither. Years ago grocers sold rutabagas by the one-half peck until northern Wisconsin began sending down big ones and the one-half peck measure would no longer hold one. Now that dehydrating has come we may take home a rutabaga in one vest pocket and a mess of greens in another, but unless the dehydrated vegetables turned out at this new mill are better than those we have tested, a box of pills should be put in another pocket. It ought to work, the dehydrating, for apples.

Downy Mildew on Grapes and Plum Scab

Specimens of diseased plums and grapes sent in by a member last August were referred to the department of plant pathology of the College of Agriculture. Mr. A. J. Riker, of the department suggests the following treatment:

The grapes are infected with a disease known as downy mildew. This is quite a common disease on grapes, especially in some seasons.

It may be controlled another year by (1) spraying with Bordeaux mixture 4-4-50 (making the first application just before the blossom buds open and repeating four or five times at intervals of two weeks), (2) destruction of diseased leaves, (3) securing resistant varieties. (As a rule American grapes

Charmingly Airy Columbines

Some years ago, while still a kid, among my various collecting fevers was that of catching butterflies. The ones that fascinated me most were the long-tailed Papilios. The long spurred Columbines or Aquilegias with their beautifully colored nodding flowers and long spurs always remind me of my boyhood butterfly friends. We have them (the Columbines I mean) in a mixture of many beautiful shades and colors, also yellow, rose pink, and blue and white separate, as well as heavy plants of our native red and yellow variety.

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"Hardy Plants for the Home Garden"

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are much more resistant than the European types.)

The plums are attacked by scab. This disease may be controlled in a small orchard by spraying at the same time the apples are sprayed. If you have a commercial planting use Bordeaux 4-4-50 or lime sulphur, one and one-fourth gallons, and one pound arsenate of lead to fifty gallons of water. Applications should be made (1) immediately after the petals fall; (2) two or three weeks later; (3) shortly before the fruit begins to ripen.

A Spray Calendar

We no longer publish a spray bulletin, as this service is performed by the State Department of Agriculture. Bulletin No. 36, by S. B. Fracker and R. E. Vaughn, contains not only a spray calendar, but formulas for preparing all the different spray mixtures needed in field and garden. A copy of this bulletin may be had on application to this office or to the State Department of Agriculture.

It is of little traits that the greatest human character is composed. —Winter.

Our Song Birds and Bird Songs

(Continued from page 131)

notes of the Phoebe calling "Phoebe, Phoe-be" at any time of the day and the sweet pensive little song of our wood pewee, "Pe-ah-wee, Pe-e-r," are always in evidence in our bird choruses.

Another happy little songster is our black-capped chickadee. All winter long we hear his lively little call, "Chick-a-dee-dee-dee," when he comes to the suet tree for his meals. Occasionally we hear his clear whistled song of two notes, "pe-wee, pe-wee." And the blue jay, what shall we say of him? He has been called a joker, and the "clown of the circus." He can produce some clear musical notes if he wishes, then in the same moment his squalling catlike "J-a-a-y, J-a-a-y" will drive all of the smaller birds out of the neighborhood for the time being. Then again he will mimic any tone or sound he hears which strikes his fancy, but he never attempts anything that could be called a song. Why should he? If he is the joker and the clown perhaps it becomes his duty to furnish variety as the spice to the music. Who knows?

Bees and Horticulture

BY H. F. WILSON

Science tells us that all forms of plant and animal life are to a more or less degree dependent upon other plants or animals for their existence. Just why some of the forms of life now in existence should be allowed to survive may be hard to understand, but each succeeding year brings new discoveries which make known to us some of the things we do not see clearly.

The interrelations between insects and plants are of prime economic importance to the horticulturist and farmer. This, because of the part insects play in carrying pollen from one plant to another, thereby providing cross fertilization which is so essential to the production of strong, healthy plants.

Our fruit growers should take time to study the habits of insects about the blossoms in the spring, especially the honey bee. If they have a proper understanding of how plants grow and seeds and fruit are formed, it will only need a few observations to show what bees and other insects are doing for us.

Having the plants properly fertilized is just as much a part of plant growing as any other operation, and many fruit growers through actual experience have found this to be true.

Why is it that plants need outside help, do they not have the power of fertilization in themselves? Yes, but let me explain: In plants as well as animals there must be male and female elements. Animals are able to move about and complete the sex acts by themselves. Plants, being unable to move about, must depend upon the whims of nature for their transfer. Nature in some cases has combined the male

(stamens) and female (pistil) organs in the same flower, although this does not mean that all such flowers can fertilize themselves. In other plants the female and male flowers are entirely separate from one another and depend upon the wind to blow grains of pollen from the stamens of the male flowers to the pistil of the female flowers. As with animals, cross fertilization is necessary in plants, and nature has so arranged its scheme that very few blossoms are actually fertilized within themselves. Cross pollination develops better fruits of all kinds.

In this scheme nature has provided plants with various colored flowers and nectar-secreting organs to attract bees and other insects at that particular time when the production of seed is to begin.

The petals of the flower are perhaps useful in drawing the insect near. The nectar at the base of the flower entices it deep down into the corolla, thereby causing the insect to come in contact with the pollen; some of the pollen clings to the body of the bee and is carried on to the next flower.

The honey bee does not visit flowers to cause pollination but rather to gather the nectar and pollen as food for itself and its young. The plant provides the bee with food for services rendered.

Mr. W. J. Beal in 1868 wrote as follows: "Bees are willing agents here as in other instances, lighting first on the stigma of the older flowers which are further down the stems, and then passing up to others which are younger. Besides collecting nectar at the bottom of the flower, they collect the pollen by scraping the style upon each side with their legs and when calling at the

next flower first striking the exposed stigma, leaving a few little morsels as tribute for the bountiful supply."

This action of the bee, in which it unconsciously causes the fertilization of the flower is nature's agent for bringing about cross-fertilization.

BEES INSURE CROPS. Many instances have been recorded showing the value of bees for farm, garden and orchard and experiments carried on by well qualified investigators show quite conclusively that bees are a necessary adjunct to successful farming and orcharding.

In the province of Ontario, Canada, where large areas of alsike clover are grown for seed production, the farmers are glad to provide free space for beekeepers for their apiaries. In nearly every large greenhouse where cucumbers are grown bees are used to pollinate the flowers.

In the state of Washington a few years ago orchardists were renting colonies of bees at five dollars per colony to fertilize their apple crop. Every row and then very definite examples of the need of bees in pollination are shown. Mr. L. D. Stilson of Nebraska notes that in 1893 the apple trees in his orchard bloomed abundantly and the fruit set in great profusion. When the apples were about one-half to three-fourths of an inch in size they began to drop. An examination showed that very few seeds had been formed. Mr. Stilson credits the trouble to the fact that heavy rains occurred during the blooming period which washed the flowers clean of pollen. In Mr. Stilson's orchard, where he had some bees, he noticed that of the fruit formed, most of it was on trees in the im-

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mediate vicinity of the apiary or in line of flight of the bees on sunny days following the rain. With cherries he had had fourteen consecutive crops, while others without bees had missed three to five crops. Mr. Stilson also mentions that E. Whitcomb of Friend, Nebraska, in 1893 produced 300 bushels of cherries, while orchards equally as good, but out of line of flight of the bees produced none.

Mr. A. H. Hendrickson carried on some work for the California Experiment Station in 1915, 1916, 1917, in which he placed tents over trees and placed a colony of bees under several of the tents, while others had no bees. Observations were made on 50,000 plum and prune blossoms in 1915, on 87,000 in 1916. The trees under tents with bees set about 19 per cent, while the normal set in the field was a little less than 4 per cent. Mr. Hendrickson concludes that "both the French and Imperial prunes may be aided in setting fruit by the use of bees in the orchard during the blossoming period, provided the trees are in a normal healthy con-

dition. The absence of bees in the orchard may mean a low percentage of set with both of these varieties."

Prof. N. B. Waite, writing in one of the government bulletins on pollination of the pear, mentions that "the common honey bee is the most regular important and abundant visitor and probably does more good than any other species." "Pears require cross pollination, being partially or wholly incapable of setting fruit when limited to their own pollen."

Just how much good bees do in fertilizing cherries in Wisconsin is an undecided question, but on the Pacific coast bees are deemed necessary and there are printed records which indicate that some species cannot be grown without the aid of bees.

Dr. Gates, formerly with the bee department of the Massachusetts Agricultural College, reports that several growers in that state continually used bees to insure fertilization of melons. Greenhouse men who grow cucumbers are entirely dependent upon bees for fertiliza-

tion of the blossoms as hand pollination is entirely too laborious. Dr. Gates reports that one grower was known in Massachusetts who used upwards of eighty colonies of bees each year in cucumber greenhouses.

There are many other examples which might be given, but these are sufficient to show the value of bees in horticulture.

INJURY TO FRUIT BY BEES. Uninformed persons who see bees feeding on punctures in fruit usually come to an immediate conclusion that the bees are responsible for the injury, but such is not the case. It is not possible for bees to puncture the skin of fruit, because their mouth parts are not sufficiently sharp. However, once the skin of a fruit is broken, the bees gather around to suck up the juices which are exposed.

If you will carefully examine grapes or other fruit upon which the bees are feeding, you will usually be able to find a discolored area, showing where the skin has decayed following injury by some other insect, or perhaps a fungus growth.



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Endorsed by leading growers.
Write for catalog.

GILSON MANUFACTURING CO.
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Port Washington, Wisconsin

What Our Scientists Are Doing for Us

The annual report of the Wisconsin Agricultural Experiment Station for 1921-1922, recently issued, contains much of interest to fruit growers. Before reviewing the report as it pertains to horticulture it is well to state that whatever is therein stated is merely a review of *experimental* work and not statements of established facts. Much of the work will be repeated again and again to eliminate errors before it is published in bulletin form. The goal in science is not reached by leaps and bounds, but by steps slowly and carefully taken:

Studies in Apple Scab Control

(Wis. Agr. Exp. Sta.)

This season has been favorable for the development of apple scab. In studies at Madison and Sturgeon Bay, G. W. Keitt and L. K. Jones (Plant Pathology) continued the spraying experiments of the previous years and, in addition, extended them to the effect of adding adhesives, such as gela-

tin, glue, and calcium caseinate to lime-sulphur 1-40, and also calcium caseinate to bordeaux mixture 4-4-50.

The most satisfactory spray program of the season consisted of lime-sulphur 1-40, (with powdered arsenate of lead, 1 pound per 50 gallons) applied on the following dates: (1) May 12-13 ("pre-pink"), (2) May 18-20 ("pink"), (3) May 29-June 1 ("calyx"), (4) July 8-14, and (5) August 5-11. In most tests the results from dry lime-sulphur 4-50 were similar to that obtained with liquid lime-sulphur 1-40. Bordeaux mixture 4-4-50 controlled the disease satisfactorily, but as in previous seasons it russeted the fruit to an extent that made its use inadvisable. The lime-sulphur program in which glue and gelatin, respectively, were used as adhesives gave less satisfactory control of the disease than did the program of lime-sulphur without an adhesive. On the other hand lime-sulphur and bordeaux mixture, respectively, with the addition of calcium caseinate gave slightly better results than did these sprays without the addition of an adhesive. To determine the

commercial value of this process, further trials will be required.

Tests were also made to determine the advisability of substituting dust treatments for certain liquid applications. The results obtained in this work were variable, apparently depending very much upon the relation of the time of application to meteorological conditions. In some cases very good control of the scab disease was obtained, while in others it was very inadequate. Three applications of lime-sulphur followed by two of dust gave essentially as good control of the disease as did the five-spray program of lime-sulphur.

Controlling the Striped Cucumber Beetle

Satisfactory results in controlling the striped cucumber beetle were obtained during the past season in experiments by Mr. Dudley, Wisconsin Agricultural Experiment Station. Nicotine sulphate combined with hydrated lime, copper sulphate, and lime, unslaked lime, gypsum, and sulphur were used against the insect with good success.

A mixture of nicotine sulphate and hydrated lime containing 5 per cent nicotine sulphate was tested out five different times on cucumbers and squash under varying conditions of temperature, humidity, and wind. An average of 75 per cent of the beetles were killed. A mixture of nicotine sulphate and hydrated lime containing 10 per cent of nicotine sulphate, tested six different times under extremes of temperature, humidity, and wind, killed on an average 91 per cent of the beetles, varying from 83 per cent to 98 per cent. The best results were obtained in the absence of wind under high humidity and high temperature.

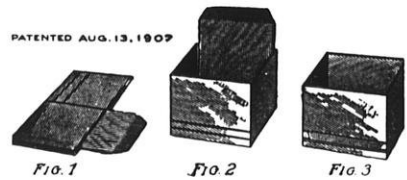
A mixture of nicotine sulphate and copper sulphate-lime (uncombined bordeaux), containing 10 per cent nicotine sulphate, gave an average kill of 86 per cent. It

(Continued on page 142)

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and white mixed, pkt. 10c; Annual Statice, mixed colors, 10c per pkt. One full pkt. each of Helichrysum, Gomphrena, Acroclinium and Statice for 25c. W. A. Toole, Garrey-nee-Dule, Baraboo, Wisconsin.

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ESCHRICH'S NURSERY, North Milwaukee, Wis., growers of ornamental nursery stock. Ask for prices and illustrated catalog.

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Skillet Creek Fruit Farm has for sale in season at roadside store apples, plums, grapes, homemade candy, etc. Not tourists' prices, but reasonable prices. Also nursery stock. Look for large sign on highway 12 just one mile southwest of city limits. L. B. Irish, Baraboo, Wis.

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to Buy
or
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A Postal Card Will Bring Our Samples and Price to You

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The BEST Seed Grown in Denmark and Awarded the Highest Honors in the Danish Government Trials

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We are the largest Cabbage Seed Importers in Wisconsin.

STANDARD SEED COMPANY

Peder Back, Owner, Racine, Wisconsin

Controlling the Striped Cucumber Beetle

(Continued from page 140.)
was found that a rather inert carrier of the nicotine sulphate, such as hydrated lime or gypsum, was preferable to an active carrier, such as unslaked lime, because much nicotine is lost by volatilization when it is mixed with an active substance.

It now appears that the striped cucumber beetle can be controlled by two or three thorough applications of dust containing 10 per cent nicotine sulphate (4 per cent actual nicotine). The first application should be made early in June or just as soon as beetles

have commenced to attack the plants. A duster having an arrangement for expelling dust with force is necessary for effective work.

Flight Experiments.—Continuing the work of last year tests were made with over 35,000 cucumber beetles in order to determine their length of flight. Results show that they had flown on an average about one-half mile each, so it seems probable that this insect seldom flies over that distance.

Civilization is simply a series of victories over nature.—Harvey.

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Fine collection Gladiolus, 50 cents dozen.
Six kinds Iris, two each, \$1.00 dozen.
Peonies for fall delivery, all best kinds at moderate prices. Write for prices and state kind wanted.

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One Dollar

- (1) Membership in The State Horticultural Society for one year.
- (2) A copy of the 1922 Annual Report containing 28 papers; official lists of fruits and flowers adapted to Wisconsin.
- (3) A copy of the 1920 Annual Report to first comers, to others the 1917 Report.
- (4) A copy of The Garden Book, 55 pages; the best garden book for beginners ever written.
- (5) A copy of "Native Plants of Wisconsin" by William Toole, Sr. 5 papers; native climbers, shrubs, trees, ferns, flowers, 54 pages.
- (6) Wisconsin Horticulture, a monthly magazine one year.

All for One Dollar: Currency, draft, money order or personal check but *not* postage stamps.

Once a member you are privileged to solicit memberships; commission fifty cents for each member secured. Remit to

Frederic Cranfield, Secy.

701 Gay Building, Madison, Wis.

Cherry Leaf Spot Investigations (Wis. Agr. Exp. Sta.)

From year to year new methods have been tried out to protect the cherry crop from the ravages of the cherry leaf spot disease, and various control programs were tested during the past season at Sturgeon Bay by Mr. Keitt and Mr. Jones.

As in former years, bordeaux mixture 3-3-50 proved to be the most satisfactory spray, giving excellent control of the disease when applied (1) just after the petals fell, (2) two weeks later, and (3) just after harvest. Simi-

Kickapoo Orchard Tract For Sale

Twenty acres, 18 acres planted. Two acres spring of 1913, 16 acres spring of 1914. Varieties mainly Wealthy, Mackintosh and Fameuse. A few Dudley and other varieties. Will sell undivided one-fourth interest for \$2200; one-half interest for \$4400. Terms Cash.

J. N. BIDWELL, Care Wisconsin Horticulture

701 Gay Building, Madison, Wis.

lar programs of bordeaux mixture 2-2-50, lime-sulphur 1-40 and dry lime-sulphur 4-50 failed to control the disease with full satisfaction. Gelatin (.25 pounds to 50 gallons), glue (0.5 pound to 50 gallons), and calcium caseinate (0.5 pound to 50 gallons) added as adhesives to bordeaux mixture 3-3-50 and lime-sulphur 1-40, respectively, failed to increase materially the efficiency of these sprays. Dust applications as in former years failed to control the disease satisfactorily but gave sufficient promise to warrant further trials.

Sprays for Anthracnose in Black Raspberries

(Wis. Agr. Exp. Sta.)

Experiments for the control of raspberry anthracnose have been continued through the year by L. K. Jones (Plant Pathology) following in general the plans of the two previous seasons; and a more extensive comparison of the effectiveness of bordeaux mixture and lime-sulphur in combination and with various adhesives has been made. The results in general confirmed those of the two previous seasons. Two applications of lime-sulphur alone controlled the disease for commercial purposes. The best results, however, were obtained by the use of two applications of lime-sulphur with glue, gelatin, casein lime, or saponin as an adhesive. In general, bordeaux mixture alone or in combination with the various adhesives gave less satisfactory control than lime-sulphur.

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WISCONSIN NURSERIES

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Give fools their gold and knaves their power;

*Let fortune's bubbles rise and fall;
Who sows a field or trains a flower
Or plants a tree is more than all.*

—Whittier.

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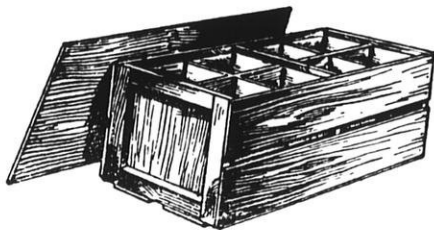
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Wisconsin

SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shrubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen. Order direct from a reliable nursery and save money.

Two applications of bordeaux mixture alone or in combination with the above adhesive gave satisfactory control of the disease in a commercial way. A third application of bordeaux or lime-sulphur about a week after the blooming period was beneficial in reducing the amount of the disease, but this spray was accompanied by severe foliage injury.



Berry boxes and crates, either in the flat or made up complete; Climax grape and peach baskets; till or repacking baskets; bushel and half bushel shipping baskets, and tree protectors at remarkably low prices.

Send for our circular and prices before placing your orders.

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Nitrate of Soda

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Write for prices from nearest distribution point.

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BOOKLET FREE—"What Nitrate Has Done in Farmers Own Hands."

S. H. Burton, Western Distributor
Washington, Ind.

Cucumber Mosaic Investigations (Wis. Agr. Exp. Sta.)

Investigations of cucumber mosaic have been continued through the year by Messrs. M. N. Walker and S. P. Doolittle, and it has been shown that this disease is carried over winter on the poke-weed, *Phytolacca decandra*, as well as on the milkweed and wild cucumber. The disease has also been transmitted to the pigweed and to the cultivated ground cherry. This makes it much more difficult to control the disease by

Distinctive Landscape Gardening



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the eradication of the plants on which it lives over winter.

Wherever is love and loyalty, great purposes and lofty souls, even though in a hovel or mine, there is Fairyland.—Kingsley.

A successful man has purpose.

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Have all the standard varieties as well as the newer sorts. Can supply you with everything in

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Let us suggest what to plant both in Orchard and in the decoration of your grounds. Prices and our new Catalog sent promptly upon receipt of your list of wants.

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WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, May, 1923.

Things You Should Remember

1. The Wisconsin State Fair and the preparation of an exhibit. Write to your Superintendent, Gus Dittmer, Augusta, Wisconsin, for details and a list of premiums.
2. To pack up those old bee journals and books for the Miller Memorial Library.
3. Wisconsin Beekeepers' Field Meet and Chautauqua, August 13 to 18, at Madison.
4. That if you are a 100% member, you will get a *new* member.
5. That the State Association has labels, letterheads, envelopes, and lithographed pails to sell to its members. Write the secretary for samples and price list.
6. That you must have a permit to move bees or used beekeeping equipment. Write Dr. S. B. Fracker, State Capitol Annex, Madison.

Wisconsin Is on Its Way

With the proper cooperation on the part of the members, the State Association can do a great deal to help dispose of the honey of our members. In going over the reports of the honey sold through the association we find that in 1921 several thousand pounds of extracted and comb honey was sold for several of the members. During the past season a greater amount has been moved for members. Our records show that 12,720 pounds of extracted and 9 cases of comb honey were sold, for which the association received \$63 in commissions. In addition, 9,720 pounds of extracted honey and 100 cases of comb honey were reported by members to have been sold as a result of the work done through the secretary's office in sending lists of members having honey to sell to interested buyers and for which no commission was received. The commissions received from members have been placed in the association treasury with the hope that this fund will be-

come sufficiently large to permit a state advertising program.

Just the other day one of the members wrote this office asking for a list of brother members who still had honey to sell. The list was sent him, and what was the result? Within six days after he had received the list, he reported having placed an order with a brother member. We do not know exactly how many of our members have purchased honey from one another through this exchange of names, since not all of our members have cooperated in sending in reports, but we do know that the amount reported sold is only a small fraction of the amount moved through this plan.

Cooperation *will* sell honey—there is no question about it. Read what the manager of the Texas Honey Producers' Association says in the following news item we have taken from the April News Letter of that organization:

"The demand for honey is growing every day and very little remains on hand among Texas beekeepers. Nearly every other state, especially those having no cooperative associations, have a large carry over stock. Wyoming and California especially have a large surplus and are hunting a market. Few actually realize the *marvelous* work accomplished by such organizations as the one in Colorado and our own. You may not feel the good that the Association does you, but when you compare the fact that Texas raises more honey than any other state and is the only large producing state that has cleaned up its crop, you will begin to see the value of such work as ours.

"Prices are ruling higher and we want to warn every one against selling his honey or making contracts until the Association names its price. The directors expect to meet on April 24th for this purpose."

What the Texas organization has accomplished a Wisconsin organiza-

tion can also accomplish. How? Not by beekeepers continually talking about working together, talking about cooperation here and cooperation there, then turning right around and cutting prices on a neighbor beekeeper, but *by beekeepers actually doing what they say should be done*. We can have a marketing organization, *we can have* a proper means of distribution of honey in Wisconsin, *we can have* stabilized markets, standard prices, uniform containers, and *we can carry* on an advertising program. When? Just as soon as the larger producers of Wisconsin are ready to back such an organization as our Texas and Colorado beekeepers have. Our beekeepers must not only back such an organization with their money, but also with their moral support. The following poem should have carried the title, "A Cooperation Truth!"

A COOPERATION FABLE

(By the Apiary Department Bussaw,
The Diamond Match Company,
Chico, Calif.)

Said a wise old bee at the close of day,
"This colony business doesn't pay.
I put my honey in that old hive
That others may eat and live and thrive;
And I do more work in a day, by gee,
Than some of the other fellows do in three.
I toil and worry and save and hoard,
And all I get is my room and board.
It's me for a hive I can run myself,
And me for the sweets of my hard-earned pelf."

So the old bee flew to a meadow lone,
And started a business all his own.
He gave no thought to the buzzing clan,
But all intent on his selfish plan,
He lived the life of a hermit free,
"Ah, this is great," said the wise old bee.

(Continued on page 66)

Wisconsin Beekeeping

H. F. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association

President.....	James Gwin, Gotham
Vice President.....	A. A. Brown, Juneau
Treasurer.....	C. W. Aeppler, Oconomowoc
Secretary.....	Malitta D. Fischer
Annual Membership Fee, \$1.00	
Remit to M. F. Fischer, Secy., Madison, Wis.	

Wisconsin Is on Its Way

(Continued from page 65.)

But the summer waned and the days
grew drear,
And the lone bee wailed as he
dropped a tear;
For the varmints gobbled his little
store,
And his wax played out and his
heart was sore,
So he winged his way to the old
home band,
And took his meals at the Helping
Hand.

Alone, our work is of little worth;
Together, we are the lords of the
earth;
So it's all for each and it's each for
all—
United stand, or divided fall.

News Items Taken from the Bulletin of the G. B. Lewis Company

In 1922, the Texas Honey Producers marketed \$95,601.08 worth of honey and \$16,660.58 worth of beeswax. They purchased \$23,345.40 worth of equipment at a saving to the beekeepers of \$2,674.44, and \$18,548.63 worth of glass jars with a saving of \$2,165.59, according to the report of E. G. LeStourgeon.

The General Superintendent of the Post Office Department rules, "Comb honey as well as extracted honey is considered a liquid and must be so packed that if the honey becomes detached from the wooden frame none of it can escape from the container."

They that will not be counselled cannot be helped.—Franklin.

Comb Building

H. C. DADANT, Hamilton, Illinois.

The most important requirements for successful beekeeping are: The beekeeper, acting with understanding and alertness, the queen and the population of her colony, a good nectar secreting location, and the modern beehive with well built nearly all-worker combs. The building of comb has always been a source of great interest to honey producers, even before comb-foundation came into use. Little was thought at first, however, of the great advantage of taking a hand in the building of the comb, since the bee alone seemed capable of building it. The first comb-building in which man took part was when he began to realize the uselessness of a large number of drones in the hive and the advantages of reducing the drone comb space to a minimum, securing in its place worker size comb. It is within the memory of some of us that, when transferring bees or removing undesirable combs, almost every square inch of good worker comb was saved and many combs were repaired or built up by a patchwork process, cutting out the drone comb and inserting pieces of the desirable worker cells. Occasionally we still practice this method when transferring bees to the modern hive from the common box or from other locations.

The habits of bees have not been changed by domestication or modern equipment and comb-building is not entirely within our control, even with the best equipment and practice. We will continue to find an occasional undesirable built comb, regardless of our efforts and aid to the bees. In nature, bees fasten combs well at the top or upper sides, and seldom at the bottom or lower corners. A rectangularly shaped comb, with square corners, fastened to the bottom-bar, does not conform to their nature. They do not like the regularity in the shape and arrangement of the frames. Drone comb can hardly be entirely eliminated from a colony for more than a period of time and passageways

and holes through and around the comb, so undesirable to the beekeeper, will continue to be made. A swarm, given its freedom, will first build worker combs but as soon as the bees reach a certain stage in comb building, the comb area increases too rapidly, the laying queen does not keep pace with it and drone cells are built. The use of burr-combs and propolis, the clogging of the entrance, and minor manifestations of their nature will continue to be expressed. Yet, with a knowledge of the behavior of bees and from examples of their comb building, we can now almost control the combs within the hive.

Frequent examples are found of worker cells being built on one side of a comb and drone cells on the other, while in the small sample I have here the bees did not build the cell bases regularly, nor to conform with the cell walls of the opposite side. This demonstrates that it is impossible to lay down hard and fast rules regarding the minor details of the honey comb.

The securing of combs entirely of straight worker cells, which will not sag and will be well fastened in the frame, is an important problem. Since the busy farmer or business beekeeper can make the best financial success only through the greatest possible production with the least labor and by making use of the best equipment he is interested in the solution of a problem of this kind. In fact, during the past few years a demand has come from honey producers for a more convenient and effective comb base or foundation. Artificial combs of foreign material of any sort have always proven costly and objectional to the bees. The resulting combs are sometimes good but the percentage of good combs is not large enough. The bees naturally persist in showing an aversion to any material except pure beeswax and beeswax must be carefully boiled and refined to retain its natural colors and properties to make the comb foundation most acceptable to them.

Although bees have been building combs from time immemorial, very little was done to guide their work until the movable frame hive was invented by Langstroth in 1851. It was several years later before comb-foundation was invented and not until about 1875 that A. I. Root and others made comb-foundation mills which led to the popular and profitable use of the beeswax honey comb base. Where formerly the beekeeper practiced cutting and patching combs to get more nearly 100 per cent worker cells, we now melt up undesirable combs entirely, substituting full sheets of foundation.

This has presented a new problem since the full sheet of foundation, it has been necessary to evolve a satisfactory reinforcement. Instead of allowing the bees to build combs from the top downward, adding a little at a time, we now give them several square feet of comb base upon which they work simultaneously throughout much of the area, and the rapidity with which this is usually done during a honey flow, together with heat and weight, calls for a reinforcement which will strengthen every square inch of the surface and prevent breaking down, stretching and the common sagging and other damage, and thus secure the greatest percentage of good combs, so much desired.

Looking back through the old issues of the bee journals animated expressions can be found on the use of comb-foundation. While the most successful bee men strongly and rightly advocated its use others practiced false economy in using a narrow starter instead of a full sheet. During those years and up to the present day many styles of frames and methods of reinforcement have been used. Today we require simple and effective methods.

There being no question about the value of good combs the problem is how to get the largest percentage of them, properly reinforced to avoid the common sag which occurs most frequently in the

upper one-third of the frame and to do so by a convenient method. Here the physical properties of beeswax are to be reckoned with. It melts at about 145 degrees and is soft and subject to distortion quite readily at a minimum of 90 degrees. In order to ascertain the best methods of reinforcement under field conditions, I tried, during the season of 1920, more than 100 combinations of vertical, horizontal and diagonal reinforcements in various styles of frames. From 50 to 100 frames of each kind were used for the tests carried out in the 9 Dadant apiaries during the spring, summer and fall honey flows. Records were kept of all of these. I have spent more time, probably, than necessary trying many materials and ways finally to prove the principles already demonstrated and partially practiced, in Dr. Miller's idea of vertical reinforcement. There are some objections to his little wood splint, which is made one-sixteenth inch square, placed vertically from top-bar to bottom-bar. No method of reinforcement, however, is entirely devoid of all objections. What we desire is the most simple and effective method, with minor objections reduced to the minimum, which will produce good combs in the largest percentage of cases. The principal objections to the splints are their size and the fact that they cannot be placed by hand or machined into the mid-rib of the comb-foundation, consequently there is oftentimes some bulging of the comb surface over them. Other minor objections to vertical reinforcements, when a steady honey flow or good comb building conditions are not present, are the occasional gnawing away of the foundation along wires or splints and some lack of brood rearing in those cells the reinforcing bars cross. However, longitudinal wiring methods are subject to those small objections also. These faults result in a certain percentage of undesirable combs but Dr. Miller said he preferred an occasional imperfection of this nature to the greater labor required and the very objec-

tional and prevalent sagging that results by the common longitudinal wiring methods. This conclusion is well taken and highly important.

Wood splints are porous and prevent a good adhesive surface. Following out this idea, wires were tried and adopted having irregular yet rigid shoulders of support. Hand made wired foundation was not difficult to construct in carrying our experiments on a few thousand sheets but proved expensive and commercially impossible. The securing of machinery and trained labor which would produce comb-foundation as good in every way as before and still have the desirable reinforcing wires built in the mid-rib of the sheet, was the greatest difficulty to overcome. It has been overcome, however, and wired foundation has been made adaptable to the style frame commonly used. Finally the frame itself has been modified to give the highest possible convenience and efficiency.

In circulars advising the use of the Wired Foundation which I have produced it is shown that no comb-foundation will produce good combs under all conditions. Comb-building under unfavorable conditions should be avoided, especially during a dearth or lack of nectar in the blossom or during a light, irregular honey flow. In fact, to quote Langstroth, "Honey gathering and comb building go simultaneously, so that when one stops, the other ceases also. As soon as the honey harvest begins to fail so that consumption is in advance of production, the bees cease to build new combs, even although large portions of their hives are unfilled. When honey no longer abounds in the fields, it is wisely ordered that they should not consume, in comb-building the treasures which may be needed for winter use."

Let us summarize the necessary conditions and requirements considered and found good practice, under which good comb building will take place.

1. Hives should be nearly level.
2. The sheet should hang

smoothly in the central plane of the frame. With a little practice and care this is easily and quickly secured. A convenient assembly board is advisable. The sheet should at least be supported by a board or cardboard about one-half inch thick inside the frame which should lay horizontally during assembly.

3. Foundation should be well fastened in the frame and where no longitudinal wires are also used with wired foundation the top fastening should be secure. This top fastening is obtained by driving several two penny fine cement coated nails from the side deeply into the wedge, firmly pinching the upper edge of sheet and wires in the top-bar, from which the weight of comb hangs until built out. The new style frame with heavy wedge cut from top-bar is preferable. Sheets made large enough to project into a slotted or split bottom-bar are very effective and generally preferred. Old style frames with one piece bottom-bars require one or two longitudinal wires. In hot weather, especially in southern climates, when desiring to haul, ship or extract freshly built combs of honey or brood, more reinforcement is needed than under ordinary conditions. Combs freshly built are always tender and should be handled with care. Combs 30 to 60 days old become much stronger and improve with age.

4. Foundation should be kept in the box until needed in the hive, if possible, and not handled when very cold or warm. When the large beekeeper must put up frames with full sheets of foundation ahead of time they should be carefully stored, hanging in a vertical position where the temperature will not reach near 90 degrees or more. This heat causes the foundation to soften and stretch between wires, causing a wavy or washboard effect which does not contract when cooled again. I have here samples of this sort of trouble (show here frames as examples). Slight waviness is not bad, however, as it disappears after the comb is in use a time.

5. Foundation should not be furnished to bees faster than they can make use of it for good comb-building. Before or during a small irregular honey flow or as soon as the honey flow slackens, bees stop normal comb-building, and sometimes gnaw away foundation along the wires, the bottom-bars and other places for dry comb building or burr-combs in other places. The places cut away are usually afterwards filled in with comb, especially drone comb, which proves the honey flow was not good when the damage was done. The beekeeper running out apiaries sometimes finds it impossible to reach all apiaries at the proper time for starting new combs and may resort to a little feeding of sugar syrup or honey or the furnishing of a little surplus beeswax made available to them in thin flakes or shavings, or the painting of liquid beeswax in a few places on the foundation.

6. There appears to be a difference in the work of comb building among colonies under the same conditions. Cross or nervous colonies seem to produce the majority of imperfections in combs.

7. There is an advantage of having combs drawn out in supers or above the brood nest. This is not necessary, but will increase the percentage of good fastening to the bottom-bar. In a bee tree, or under natural conditions, combs are not fastened to anything by bees at the lower edge and it is no wonder they like to make a passageway above the bottom-bar.

8. The use of well made, full print, worker cell size foundation sheets made of pure, clean beeswax, with as little reinforcement as possible, is important. Sufficient reinforcement to make for convenience in assembly and a good non-sag comb is all that is necessary.

9. Medium brood grade foundation is generally much preferred to light brood. Medium brood, although a little more expensive in first cost than light brood per frame, saves the bees secreting much wax, which is returned to the beekeeper

in more honey ten to one, as it is estimated that 10 pounds or more of honey is consumed to produce a pound of wax. It is seldom that bees secrete a surplus of wax, and judging from the fact that only about 12½% of the total brood foundation used is light brood and that many beekeepers specify not more than six sheets per pound, there is no real economy in light weight foundation.

There has been one additional convenience tried and found useful in the make-up of the foundation sheet. This is a square hook or right angle bend of the upper one-eighth inch edge of the sheet and ends of wires. This has not proven necessary, although at an additional cost of one cent per pound in manufacture would make the assembling and fastening to the top-bar simpler and fool proof. This idea has been submitted to several beekeepers, but not considered necessary.

Comb-building in comb-honey or chunk honey production needs little attention here. Foundation made of pure, well cleaned beeswax is, of course, required and a full sheet, well made, fastened in the honey section or frame by well known methods produces desirable results and no further improvements are demanded or can likely be made.

(This paper given at annual convention)

Dr. Fracker Reports

"About sixteen men took the examination for Deputy Apiary Inspector on January 27 and fourteen passed and have been certified for appointment. This is about twice the number of available vacancies for summer."

"The Executive Committee of the American Honey Producers' League has approved a design for a trademark and plans for its use on labels, bottle caps, etc., are going ahead rapidly."

"The League is working up a card index to the big producers and buyers of honey in the United States and names of about 300 producers of honey in ton lots and over have already been received."

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Song Birds vs. Fruit Growing

We admire the enthusiasm of bird lovers. They are always on the job, and, while always persistent in their plans for the preservation of bird life, are rarely obnoxious. So popular is the subject of bird preservation and so general the love of song birds that there is no more certain road to unpopularity than to merely suggest that there may be two sides to the question. It is doubtful if any normal-minded person could be found who would advocate the complete destruction of song birds even among fruit growers who have suffered severely from the depredations of feathered songsters. The most any would ask would be that Audubon societies and others refrain from urging the further enactment of drastic state and national laws and to agree to a rational enforcement of the laws now standing. This is a tremendous big country and, aside from a few fundamental things, such as the protection of life and property, etc., any law meant to be observed by 110 million people over hundreds of thousands of square miles of territory needs to be pretty carefully considered. To be specific: In the open country and in unsettled regions there are just about enough birds to go around. All enjoy their presence and no one is injured. No one aims at either their destruction or their preservation; nature keeps the balance right. In most small cities and towns this also holds true. In Madison, for instance, the increase in the number of cats seems to keep pace with the increase in birds and we may have both song birds and gardens.

In Minneapolis the case is different. There there are large wooded parks and many very active bird protective associations. Also

every kid makes bird houses; also further, forests adjoin the city and every robin and thrush in the city seems to have sent word to all his relatives in the north woods of Minnesota that the gardens are fine in Minneapolis, the berries fat and juicy. The result is that gardens suffer most outrageously. Professors in the agricultural college will tell you, in whispers, that they are unable to get even a mess of peas or a tomato from their gardens. Gardeners in other cities suffer equally.

Fruit growers often suffer great losses, but rarely say anything through fear of being considered stingy or worse. It sounds very pretty and touches a popular chord to say, "The birds protect your crops; will you deny them a cherry?" Certainly not as long as the cherries belong to somebody else. It seems to be common trait to be liberal with money—when it's not your own.

Mr. F. V. Holston, a fruit grower of Bayfield, after losing the greater part of his crops of berries and cherries for several seasons, finally reached a point where he felt justified in seeking a remedy. In October, 1921, he addressed the following letter to the attorney general at Madison, which was later printed in the Bayfield Press:

Dear Sir:—I wish to call your attention to conditions existing here and which should be remedied.

We have what promises to be, and in some particulars is now, a very promising small and tree fruit district.

The laws, or at least as they are being interpreted by our game wardens, is working an extreme hardship on us, driven several out of the business and threatens to wipe out cherry producing entirely.

Possibly the forest growth afford-

ing shelter and nesting places puts us in somewhat different position than the older portions of the state, for which the game laws were apparently enacted.

While the birds do considerable of damage to our strawberries and raspberries, two of our staple crops, this is not excessive, as the young birds have not yet hatched out or are too young to get into the orchards.

But following these fruits, come in their order cherries, apples and the blackberries, on which these robber birds appear to obtain their entire subsistence.

In my case, while the cherry crop was very light, I had every reason to expect over 100 sixteen-quart crates. I picked 50.

From every branch from which we picked fruit there were in excess of the number picked, stems with the pits attached from which the birds had removed the pulp, in many cases leaving none whatever, while not in a single instance did we find a branch from which the birds had taken no fruit.

A neighbor of mine suffered a like experience, only he picked 100 crates where the crop should have easily exceeded 200.

With cherries netting us, through our fruit association, \$3.19 per crate, it means quite a monetary loss, easily the difference between a profitable and unprofitable business.

A near neighbor had several rows of blackberries that wintered in splendid shape, blossomed freely and set an elegant crop. This patch was very close to his house and he kept close watch on it and began picking just as soon as they commenced to ripen. By following this practice and picking 5 or 6 pints a day he succeeded in marketing four 24-pint crates. He had cash orders

for over 25 crates, which was a reasonable estimate of his crop.

After securing these four crates he never succeeded in picking sufficient for a pie, the birds, particularly the robins, picked them as fast as they began taking on color and long before they were ripe.

In my orchard, while other birds took some, the robins took over 90 per cent.

Our wiseacres and game wardens have only one argument—these birds consume innumerable insects which otherwise would prove a menace to our orchards.

How are we benefited in protecting our orchards against insects if it only means to grow more fruit for the benefit of the robins?

If I deliver a crate of these cherries to one of our merchants and he exhibits them in his show window, some auto bandit rushes in and grabs the crate and tries to make his getaway with it. If the merchant were prepared he would shoot such bandit to death and be well within his rights. What is it that makes it a crime to attempt to steal one of my crates in the hands of the merchant and renders me subject to criminal prosecution if I take the necessary steps to prevent the stealing of 50 to 100 crates out of my orchard?

There are hundreds of our nicest, choicest, largest and best apples delivered to the canning factory at \$1.00 per bushel which, were it not for the work of the birds, our association finds a ready market for at \$2.00, \$2.25 and \$2.50 per bushel. This means a steady loss to the fruit growers of \$100.00 to \$150.00 per day throughout the apple season. Are we not being called upon to pay a pretty big price for these Audubon pests?

Our game laws are the result of a

long-continued propaganda by our game wardens, aided and abetted by our Audubon friends and sympathizers, many, if not most, of whom will go into an equal ecstasy of delight over the cawing of the crow, shriek of the yellow hammer or chirp of the robin. Robins do not sing while eating fruit; they are always too full for utterance. They sing only in the spring when mating or nesting and preparing the way for their further depredations.

In some orchards the crows are very destructive to both cherries and apples, but in all orchards the robin is the principal offender, with the yellow hammer or flicker a close second as far as the apples are concerned.

Now, Mr. Morgan, it seems to me that we should be allowed to go armed and shoot and destroy these robbers on our own premises or employ others to do so in the defense of our property.

I am sending you by this same post a carton of apples showing the manner in which the birds work, the kind and quality of fruit they seem to choose, always the largest and brightest colored.

Respectfully,
Frank V. Holston.

Madison, Wis., Sept. 27, 1921.
Mr. Frank V. Holston, Bayfield.

Dear Sir:—I have your letter of the 16th, also the carton of apples showing the work of the birds on the apple crop.

We have discussed this matter with the Conservation Commission and they are inclined to do anything that is in their power to aid in the situation if some method can be devised whereby the law will permit them to do so.

You understand that the state authorities are only a small part of

the force that is attempting to perpetuate bird life. The federal authorities are very strict in their enforcement of the rules and regulations with reference to these birds and before the state can do anything substantially to help the situation along the lines you suggest, it would be necessary to obtain a similar permit from the federal authorities.

I would suggest that you ought to lay the matter before the federal authorities and get them to make some concessions to the fruit growers of your section of the country, then the state authorities can act accordingly.

After my interview with the Conservation Commission I feel quite confident that they will be glad to cooperate with any concession that the federal authorities might grant to relieve the fruit growers of the bird pest. Very truly yours,

Wm. J. Morgan,
Attorney General.

From this it will be seen that within a few miles there may be some doubt about the wisdom of enforcing strictly a state law. Who shall say that Mr. Holston would be in the wrong if he deliberately set about lessening the number of song birds in his locality?

When it comes to federal laws the situation is even more complicated. We may not kill a bobolink in Wisconsin, but in the South a bounty is set on their heads. For be it known that "Robert-O-Lincoln," so much praised in song, is no other than the destructive rice bird of the South. You see, we get into an awful mess when we allow sentiment to outrun common sense.

Let us continue to urge youth to refrain from wanton destruction of song birds and their nests and do

(Continued on page 159)

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

The Editor Says:

The poet says: "In the spring a young man's fancy lightly turns to thoughts of love."

In the spring—judging from observation—the women are thinking of spring sewing, house cleaning, and making garden. "Rather late in the summer for these things," do I hear someone say as they read this?

Once again I must remind you that "pages" like gardens must be prepared weeks ahead of the day you expect to pick the flowers or read the printed page.

Our president, though she has been both ill and busy, sends us some aids and few of her recipes.

Mrs. L. G. Kellogg, whom I long ago decided was one of the dependables, sends a very interesting letter. The "do something to interest the children" is the part that especially appeals to me, for I believe there is nothing you can teach children that will be of more benefit to them later in life or give them more pleasure than a working knowledge of a garden. A child is naturally optimistic and a very few radishes or flowers approaching perfection will please him, so the lesson of "the best-laid plans which go awry" and the fact that the choicest seeds do not always come up, is not quite so bitter as it will be later in life. With a little wise guidance, a child learns perseverance, patience and forethought, as well as an appreciation of beauty, form and color. If you wish to gain appreciation for the honorable profession of Horticulture, if you wish to see more, better and beautiful homes, you

must start training the children now. You cannot wait until sometime when it is more convenient. Children are like gardens, "pages" and friends. Now is the time to train them or plant them, or do something for them. By and by may be everlastingly too late.

Some Good Suggestions

Dear Sisters of The Women's Auxiliary:

As I look backward to the time of our summer meeting, I am reminded of a delightful drive over the country to Sturgeon Bay, of pleasure derived in picking up passengers on the way. The delicious meals served at the Club House, and a most successful luncheon served by the Sturgeon Bay ladies at this attractive resort.

We were also very pleasantly entertained with papers of interest pertaining to Horticulture at the Business Men's Club Rooms. As our interests were similar we met and parted as one large family.

The woman who had never grown a plant or flower, who had never hesitated in life's journey to consider the finer touch of our door life, may not have been as interested in God's works, among flowers and plants, as we were—thereby requiring a diversion in the programme. I believe that not only mothers, but the fathers as well, could be attracted through their children, to our summer meetings. Would it be possible at our next summer meeting to devote the first evening to a program—one composed of music, readings, and a two-act play, all given by the children and young people living in the vicinity of wherever the summer meeting is to be held, thus drawing out not only the parents of the children taking part, but their friends as well? The next morning, in a special room for the ladies, the

Auxiliary ladies should have something of interest for those mothers, in giving a few especially fine receipts. Papers on how to lighten the house duties or on subjects pertaining to the care of children. This not only brings out the parents to our meetings, but creates a desire among the boys and girls to have plants and flowers in the home, also helping them for the pure and true things in life.

With kind greetings to Auxiliary Sisters.
Ida M. Kellogg.

A Housewife's Help

There is nothing more convenient for a woman with no help than a small table at her right hand from which to serve the dessert and tea or coffee. If there is a shelf underneath the table, so much the better, as then the dishes that have been used can be slipped out of the way, without a journey to the kitchen. More fortunate is she who has a serving wagon or wheeled tray, as this may be used for the same purpose, and is additionally convenient in conveying the dishes and food to and from the kitchen. It will also be found useful in many other ways about the household, saving steps and strength.

My wheel tray is always very much in evidence during canning season and on ironing days it is a most useful adjunct to the ironing board, especially when those unmanageable, long, white linen tablecloths have to be ironed.

Flora Toole.

Among the inexpensive inventions in my kitchen is the potato baker. It is made of heavy wire, raised slightly so it will not rest directly on the oven floor, with twelve upright pointed pieces at regular intervals apart to hold the potatoes in place. The heavy crusting so often seen on the bottoms of baked potatoes is thus avoided and they also cook evenly without the necessity of being turned. A loop at one end of the rack aids in removing it from the oven without the disagreeable accompaniment of burned fingers.

F. T.

A Good Salad Dressing

My favorite salad dressing is as follows:

One tablespoonful each of sugar, mustard, salt and melted butter; two eggs, one cup of cream, and one cup of vinegar. Mix the mustard, sugar, salt and butter together, add the beaten eggs, the cream and the vinegar. Put this in a double boiler and cook until creamy, stirring constantly. Milk may be used instead of cream by adding another egg. When this is cool pour it into glass jars, screw cover down tightly and keep in a cool place. It will keep for months, and may be somewhat varied by the addition of a little whipped cream, sweetened or not according to taste and the nature of the salad ingredients. F. T.

More About Celery

Celery is a moisture-loving plant, and it is frequently necessary to employ irrigation unless the soil is naturally moist. Three systems are employed: The overhead sprinkler system, the furrow or surface system, and the underground or sub-irrigation system. It has been found that the first of these is generally the most adaptable. Since the plants are greatly injured by wilting, successful growers watch the soil moisture conditions closely and apply water before any wilting of the leaves occurs. Some successful growers in the northeastern district do not use irrigation. They depend upon having the soil in good condition and well supplied with organic matter, and upon thorough and frequent cultivation.

Celery is subject to the attacks of diseases from seedbed to market. Damping-off is the principal danger in the seedbed, but this can usually be controlled satisfactorily by care not to overwater and by giving plenty of ventilation. Plants in the field suffer from early and late blight, bacterial blight, Sclerotinia

rot, and black-heart. There are rots that attack the product in storage or in transit. Blights spread rapidly during periods of moist and sultry weather, and even during bright weather, when the plants are growing rapidly, spraying is necessary to be on the safe side. The storage blights or rots usually have their origin in field diseases. Control is based upon crop rotation and spraying with Bordeaux mixture to prevent them. A reading of the bulletin will give a thorough understanding of the approved methods of control.

RESULTS OF EXPERIENCE

The experience of many successful growers and the results of experimental tests on blanching, harvesting, storing, and shipping are given in considerable detail. Although it is an expensive crop to grow and market, most growers have paid little attention to cost accounting, and conditions vary so much from year to year and in different regions that it is difficult to give figures of real value. The principal items of expense are: Interest on investment, plowing and fitting the land, drainage and irrigation, fertilizing, growing the plants, setting and cultivating, spraying, cost of boards or paper used in blanching, labor, selling costs, and washing. It is safe to assume, says the department, that the grower who is not making a profit of from \$200 to \$300 an acre or more is falling short of his goal, but the only way to know what profit is being made is to keep a careful cost account to balance against the returns.

A Farmer's Prayer

The following, known as "A Farmer's Prayer," which has been running in many of the papers of

the middle west, originated in Garden County, Nebraska, so it is said.

"Lord, I am only a farmer. Thou knowest that when wheat was \$2 per bushel and I had flour and sugar in the house and cake and pie every time I wanted it. I was not satisfied and voted for a change.

"Thou knowest that I wore a Harding badge and was faithful in all things to G. O. P.

"Even as Thou knowest that I believed in the dawn of the new day and that wool would advance in price that I would get \$3 for wheat and 20 cents for my pork.

"Lord, two years have gone by never to return and I am too poor to buy the necessary Rockefeller for my Henry; still I wear a Harding badge, but it's on the seat of my overalls.

"O, Lord, I am thankful for one thing, that Harding has been able to make jackrabbits taste good in the summertime. I pray Thee that Thou wilt keep them replenished so that I shall not want.

"I am glad, O Lord, that Thou has prospered the railroads, that they have been able to keep up their freight rates and when my corn would not pay the expense of gathering, and I pray Thee that Thou wilt continue to uphold Mellon that he may be able to collect for years interest on the funds of his own bank account, for it is a righteous course.

"Teach me to pray: Our Father who art in Washington, Harding be his name; his kingdom come, his will be done, even to beating the soldiers out of a bonus. Give us each day our daily corn bread, that Wilson tried to make us eat for two years and Harding had us eating in three months, and lead us not into temptation to vote for a democratic president, for Harding got all the power, and Mellon got all the money, Rockefeller all the oil and me the patched trousers for ever and ever. Amen."

THE FLORISTS PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

Florists' Prices

There are times when the public want flowers and want them quick, out of all proportion to their general wants. Shall the florist say he does not have them and should not be expected to furnish such an unusual amount on such short notice? Or must he foresee and make great expenditures in preparation for such unusual demands?

It is well known that the football receipts covering at most a period of six games pays for the entire athletic program of our universities, and that football coaches get large salaries in comparison to track coaches. Prices of games have continually raised and it is a problem to get sufficient seating capacity at the fields. In track events, where athletic training reaches its peak, and the finest specimens are evolved, the attendance scarcely pays for the ribbons awarded for the third and fourth prizes. The athletic program contemplates "making hay while the sun shines."

Similarly, the churches emphasize their Lenten season, and accession of members and the replenishing of the coffers during this season carries the church for the rest of the year. During the summer when nature beckons to the out of doors, the pastor finds himself with sufficient funds to take a long vacation and likely as not the church is closed for the summer vacation period.

All businesses to continue must have a certain amount of money and sufficient sales to carry them over inactive periods. Non-perishable goods can maintain an even

tenor of prices. Perishable goods must be handled when the demand is best. How often have we railed against the wanton destruction of fruits in Michigan that would have brought a price in the Milwaukee markets. When the fruit dealers are far away from us in space they are likely to be also far in mind. The California fruit growers association represent a combination that has boosted the price of oranges till we hardly recognize them as necessities any more. And yet, we credit their fairy tales of frost or blight and pay the great advances feeling that it is just our luck. We even advise our Wisconsin horticulturists to combine for getting a more uniform price, which can mean only a higher price for their product. If they do not organize their business will not reach a plane of stability. It reminds me very much of a photographer out on 57th street near Jackson Park in Chicago. Across the street for some time was a cut rate finisher, who finished himself by the cut rates. A customer not finding the cut rate man drifted into the one that stuck, and inquired prices for finishing. She was not satisfied with the rates quoted and mentioned the prices across the street. The manager countered with the question "Where are they now?" And this would be a proper question for the florist to put, were he not to "make hay while the sun shines."

Perhaps there are businesses that are handling a more perishable product than cut flowers, but not in our latitudes. The party who peddles snowballs in Hades doubtless has

to dispose of his product more quickly. Many people do not stop to consider the immense amount of planning and work necessary to supply peak demands. The expense would never be justified if prices were always uniform. Consider one grower that furnishes the largest amount of stock during these rush periods in Milwaukee. He has two eighty acre farms that do nothing but furnish fertilizer for his greenhouses. All of the crops that are raised on these farms are fed into steers that are kept on cement yards. Fertilizer for the farm is purchased from the stockyards, because the quality of the manure produced on the farm is too high to use on farm crops. It must be used in growing valuable crops. Where twenty thousand cyclamen are potted at one time and repotted several times to bring to maturity, the labor element and heated space alone costs considerable.

The law of supply and demand functions just as inexorably in the florist's business as it does in anything else. We radio fans make a deposit on tubes at high prices, so that we may not be delayed in trying some new hook-up. When fifty thousand people are wanting the same thing, the factories are going to try their best to make them and not on any cost plus ten per cent basis either. The special holidays find an inordinate demand for flowers. We personally went to one of our friends who had a store full of carnations three days before Mother's Day and tried to buy some. But they had none for sale. They were in honor bound to take care of their regular customers, and knew they would fail by thirty thousand blossoms. The question is, do these people who only enter the market

on these rare special occasions have rights in the matter of price that the florists are bound to respect? Or, does their duty lie first in taking care of those who are their regular customers? If prices were uniform the entire year around, the florists would be much better satisfied. The farmer through his farm bloc is trying to get a uniformity of prices, but the florist has no such organization, nor is his business of the prime importance that would warrant his organization. He caters to the esthetic side of mankind, and must develop his market by suggestion through advertising.

The writer may have a peculiar slant at these seasonal high prices, but knows that without these peaks of demand there would be much less to be had in between times, and that there would be considerably fewer florists than there are now, if the laws of supply and demand were inoperative. So, much as we would like to console the public, our verdict will have to be in favor of the florists. They are only following the laws of self-preservation.

Huron H. Smith.

In Farmers' Bulletin 1306, Insect Enemies of Chrysanthemums, by Charles A. Weigel, entomologist, the most destructive of these pests are described and control measures are suggested, together with formulas for insecticides and fumigants. The bulletin, which is of interest to florists, gardeners, and extension entomological workers, may be obtained on application to the United States Department of Agriculture, at Washington, D. C.

Combating Anthracnose of Muskmelons

If muskmelons become disfigured by roundish, light-gray spots which later become sunken and marked by concentric rings of pink or black dots, the field is infected with the destructive anthracnose, a fungous

disease that also attacks cucumbers and watermelons, living from one year to another in the soil on plant refuse. It may occur in any region of the United States, but usually most damage is done where warm weather is accompanied by high humidity. All parts of the plant are attacked by the fungus, which greatly reduces the yield and may even destroy whole fields. Affected melons bring reduced prices and may even be unsalable. They may look well when picked, but develop the disease before they reach the consumer unless they are given special care and are hurried to market.

According to Department Circular 217, "Anthracnose of Muskmelons," just published by the United States Department of Agriculture, crop rotation is the best means of controlling anthracnose. Muskmelons should never be planted on a field that has grown a crop of anthracnose-diseased cucumbers, muskmelons or watermelons the previous year. However, the severity of the disease may be reduced by planting disease-free seed, or by disinfection of seed, and by thoroughly spraying the vines with Bordeaux mixture.

The seed may be disinfected by soaking for five minutes in a solution of mercuric chlorid, one part to 1,000 parts of water, after which it should be washed thoroughly in running water and dried. The Bordeaux mixture is made of four pounds of copper sulphate, four pounds of stone lime and 50 gallons of water. Spraying may prevent an outbreak of anthracnose or check it if already started, but it must be frequently and thoroughly done so that both sides of the leaves are kept covered with the spray mixture.

Bacterial Rot of Cucumbers

Cucumbers frequently are made unsalable or greatly reduced in value as a result of a disease known as bacterial spot, or angular leaf-spot. United States Department of Agriculture Circular 234, "Bacterial Spot of Cucumber," discusses the disease.

Bacterial spot appears on the fruits as round, water-soaked, translucent spots that do not reach far beneath the surface. Organisms of decay, however, may gain access through these lesions and destroy the entire fruit.

The seeds carry the infection, which accounts for the wide distribution, but which also makes control measures comparatively easy.

To avoid loss, affected fruits should be disposed of quickly, as various organisms of decay are likely to enter through the wounds. If packed dry and kept cool, the development of bacterial spot may be retarded. Good ventilation during transit is important.

Seed disinfection combined with crop rotation is the most satisfactory method of reducing loss. Spraying alone is not recommended for the control of this disease, but 4-4-50 Bordeaux mixture thoroughly applied is an effective check. Seed treatment consists of immersing the seed in a 1 to 1000 mercuric-chloride solution, which may be made from the standard tablets sold by druggists. The solution must be made in a glass, earthenware, or wooden receptacle. Great care should be exercised, as it is very poisonous when taken internally. Plants grown from treated seed on soil new to the crop are likely to be free from the disease unless infection occurs from diseased fields near by.

Misbranding a Serious Offense

The federal food and drugs act does not require that fruits and vegetables be graded or that the grades be stated upon the packages, but if the packages bear a statement regarding grade, the statement should be true. Any untrue statement on packages of fruits and vegetables shipped within the jurisdiction of the federal food and drugs act, or in papers accompanying such shipments, violates the provisions of the law.

A first offense is punishable by a fine of \$200 and subsequent offenses by \$300.

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Summer Meeting

The 1923 summer meeting will be held in La Crosse, August 15, and 16. No doubt some of our older members will recall a former meeting at La Crosse, August, 1909, and wonder why we are going again. The attendance at that meeting, aside from the officers and executive committee, numbered the grand total of one (1). One solitary farmer was on hand promptly at the opening of the afternoon session, but escaped within an hour.

Lots of things have happened in the intervening fourteen years, most of them within the few years Mr. Spreiter has taken over La Crosse county as his hunting grounds.

There are several reasons why La Crosse is a good place to meet.

It is one of several counties where the newer development in fruit growing in Wisconsin, the renovation of the farm orchard, may be seen to advantage. This purely co-operative move among farmers for better fruit is remarkable and by all odds the biggest thing in horticulture in recent times.

We will go to La Crosse August 15 and 16, and see for ourselves just how a spray ring works.

La Crosse county has eight active local societies. It is unlikely these societies will send delegates, but rather will come en masse. They will be glad to see you, you will be glad to meet them.

There is another, and not the least reason why La Crosse was selected—the scenic beauties of the county. There is too little room here to describe these, but any of our members who have not read Hamlin Garlands's "Main Traveled Roads" and "The Return of a Private" should do so before leaving for the meeting.

There are many other good reasons why you should attend, but these will be disclosed later. Don't wait for a special invitation. None will be issued. Everybody in Wisconsin is invited and everybody will have a good time. Don't be concerned about the program. None will be printed.

On Wednesday, August 15, we will meet to discuss our troubles.

Thursday will belong to Mr. Spreiter and the La Crosse societies and I am sure no one doubts that it will be a big day. So come and bring your friends.

The Striped Cucumber Beetle

That universal pest, the striped cucumber beetle, so well known to every gardener as to need no further description, is not only the

dread of the gardener but no less to those who set in more or less easy chairs and are supposed to know everything. Long before the amateur has planned his garden, long before winter's snow has gone, the entomologists and horticultural experts (?) make ready for the ever recurring avalanche of questions by letter, by wire, by telephone and personal inquiry about the striped cucumber beetle. Sometimes in our sleep this beast grows to monstrous proportions, seven feet tall, twelve feet from tip to tail, with eyes of fire and claws of steel tearing at our vitals until we awaken in terror. But worst phantom of all is the one that attacks us in our waking hours. So far no efficient control has been found for the beetle.

Last year we were ordered by the U. S. Department of Agriculture experts to cover the plants with Bordeaux mixture; that would be a sure preventive. It was not, it is not. Now comes another sure remedy from the same source, nicotine dust. To prepare 12 pounds of nicotine dust, sprinkle on 9 pounds of kaolin, 3 pounds of lime, 8 fluid ounces of Black Leaf "40", a concentrated nicotine compound.

The following directions are given for preparing the dust:

"In the preparation of this dust it is very important that the Black Leaf '40' be thoroughly mixed with kaolin and lime. This can be accomplished by first mixing and sifting the kaolin and lime, then combining the required amount of Black Leaf '40' with the dust, adding the Black Leaf '40' slowly and mixing it thoroughly. The Black Leaf '40' can be added to the dust by the use of any convenient sprinkler. A pint fruit jar with a metal top from which the porcelain has been removed, punched with holes by the use of a 6-penny nail, makes a good sprinkler. After the addition of the Black Leaf '40' the

mixture should be run through a fine sieve, 20 meshes to the inch, with the aid of a brush. This last operation should be repeated at least three times. Be sure that all the material is worked through the sieve, since if this be neglected a large quantity of the Black Leaf '40' may be lost. Cover the leaves, top and bottom, with the dust and sprinkle a liberal portion on the ground under the plants."

If this proves a sure cure, we really ought to set aside a (cucumber) day of thanksgiving and a feast wherein cucumber is served instead of turkey. If it doesn't, we will hang the promoter of this scheme.

P. S.—Try soot or road dust.

Dunn County for Apples

The editor of the *Dunn County News*, published at Menomonie, asks for an opinion on the suitability of Dunn county lands for orchard purposes. The question was prompted no doubt by the knowledge of our trial orchard at Weston which is located on one of the ridges in western Dunn county. The answer may be of interest to readers outside of Dunn county.

There is no lack of suitable land for apple orchards in Wisconsin; there are millions of acres of perfectly good land waiting for trees. Out of these millions there are several thousand acres in Dunn county peculiarly fitted for this purpose.

One essential factor is drainage, soil drainage, the meaning of which anyone can readily comprehend, and air drainage, not so generally understood. For best results apple trees should be planted where a free circulation of air is assured. It is conceivable that this might be found in certain valleys or lowlands, but not so likely as on elevated lands. The ideal locations then for or-

chards are the flat tops of ridges with the accompanying valleys into which the cold air drains in spring and fall. These conditions are met exactly over a large part of Dunn county, especially in the region west and southwest of Menomonie. To these add a fertile surface soil underlain by a deep clay (moisture holding) subsoil and we have almost ideal conditions.

It is the policy of the State Horticultural Society to encourage the planting of apple orchards in this state in sections where conditions are well adapted to the business. We therefore urge the planting of orchards, thousands of acres of orchards, on these clay ridges.

While I would prefer that orchards should be planted by men who know the business thoroughly I cannot agree with your correspondent when he says: "It is my general opinion that it is better for people who do not know the orchard game to keep out of it." It would have been quite as reasonable for him to have said a few years ago that young men who naturally know nothing of married life should keep out of the game, but they don't do it and most of them get along very well. They learn as they go along and that is what the fruit grower does. Urge some of your young men up there who are quite fed up on dairying who have been milking cows 730 times a year, working from May to October to get feed enough to keep these same cows from October to May, to get hold of 40 or 80 acres of this ridge land and plant 200 to 300 trees the first year with berries as a side line, increasing the tree acreage from year to year until 20 to 40 acres are planted.

Wisconsin is a great dairy state

and the lure of immediate cash returns is great, but unless we are careful it will come to be that every boy born on a farm in Wisconsin will be predestined from birth to be tied to a cow's tail all his life.

Superior Varieties of Blueberries Developed

The little old swamp blueberry at one time found growing wild only in marshy, naturally acid soil, for a long time considered impossible to transplant or cultivate under domestic conditions, has been lifted under the nursing of specialists of the Bureau of Plant Industry, United States Department of Agriculture, from its wild environment and come to occupy an aristocratic place among our other domestic fruits. A blueberry an inch in diameter is not a dream, but a possibility.

Distinct progress has been made in the breeding of superior varieties of blueberries. At the department of agriculture testing plantation at Whitesbog, 4 miles east of Brown Mills, N. J., about 25,000 hybrids have now been fruited. Many of them have produced berries three-fourths of an inch in diameter, several four-fifths of an inch, and one of them this year reached almost seven-eighths of an inch. Among these large-berried hybrids several have been selected for propagation. The progress of blueberry culture is evidenced by the fact that during the season of 1922 nearly a thousand bushels of blueberries were picked at Whitesbog and that these sold in the open market in New York at prices about 75 per cent higher than those of wild blueberries. In the fall of 1921 more than 250,000 cuttings of selected blueberries were made by nurserymen.

Will Potash Benefit Apples?

BY WILL J. PLATTEN

Many experiments have proved conclusively that nitrogen is the only fertilizer that will increase the production of apples on ordinary soils sufficiently to make its use profitable. Phosphorus and potash applications have not paid their cost in increased production. The results of these experiments were always measured in bushels produced.

I have recently returned from Florida, where I noted the remarkable results they attain there from the application of potash in their citrus groves, for the purpose of hardening the fruit, thereby improving the keeping quality, and for the prevention of excessive "dropping." I saw trees with dropped oranges two deep under them covering the ground with soft, worthless fruit and in the next grove hardly a drop, the fruit on the trees being plump and firm. The first grove had not been fertilized with potash and the second had been. This effect of potash on citrus fruits is an established fact.

In the older apple regions of Wisconsin, for a number of years the Wealthy apple has been dropping badly, and it and the McIntosh Red especially have been soft and do not keep as well as they should, even in storage. It would seem to me that an application of potash might benefit our Wisconsin apples in respect to preventing excessive dropping and towards improving their keeping quality.

I would suggest that the members of this society make a test of potash this coming season, applying it to a few trees in com-

parison with check trees of the same variety; counting the drops and then making a storage test of the fruit from the treated and the check trees. It would be interesting to hear results at the next winter meeting.

Expansion at Sturgeon Bay

Developments for the coming season at Sturgeon Bay include a pre-cooling plant to be installed by the Door County Fruit Growers Union at a cost of \$40,000. From the *News* of Sturgeon Bay we learn that:

The new plant, 50 by 100 feet in size, will be instrumental in enlarging the fresh fruit shipping radius of the Union by making possible the cooling of the fruit to such a point that it will stand long shipments. The present market radius of the Union is only 300 miles, while the new radius on account of the pre-cooling process will be extended to 500 miles, reaching as far south as Texas and nearly to both the Atlantic and Pacific coasts. Eight or ten rooms in the building designed to handle ten to twenty carloads a day, will be cooled by air circulating from a cold air manufacturing device to an extent that it will take about twelve hours to expel all traces of orchard heat in the fruits at the time of delivery. From the refrigerator rooms, the fruit will be transferred directly into cars for shipment.

Refrigerator car cooling is not alone sufficient to take the orchard heat out of the fruit, it is found by shipping experts. The pre-cooling process must be used to put the fruit in such a condition before being placed in cars that it will retain its natural size, color, and flavor for long periods of time.

The pre-cooling method will so enlarge the market radius of the Union this year that all of the surplus fruit not taken care of by the

cannery can be sold at a good price on the fresh fruit markets.

After the cherry season the plant will be used for the storage of apples. This would seem to be a very satisfactory solution of the apple marketing problem. Door County, McIntosh and Snow apples, which brought the growers \$3.75 to \$5.00 a barrel last October, sold (wholesale) in Milwaukee in November at \$8.00 a barrel and up. The answer is, "roll your own."

Fertilizers for Gardens

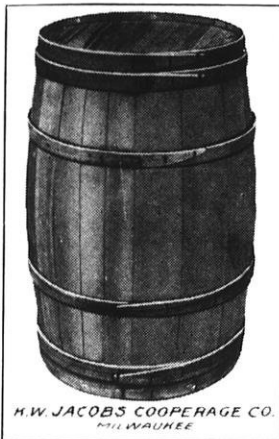
Of the mineral fertilizers, sodium nitrate and potash are best. The various stock-yards products, including pulverized sheep manure, are quick acting fertilizers that may either be mixed with the soil when spading or plowing or used later as a top dressing.

Mineral fertilizers must be applied with great caution to growing plants, as in slight excess they may kill the plants outright. ($\frac{3}{4}$ to $1\frac{1}{2}$ pounds of nitrate of soda per square rod is enough. Of acid phosphate 2 to $2\frac{1}{2}$ pounds per square rod should be sufficient.)

The mineral fertilizers are all very expensive and seldom give adequate returns to the amateur for the money invested in them.—Wisconsin Garden Book.

Poison Cutworms

Cutworms cut off young plants near the surface of the soil and eat the foliage of older plants, feeding at night and hiding on the ground during the day. A small number of plants may be protected by cutting the tops and bottoms out of tin cans and placing them over the plants, pushing them well into the soil. Keeping down weeds and thorough cultivating of the soil is also of value. Larger areas may be protected by applying poison bran mash to the soil in the late afternoon or early evening. Either broadcast the material or place in little heaps near the bases of the plants. Care



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should be taken to keep poultry and livestock away from it.

To make up the poison bran mash mix 2 ounces Paris green or white arsenic or 4 ounces of arsenate of lead with 3 pounds of bran. Add 2 ounces of cheap syrup or molasses, $\frac{1}{2}$ orange or lemon finely ground and a small quantity of water. Then mix all together, adding enough water to make a crumbly mash. One-half teaspoon lemon extract may be used instead of fruit.—Wisconsin Garden Book.

Killed Only by Contact

Plant lice are small, soft-bodied insects which may be found massed together on the under sides of leaves and on tender shoots. They injure the plants by sucking the juices and for this reason cannot be controlled with arsenate of lead. They may be controlled by applying some contact spray, such as strong soap (preferably fish oil soap) at the rate of one-half pound to 4 gallons of water; or 40 per cent nicotine sulfate (Black Leaf 40), 1 teaspoon to 1 gallon of water with the addition of an inch cube of soap. The spray must actually cover the insects and should be forced well into curled leaves. If all are not killed by the first ap-

plication, the spray should be repeated.—Wisconsin Garden Book.

Here Again We Have Warnock and His Tree Paint

The manufacturers of Warnock's tree paint have again been prosecuted for violation of the federal insecticide and fungicide law. The department of agriculture alleged that the "paint" would not protect trees against borers, San Jose scale, canker and blight, as claimed by the label. The defendant entered a plea of guilty (!) and was fined.

A resident of Fond du Lac complains, through the local press, that shade trees are being butchered by incompetent persons posing as tree surgeons. We are curious to know how many other cities are suffering likewise.

Shall we plant roadside trees? By all means. Shall we plant the roadsides or avenues, the trees in rows forty or fifty feet apart, or shall we vary the planting, occasional sketches of "avenue" planting and in other places plant in groups of three to a dozen trees? In other words, shall we

have our planting "machine made" or will we adapt it to existing conditions? You answer this one.

Be Careful of Poisons

Lead arsenate, white arsenic, and Paris green, recommended for garden use, are deadly poisons, and care should be taken to keep them away from children and domestic animals. Bean plants should not be sprayed after the pods have formed, nor tomatoes after the fruit is nearly full grown. There is no danger of poisoning to the consumer from eating sprayed cabbage because the cabbage head grows from the inside and the outer leaves are removed before cooking. The outer leaves, however, may have enough poison on them to kill domestic animals.—Wisconsin Garden Book.

How to Water Plants. More people fail in watering than in any other way. Some choke the plants, others drown them. Choking usually comes from applying small amounts at rather frequent intervals. Not enough water is applied to moisten the bottom soil, and the top is kept too wet, which encourages disease.

THE PLANTING AND CARE OF STRAWBERRIES

By O. A. D. BALDWIN, in the American Fruit Grower Magazine, Chicago.

Every year an increasing number of people are growing strawberries, both for commercial and home use purposes. With this increase in planting, more interest and attention is being given to the best methods of planting and care of strawberries.

Five of the most important factors in successful strawberry growing are: Selection of general location and particular site, preparation of the soil, planting, care, cultivation and renewal of the fruiting bed.

The selection of location and site is of particular importance to the commercial grower. It is to his advantage to locate in a small fruit section, so that he can get the benefits of organized buying of supplies and selling of his crop. More than this, he will have the helpful stimulus of working with others engaged in the same business and having a mutual interest. The particular site in this fruit section should be selected with regard to suitability of soil, distance from shipping point, drainage and exposure. A good, rich, medium sandy loam of moderate depth, underlaid with a clay subsoil, makes the best strawberry land for commercial purposes. Such a soil will give good surface drainage and still retain enough moisture to carry the plants through dry seasons. Exposure of the site is not of great importance, although a southern slope will make the ripening date six to eight days earlier.

TRUCKS LESSEN DISTANCE

With the present wide use of trucks the distance to shipping point or city market is not as important as formerly.

The single most important factor in successful strawberry production is the preparation of the soil. Strawberry plants are intensive, rapid-growing plants. They are on the land only three or four years at the most, thus giving no time for building up the soil or changing it to suit their needs after the field is planted, and making it necessary to give careful attention to soil preparation before setting.

Although it has been mentioned that a rich, sandy loam is the best commercial strawberry land, this does not mean that such a soil is necessary for good production. Fine strawberries can be grown on a wider range of soils than any other fruit crops.

SOIL CONDITIONS IMPORTANT

The soil should be loose and open, full of humus, rich in readily-available nitrogen, and slightly acid. Where possible, it is an excellent practice to grow a cultivated crop on the intended strawberry field for two seasons previous to planting—for example, corn followed by potatoes.

September first, before planting the corn, a green manure crop of thirty-six pounds of oats and twelve pounds of hairy vetch per acre, to furnish humus and nitrogen, is recommended. Corn is a rough feeder and will reduce the green material to fine humus, readily available as plant food. After cutting the corn, an application of stable manure at the rate of eight to ten tons per acre and plowed under in the spring will further increase the humus supply to insure a mellow, well-drained, well-aerated soil, and also supply more plant foods. Stable manure has proven to be the best all-round fertilizer for strawberry plants, furnishing both organic material and a good supply of essential plant food elements.

Following the potato crop, fall plowing is advisable, to allow the soil to settle and give a firm bed for setting the plants, at the same time killing any insects wintering in the soil. In the spring disking and harrowing is all the preparation the land will need.

SELECT PLANTS WITH CARE

We now come to the plants and actual planting. Be sure that your plants are true to name, free from disease and insects, thrifty, vigorous and carefully packed. There are many reliable nurserymen throughout the country, who make it their business to put out good stock having these qualities. Instruct the nurserymen to ship so that the plants will arrive at the time your ground is ready for planting. If they come a day or two early, unpack carefully, to keep varieties separate, open each bunch and spread the plants out in a shallow trench, cover the roots with soil and water them. The plants will keep in this way without injury for four or five days.

In commercial plantings rows are usually set three feet eight inches apart, with the plants fourteen to eighteen inches apart in the row and the new runners trained to a narrow, solid row—this requires about seven thousand plants to the acre. For home gardens the rows may be set closer together—two or three feet, with plants spaced as above. Garden plants are also often trained to the hill system, with plants set about twelve inches apart in the row and all runners cut off so that the original plant forms the entire hill. This system will produce fewer berries of larger size.

HOW TO SET PLANTS

A spade is a convenient tool for making holes. Put it in the ground six or eight inches and pull towards you, remove the spade and you have a "V"-shaped opening. Place the plant and close the hole with one foot, firming in well by stepping on both sides of the plant.

In setting be sure that the crown is not covered, as to do so will kill the plant. Set at the same depth at

which the plant grew, with the crown level with the surface. Plants set too deeply will be washed over with mud, and those set too shallow will dry out. When planting it is a good practice to wet the roots in a pail of water just before setting, unless the soil is full of moisture. This will save the plants' sudden wilting and insure a good start.

In selecting varieties, pollen fertilization, adaptability and season of ripening must be considered. Most widely-grown varieties are staminate, that is, they are capable of fertilizing their own flowers and need no other variety set with them. Other varieties are pistillate, their flowers producing no pollen, and these sorts need a staminate variety set in every third or fourth row to produce good crops of fruit. Nursery catalogues usually show whether a variety is staminate or pistillate.

RULES FOR FIRST SEASON

With good soil preparations and proper setting, continuous and thorough cultivation and care must be given during the first growing season to insure a good crop. The blossoms should be picked off during the early summer in order that all possible vigor may go into the new roots and runners to grow a good fruiting row for future crops.

The field should be hoed as often as is necessary to keep the soil crust broken and the weeds down. A little earth thrown over the runners will aid them in setting and give a better stand of plants.

Cultivation should be continuous throughout the growing season and early fall, keeping the soil finely broken up to prevent loss of moisture and at the same time bring it up to the surface within reach of the plant roots. As the plants grow, shallower cultivation is given, so as not to disturb the root growth. If the operation in each row is always in the same direction, newly-set plants will not be torn up.

At the end of the fruiting season comes the question of renewal of the bed for the next season's crop. A very successful practice is to first mow, rake off and burn the old vines. Following this, turn a shallow furrow away from each side of the row, using a small plow, leaving the row six to eight inches wide. Then go over the row with a hoe, cutting out plants so that small blocks of the newer plants are left eight or ten inches apart.

Finally, cultivate down the soil that has been turned into the middle of the row. The mowing and burning will destroy any leaf diseases and insects that may be in the leaves, and the operations will provide room and fresh soil for the growth of new runners necessary to give a good yield the following season. A light layer of

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stable manure put on after the ground freezes, as a winter mulch, will greatly benefit plant and fruit production.

DISEASES OR PESTS

The strawberry plant has very few serious diseases or insect pests, while grubs and cut worms are killed by fall plowing previous to setting the plants. Because of these pests it is not advisable to plant on a newly-turned sod, as such land often harbors them.

The leaf roller may be controlled by two or three sprayings about one week apart with arsenic of lead, two pounds of paste to fifty gallons of water, applied as early in the summer as the insects are noticed and before the leaves are rolled.

Strawberry leaf spot is the only serious disease and may be controlled by one or two sprayings of bordeaux mixture. This spray should not be applied less than two weeks before picking, as it may injure the fruit.

Leaf spot, when present, is usually worse in midsummer, after the crop is off, and prevents a healthy growth of plants for the coming season. A spraying at this time will check this injury.

The strawberry is a fruit that does not require any more constant or particular care than any other to bring it to its highest quality and value, but with ordinary attention and care given no other fruit will respond more readily or will more surely repay the grower in both pleasure and profit.

"When we build, let us think that we build forever. Let it not be for present delight nor present use alone. Let it be such work as our descendants will thank us for, and let us think, as we lay stone on stone, that a time is to come when those stones will be held sacred because our hands have touched them, and that men will say, as they look upon the labor and wrought substance of them "See! This our Fathers did for us."

—Ruskin.

Hardy Fruits

W. H. ALDERMAN in American
Fruit Grower

Fruit growing in the upper Mississippi Valley has to deal with one basic and important problem, namely, that of hardiness to winter conditions. Under ordinary circumstances the success or failure of a

man who attempts to grow fruit in northern Iowa, North and South Dakota, Minnesota and western Wisconsin depends upon his ability to select suitable varieties and to so handle them that they are given favorable conditions under which to develop and to withstand the naturally severe weather conditions of that region.

THREE TYPES OF INJURY

There are three general types of injury encountered by the growers. One of the most common types is that generally spoken of as sun-scald. This is brought about by the rapid changes of temperature occasioned by severe freezing, followed by sudden thawing, usually on the southwest side of the tree where the full force of the afternoon sun raises the temperature of the dark-colored bark many degrees. The second type of winter injury is of a different character and results in the actual killing back of the tips of the branches and sometimes of the entire plant. In mild cases this is associated generally with late and succulent growth of terminals, which because of their immature condition are unable to resist the extreme cold and as a result the plants show much dead wood at the tips. Where the variety is more tender or the conditions more severe, this injury may extend clear to the snow line or in extreme cases may kill the plant, root and branch. Closely associated with this type of injury is the common crotch injury, sometimes spoken of as "Crotch Canker." Since the main crotches of the tree are among the last places of the plant to mature and thoroughly harden their tissue, they are naturally tender to adverse winter conditions.

TOPWORKING THE WEALTHY

Even a variety as hardy as the Wealthy is frequently affected with crotch freezing, so much so that many growers are now topworking their Wealthy on such sturdy stock as Hibernal or Virginia Crab. The third type of injury is that which affects only the fruit buds. This is more commonly found on the plum and cherry than it is on the apple.

(Continued on page 159)

The Opgenorth Line
of
Berry Box
Material



United Fruit Package Co.
SHAWANO, WIS.

VENTILATED LINE
Ventilated Folding Boxes
Ventilated Boxes Made Up in Crates Complete
Ventilated Sides and Bottoms for Growers Who Wish to Make Up Their Own Material

PLAIN LINE
Improved Plain Folding Boxes
Plain Boxes Made Up in Crates Complete
Plain Sides and Bottoms for Growers Who Wish to Make Up Their Own Material

K. D. Crates Requiring One Nail to Complete

A Postal Card Will Bring Our Samples and Price to You

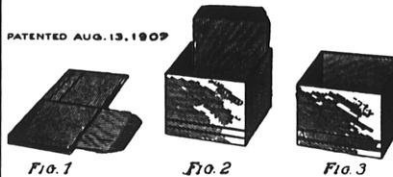
**The Hawks
Nursery
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are in a position to furnish high grade Nursery Stock of all kinds and varieties suitable to Wisconsin and other northern districts.

Will be glad to figure on your wants either in large or small quantities

Wauwatosa . . . Wis.

PATENTED AUG. 13, 1907



Berry Boxes

Crates, Bushel Boxes
and Climax Baskets

As You Like Them

We manufacture the Ewald Patent Folding Berry Boxes of wood veneer that give satisfaction. Berry box and crate material in the K. D. in carload lots our specialty. We constantly carry in stock 16-quart crates all made up ready for use, either for strawberries or blueberries. No order too small or too large for us to handle. We can ship the folding boxes and crates in K. D. from Milwaukee. Promptness is essential in handling fruit, and we aim to do our part well. A large discount for early orders. A postal brings our price list.

Cumberland Fruit Package Company

Dept. D, Cumberland, Wis.

**McKAY NURSERY
COMPANY**

MADISON WISCONSIN

**Nursery Stock of
Quality**

for Particular Buyers

Have all the standard varieties as well as the newer sorts. Can supply you with everything in

**Fruit Trees, Small Fruits,
Vines and Ornamentals.**

Let us suggest what to plant both in Orchard and in the decoration of your grounds. Prices and our new Catalog sent promptly upon receipt of your list of wants.

**Nurseries at
Waterloo, Wis.**

“SEE WISCONSIN FIRST”

The Summer Meeting Affords an Opportunity

One Dollar

- (1) Membership in The State Horticultural Society for one year.
- (2) A copy of the 1922 Annual Report containing 28 papers; official lists of fruits and flowers adapted to Wisconsin.
- (3) A copy of the 1920 Annual Report to first comers, to others the 1917 Report.
- (4) A copy of The Garden Book, 55 pages; the best garden book for beginners ever written.
- (5) A copy of "Native Plants of Wisconsin" by William Toole, Sr. 5 papers; native climbers, shrubs, trees, ferns, flowers, 54 pages.
- (6) Wisconsin Horticulture, a monthly magazine one year.

All for One Dollar: Currency, draft, money order or personal check but *not* postage stamps.

Once a member you are privileged to solicit memberships; commission fifty cents for each member secured. Remit to

Frederic Cranefield, Secy.

701 Gay Building, Madison, Wis.

Song Birds vs. Fruit Growing

(Continued from page 147)

all else reasonable to the end that no species of song bird becomes extinct, but let us also be reasonable in the matter. Especially let us look the truth squarely in the eye when it comes to the argument about birds protecting crops. Bird enthusiasts should be careful to avoid this subject, because there is an awful kick in it.

Hardy Fruits

(Continued from page 157)

It sometimes happens that the entire flower cluster within the bud will be killed, while at other times only individual flowers within the cluster will succumb. The conditions which bring this about are generally those which sometimes occur during the winter when rapid changes of temperature occur in a brief time. It sometimes happens that the thermometer will rise or fall 40 or 50 degrees within a twelve or twenty-four hour period. These quick changes frequently cause bud killing, especially if they occur during the latter part of the winter after the buds have become partially aroused from their period of dormancy and are indicating some development within. An injury closely associated with this bud killing is frequently encountered in the raspberry where the tissue at the base of a bud that will develop into a lateral shoot is injured. When the cane is sliced longitudinally at the bud a characteristic browning will be found. If this is severe, it is followed by either a complete killing of the bud or else a weakened union which will cause the lateral to break down after it has made a short growth. In the strawberry a similar injury sometimes occurs in the crown at the base of the flower cluster.

A most effective method of preventing winter injury is in the selection of hardy varieties, but even these are sometimes injured under unfavorable cultural conditions. Injury can sometimes be warded off by the use of proper precautions. It is much easier to prevent winter injury on heavy soils than on light sandy soils. This is particularly true of the types of injury which result in the killing of the plants or wood tissues. The reason for this is found in the fact that the sandy soils dry out much more completely and frequently enter the winter deficient in moisture. Under these conditions the soil will freeze deeper and soil temperature will be lower than they would under conditions where sufficient moisture is present. The result is that the entire plant

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Send for beautiful illustrated peony booklet, *Superb Peonies*

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WISCONSIN NURSERIES

Our Motto:

Give fools their gold and knaves their power;

Let fortune's bubbles rise and fall;

Who sows a field or trains a flower

Or plants a tree is more than all.

—Whittier.

At It Twenty Years. Catalog for the asking.

W. J. MOYLE & SONS.

Union Grove, Wis.

Kellogg's Nursery

Janesville

Wisconsin

SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shrubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen. Order direct from a reliable nursery and save money.

becomes dried out and the killing, which is largely a matter of drying of tissue, is consequently more severe. It is obvious that any method of cultivation which will conserve the moisture content of the soil, particularly in the drier portion of the upper Mississippi Valley, will be effective in lessening winter injury.

There are other methods which may be used to supplement the one just suggested. A common treatment to prevent sunscald is to lean a board against the southwest side of a tree to afford shade and protection during the winter months. Low heading of trees should also be practiced to aid in the shading of the trunk. Some have reported satisfactory results following the whitewashing of the trunk and the main limbs. This treatment is based on the well-known fact that a white surface will absorb less heat than a dark one and consequently a white-washed tree trunk will not warm up as much nor as quickly as will one not so treated.

SUMMER MEETING

State Horticultural Society

La Crosse

August 15-16, 1923



One Day Program and Evening
Entertainment

Second Day Visiting Farm Orchards

Why Go to Europe to View Scenery
Less Beautiful Than Our Own?

SEE WISCONSIN FIRST

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, June, 1923.

Have You Made Arrangements:

1. To attend the Beekeepers' Conference and Dedication of the Miller Memorial Library, August 13th to 18th, at Madison? Programs will be mailed about the 20th of July and if you do not get a copy, write this office.
2. For your Bee and Honey Exhibit at the State Fair, August 27th to September 1st? If not, write Gus Dittmer, Augusta, Wis.
3. To send those old bee journals and books to the Miller Memorial Library, Madison, Wisconsin.

The secretary's office can still furnish letterheads, envelopes and labels to members. Get your orders in early.

A. I. ROOT

Many of our readers who do not take one of the bee journals will be sorry to learn that Mr. A. I. Root died at his home in Medina on April 30. Mr. Root was America's greatest pioneer in the development of mechanical beekeeping devices. Being far-sighted and quick to accept and experiment with everything new that seemed to give any chance of success, he has brought to the beekeepers much of their equipment that is in use today. A useful life is the greatest gift one may give to the world and Mr. Root's gift was immeasurable in its fullness.

"Preserving Time Soon Here"

Beekeepers who have not had their family try out the use of honey in place of sugar for preserving fruits, should interest themselves in this now.

Honey is used for the preserving of fruit in the same quantity as sugar. A most excellent jelly can be made by the use of honey and fruit juices.

Learn from the spider and the bee
Two styles of business strategy:
Alone, the spider spreads his snare,
If business comes, he gets his share,
Together, bees far better thrive.
They bring the honey to the hive.

—June issue of The Besto Bee.

To the Exhibitors at the State Fair

BY A. C. ALLEN
Judge of Apiary Exhibits

Each year as I have gone over the exhibits at our fair I have seen where some, and perhaps all might have improved on their exhibits, thus making a better showing for themselves, a more pleasing aspect to the village, and less work for both the superintendent and judge.

It is with a desire to help those contemplating making an exhibit this fall that I write these lines.

The beekeepers of Wisconsin are a wide-awake lot, as is evidenced by their commendable efforts and beautiful displays of honey which has made that department of our fair the leading one in the United States and we must not only keep it so, but make it much greater than it now is. Nothing worthy of note is accomplished without painstaking effort, advance planning and sacrifice, and this is especially true of an exhibit worthy of space in our crowded building at the State Fair. And, inasmuch as this is expected to surpass any local or county fair, nothing but the very best, best quality, best arrangement, proper quantity for your particular booth, should be given consideration. Your exhibit speaks for what you yourself are.

It seems to me that each one participating should feel a measure of true pride in assisting in putting up the largest apiarian exhibit in this country and may I not say in the whole world?

I want to impress upon each one the importance of beginning early. It is none too soon to start laying plans now. This month, before the busy season with the bees begins, while you have time to calmly plan out just how you want your exhibit to look, you should not delay. If you have never made an exhibit, or even if you have, you can get many helpful suggestions from the views

of exhibits given in past numbers of your bee journals. Try to vary your arrangement from what it has previously been without spoiling its harmony and beauty. Bring the harmony of poetry into your exhibit. Make your decorations and arrangements in keeping with your location in the building, space you have, light, etc.

Just a suggestion about decorations. They are all right and we want them, but even that can be overdone. And as decorations can be given only ten points in scoring, no matter how many you have, you should aim to have them as effective as possible with a minimum of labor and devote the greater part of your time and energy on the exhibit proper. Also do not let the decorations hide the real goods. And would it not be well to have more of the honey bearing plants in evidence? Boxes of moist earth or vases of water containing clover, goldenrod, hartsease plants and leafy limbs from basswood, etc. These all can be kept fresh during the entire week and you can explain to visitors that the honey is secured from such plants. Views of prominent beekeepers, your own apiary and home, manufacturing plants, bee books and journals. We hope also that you are securing the best labels obtainable, which do perhaps as much as any other one thing to show off your booth.

Study your fair book and try to comply in every respect with the rulings. Every year something has to be ruled out because some have not been careful enough in this matter, thus causing themselves labor and expense which brings them nothing. A judge always regrets having to rule anything out, but he, too, must comply with the rules.

Prize No. 5 calls for twelve sections of honey only. Bring only twelve. Some have brought twenty-four in a twenty-four section case, expecting the judge to sort out the best and decide from these. He has

Wisconsin Beekeeping

H. W. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association

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Vice President.....	A. A. Brown, Juneau
Treasurer.....	C. W. Aeppler, Oconomowoc
Secretary.....	Malitta D. Fischer
Annual Membership Fee, \$1.00	
Remit to M. F. Fischer, Secy., Madison, Wis.	

no time for this, and please do not bring any more twenty-four section cases. They are too wide to go on our shelves without projecting in the way and if you cannot obtain the proper size you can easily cut down the larger size to hold just the proper number. Sand paper your cases and do not allow a particle of propolis to remain on any sections.

Extracted honey bottles with screw caps are better than those with corks.

Let all empty extracting combs be returned to the bees to be dried off before bringing them to the fair, as wet combs daub the shelves and hands and attract robber bees.

Please fasten your entry tags and recipes on to the plates of baking with cords so they may not get lost or misplaced while being judged. This has sometimes happened, causing confusion and loss of time.

We believe fruit cakes should be given a separate number from other loaf cakes. That we should have an entry for Honey Candies and Winter Packing Cases, also for Devices for Spring and Fall protection of hives and we had hoped to make these additions to the premium list for 1923, but the list went to press before we knew it, so these will have to wait another year, but it will give you the more time to prepare these things. If you have never made an entry or exhibit at the State Fair, why not plan for it this year. Do not fear that you will not get a premium. With our allowance of \$1,500 you can hardly fail of it, and this liberal sum should encourage a large number to enter the contest and advertise your honey. We should draw out every dollar of this money. The more we

draw of it the more favors will be granted us in the future. Once more I ask you to begin now and keep your exhibit in mind all summer and come and enjoy the fair.

Portage, Wis.

Notes on Northern Wisconsin

C. D. ADAMS

The writer spent three weeks in the northern part of the state investigating two recent outbreaks of American foul brood. As near as we were able to discover in Bayfield county the disease is now eliminated from all but one apiary. As this is a good sized commercial apiary the treatment was left in the hands of Inspector Louis J. Peterson. The entire out apiary is to be shaken in clean hives on foundation and immediately moved to a new and safer location.

In Douglas county an area equal to a township was thoroughly inspected and every one of the few remaining colonies of bees and hundreds of empty hives and combs were destroyed. In every case this was done at the suggestion of the owner. Such whole-hearted cooperation has seldom been equaled in the clean-up work in Wisconsin.

An unusually severe winter loss was sustained in the north central part of the state. In several commercial apiaries it ran over 50 per cent. The cause seemed to be the combination of a poor crop last season with the unusual late date for taking bees out of the cellar.

One of the best examples of good management overcoming these difficulties was found in the yard of Mr. and Mrs. Claud Moll of Ashland. Of 64 colonies wintered in quadruple packing cases out of doors only one colony died and four weak colonies were united with stronger ones.

Of 35 wintered in Buckeye hives in the cellar there were no losses. Yet the honey flow lasted only one week in early June in their locality and the winter was no shorter there than elsewhere. But the reason for such "good luck" is easily understood by anyone who has seen this

enthusiastic pair at work in their yard. To those who exclaim, "May their tribe increase!" I can say, "It has increased." Their two oldest daughters take the place of Mr. Moll when he is away at work at his trade, as he is so much of the time.

At Dancy, I stopped to see how our friend Francisco was faring. He took me to his outyard where 80 colonies were packed in quadruples packing cases with one of the new fangled ideas that has recently been talked of some, usually with a smile. Every one of these winter cases have the opening at the top of the hive, and Mr. Francisco is smiling, for the bees were alive and in good condition in every hive but one. This one was somewhat weak, but will probably build up later.

The owner of this yard says he will never winter bees out of doors any other way, but he does not like the top entrance during the summer. He says the bees make the change fall and spring without any apparent confusion.

"There Are Men Like This"

"One of our beekeepers recently took issue with us regarding our endeavors to get our members to pull together on cooperative betterment.

This man goes about with a frown on his face and every new ideal is pooh-poohed and called a lot of bunk. He never forgets another's little failings.

Now, he doesn't believe in cooperation.

All right, old friend, if you don't think cooperation necessary just watch and see what happens to a wagon if one wheel comes off.

Don't get the idea that this association is the steering gear of the universe. Watch the bees and you'll find that the one that gets the honey doesn't hang around the hive."

I hope we have none of these in Wisconsin.—*Texas Honey Producer.*

What He Thinks of Co-operation

Osseo, Wisconsin,
March 29, 1923.

Professor H. F. Wilson,
University of Wisconsin.

Dear Sir:

Have just finished reading the Beekeeper's Supplement to Wisconsin Horticulture.

For quite a while have been wanting to write to you regarding the marketing question in a different sense from my previous letters, but the reading of the article on marketing in the course of paper, by A. A. Brown, seemed to set a spark to the notion and here we are.

Why do so many write on the marketing question finding fault with the present system and marketing in general when they can not or will not even offer a suggestion? That is getting the problem nowhere. Why don't some one get out and do something instead of letting the other fellow do it? How soon do you think it will be done that way? Why don't someone or a few, at least, offer some ideas on how to accomplish greater distribution of honey? It means hard work to buck the breakers before getting to smooth riding. Also, poor pay.

Doubtless quite a few beekeepers have tried to put across a system of marketing cooperatively but have given up discouraged. Why? I believe because of the *class of beemen that cannot distinguish between the wholesale price and retail price, and also because of the fact that they think the man that wants to push a new idea is going to make more than he, or a fortune out of the venture.* That is human nature. At least that is my experience. To illustrate:

Our local association has been talking cooperative marketing for quite a while, but that is as far as it went because we had not enough honey to start a venture and because we were too far from the markets. However, I decided to put honey in glass and see how the buying public like it. This on my own.

Along in the fall when my honey was about sold I mentioned the fact to Mr. A. Well, he wanted to know how it was accomplished. I told him, and asked him if he would not fill my orders when my honey was gone. Giving him the net wholesale price, he was quite enthusiastic and said he would. But, upon calling him on the phone to fill an order for forty dozen jars of honey, he refused. He wanted more money. I was giving him the net price that I myself was receiving, just to get the orders filled. The price may seem low to some, but when taking the price of advertising off, in the form of lower selling price and then receiving more than the market, I thought the price good for the first year.

Mr. A. no doubt on thinking the matter over thought I was making some easy money. I wasn't. Not one cent.

I took the car and saw a few beemen who had honey and bought the honey outright for less than Mr. A. would have received. Also, my orders took the crop of two men and now I am helping a third.

Mr. A. on hearing that I was filling my orders as received and he still having honey grew uneasy, for he needed to change his honey into money. He came to see me again and wanted me to give him a chance again. He received no satisfaction. He did not deserve any, for three reasons: 1st, he broke his word. Who could depend on him? 2nd, for implied accusation of profiteering; 3rd, because there was lots of honey to be had besides his.

Just before Christmas he started out to peddle. He sold from the car to any one who would buy at 85c per two quart glass mason jar, and quarts correspondingly low. Same to the stores, trading it out. Taking cost of delivery, jars and labels into consideration, he was selling for price he would have received wholesale in large lots. *That is the kind of men the cooperative movement has to deal with.* Why the price cutting?

Do farmers try to undersell their neighbors on eggs and butter? Why should the farmer beekeeper try to undersell his beekeeping neighbors? Because he does not find a market outside of his locality. Does not even try. In other words, under-distribution is the cause of under selling in most cases.

THE REMEDY

WILL THIS START SOMETHING?

First. Wisconsin has four large markets for her honey within easy reach.

Second. Wisconsin produces as good a honey as can be found. No need of blending with cheap honey. Let that be a selling point.

Third. How to appeal to the people in the markets, that is, container. My solution would be the glass jar. City people buy small quantities. Why try to go against that tendency? Taking for granted that the cities are the chief markets, many small sales, small profit, in aggregate are large.

Fourth. Establish a bottling and packing plant in at least two of the markets. Saves freight. Need be small at first, but will need beekeepers in back of it to supply the honey as needed. A real sales manager in charge of each. A packing plant will produce a more uniform grade of honey than if packed by individual members.

Fifth. Sales. What is the most efficient method of calling the housewife's attention to something good to eat that is also a real food for her growing children and herself. I have in mind the city house sampler or grocery store demonstration booth where the ladies can have a good taste. There are many ways to call attention to the above facts once you are in the position to supply the goods. That is the main point, to be able to supply the goods.

Sixth. Honey in tin in large quantities. Use every possible means of securing a large mailing list of good prospects. Then work it.

Last but not least, is a good, strong corporation to be able to carry on over the lean months and to store the honey from abnormal

yields until it is needed, and still give the beekeeper some money for the honey until it is sold. Then he can get the remainder.

The above is my idea of a good embryo marketing plan for the beekeepers of the state. There are many details, needless to say, that will require working out. The main idea, though, is to have all the honey in the state under the control of the one or more marketing organizations.

Mr. Brown refers to the California Raisin Growers and like organizations there, while a little further back he speaks of Mr. Ford and Mr. Rockefeller. There is absolutely no connection or comparison. Mr. Ford and Mr. Rockefeller have their own marketing systems, as is said, but the California producers have not. All they did out in California was to get together and adopt a brand and trade-mark, together with a package, when needed, put all their products behind those brands and trade-marks, and then advertised those products. Did they overturn the regular trade channels whereby they received great distribution? They did not. They ask higher prices and inform the grocer that amount of money invested in one box of oranges if sold at ten per cent profit, one box a week, the grocers' profit will be in one year—figure it out! That is what they advertise to the storekeepers, small profits with large turnovers. Why not the same with honey? I mean in the city markets.

I forgot to mention above for the marketing plan, that a trade-mark or brand must be adopted and that mark or brand advertised; it must mean to the purchaser that all honey under that mark or brand is the best that Wisconsin has and consequently the honey to buy.

Caution: I find that Minnesota consumers do not respond to Wisconsin Honey No. 1 as printed on the labels, as do the Wisconsin people. Interstate trade will require some other distinction, if any amount of honey is to be sold. It must be to state pride that they

do not buy as readily on the other side of the river.

Respectfully,
(Signed) Henry A. Schaefer,
President Trempealeau County Beekeepers' Association.

Standardizing Honey Labels and Packages

B. B. JONES

In Charge Standardization and Inspection, Wisconsin Department of Markets.

That great progress has been made in the marketing of honey in the state during the last three years is, I believe, the general consensus of opinion among the progressive beekeepers. Much of this general improvement can properly be attributed to the work on honey grading done by the Department of Markets after it has been requested by this association to establish standard grades for the product. This general improvement, however, has not brought us to perfection, for there is much yet to be done along the line of marketing honey. I shall discuss two ways in which there is room for a decided improvement, these two relating to the labeling of packages and the standardizing of the packages that are now used in marketing honey.

When the Department of Markets first started the enforcement of its honey grading regulations the matter of labeling was not given very great consideration, as it seemed that it was not the general practice amongst beekeepers to label their honey. The regulations provided that rubber stamps furnished by the Department should be used in marking packages, which practice the beekeepers generally followed. During the past year, however, it has been noticed that there is a desire on the part of a great many beekeepers, especially the larger and more progressive ones, to use labels in the place of the rubber stamps. This practice is heartily approved, as there is no doubt but that labeling honey packages is much to be preferred to stamping them with a rubber stamp. Of course, it will not pay the small beekeepers who

have only a small amount of honey to market each year to buy labels for their packages and therefore the rubber stamp system will have to be continued. It is hoped, though, that the number of those turning from the use of the rubber stamp to the use of labels will increase in the future as rapidly as it has the past two seasons.

With the more widespread use of labels, however, a new problem has been brought before those who have to enforce the grading and marking regulations. I refer to the numerous types, colors, sizes and shapes of labels that are now being used. In the bulletin issued by the Department on September 11th of this year there were outlined certain requirements for the printing on labels giving the information required by the standards for comb and extracted honey. In some cases these requirements have not been properly followed, but in most cases the regulations have been complied with. The Department asked that beekeepers send in sample copies of labels they were about to secure in order to have them checked over to see whether or not they complied with the regulations. When the many various types of labels came to the attention of those carrying on the work it was at once apparent that sooner or later it would be necessary to recommend and possibly adopt some type of a standard label to be used by the beekeepers of the state.

The adoption of a standard label will not be advocated by the Department at this time, as it intends to study the matter more thoroughly before issuing recommendations. The Department is watching with great interest the proposal of your association for the adoption of a standard label to be used by members of the state association in marketing their honey and believes that such action is a step in the right direction. It is sufficient to say at this time that more attention from now on will have to be given to labeling and that beekeepers and others using labels in marketing their

honey should take extreme care to see that their labels meet all regulations. It is recommended that in case any beekeeper or dealer is not quite sure about his label he should submit a sample copy to the Department for their suggestions.

The more important question that I want to discuss is that of the apparent need for the standardization of packages in which honey, especially extracted honey, is now being marketed. No consideration will be given at this time to a standard comb honey package, but the Department feels that there is need for the standardization of extracted honey containers. What are the reasons for standardized containers? is the question which is often brought up. This can be answered by stating that they eliminate fraud and deception and reduce marketing costs. These are the two main reasons which the federal government recognizes in its work of standardizing containers for fruits and vegetables. The standardization benefits will be felt by producer, dealer and the consumer and because of this the interests of each should be equally considered in deciding the question.

In past years fraud and deception have been freely practiced in the marketing of products that are sold in containers. The consumer is usually the one who suffers from this deception, and the interests of consumers demand the careful attention of the beekeepers. The need for package standardization is illustrated in the work the federal government is doing in its package standardization project. Their investigations have clearly shown that there are altogether too many types, sizes and kinds of containers used in marketing products. Consumers are deceived by the large number of packages used which hold different amounts. Take, for example, the hampers which are used in marketing fruits and vegetables. The government has collected samples of seventy-five different kinds and sizes of hampers, which they propose to reduce in number to five by

the passage of the Vestal package act, which has already passed the lower house in Congress, and is now in the Senate Committee on Manufactures. Many of the various containers were about the same size and the average person by looking at them could not tell the difference between them, yet by actual measurement it was found that these containers varied as much as two quarts in capacity. The buyer was deceived and received less than he actually thought he bought.

This can easily be the case in honey, for with numerous different kinds and shapes of containers, varying from three ounces to sixty pounds in capacity, the consumer is often misled. It is possible to pick out from fifty to seventy-five different kinds and sizes of honey containers now on the market. How much better it would be for the beekeeper, the dealer and the consumer if these were standardized and only five to ten containers used. This can be done by the Department establishing certain packages as the standard packages for the state and requiring that no packages other than those promulgated in the standards can be used.

If standard packages are used marketing costs will be reduced. At present package manufacturers are required to make and carry large stocks of many different kinds of packages and containers. Some of these are widely used, while others are used only occasionally, and the cost of carrying the less widely used packages must be carried by the packages which are widely used. Thus by eliminating many useless packages the package manufacturer and dealer is able to reduce costs. Your state association can supply you with packages at a lower cost if they standardize on three or four containers, for if they are forced to furnish a large number of various types of containers it will mean added expense which must be borne by the purchasers of the standard packages. If costs are reduced all along the line the consumer will be in a position to purchase more

honey and will be better served if he can be assured that he can always get honey in certain standardized packages.

The university has collected specimens of the various kinds of containers now on the market which are shown in this picture. How much better it would be if a few standard packages were adopted and the rest eliminated. The beekeeper would be greatly benefited, the dealer would be helped in carrying on his business and the consumer, on whom the beekeeper and dealer both depend, would be protected. The interests of all three classes are affected by standardization and anything that will work to the benefit of one will work to the benefit of all. Standardization of packages for marketing must come, just as the standardization of packages for fruits and vegetables is about to be accomplished. The question before the members of this association and the beekeepers of the state is whether or not this progressive step is to be taken now or whether the honey marketing industry of the state will be held back by the continuing of the present practice of marketing honey in fifty or seventy-five different kinds, types and sizes of containers. A discussion on this question by those present is requested by the Department, as this will constitute one of the public hearings which are to be held in various parts of the state to determine whether or not the Department shall adopt certain standard containers to be used in marketing extracted honey.—This paper given at state convention.

The American Honey Producers' League

S. B. FRACKER, SECRETARY.

(This paper given at State Convention.)

A letter received from a western state a few days ago, speaking of the American Honey Producers' League, said, "I believe there should be more definite information sent out to us so that we may know more

about our relations with the League as members. Professor Wilson wrote and asked me to write an article stating what the American Honey Producers' League had done. If he will write the article and swear to it before a notary, I will sign it."

One of the biggest difficulties faced by the new officers of the League, who were only elected a few months ago, has been the fact that the members of this national organization knew very little about what was being done. A recent manager of a well-known advertising exchange in the United States said, "The beekeepers are so busy talking to each other that they have no time to talk to the public." Meaning that that was the principal reason for the continued weakness of the honey market. The American Honey Producers' League has perhaps gone to the opposite extreme and has talked to the public exclusively, neglecting its members to such an extent that by last summer support had almost disappeared.

This was in no way due to failure on the part of the League to make progress along the lines for which it was established. In fact, as I have gone over the accomplishments of the League since its establishment I have been surprised at the amount which has been done in such a short time. On January 6, 1920, a little group of twenty-four met at Kansas City, adopted a constitution and agreed to try to make the new organization one of national importance. The executive committee elected at that time met again in December, but the first general meeting of the organization was not held until less than two years ago on February 15, 1921, at Indianapolis. During 1921 the League developed from a little group of twenty-four to an organization of almost 2,500 members. During that year it handled over eight thousand dollars in cash, about half of that being in the general fund and the remainder in an ad-

vertising fund, secured largely from dealers in honey and bee supplies.

This rapid development was apparently somewhat too fast, for some of the affiliated organizations have been unable to continue membership on account of the high cost. Certain adjustments are being made this year which it is hoped will reduce the former difficulties and put the League on a permanent foundation rather than one which depends on the temporary enthusiasm of a "boom."

In organization the League differs from former national associations in being built up exclusively of other societies and having no individual membership of its own. A source of extensive correspondence from the secretary's office this fall has consisted of explaining to beekeepers in Pennsylvania, Florida, Georgia, Missouri, West Virginia, California and other states the necessity of their joining affiliated organizations before they could become members of the League, except at the commercial rate of \$10 per year. It is believed that the experience of the National Beekeepers Association, with a rapidly changing membership, shows that the United States is too large a tract of country to make practicable an organization of individual beekeepers, scattered from the Atlantic to the Pacific.

There are now seventeen organizations affiliated with the League and the monthly mailing list of the League bulletin includes about eighteen hundred names. It is, in truth, a national organization, for it is represented on the Pacific Coast by state associations of Oregon and Washington, in the Rocky Mountains by Montana and Colorado, in the Mississippi Valley by nearly all the strong state beekeepers' associations and in the east by the Empire State Beekeepers Federation, Incorporated, which is a group of the various local beekeepers' associations of the state of New York. The objects of the League, as stated in the constitution, are remarkably inclusive, but the work itself has been

confined largely to certain specific lines to which a national federation is especially adapted. According to its founders, the purpose of the League is "to foster and promote better methods and systems of marketing; broader education in apicultural and research along the lines of interest to beekeepers; to provide legal aid to beekeepers and affiliated organizations; and to assist in the passage of reasonable and proper legislation; to assist in the standardization of bee equipment, containers and grading of honey; and to provide boards and committees of arbitration to settle or decide disputes involving affiliated organizations and members or subscribers."

As shown by its work up to the present the primary value of the League has come from its work in increasing the demand for and sale of honey, the arbitration of business disputes and influence on legislation.

Last fall the League expended over five thousand dollars in advertising, most of that being used for space in the "Good Housekeeping Magazine." As a result of the direct requests which came from readers of the magazine who read the advertisement over eighteen thousand copies of honey recipe booklets were mailed out to individual consumers, mostly in the United States, but some of them in other countries. Requests came in from practically every country in the world, including all those of Europe, several in Africa and Asia, as well as South America, Australia and the Hawaiian Islands. Several thousand additional booklets have been sold to beekeepers for distribution in their own localities, some of which have had printed on them the name of the beekeeper distributing the booklet, others bearing the name of the League.

Another very important work for which the League is alone responsible was its influence with Congress which resulted in the increase in the tariff on honey from less than one cent a pound to three cents a pound. As the beekeepers of the West Indies can afford to ship honey to the

United States when they receive only two cents a pound at the point of shipment, this increase in the tariff is just large enough to divert practically all of the dark honey of the West Indies to Europe, making a place for the American product with our own manufacturers. When we realize how small an amount has to be imported at a low price to result in displacing the market in this country we realize what an important factor this may be in the future honey market.

One of the least advertised activities of the secretary's office has been that of arbitrating possible disputes. The nature of this work is such that it has not been proper to publish the details. One hundred and fifty cases were submitted to the secretary last year in which the buyer and seller of bee supplies or bee products were unable to agree on the price to be paid or the time it was to be paid, or adjustments for loss in transit, and similar matters. Practically all of these have resulted satisfactorily to both parties and an immense amount of time, energy and disagreeable and expensive litigation has been saved. A case in which the League is assisting state officers in making an adjustment at the present time consists of that of a beekeeper who made a shipment of \$430 worth of honey to another state and then received a check in payment which was returned marked "no funds." In spite of the fact that the victim in this case seems to have been dealing with a man who has been responsible for serious losses to others in former years, arrangements have been completed whereby the beekeeper will secure payment in full.

As cities become more congested there are increasing numbers of people who object to the idea of bees within the city limits. Half a dozen places of considerable size have had ordinances prohibiting keeping of bees in town within the last two years. The legislative committee has in every case, we believe without exception, presented such strong evidence against the consti-

tutionality of ordinances of this type that the study has been abandoned.

State organizations in previous years have held conventions at such irregular times that it was almost impossible for prominent members of the trade and of the United States Department of Agriculture to attend more than a few of them. In Wisconsin we have been particularly fortunate in hearing a large number of prominent beekeepers during the past ten years. Many other states were in a less fortunate position, however, and due to repeated conflicts and the necessity for long trips to address one meeting it had been impossible for speakers to attend. Under the present arrangement the schedule committee of the League is securing the cooperation of more and more state and district associations, so that the beekeepers of the United States are getting in touch with the leaders of thought and action in honey production to a greater extent than they have ever done before.

One of the troubles which beekeepers in all parts of the United States have in common is that of depredations and molestation of out-yards while the owner is a long distance away. Sometimes entire colonies of bees are stolen, but more often the supers of honey are removed after the honey flow is over. It has been difficult to put a stop to this, but the League is distributing warning posters at twenty-five cents apiece which are being placed in apiaries in many parts of the country. The funds being accumulated in this way are being laid up to provide a reward for the arrest and conviction of the people who molest bee yards.

The most recent undertaking of the League is the publication of the monthly bulletin, in which the activities of the organization are explained to the individual members throughout the United States. This is mailed without charge to all supporters of the League, whether they are patrons giving \$100 a year and more or individual members of affiliated organizations at the \$1 rate.

The individual beekeeper, then, can see the results of his \$1 investment in five or six important particulars.

1st—The free subscription to the monthly League bulletin.

2nd—The right to use warning posters offering a reward for the arrest of people molesting the apiary.

3rd—The opportunity to buy honey recipe booklets from the League at a discount.

4th—In the future, as soon as the honey label is fixed, as it probably will be at the St. Louis meeting of the League, the members will have the right to use this label and will also have the right to use honey advertisements prepared by advertising experts, the beekeeper placing these advertisements in his local paper in connection with his own name.

We may therefore summarize the work of the organization as follows: It has distributed about twenty thousand honey recipe booklets in various parts of the United States, has advertised honey in national publications, has assisted state organizations in arranging their schedule so that speakers of national prominence could visit them in rotation, has been responsible for an increase in the tariff on honey from less than one cent a pound to more than three cents, has arbitrated over one hundred and fifty business disputes, has been instrumental in preventing the enactment of objectionable ordinances in half a dozen cities and is now distributing warning posters to assist beekeepers in preventing losses from theft, is cooperating with the federal department of agriculture in fixing standards and grades for honey, is keeping the beekeepers in touch with each other and with national apicultural interests through the publication of a monthly bulletin and is organizing a new advertising campaign which is to be placed on a permanent basis.

The Nutritive Value of Honey and Its Value as a Food

MISS ADELE KOCH

Extension Specialist in Home Economics,
M. A. C., East Lansing, Michigan

Honey is a sirup with a distinctive flavor and aroma made up of four parts sugar to one part water. There are several kinds of sugar present in honey—cane sugar, grape sugar and fruit sugar.

There are present in honey magnesia, lime, phosphoric acid, and iron. Since in making up a day's menu the lime and iron content may be difficult to maintain, the presence of these two mineral constituents is worthy of notice.

Since the principal ingredient of honey is sugar, it is obvious that it should be classed with the fuel foods which supply the body with the energy it needs for the various tasks it performs rather than those whose function is to build and repair the body—that is, the "tissue formers," as they are sometimes called. In placing it in the day's meals it should be used as a sugar.

Because the chemical change effected by the bee in the sugars of the nectar is the same as that effected by digestive ferments, and the principal sugars may therefore be considered to have undergone the first step in digestion, honey is often said to contain predigested sugar. It should prove valuable for children who experience difficulty with cane sugar which causes acid fermentation in the stomach.

Honey is said to have a mildly laxative effect. L. Luttinger reports that honey contains all three vitamins, which means the growth producing vitamin, the antinuritic and the antiscorbutic, and that he substituted honey for orange juice and cod liver oil in the feeding of babies. He found that it did have a laxative effect. This information is of value to mothers, since in many Michigan homes honey is much more easily obtained than either orange juice or cod liver oil.

The presence of all three vitamins makes honey a more valuable sugar than cane sugar. Besides the

food value—honey is very desirable because of its flavor.

For honey to compete with sugar as a source of energy it would have to sell at 6 cents a pound when sugar is selling at 7 cents.

In American homes honey is largely used as a spread for bread and ounce for ounce equals jam in the number of slices it will spread.

The U. S. Department of Agriculture has found that honey substituted for about half the sugar used to prepare the sirups for soft drinks, such as root beer and fruit drinks, very much improves the quality of the drinks without very much increasing the cost.

To increase honey consumption the producers should push its use in cookery—for the sweetening as well as the flavoring of muffins, cookies, cakes and candies. Foreigners use honey in this way much more generally than Americans do.

When used in cookery, it should be borne in mind that honey is slightly acid and therefore may be used as a substitute for molasses. It can be used in the place of molasses in all forms of breads, muffins, and cakes, and makes a more delicately flavored product. It contains less acid than molasses, however, and care should be taken to use less. Repeated experiments show that the allowance of soda to a cupful of honey ranges between one-fourth and one-half of a level teaspoonful.

Honey is especially useful in recipes without butter. A cake containing butter will remain fresh tasting as long as the butter stays fresh, but a honey cake made without butter will keep fresh for months and even improve in flavor.

In considering the uses of honey in cookery it is well to remember that it owes its flavor to bodies which are very volatile and for this reason should not be heated unnecessarily hot or unnecessarily long.

The writer has wondered whether honey producers might follow the plan of the citrus fruit producers and on every package of honey marketed put a label containing a good

tested recipe using honey. If several producers cooperated the cost of this would not be prohibitive and should produce increased honey consumption.

Several recipes are given here:

HONEY AND NUT BRAN MUFFINS

½ cup honey.
1 cup flour.
¼-½ teaspoon soda (level).
¼ teaspoon salt.
2 cups bran.
1 tablespoon melted butter.
1½ cups milk.
¾ cup finely chopped English walnuts.

Sift together the flour, soda, and salt, and mix them with the bran. Add the other ingredients and bake for 25 or 30 minutes in a hot oven in gem tins. This will make about 16 large muffins.

SOFT HONEY CAKE

½ cup butter.
1 cup honey.
1 egg.
½ cup sour milk.
1 teaspoon soda (level).
½ teaspoon cinnamon.
½ teaspoon ginger.
4 cups flour.

Rub the butter and honey together, add the egg well beaten, then the sour milk and the flour sifted with the soda and spices. Bake in a shallow pan.

Much more detailed material on the uses of honey may be found in Farmers Bulletin 653, "Honey and Its Uses in the Home," from which bulletin most of this paper was taken.

(This paper was received through the courtesy of Russell H. Kely, secretary of the Michigan Beekeepers' Association.)

Members of the Association will be interested in knowing that the Wisconsin Section of the American Honey Producers' League now has 114 paid-up members for 1923. The dues to this section are \$1 for members of the State Association. Any member desiring to become affiliated with this organization, may send \$1 to the secretary.

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A Visit to the Bulb District of Holland

By JOHN C. WISTER

(Courtesy Farm and Garden)

(An excerpt from Mr. Wister's address on "European Gardens," given at a recent Conference of the Woman's National Farm and Garden Association.—Editor.)

Last May, on the seventeenth, I reached Holland. This would be too late in most seasons to see many flowers, but I was in time to catch the last of the hyacinths and the last of the early tulips, the last of the daffodils and the beginning of the late tulips, so that by lucky circumstances I saw as much in a week as could be seen in ordinary seasons in three weeks.

The bulb district lies within five or ten miles of the North Sea and stretches for a distance of about twenty-five miles along the railroad line between The Hague and Amsterdam, the center being somewhere between Haarlem and Hillegom. This entire district is artificial. The country was formerly composed of coastal sand dunes which the Dutch have been digging away for 300 years. The whole country has been lowered until the proper moisture level has been reached for bulb growing. As far as one can see, within every direction from the railroad train, these bulb fields stretched out and the flatness is broken only by an occasional village with its trees, or by isolated bulb storage buildings of red brick, or a farm building or straw shack. The fields are all from five to twenty acres in extent, and are surrounded by small canals and often divided by beech hedges which are trimmed to a height of about six feet. The brilliance of the colors in these enormous masses of flowers is indescribable.

I went first of all to Leyden

where I was met by Mr. Warnaar, a large wholesale grower, who took me to his nurseries in Sassenheim. About one hundred fifty acres are under cultivation mostly in tulips and daffodils and these were very brilliant in color when I was there. Of the early tulips, *Luminosa* was still bright, and made a most brilliant showing. Of the daffodils the largest quantities were of *Poeticus*. Fields of these ten acres in extent were often to be seen. Among the newer varieties of *Poeticus* I was particularly taken with *Horace* and *Glory of Lisse*. Of the yellow trumpet varieties the finest were *King Alfred*, *Olympia* and *Van Waverens Giant*, which are still considered novelties in America, but which in Holland were being grown by the acre. But with so many of the new, some of the old varieties like *Emperor* are still among the best.

There were many bicolor trumpets, but I liked *Spring Glory* the best. Mr. Warnaar then proceeded to show me the beautiful white variety, *Mrs. E. H. Krelage*, which it is believed is going to be the most important of all white trumpet *Narcissus*, and *Imperator*, a variety which is not yet on the market and which is still worth more than one hundred dollars a bulb. Of the *Medium Crowned*, or *Incomparabilis* varieties, of which *Gloria Mundi* and *Sir Watkin* are well-known types, I was much impressed with *Bernardino*, *Great Warley*, *Homespun* and *Lady Margaret Boscawen*. Among the *Leeds* varieties, novelties to me, were *White Lady*, *Queen of the North*, *Sirdar* and *Lord Kitchener*. The *Poetaz* section is not as well known in America as the others I have mentioned, and there seems some doubt as to their ability to with-

stand our climate more than a few years. But as they are not expensive as daffodils go, they are well worth trying. Of the many varieties I liked *Laurens Koster* and *Admiration* the best.

Tulip varieties are even more numerous and more confusing. I recognized a number of old friends like *Clara Butt*, *Farncombe*, *Sanders*, *Rev. Ewbank*, *Bronze Queen*, *Inglescombe Yellow*, and *La Tulipe Noire*, of course, but there were endless new sorts which I could neither spell, pronounce or remember. Some deep bronze purple varieties that attracted me were *Abdel-Kadir*, *Don Pedro*, *Louis XIV*, *Turenne*, *Velvet King*, *Faust*, *Zulu* and *Twilight*. I looked especially for shades of lavender mauve that would combine well with lilacs, and four of these are *Erguste*, *Euterpe*, *Herzogin von Hohenberg* and *Oliphant*. A few others as yet but little known varieties are *Bacchus*, *Chester J. Hunt*, *James Watt*, *Meyerbeer*, *St. James*, *Jubilee*, *King George V* and *Princess Mary*. After looking at these varieties I found myself in the frame of mind that could understand and sympathize with the tulip mania that swept over Holland in 1634, from which people like *Ponzi* must have received their inspiration for high finance.

I was greatly impressed with the care the Holland people take to keep out disease, and from what I saw I would feel much more secure with Dutch grown bulbs than with American grown bulbs, for I do not know where in this country we can get skilled laborers who would go over the fields as carefully as is the custom in Holland. Every field is inspected every day. Two men walk together, one of them carrying an umbrella to shade the

ground so that the sunlight and shade do not confuse the eye and the slightest discolored foliage is removed at once. If the whole plant seems affected it is taken up bodily by a special tool which lifts the soil out with it. I have never seen anywhere such spotless looking fields and, for that matter, such spotless looking towns as those in every part of Holland.

From Sassenheim I went to Hillegom to the great farms of the Van Waveren Company, which are probably the largest in Holland. This firm is celebrating its one hundredth anniversary this year and is very proud of it. I was taken to one of the outlying districts to see the work of cutting down sand dunes and making new fields, for they are still further enlarging their business not only of bulbs but of sugar beet seeds, in which they also specialize. From Sassenheim it was not far to Heemsted, where I visited Jan Roes, to whom Mr. Chester J. Hunt had given me a letter of introduction. Jan Roes grows tulips only, and and is considered the greatest authority on them in Holland, but his place is a comparatively small one. At Heemsted, also, is the trial garden of a Dutch Bulb Growers' Association, where new varieties are tested and where experiments in the fighting of pests are undertaken.

The next day I went to Haarlem to see Mr. Krelage, whom I had known for some years through correspondence on Iris matters. He is one of the greatest seedling raisers of Holland and has done great work in breeding both tulips and daffodils. To protect the flowers and give him an opportunity to study them longer, and to hold them back for late flower shows, he uses a frame of burlap on heavy posts which is neater and better than any

I have ever seen. These frames can be placed vertically or horizontally according to the amount of protection desired. Among the tulips which particularly interested me were a new race which look like Darwin tulips. Here they were in full bloom when the late varieties with them had not opened, and for this reason they should become commercially important. Mr. Krelage was kind enough to invite me to his house to supper to show me his wonderful horticultural library, which is one of the best in Europe.

In the town of Haarlem also is the famous firm of Van Tubergen. Their garden which is called Zwanenburg, is not more than two or three acres in extent, and is for the exclusive use of a test garden, the growing fields being far out of the city. Here again many seedlings of daffodils and tulips were seen in splendid condition. Among other flowers the most brilliant were the St. Bavo Anemones, a special strain developed by Van Tubergen, and named in honor of the Cathedral which is near the nursery. These are planted in mixed beds, so that the red and purple colors are mingled, and they are a most beautiful picture in the sunlight and wind. The present head of the firm is Mr. Hoog, a nephew of the original Van Tubergen. In honor of his work in creating the Regelow-Cyclus race of Iris, Mr. Dykes named the beautiful Iris Hoogiana for him.

From Haarlem to Aalsmere is but half an hour by train, and here are the best nurseries for trained evergreens. Specimen box and other trees are grown in all imaginable shapes most of which, to my eye at least, are very ugly. From there another short journey brings one to Amsterdam and here I saw

a sight to make any American feel unhappy: large canal boats full of Rhododendrons were being unloaded on the streets and sold to passers-by, the peatty soil hanging to their roots just as if they had been in pots. Cut flowers in Amsterdam, as in every part of Holland, were wonderfully fine. I have never seen equaled anywhere the cut sprays of lilacs in the windows, and there were also many fine roses, lilies and, of course, plenty of tulips.

To go to the great nursery center of Boskoop it is necessary to go back to Rotterdam, then to Gouda by train, and from there an hour or so by canal boat along the most beautiful canal. With Quarantine 37 in force Boskoop has, of course, lost its importance to America, but before this Eighteenth Amendment to the plant world was in operation, young plants came from its nurseries to this country by the millions. All of them were good plants from an European point of view, but many of them were too soft to stand our severe climate, and thus often gave Boskoop a bad reputation. The nurseries border on one of the main canals running through the town, and to get to a nursery office one has to cross a small swinging bridge. Most of these nurseries are narrow, that is, only two or three hundred feet, but they run back thousands of feet. The stocks of azaleas, Rhododendrons, box and conifers, were in magnificent condition. It was enough to make any American unhappy when he realizes that these wonderful plants are unobtainable and that we have to rely upon American nurseries which have not yet caught up with the demand and which are asking exorbitant prices for some of the

(Continued on page 167.)

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

Convention Impressions

MRS. CLARA HARRINGTON

When I started to Madison I felt like a bashful school boy the first day at school, but when I arrived, I was made to feel so welcome that it was like a home-coming of a large family who had taken me in as a member.

I thoroughly enjoyed every moment of the three too short days and came back with a large fund of useful knowledge besides. I knew quite a few members and became acquainted with so many congenial men and women horticulturists that I have arrived at a logical conclusion—that all horticulturists are splendid people and are well worth knowing. Isn't this true?

Mrs. Schoen's delightful luncheon gave me a splendid chance to enjoy the companionship of several congenial ladies of the Women's Auxiliary whom I wish I could meet often.

I have never seen a prettier sight than the exhibit of fruit, flowers and vegetables held in the rotunda. With those beautiful walls as a background and the beautiful colors of the apples banked against them and the lovely colors of the flowers and vegetables in the center, only an artist or a poet could really give you an idea of its beauty unless you were fortunate enough to see it. We surely should be grateful to the members who staged this wonderful exhibit.

I certainly enjoyed every paper or lecture that I heard both at the Women's Auxiliary and the regular sessions. We surely will never forget Judge Traxler's lecture and col-

ored slides of wonderful peonies. It made us all want to grow peonies and then more peonies.

I wonder if it would not be a good idea to have fifteen minutes of snappy community singing before the time scheduled for the Women's Auxiliary to begin. It is so easy to forget time when gazing at the beautiful exhibit and the singing would attract the crowd and remind them of the evening program. I would also suggest a piano accompaniment if possible or if not, some other instrument but if we can't have either—sing anyhow, but have it before the meeting so that the meeting can start promptly with a large audience. I just know all horticulturists must be musical.

It seemed to me that everything had been so perfectly arranged in every way that there is no room for improvement. If everybody in the state knew how much enjoyment and knowledge he would get by becoming a member, I'm afraid our worthy secretary would be the busiest man in the state enrolling them. I have always been proud of my native state but when I returned from Madison I was prouder than ever and I am sure no other state ever had a more successful convention or a finer exhibit. On Wisconsin!

After writing such a nice letter I rather suspect Mrs. Harrington will think I am a pretty mean person to tell right out in meeting that it took considerable persuasion to persuade her to attend the convention. She was quite positive that there were many other things she

would rather do than spend three days at the winter meeting—one day wouldn't be so bad, but three was entirely too much. After she had been there one day, nothing more was said about going home. Indeed I believe she entirely forgot that there was such a place, and when we started for the train she said, "My those were the shortest three days, time just flew, everything and everybody was so interesting."

Editor.

Carelessness with Poisons

A newspaper item told of a woman who used arsenic instead of baking powder, in making a batch of crullers. Three persons tested the crullers while warm and were made violently ill.

Few housekeepers, I think, would be as careless as this woman, but the incident may be used as a warning. Spraying necessities compel the use of several dangerous poisons on most farms. They should be kept in some safe and convenient place, preferably the "shop" or office, under lock and key. Such things should never be in the home pantry, or upon some dark shelf.

More than once some dark tragedy could be traced to nothing more in its beginning than carelessness in the handling of some poison in common commercial use, resulting in a lifetime of regret.

F. R. Toole.

"Grow flowers, that thou may'st have and give.

Grow cabbages, that thou may'st eat and live.

For life is complex and its needs demand

That flowers and cabbages grow hand in hand."

Author Unknown.

Growing, Exhibiting and Displaying Flowers at the State Fair

MRS. CLARA E. HARRINGTON

For the amateur exhibitor, the state fair really begins when the seed catalogues appear, because lists must be carefully scanned and considered for weeks, before orders are sent for seeds.

While the amateur does not expect to try out all the new novelties offered, there are generally one or two that she thinks might possibly add to her exhibit. I say "she" because nearly all the amateur exhibitors are women, while the reverse seems to be true among the professionals.

Sometimes a new variety of aster, celosia, cosmos or other old standby is advertised and highly recommended and of course this must receive thought and consideration.

By bitter experience we have found that it does not pay to order seeds from any but the most reputable firms and generally the highest priced seeds bring best returns. Cheap seeds usually mean flowers of inferior size or not true to name. When we order American Beauty aster seed we do not want a crop of six or seven colors of inferior asters, or worse yet, no crop at all.

We have found it best to raise some varieties of flowers in the cold-frame and then transplant, while others seem to do best planted in the open ground. Asters, snapdragons, celosias, salpiglossis, dianthus and verbenas do best in the cold frame while larkspurs, calendulas, marigolds, annual gypsophila, centaureas, sunflowers and cosmos do best when the seeds are planted in the garden.

When the first seeds are sown in the cold-frame, the exhibitor's troubles begin, for the elusive snail, cutworm and several like creatures

seem to enjoy the delicate leaves of the choicest plants for their spring greens. Some of these pests may be kept off by sprinkling lime around the outer edge of the cold-frame next to the boards. By giving plenty of fresh air many plants can be saved from damping-off if not sown too thickly.

It is easier to give the plants the best care, by transplanting them into rows in the vegetable garden where they can be cultivated with the hand cultivator and hoed the same as vegetables.

The transplanting should be done before the plants are too tall or the weather too warm, otherwise if the plants manage to survive, even with good care they become stunted and the result is inferior blooms or short stems, either fault being fatal to the exhibitor. This may not be true where there is a water-system, but I think most amateur exhibitors depend mostly on rainfall and plenty of cultivation to conserve moisture.

After the plants have stood the perils of transplanting and drought and we have fought off myriads of bugs, slugs and worms, just before the state fair we usually have a regular cloudburst accompanied by plenty of wind and hail. We ruefully view the wreck and wonder if we can find the necessary number of blooms called for in the premium list, that are not mud-bespattered or bedraggled.

For the nearby exhibitors who decorate dining room tables, it is better to arrange them Sunday evening, as visitors are not in the way and much more can be accomplished.

In arranging the tables, we have discovered that simplicity is the best rule to follow. Elaborate displays and accessories should be left to the

professionals, who know best how to handle them. The centerpiece should be arranged gracefully, not overcrowded and not too high. If candles are used, they should harmonize with the color scheme.

Flowers for exhibitors are best cut early in the morning, the lower foliage stripped and then placed in deep receptacles of water in the cellar or other cool place till needed. By stripping the lower foliage, the water in the receptacle at the fair does not become impure so quickly, as there is less decaying matter to pollute it and therefore the flowers stay fresh longer. Then too, it is easier to arrange them without these lower leaves.

With some flowers like dahlias, sunflowers or poppies, the stems may be stripped of the lower foliage and then plunged into boiling water for a half minute or so and then placed in cold water in a cool place for a few hours. This is particularly effective with both single and double poppies and then these beautiful, seldom-used flowers can be used in displays, baskets or table decorations and will last for several days, if they were picked just after opening, very early in the morning.

The "setting-up" process at the fair can be greatly facilitated if the necessary number of blooms of each kind are selected and counted at home and then wrapped by themselves when being packed in the baskets or boxes. Then it is only necessary to unwrap and arrange in a vase at the fair. A few extra blooms of each kind must be taken along in case of accident. This is particularly true of cosmos and the large varieties of marigolds whose heavy heads have a disagreeable habit of breaking off.

(Continued on page 172.)

THE FLORISTS PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

Flowers in God's Acre

From our youth, we have always thought that the German word for cemetery, "Gottesacker," was the best chosen word to carry a thought of consolation. We hold no brief for cemeteries, but when they strive so arduously to beautify them with plants and flowers, we think they should be commended. Few commercial growers in this neighborhood grow the variety and amount of flowers that are grown out at Forest Home cemetery at the south-western edge of Milwaukee, where Highways 57 and 61 intersect. Perhaps it is because they are not a commercial house, but more like a private conservatory, that they grow such choice specimen plants. Then, too, it may be that James McGregor, the old Scotch gardener, doesn't want to be beaten by any other grower in town when it comes to growing a fine specimen plant. He comes so close to doing it, that it is no fun for the rest of them.

In the November, 1922, issue we recorded the death of the oldest member of the Milwaukee Florists Club, James Currie, and it is to his genius as a florist, that the conservatory is there today. James Currie was an extraordinary man, not only a florist, a landscape gardener, an architect, but also an engineer. It was his genius that planned all of the buildings at Forest Home which are still serviceable after more than 20 years of use. The cemetery is owned by the St. Paul church. James Currie's mantle has fallen to his son, W. B. Currie, of Currie Bros., florists, who has been trained by his father for the place.

There are really three sets of greenhouses or rather conservatories. On both sides of the chapel are large palm houses beset with natural stone grottos, sheltering pools teeming with goldfish. Many of the palms have been growing there for 20 years or more, and their roots reach far down into the earth. The Kentias (*forsteriana* and *belmoreana*) are probably the finest one can see in this region, and their *Rhapis flabelliformis* are the largest we have seen in cultivation. Short pleasing vistas are the rule and one thinks how pleasant it is to be in the midst of God's acre and have the feeling that one is almost the same as in God's out of doors. How different from the extremely mournful weeping ferns and cast iron rubber plants of the usual funeral director's establishment.

The gardener's office is in the cut flower house. Although they do cut and sell flowers, it is only to owners of the lots in the cemetery, and the supply is hardly ever equal to the demand. In fact, the whole reason for this set of greenhouses is to furnish flowers and bedding stock to lot owners. In a part of the main conservatory, you will see a heterogeneous gathering of century plants, cacti, palms and ornamentals being wintered over for lot owners.

There are 27 greenhouses, all told, and we saw eight or ten employees potting stock in the long potting room, 12 by 70 feet. Another group were making ornamental cement work in the big room back of the carnation houses. Our principal reason for going there in

the middle of February was to see the splendid *Cineraria cruentis* hybrids which Mr. McGregor grows. Specimen heads reached a cross diameter of 18 to 20 inches. But once arrived, we found many things of interest. A few varieties of orchids were in bloom, and the *Primula malacoides* was doing its best to reach the roof. Mr. McGregor had some of those fine *Amaryllis* from James Livingstone, which were just coming into bloom. One specimen *Calceodaria* he grew had a cross diameter of 45 inches. This is somewhat past our experience and we thought of borrowing it for the florists, like the small boy did the ostrich egg to set it up as an example for the hen to encourage her to do her best.

W. B. Currie told us of their plans to move the greenhouses four miles out on the Loomis road to a plot of 55 acres they have bought for the purpose. There they will grow all of the bedding and nursery stock they need, besides the fine flowers. They will also grow some of the quantities of turf it takes to keep a place like this supplied.

If any place should give us a vision of the immortal realms, it ought to be God's acre, and the more we can do to beautify the place, the nearer we will come to the ideal. We think W. B. Currie and James McGregor are on the right track, and that there can never be too great a wealth of flowers in such places. Mr. McGregor is an enthusiastic florist, and says he can never get enough of flower shows. He recalled the old days in Milwaukee, when shows were frequent, and rejoiced greatly to see the two held last year in the Museum-Library building rotunda.

Huron H. Smith

Response of Apple Trees to Nitrogen Applications

Orchard fertilization has been attacked by most investigators as a simple matter of increasing growth and productiveness. That the problem is not so simple as has been supposed is brought out in recent researches of the Missouri Experiment Station in Research Bulletin 50, which supplements the work already reported in Bulletin 40. The author, Dr. H. D. Hooker, Jr., has studied the application of nitrogenous materials at different seasons, and the consequent effect on set of fruit, growth of leaves and bearing spurs, formation of fruit buds, and starch accumulation in the spurs. He has found that spring applications do not favor starch accumulation at the time when fruit buds are formed, which is during the summer. Late applications of nitrogenous fertilizers, between September 1 and 25, effect a greater nitrogen content of the spurs the following spring immediately before growth begins. Indirectly, and because of a greater leaf development, a high starch content of the tissues is produced the following summer, which is favorable for fruit bud formation.—News Bulletin, Soil Imp. Com., May, 1923.

Boric Acid as an Antiseptic

The value of boric acid as an antiseptic for ordinary use should be more generally known. For many purposes it should take the place of the disagreeable smelling, and in some ways dangerous, carbolic acid. It may be used in its powdered state, but often more conveniently as a wash on fresh wounds to prevent infection. Where a salve is needed, equal quantities of boric acid and vaseline should be thoroughly blended. This will

be found very convenient for use either in the home or stable.

For an eye lotion, nothing can equal a saturated solution of boric acid. To prepare, mix the powder to a paste and then dilute this with soft water, leaving it strong enough that there shall be a small deposit of crystals in the bottom. Keep this in a bottle for use. For smarting or irritation, bathe the eyes in any way that will cause the liquid to reach the inside of the eyelids. A medicine dropper may be used, or better still, a small aluminum eye cup may be purchased at the drug store.

Like many other valuable household remedies, boric acid is moderate in price.

God never placed us here simply to get ready to go to heaven. He placed us here to grow and to develop the highest and best things of life, to serve humanity and to make the world a little better place for our having been in it.

Aim to destroy weeds just as they appear above the surface. It will save hard work in getting rid of them later.—Wisconsin Garden Book.

The gardener's motto at this time should be "Catch moisture; hold moisture." The demand for moisture as the plants grow and the warmer weather comes on constantly increases, moisture is needed for plant growth, and unless there is an abundant supply, growth ceases. Moisture, then, becomes the chief concern of the gardener at this time. Tillage is the chief means the average gardener has of insuring this essential of successful gardening.—Wisconsin Garden Book.

A Visit to the Bulb District of Holland

(Continued from page 162.) plants which can be so cheaply secured in Holland. Whether or not we believe in the protective tariff, we cannot help feeling annoyed at quarantine which makes us pay fifteen or eighteen dollars for a Rhododendron which can be secured for seventy-five cents and less in Holland. The danger of importing pests on these plants is, of course, very real, so that the problem is an exceedingly difficult one, and I for one, do not wish again to see free importations of all kinds of plants as we have had in the past. This should not be taken as an endorsement of Quarantine 37, however, as I feel that this particular quarantine has been in many ways unjust and unfortunate.

Why Worry?

No matter how things come or go,
Don't you give up or fret;
Just stand upon your troubles and
Reach what you want to get.
Be like the happy man who had
A big cucumber vine.
And when a white worm ate it off
Did he sit down and whine?
Oh, no! he took that hearty worm,
Went to the lake and caught
A monstrous fish that sold for more
Than all the vine would brought.
—Poet Unknown.

True Hospitality

It rained—and we were welcomed in the tiny log cabin—spotlessly clean—some flowers in an old blue bowl on the well scrubbed table—our hostess, a little old Indian woman her face beaming with pleasure proffering us a plate of deliciously ripe fruit. A real horticulturist and true hospitality.

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The La Crosse Meeting

Attendance at the summer meeting, La Crosse, August 15th and 16th, will be well worth the time and expense involved. In fact our summer meetings now closely approach in interest and value the winter meeting. It was not always so. Twenty years ago only a handful attended and most of them wished afterward they had stayed home.

An increased interest in things horticultural, the increase from a scant hundred members in 1913 to over 2,400 in 1923, good roads and the automobile have completely revolutionized the summer meeting. While the meeting affords an opportunity for a delightful vacation trip it also comes at a time when

garden and orchard problems are fresh in mind. The atmosphere of the summer meeting is different from that of the winter meeting, less formal perhaps, those present ask more questions, discuss topics of interest more freely. This is exactly as it should be; we meet for a "pow-wow" not exactly Indian fashion but with the greatest possible freedom from restraint of any kind. Not for years has there been a prepared, written address at the summer meeting and there will be none this year.

Several of our members who are experts, have been asked to lead discussions on live topics. These thoroughly practical men and women will be ably assisted by the scientists from the State Department of Agriculture and the College of Agriculture. The main feature will be a question box, a big one. If we had the authority we would limit attendance to those who would promise to ask not less than five questions each.

So much for the two sessions, forenoon and afternoon, Wednesday, August 15th. The evening session is entirely in the hands of County Agent Spreiter and the good people of La Crosse county; that it will be long remembered we have no doubt. On Thursday we will combine pleasure and profit. We will visit orchards big and little as well as other places of interest in horticulture. It will be a day well spent. We cannot give you now a definite program of any sort, so many people neglect their correspondence this time of the year, but a printed program will be handed to you as you enter the hall or out-door meeting place and the big question box will be ready. Mark the dates on the calendar, August 15th, 16th.

Burbankitis, a Bacterial Disease

The disease Burbankitis has been known for a long time. Victims may be found in every community. It's not insanity, as that disease is commonly understood but rather dementia. There is no known cure, but fortunately the disease is seldom if ever fatal.

In the February number I took occasion to remark that Burbank appealed to me as considerable of a humbug, that he was not a scientist, etc.

So far no one has risen to challenge these statements. On the contrary many have written to me endorsing the sentiments expressed by Professor Barrows and myself. Although these communications were personal I cannot refrain from giving extracts from three without disclosing names of the writers. All are prominent men, two in the eastern section and one from the middle west.

"After reading your article in Wisconsin Horticulture entitled "Behold our Idol Has Feet of Clay" my impulse was to reach out my hand for a shake of appreciation. I have always taken precisely the attitude which you mention in this matter. I have many times asked those who were inclined to hero worship to mention a single new production by this man produced by scientific methods which was of real practical value to the growers of the United States. He undoubtedly has had a delightful existence in his experimenting and propagating of fruits and flowers but he has shown the weakness which you mention. The most gigantic error of his life, however, was allowing the exploitation of the public by the company organization that published the work of his life which consisted mainly of a fine set of pic-

tures and had for its principal object the extracting from the hero worshippers a goodly number of their hard earned dollars."

"However, I doubt if the present generation will ever cease their worship but when the cold facts of history are presented to the succeeding generation and come to be considered the truth will be evident."

"On my return home I found my room filled with letters and magazines that had piled up since I left, and among them of course Wisconsin Horticulture which was very welcome, particularly the February number. I am glad that you have seen fit to come out in the open as you have about Burbank and state the case, for there is certainly no doubt about the fact that he has the public absolutely buffaloed and will continue to do so until the Horticultural societies call his bluff."

"Please accept my thanks for your editorial in Wisconsin Horticulture for February. I am interested in seeing the public educated to judge accurately who is reliable and who is not. I am sorry to see it necessary to attack any man for lack of integrity, but someone must support the honest worker."

Perhaps after all the fault is less Burbank's than it is those who have exploited him and the unthinking who prattle much of that of which they know nothing. Nevertheless Burbank not only allows this fulsome stuff to be spread broadcast but encourages it. My whole desire is to get the proper measure of the man and to point out that the value, economically, of his work so far has been insignificant, and that plant breeding is a science rather than an art.—Frederic Cranefield.

Here Comes a New One

As if anthracnose, high taxes, leaf curl, the gasoline tax, root gall and a few other like burdens were not sufficient to take all the joy out of life for the raspberry grower, some cheerless plant pathologist has discovered a new and incurable disease and fastened it on to the raspberry. Listen:

WASHINGTON, D. C.—Warning was sounded here today to raspberry growers in Wisconsin to be on guard against an invasion of a mysterious disease that has wiped out berry plantations in Ohio and New York.

It is admitted by the agricultural department investigators that they know very little of this blight. They have been unable to determine the cause of infection, and have, so far, discovered no effective method of treatment. For purposes of identification the federal scientists give it the name of "blue-stem."

EASY TO RECOGNIZE

It is easy to recognize blue-stem by the peculiar curling of the young leaves and blue stripes on the canes.

The necessity for watchfulness by Wisconsin growers is emphasized by the statement that in some sections where raspberries have been grown extensively for years profits are curtailed to such an extent that farmers are not encouraged to stay in the business.

Infection runs as high as 75 per cent, and total loss in some districts is believed to be very large.

Often growers may suspect, the federal investigators say, that the trouble is winter-killing.

NO RECOVERIES NOTED

No recoveries have ever been noted. If the affected parts are cut off the disease will soon show up in another part. Plants started by rooting the tips of diseased plants will always have the disease. No bacteria or fungi have been found that might be said to be the cause, but certain features of the malady, such as the mottling and deformity of the leaves and the stunting and

final death of the plants, indicate it may be of the mosaic type.

The only practical method of getting ahead of blue stem, the government says, is to get stock from a nursery known to be free from it and set as far as practicable from diseased plantations. Young fields must be carefully watched and plants showing blue stem symptoms removed and replaced by healthy tips.

Dr. S. B. Fracker says we are safe so far, at least so far as he knows.

"The presence of this disease, which is thought to be of the mosaic type, in this state has not been fully demonstrated. Our nursery inspectors have given special study to its symptoms and are on the lookout. We have had raspberry leaf curl, which is highly injurious and may be a form of this same disease, for many years, and we are using precautions to prevent its further distribution." Let us pray.

Resolve to make your garden investment pay maximum dividends by *thorough, timely, tillage*.—Wisconsin Garden Book.

"Don't put off till tomorrow what should be done today" pays big dividends if put into practice in gardening. "A stitch in time saves nine" when garden conditions are most favorable for tillage.—Wisconsin Garden Book.

Squash bugs cannot readily be controlled by means of sprays. They will collect under pieces of board or burlap and may be gathered and destroyed early in the morning. The reddish brown eggs are laid in clusters on the under sides of the leaves and may be gathered and destroyed.—Wisconsin Garden Book.

Old Fashioned Flowers

SARAH JAMES

Old fashioned flowers; how they come trooping from our own garden and from the gardens of friends and neighbors as we call them to mind, reaching down through the long vista from childhood.

How extravagantly lavish nature is with her gift of flowers. How much happiness they bring. How refreshing to the soul. Everybody loves flowers. Like friends they are always needed. There was a story in one of our horticultural magazines impressively told of a workman who passed a bright flower garden every day on his way to work. Sometimes he stopped to admire them. He grew to greet them as friends. Then he tells how he missed them when his work called him to a distant city. But the memory of that garden cheered him in his daily walk to work.

Old fashioned flowers are taking their places again in everybody's garden. It is a joy to welcome old friends in flowers. The dames of a private school where I learned my a, b, c's and the three R's had a beautiful garden. It was the most wonderful to me in my childhood. The garden was laid out in conventional shaped beds, round and square and some running the length of the garden and were kept in place by strips of boards. Between the beds were narrow paths, paths free from weeds as I recall. As we came from school, we often stopped and leaned upon the old picket fence to admire the flowers. There were the little Johnny-jump-ups, in the border, in the paths, they even peeped up close to the fence. They were modestly persistent as they are today. It matters little what their abuse, even if covered with an ash pile through

the long winter, they come up smiling as soon as opportunity is given, as if saying, "I'm glad I'm here, and I know you are." Is the pansy a magnified Johnny-jump-up, the Johnny-jump-up accepting cultivation? In this same garden were peonies, sweet Williams, columbines, the yellow button buttercups, flowering almond, white and purple lilacs. There were the old fashioned pinks. Even to this day, this pink has no rival for fragrance and color. The delicate markings on the petals, their fringelike edges are wonderfully beautiful. There is not a pink or carnation which excels it in fragrance or beauty. I know of only one garden where they are found today. They are very rare. The peonies in this garden seemed as large and as generous of bloom as those grown today. But we recognized that flori-culture has produced almost limitless varieties. The flowering almond comes early, blooming before the leaves were out. This bush in bloom makes me think of spring sunshine. There were the white and purple lilacs including the Persian, ever-generous with bloom. What else more exemplifies God's abundance? Recall the spring air laden with their fragrance. Today I believe only nursery men can tell us the varieties, the doubles, the pinks, light and dark lavender. With them we are introduced to a new world in shrubbery. The syringa that has stood on a lawn for fifty years is a beautiful mass of white each June.

The old pink hollyhock grew in a neighbor's garden. The children used them for doll's parasols. Today what a variety of colors and shades among them. Can anything be more effective than these hollyhocks massed against a building, or

used to screen a less attractive backyard?

The *dahlia*s. They were in a class by themselves. There is the dignity in the erect plant. There is the dark, glossy green foliage, the conventional rich red rosette blossom, often grown enmass, some times at the kitchen door, where they were watered and enriched by the water thrown from the kitchen.

There were the low iris, used for borders. They were blue, shading to purple. Their markings are beautiful, characteristic of the whole Iris family.

The chrysanthemums were white and yellow, and were little button-like flowers. They have submitted to cultivation marvelously. Co-operating with God, man is a magician in handling this flower. Words are inadequate to express our wonder, surprise, interest and pleasure when we have visited a chrysanthemum show.

The aster has accepted cultivation too, in no small way. Today, the wild aster is extensively grown and used by florists. Let us all have the wild purple aster in our garden.

In my early garden, I think of the petunia, balsam, portulaca, sweet peas, cypress vine, and Madeira vine. The bright red blossoms of the cypress vine reminds us of the cardinal flower, though darker and smaller. The dark green foliage gives a cool and refreshing feeling. The Maderia vine was so sensitive to frost, that it was often cut down before the bloom came.

The petunia has made great strides. In many ways in which it is used it is superseding the geranium. As for example, it is used in porch boxes and window boxes, in vases and massed in beds. Its bloom is abundant, from its first blossoms in June until a killing

frost comes perhaps it is November. The petunia may be used to good effect on either side of a drive for autos only. The rows may extend from the street to the garage, and if there are two runners of cement only, the opening between is planted to petunias. The plants do not stand erect, they are rather low and mass well for such a purpose. These two or three stretches of color are beautiful. One color is used, it may be pink. The shades of pink are good. They seem to temper the heat of summer. In porch boxes I have seen one color used, pink for a southern exposure, the dark purple in an eastern exposure, and in one large box on the east side of the house every shade from the darkest purple to white was used.

I recall a floral carpet of portulacca in a disused driveway. It looked like bright flowering moss. The bright colors were beautiful, running off into the green lawn.

We must not forget the bleeding heart. It was originally imported from Asia and is becoming extinct. Its foliage is beautiful in color and shape. The flowers are interesting in form and grow on a graceful raceme.

Among the roses, were the blush rose, the hundred leaf, the cinnamon, and the moss rose. O, that sweet brier. From the greenhouse we would secure a tea rose and a pot of heliotrope.

There was the four o'clock, nature's floral timepiece. It shows itself larger, with advance in style. They are more showy than formerly. It grows to great bushes as we see it today.

Sometimes in an old fence corner or near an old deserted farm building, you will see a bunch of tansy growing. In just as deserted a

place you may find the blue bell growing.

I think more attention is given to the arrangement of flowers today, particularly to the color scheme and the massing of them. There is thought of course given to the height of plants and to the time of blooming.

The annuals and perennials are equally important in every garden. Among the common annuals are the amaranthus or strawflowers, the sweet alyssum for borders, and the antirrhinum or snapdragon, the annual larkspur, blue and pink, and the mignonette. The French marigolds are most effective in ribbon borders and edgings to beds of tall flowers such as salpiglossis and zinnia. The African marigold can be used effectively in massing, as, for example, at the entrance of a garden. Should there be a garden gate, mass it on either side.

The calliopsis, yellow with brown center or brown with yellow center and the pot marigold or calendula and the French marigold may be used where a yellow color scheme is desired.

Then there is the bachelor's button, particularly the blue, though the mixed colors make a wonderful bouquet with its delicate light green leaves.

There are two more I would like to mention, the phlox drummondii and the cockscomb.

Among the perennials not previously mentioned are the phlox perennial, the tiger lily, day lily, lily of the valley, the larkspur, and the garden heliotrope.

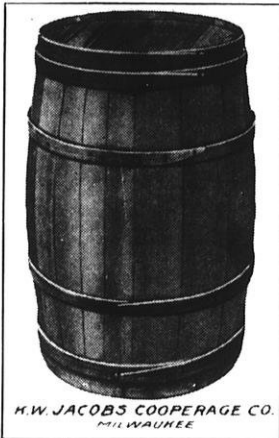
A garden extending along a fence or either side of a walk may be given the air of permanence and homely comfort by the use of hollyhocks, canterbury bells, columbines,

lupines, phlox, alyssum, marigold, ivy and a rose or two.

We love our old friends, but we find it very enjoyable to welcome new ones. The new friends have brought us indescribable joy, the new friend I raised last summer was the *Torenia Fournieri*. It has violet blue flowers, the pansy colors and markings but in shape it resembles the snapdragon. The plants make a beautiful border alternating with ageratum.

Professionals tell us not to introduce too many new flowers in one season. A new friend now and then is an inspiration. Keep the old friends tried and true. In "Elizabeth and her German Garden," Elizabeth describes her old fashioned garden so interestingly and then tells its deeper value when she says, "The garden is the place I go to for refuge and shelter, not the house. In the house are duties and annoyances, but out there blessings crowd around me at every step. There I feel protected and at home, and every flower and weed is a friend, and every tree a lover. When I am vexed I run out to them for comfort. Did ever a woman have so many friends? And always the same. Always ready to welcome me and fill me with cheerful thoughts. Happy children of a common father why should I, their sister, be less content than they? I do sincerely trust that the benediction that is always waiting me in my garden, may by degrees be more deserved, and that I may grow in grace and patience and cheerfulness just like the happy flowers I so much love."

You may succeed when others do not believe in you, but never when you do not believe in yourself.



Now is the time to buy your APPLE BARRELS

From

K. W. Jacobs Cooperage Co.
Milwaukee

36 Years of Service

Quality Barrels

Flowers at the State Fair

(Continued from page 165.)

Baskets or bouquets, both of cut flowers and everlastings, can be arranged at home, tagged and packed carefully. In selecting kinds of flowers to be used in collections of annuals or perennials it is best, when possible to choose those having long-stemmed blooms and varieties that last well for several days. Some flowers look beautiful the first day and then close at night never to reopen, while others look sad and droopy all week. The close air of the crowded hall and lack of fresh water daily are hard on cut flowers, so consequently only long-keeping kinds should be chosen.

When possible it is best to set up the exhibit Monday night, so the superintendent can be free to arrange them artistically by eight o'clock Tuesday morning. There are always a few unavoidably late arrivals and then they have a chance to work without being crowded.

By keeping these things in mind a large exhibit can be set up in a short time after arriving at the

fair and much worry and confusion can be avoided.

The superintendent of the horticultural building and the department superintendent do everything in their power to make it convenient and helpful for us and we should meet them at least half way, and further, if possible.

By making our entry at least two weeks before the fair, we can receive our tags early and thus avoid confusion at the secretary's office. If "shopping early" is a good thing at Christmas time, it certainly is at state fair time and if I were allowed to make a slogan for exhibitors it would be "Do things early."

After we have gone through all this work and suspense, we all hope to get a premium, but when we see that some one else has superior flowers and better taste in arrangement, we should be good losers and accept the judges' decision gracefully. If we do not understand *why* we lost, he will be glad to explain our faults and we will learn to avoid those things next time. We should recognize the fact that

he would not have been chosen to be judge unless he was perfectly competent and unbiased. There are certain rules which we must live up to absolutely. Some of them are: The exact number of blooms in a vase; the exact number of vases in a display; the exact number of varieties or colors in a display; perfect blooms without brown spots or signs of age; clean foliage; no seed-pods, or mutilated leaves or blossoms; flowers that are supposed to be double—like asters for instance—should show no yellow centers and not be semi-double. We should not expect to use shrubs as herbaceous perennials or dahlias and gladiolus as annuals.

A display of annuals or perennials looks better if each bouquet is uniform in size and height and the vases so arranged that the colors do not clash.

We cannot all be winners at the state fair even if we do live up to all the rules, but we can be cheerful losers and try again next year.

He who is firm in will moulds the world to himself.—Goethe.

Home Adornment

MRS. W. A. TOOLE

When the subject of home adornment is presented us horticulturists we naturally think of the flowers, as to many of us they are of prime importance in our scheme of living; while all who are interested in fruits, vegetables or other products closely allied to nature are through them brought to a realization of the more aesthetic value in this branch of horticulture.

Flowers are the poetry of nature; they are everywhere the evidence of refinement and taste. The songs of inspired writers, in our Bible, are full of the beauty of flowers; while the most beautiful songs of the poets, uninspired except by the subtle influences of nature, are of the flowers.

From Chaucer down the poets have paid them tribute. Especially have they been inspired by those flowers common and familiar to us all:

Are flowers necessary? For your existence? No, thousands of men and women go through life without being able to read or write; but you would not be content to do so. Why not? Because you are more comfortable and happy with these things. So you will be more comfortable and happy with the flowers.

It is no exaggeration to say that the raising of flowers in the home not only conduces to health and comfort, but are essential factors of a higher and more refined civilization.

If there was but one dandelion in the world, it would be worth its weight in gold; but now it shows only the inborn sense of beauty in the minds of little children, who find in it a charming playfellow.

Just what varieties of the flowery kingdom shall adorn each home can-

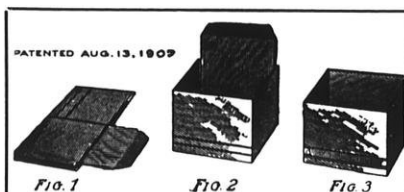
not be asserted, for each home is, or should be, a law unto itself in this matter; and individuality in this, as in other things, should be exercised.

Personally I prefer a few plants, well grown, to a window overloaded with specimens which are so crowded as to preclude the full enjoyment of the individual plant.

Our bay-window, which occupies the entire south end of the dining room is an ideal place for flowering plants and is looked upon with covetous eyes by many of our flower loving friends; but in it are only a few plants, the greater portion being given over to the enjoyment of living. This is the spot the men folks find in which to read the daily papers during their leisure moments before and after meals. To it I take my sewing and mending, enjoying the warmth of the sun on these short, cold, winter days.

When we speak of the out of doors flowers we think of perennials and almost invariably of the old-fashioned gardens where the paths were bordered by the beautiful mellow toned flowers, backed by shrubs and the prim stateliness of hollyhocks.

But not by flowers and shrubs alone do we adorn our homes. As Walt Mason said, "I would sing of garden sass." First in the spring comes the horseradish. You do not realize it is spring until you have this, its tastiest tribute. The parsnip, last year's legacy, is a substantial nest egg, banked in the frozen earth. Asparagus, day after day, always tender and delicious, until it would seem we may never know which would quit first, the eater or the asparagus. The pie-plant expands her crumpled fan, the fruit trees are in blossom, apple, cherry and plum, and if in our un-



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Wauwatosa . . . Wis.

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Strawberries — rosy, delicious. There is always something about their flavor like the first roses of June or the kiss of youth.

The tender green beads of "the first mess o' green peas;" the thin skinned, pink potato; long, crisp, curving pods of string beans; tender white cauliflower; dark crimson beet and slim, green cucumber, follow in quick succession, until the blood red tomato garnishes our table in its abundance. The long, straight ears of corn, each with its tuft of brown silk, is followed by the cheery carrot and soup-destined salsify. The round, bulky, tender-green cabbage, sturdy turnip and its cousin, the rutabaga; the hard-headed squash and, crowning the year, the great golden globes of pumpkins, scattered through the yellowed corn—"when the frost is on the pumpkin, and the fodder's in the shock."

And it is our part to make the most of all this abundance. Long rows of canned fruit, vegetables, and pungent pickles adorn our cellar shelves, hours of picking, preparing and packing the season's products are but a part of the necessary course of events if we would adorn our homes with all that makes for the peace and joy of success.

Those preserves which cantankerously blew up in their jars instead of sliding delectably down a throat at the appointed time; the neighbor who is everlastingly reproaching you, volubly or mutely, because you do not "run in;" the countless pricking annoyances which are a part of each day's duties, must be turned this way and that until you have found their humorous side.

After hours of hard work you may see with much satisfaction a large sauce-pan of simmering, bubbling, hot jam, all but ready for the cans. Company is coming and while the jam is finishing you hasten to put the iron on to heat for pressing your dantiest tub dress, which is already laid out on the

stable climate, some may take it out in blossoming, still there is the promise of amber, fragrant honey, the poetry of food, made of spring and sunshine, and perfume, bee ecstasy and flower love.

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ironing board nearby. Through haste you fumble, when *Splash*, straight into the center of that sauce pan goes the iron while a shower of hot jam goes over the stove, the floor, and ADORNS the nearby walls. You smear a hot, sticky mass down over nose and cheek with hasty hand while you vainly strive to fish the iron from its unexpected bath of jam. Oh, yes, you smile, as soon as you have time to think about it, for the humor of the situation is clearly apparent; but the smile grows more or less grim as you sop, and scrape, and scrub all signs of the sticky deluge from yourself and your surroundings. The situation has to be turned well

nigh inside out in your search for the hidden humor as you clean that favorite tub dress where a dark rivulet of jam has meandered down the front breadth.

A sense of humor is in fact a prime requisite in our task of adorning the home. Men invariably believe that it is an element that was left out in the making of the womanly system, and I often wonder if their humorous sense would be equal to the occasion if they could know exactly what goes on in the feminine mind on such occasions as her lord and master attempts to define the humor of a situation to his deficient spouse *I wonder.*

Men and women, though they live in the same house, eat at the same table, and subsist on the same income, live in different worlds.

If they would adorn their homes with the crowning beauty of peace and the light which shall shine as an inspiration to others they must always be considerate in their dealings with one another. The woman whose bump of helpfulness is so over-developed as to make her husband appear incapable of minding his own business must realize the absurdity of the situation but casts a reflection on her judgment in the choice of a husband. Of course if her strength and talents will permit her shouldering both her own and half of his responsibilities without in any way casting aspersions on his dignity as master of ceremonies, all is well and entirely as it should be.

In our search for the truth in all situations and for a definition of truth, we are met with the undeniable fact that truth is nothing more than a strong prejudice in favor of our own opinion.

WISCONSIN NURSERIES

Our Motto:

Give fools their gold and knaves their power;

Let fortune's bubbles rise and fall;

Who sows a field or trains a flower

Or plants a tree is more than all.

—Whittier.

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Quick and easy to attach—wrap this chemically treated wood veneer protector around the tree and tie at top and bottom. It will last for years.

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Less Beautiful Than Our Own?

SEE WISCONSIN FIRST

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, July, 1923.

The Wisconsin Conference and Chautauqua

August 13 to 18 the beekeepers of Wisconsin will hold open house for the dedication of the Miller Memorial Library. If you have not already made arrangements to attend, do so now. No beekeeper in Wisconsin can afford to miss this meeting, at which there will be a number of the best beekeeping authorities in America.

The present indications are that Wisconsin will have a normal crop of honey this year or perhaps a little better if we get sufficient rain to keep the clover from drying up. Under these conditions it is quite desirable that our beekeepers do not become stampeded with the idea that they are not going to be able to sell their honey and begin cutting prices. Reports from various sections of the United States indicate that the honey crop in general will be short. No beekeeper in Wisconsin can really afford to wholesale his honey for less than ten cents a pound or retail it for less than twenty cents a pound, although I know a large number of beekeepers will not agree with us in these statements. Before starting to sell, discuss with your local association secretary the prices agreed upon by the state association price committees and sell higher if you want to, but do not spoil the market for yourself and friends by underselling.

Mr. N. E. France of Platteville has again added an improvement to his apiary equipment that promises to be widely copied. He has equipped his wheelbarrow with a Ford front wheel, tire and all. The tire he inflates only slightly and finds that he can put his bees in the cellar and replace them on their old stands with less jar and confusion than he ever has any other way. There is to be no patent on this. He reports his bees came through the winter with almost no loss.

Box Hive Beekeeping and the Marketing of Apiary Equipment

By S. B. FRACKER, State Entomologist.

In August the writer was given the opportunity of discussing the commercial aspects of bee disease control at the beekeepers' chautauqua held at Green Bay. That talk was confined largely to the effect of American foulbrood infections in increasing the cost of production and decreasing the yield. The time was too short on that occasion to give anything but the most superficial consideration to the result of the presence of foulbrood on the honey production industry considered as a business proposition.

Mr. Adams will show tomorrow the progress in the county clean-up areas and will discuss the results secured in the different counties. It has long been recognized that bee disease control is a problem based as much on the study of human nature as it is on the science of beekeeping and the effects in the different areas may be interpreted from that standpoint. For example, there are areas in which long familiarity with American foulbrood infections has caused the larger beekeepers to adopt methods which, while they keep the disease comparatively under control, nevertheless maintain it in the apiary from year to year. Such plans can easily be worked out and followed and while they seriously interfere with profitable honey production the greatest danger arising from them is in the almost insuperable difficulty of eradicating disease completely when the beekeepers are of this type.

In other areas where beekeeping is said to be more backward and undeveloped the major difficulties are in convincing the owners of bees, first, that a disease is present and is responsible for their troubles, and second, that control measures should be applied. Somewhat to

the surprise of the inspection service areas of this kind are comparatively easy to handle. When we go into a new township or a new district and find that all the yards are less than eight or ten colonies in size, that they are fairly numerous and that the percentage of infection is from forty to sixty per cent, we now know from past experience that the beekeepers' chances of wiping out disease from that territory within two years are excellent. A few who are not interested in beekeeping will go out of business, others will slightly reduce the size of their apiaries, others will carefully follow directions for treatment, and the improvement in a year or two is remarkable. Beekeeping thus becomes more profitable. Those who have taken the trouble to eliminate disease are securing more honey and therefore increase the size of their yards. At the end of a two or three year period therefore there are more colonies of bees in the vicinity than there were before, honey production is more profitable and the outlook for permanent success is excellent.

Several sections of Fond du Lac county offer the best examples of this type of area. In spite of the difficulties in that county the results of the preliminary work begun in 1921 were marked and I will not be surprised if the progress there during the first three years proves to be greater than in other, better advertised, honey producing sections, such as Dodge and Richland.

Even in such areas, however, bee disease control work is by no means clear sailing. Accidental distribution of disease due to a failure to understand the virulent nature of foulbrood bacteria occasionally occurs. There is one feature, however, which does more than all others combined to prevent progress under such conditions. That is the present trade practice in the distribution of apiary equipment.

Wisconsin Beekeeping

H. F. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association

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The first problem encountered in areas of this type is that of the immovable frame or box hive. Those who keep bees in log gums, dry-goods boxes, barrels and similar places usually cannot be reached by educational methods. The extension workers of the university feel fortunate in the case of any line of field work if they reach twenty per cent of those interested in that trade. On this basis the extension work in beekeeping takes a high rank for I understand that 2083 out of twelve to fourteen thousand beekeepers of the state attended the meetings of the various bee associations during the past year. If a single one of all these beekeepers, however, had an immovable frame hive on their own premises I should be greatly surprised for it is those who are already doing almost as well as they know how who come to meetings to learn more.

Education therefore is not a solution of the box hive problem. Extension speakers reach only those who are interested in advance and wish to come to hear them. On the other hand, there are at least two scientific activities of the state which reach every producer in the area in which the work is being carried on. These are the tuberculosis eradication campaign in which the area clean-up method is being used in a dozen or more counties, and apiary inspection.

The writer does not consider box hive beekeeping with the horror that is often expressed at meetings of this kind. A colony of bees in an immovable frame hive is no more of a menace to other beekeepers than the same colony of bees in a hive with movable frames. Of two apiaries having uninspected

bees within half a mile of a given yard, one of them with the bees in log gums the other in the most up-to-date modern equipment, one is no more likely to be a threat to the conditions of health in the neighborhood than the other. In other words, there is no reason why the box hive should be eliminated unless inspection is to be attempted in the neighborhood, for the box or immovable frame hive does make inspection out of the question.

In Wisconsin therefore, our law on box hive beekeeping practically applies only where inspection is likely to be attempted. Inspectors are authorized to arrange for the transfer of bees in immovable frame hives when they are unable to examine them. In the extensive districts on the west side of the state where no area clean-up work is being attempted it will not be compulsory for the beekeepers to transfer the bees to modern equipment unless our entire inspection campaigns become necessary in that territory.

This point of view is different from the one entertained in Pennsylvania and, I believe, Texas. The Pennsylvania law states that after January 1, 1924, it will be a misdemeanor for anyone in the state of Pennsylvania to maintain colonies of bees in hives with immovable frames. The inspection service and the state college of Pennsylvania are putting on an extensive educational campaign in order that the amount of compulsion necessary after the date given may be reduced to a minimum.

In new inspection areas, especially those in which box hives are prevalent, the first question asked by the beekeeper is, "Where can foundation frames and movable frame hives be secured?" And fortunate is the inspector who is able to answer that question with any assurance, for trade practice in the distribution of apiary equipment is different from that of almost any other line of agricultural activities.

The bee supply business is an example of the result of the almost total elimination of middlemen. There may be too many middlemen between the producer and the consumer in many lines of work, such as the distribution of honey, but there certainly are too few when it comes to the sale of apiary equipment. If there is any other business in the United States which is as nearly handled by the catalog house method as the bee supply business I am not familiar with it.

There appear to be two reasons for this. First, the users of foundation, hives and frames are not as numerous as those who buy rakes, hoes, shovels, groceries and newspapers; second, the intelligent sale of bee supplies would seem to require a certain amount of technical information on beekeeping. In fact, Mr. Gus Dittmer writes that when the average beekeeper comes in for supplies he usually does not know just what he wants or how to use it, and needs advice and information.

The first obstacle has practically disappeared by this time on account of the large numbers of beekeepers everywhere. With from two hundred and fifty to five hundred producers of honey in every county the total amount of their purchases each year, if it could be determined, must be astonishing. I believe we are justified in saying that beekeeping has now become so popular that there should be a dealer in bee supplies within an hour's auto drive of every beekeeper in the state. If the county organizations will take this up with their own dealers (hardware stores and general stores are perhaps the most logical situations) in a short time up-to-date apiary equipment would be much easier to secure. In order to see whether such a plan was practicable I jotted down the other day a list of forty or fifty locations which are so distributed that they are within easy access of every apiary in the state. More than three-fourths of these are located within a district where there is a comparatively strong bee-

keepers association and yet so far as I have been able to find out there are regular dealers in bee supplies in only five locations.

The writer hesitated a long time before deciding to present such a suggestion on account of the comparative certainty that someone will be sure to accuse us of working in the interests of the supply companies. The matter of the distribution of equipment is such an important one from the standpoint of bee disease control, however, that a decision was finally reached to make the suggestion at any rate in the hope that some improvement in the availability of bee supplies might result.

Our experience in one of the cities in which bee supplies are readily accessible shows the importance of this matter. As soon as the first survey was finished in that area several years ago the bee supply distributor was kept busy supplying foundation and new frames. Beekeepers drove in from ten, fifteen and twenty miles to get foundation in order that they could apply treatment themselves. The material could easily be secured, everyone knew where it was, knew that it was reasonable in price, and knew that they would not have to sit down and work out an elaborate order blank, go to the bank to get a bank draft and then make another trip or two to town to get the material, after waiting a week for it. As a result that locality was the quickest to clean up of any we have had anything to do with, although the amount of infection at the time of the first survey was alarmingly heavy. The inspectors themselves cannot assist the owners in applying treatment unless the proper material is at hand. It is neither practical nor proper for the inspectors to carry this material themselves and have it for sale. When we insist that the work shall be finished within ten days the beekeeper, under present conditions, must either rush a letter to the bee supply company and hope against hope that the supplies will arrive

in time or he must borrow frames and foundation from a neighbor, or he must shake the bees into a hive which may already have been infected, or he must use the destruction method. Of these various possibilities the latter two seem to be employed almost entirely except in the immediate vicinity of a place where frames, foundation and hives can be secured.

Our suggestion is therefore, that one of the most important things a beekeepers' association can do is to consider carefully the situation in the county and pick out a dealer who might be willing to handle bee supplies. The dealer would have to purchase in quantity in order to secure a discount which would enable him to handle the business. Any county beekeepers' association which has among its members the owners of two or more good sized commercial apiaries can well afford to protect dealers against loss, in other words agree to take off his hands at the end of the season any equipment which he has left at the purchase price. I do not believe that this guaranty would have to be continued for more than a year or two but many dealers would doubtless decline to handle the new line unless such an arrangement was made.

Such an undertaking on the part of the dealer might need a few want ads in the local paper to let the beekeepers know where bee equipment could be secured, these want ads being run of course mainly in the spring. The county association could probably secure a few free reading items on the subject in addition. The discussions at the county meetings would also be beneficial.

It would hardly be necessary for the dealer to know anything about beekeeping. If he was shown a few simple things, such as how to nail hives and frames, how to wire and embed foundation, and was supplied with a few bee bulletins and catalogs for distribution that ought to be sufficient. Many storekeepers in small towns are glad to interest themselves in things of that

kind sufficiently to acquire that little information, if the officers of the beekeepers' association will take it upon themselves to help him out at first.

In conclusion we might summarize the advantages of a system of local dealers in bee supplies as follows:

First—It would result in improved beekeeping in three different ways; it would *reduce the amount of old equipment* on hand held over from year to year if new supplies were always at hand. It would result in the more rapid *education* of many beekeepers some of whom have never seen foundation or the inside of a modern hive. It would enable the beekeeper to supply himself with equipment for *emergencies*, such as excessive swarming, instead of neglecting his opportunities.

Second—It would increase the interest of the public in beekeeping to see bee supplies on hand at the store and bee bulletins available for distribution.

Third—and most important from the standpoint of the State Department of Agriculture—it would greatly improve the methods of bee disease control and would help us out in four different ways. First, enabling us to secure prompt action as the owners of infected colonies could secure new and fresh equipment for them without delay. Second, the temptation to hold over old material, which is the most dangerous of beekeeping habits, would be immensely reduced. Third, it would enable many districts to eliminate the immovable frame evil almost entirely, for inertia is the most important reason for immovable frame beekeeping. Fourth, treatment contrasted with destruction would become more practicable and would give better results because we could have more assurance that new equipment was being used instead of old and probably infected material.

(This paper given at last annual convention.)

Progress of Bee Inspection Work

(Reprint from the Biennial Report of the State Entomologist, State Department of Agriculture.)

Presented at the Annual Convention by C. D. Adams.

The principles outlined in the last report remain the basis of bee disease control, the plan of which is divided into three parts: (a) area survey for American foulbrood and application of control measures under the inspectors' direction; (b) close restriction on the moving of all bees and used bee supplies; (c) demonstration and educational work on both European and American foulbrood in cooperation with the College of Agriculture.

Increased demand for clean-up campaigns and continued pressure from county associations resulted last year in a doubling of the appropriation for bee disease control.* The increase did not become effective until July 1, 1921, so that the first year in which it could be used to the best effect was 1922.

Previously the chief inspector had been greatly embarrassed by demands for increasing the inspection areas and the natural reaction was an attempt to spread available funds over as much territory as possible. Beginning in 1922 it has been found best for a team of two inspectors to devote their entire time to a single county during a season and the results have been more satisfactory. An incidental effect of this change has been the discovery of American foulbrood in many townships which had been ignored before on account of indications that they were entirely healthy.

Progress may be summarized as follows:

Calumet county, begun in 1918, was first completely covered the following year. Thirty-five of the 122 yards inspected were found with American foulbrood. This number in 1920 had been reduced to 21, and in 1921 a recheck of diseased yards

showed only six, which were cleaned up. A second recheck of this county is planned for 1923.

Dane county is the only one in which progress has been unsatisfactory, the difficulty being due to several causes. Beekeepers in this county are selling infected honey in large quantities near their own yards and reinfection comes in part from honey containers thrown away. Disease has also been present for forty years and the producers are unwilling to shoulder the temporary losses which would be caused by a drastic clean-up of honey houses and equipment. Since 1920 work in this county has been temporarily discontinued.

Fond du Lac county was begun in 1921 and the western half surveyed, but not rechecked. Of the 66 apiaries found infected, 27 cleaned up, nevertheless leaving 39 still diseased in 1922. The number of infected colonies decreased from 208 to 96; and the percentage of infected colonies decreased from 8.5% to 3.9%.

The eastern half of Fond du Lac showed 42 infected yards in 1922 out of 183 examined. The number of diseased colonies was 223. As it was possible to recheck all these places in 1922, a marked improvement is expected next season.

In Grant county, the clean-up of the northeast corner near Muscoda appears to have been entirely effective, only one infected apiary of three colonies having been discovered since 1919; the latter were destroyed, the owner not wishing to continue beekeeping.

The survey of Jefferson county was begun in 1918, when 61 of the 153 apiaries examined (or 40%) showed American foulbrood. A crop failure prevented treatment that year and the enlarged area covered in 1919 showed 92 apiaries infected among 176 inspected. This was brought down to 36 in 1920, 28 in 1921 and 26 in 1922. The number of infected colonies during the same period was reduced from 240 (or 17.7% of the number examined) to 37 (or 2.4%). This does

not include the Lake Mills-Waterloo section of the county, which was not undertaken until 1922 because a preliminary reconnaissance survey had failed to reveal foulbrood in that neighborhood. When carefully inspected this past year there were found to be nine infected apiaries containing 23 colonies with disease.

Langlade county appeared to have been cleaned up entirely in 1920, but an infected yard was moved into Antigo from outside the state the following spring. In 1922, 19 infected colonies were found and cleaned up in four apiaries, all others apparently being free from disease.

Manitowoc county was the first one undertaken on the area clean-up plan and in 1917 and 1918, 21 apiaries out of 124 inspected, were found with disease. As a result of the campaign American foulbrood seemed to have been wiped out by 1919. At that time it was believed that a revisit to infected yards only was sufficient, and the inspectors working in that vicinity, it was found later, neither examined every colony in every yard nor looked over every frame. Development of the work in other districts later showed such methods unsatisfactory, so it was not a surprise when the resumption of the Manitowoc work in 1922 showed a heavy infection remaining near Reedsville. Two hundred and ninety-seven diseased colonies were discovered in 22 yards. Under more recent methods this condition is expected to improve rapidly.

In Milwaukee county, more difficulty has been experienced in locating all the apiaries than in other areas. The number of infected yards in 1919 was 62 out of 137, or 45%; which had been reduced in 1922 to 28 yards out of 204, or 13%. The proportion of colonies infected for the past four years has been 11, 7.8, 4.8, 2.9, respectively.

Outagamie county was never completely surveyed until 1922, when 77 infected colonies were found in 24 apiaries out of 228 yards inspected.

*As used in this report, "bee disease" refers to American foulbrood unless otherwise specified.

A preliminary survey of the southern tier of townships of Richland county was made in 1917 and part of the area cleaned up. Work was not renewed until 1920, when 16 infected yards were discovered, among 87 examined. The area has been increased since and in 1922, 15 infected yards were found among 206 inspected. In addition, one township in the extreme northeast corner of the county begun in 1922 showed 17 apiaries infected among a total of 29. In spite of these increases in area covered, the per cent of infected colonies has been as follows: In 1917, 17.5%; 1920, 4%; 1921, 7%; 1922, 4%.

Shawano county has never been given a complete area clean-up survey. Efforts by local inspectors have, however, reduced the number of known infected apiaries from 12 in 1919 to 4 in 1922.

In Sheboygan county the first approximately complete survey, which came in 1921, resulted in the discovery of 78 infected colonies in 17 apiaries, which the following year had been reduced to 34 infected colonies in 13 apiaries. About 136 yards have been covered in the Sheboygan campaign.

Work in Winnebago county has been very successful, in spite of the fact that all work in that county in both 1919 and 1920 was done after August 1. The percentage of infected colonies for the past four years have been 13.4, 3.5, 3.3 and 2.8, respectively. In 1921, 25 apiaries were found infected and they contained 81 diseased colonies; 180 were examined. In 1922, 13 apiaries and 51 colonies were infected out of 227 yards examined.

Preparations have been made for clean-up campaigns in Waukesha, Washington and Wood counties. In the first named, 1,042 colonies were examined in 94 apiaries in 1922 and 115 colonies in 15 apiaries were found diseased. In Wood county, the numbers inspected were 62 apiaries and 1,102 colonies, and the numbers diseased, 16 apiaries and 119 colonies. In neither case was the entire county covered. Work

in Washington county has not commenced.

The total results for the past two years have been as follows:

	1921	1922
Apiaries inspected....	1,473	2,354
Colonies inspected....	24,332	30,731
Apiaries with American foulbrood.....	338	426
Colonies with American foulbrood.....	1,573	2,027
Percentage apiaries infected	22.9%	17.6%
Percentage colonies infected	6.4%	6.6%

The gradual completion of clean areas and the addition of heavily diseased ones will, it is expected, keep the total percentage of infection at about the same level for several years to come, in spite of its rapid decrease in individual counties. Disease is usually reduced at the rate of about 50% a year for the first year or two, but when the infection is reduced to about 2% of the total number of colonies in a county, it becomes very persistent, and accidental introductions tend to balance what is gained each year. This percentage is low enough to take American foulbrood out of its place as an important factor in honey production, but leaves it potentially very dangerous.

Methods of the elimination of "the last 2%" are now being studied and will be given special attention next season. The problem is largely one of commercial beekeeping, for the apiary which carries over American foulbrood after a three year campaign is always two or three times as large as the average for the district. In Richland county, for example, the ten apiaries which have been carrying over disease since 1920 average 41.4 colonies in size and only two contain less than 20 colonies. The average size for the county is 16 colonies.

GOVERNING THE SPREAD OF FOULBROOD

The most common and dangerous means of distributing American foulbrood is through the sale and transportation of bees and used bee supplies. In spite of laws in many states prohibiting the sale of infected material, diseased apiaries have been shipped here and there,

until now the bees in nearly every section of the United States are exposed to American foulbrood.

In 1919, the Wisconsin legislature passed a law prohibiting the transportation of any used bee material without a permit or inspection certificate. This has proven very effective in limiting the distribution of disease. In 1921, 510 applications were received for such permits and in 1922, 590 applications. About one-fifth of these were from apiaries which had been inspected within a year and a similar proportion were referred to local inspectors for special inspections. The others were for moving such short distances that there appeared to be no danger of distributing disease.

As the apiary inspectors now cover one-sixth of the area of the state, having examined 30,731 colonies in 2,354 different apiaries in 1922, it is possible to determine with some accuracy the spread of disease.

In general it may be said that in the area clean-up counties there is no evidence that new yards are becoming infected. The only indication of any new appearance of American foulbrood in an area clean-up district was in northern Jefferson county, where a beekeeper in violation of law brought in an infected apiary from Dodge county. Two other colonies in healthy yards picked up infection almost immediately, but the inspectors were, fortunately, able to locate the source. The owner of the material moved was fined, and the infected colonies destroyed.

Two cases of infected yards being moved into Wisconsin without inspection certificates from neighboring states have been discovered. Both of these have proven very serious and, as the apiaries were large, elimination of disease has taken some time. More satisfactory arrangements have since been made in a general inspectors' conference and it is believed that this source of disease has been stopped.

The only other new discoveries of disease since the last report have been at Cassville, where bees were

found carrying infected honey across the Mississippi river from Clayton county, Iowa, to Grant county, Wisconsin; and a so-far-unexplained appearance of the American foulbrood in one yard in Bayfield county. It is believed the complete eradication of the latter case is being accomplished.

As a contrast to this limited distribution many applications for the transportation of infected yards into clean territory have been refused and the yards have been disposed of locally. A combination of the gradual reduction of foulbrood in its present locations and definite prevention of spreading offer the only practicable solution of the American foulbrood problem.

Comparative Data on Hives, Broodrearing and Honey Yields

I have been interested in observing the results of the different factors entering into brood rearing and honey production, such as age of queens, size of hives, strains of bees, spring protection, etc., for a number of years. During the last two years the results of my experiences have been impressed upon me since I have had an opportunity in clean-up inspection work to observe the great number of weak colonies there are among beekeepers generally at the beginning of the honey flow.

I am going to give you certain figures taken from my apiary this last year—1922. The number of colonies which I had was not great, but I think the conclusion I reached would not be materially altered if taken from a large number. There are several factors entering into my tabulations which make absolute exactness of comparison impossible. For example—I have different strains of bees; I have used some colonies for comb honey, some for extracted honey, some for increase and some for two or more of these purposes. Then besides I may not have manipulated all colonies with equal wisdom. In figuring honey yields I have not scientifically allowed each colony a given amount

for winter. Still, I think the conclusions agree with those of former years. First, I shall describe our honey flow. During May we had a week of dandelion and fruit bloom when the scale colony gained 13 pounds. On June 5th the main honey flow began and lasted 5 weeks. After a few days intermission a secondary flow started and continued the rest of July, during which time the scale colony gained only 10 lbs. Basswood was a failure and fall flowers yielded less than the current consumption of the bees. I have given the honey flow to show the importance of strong colonies early. We can't build up on one flow for another.

In the first tabulation which follows the following abbreviations are used: Q—queen; O—old; Y—young; J—jumbo (10 frame); P—protected (1½ insulate on 4 or 5 sides and fiber felt on top); Unp—unprotected (possibly ½ inch fiber felt on top); L—Langstroth (10 fr.). My bees were all cellar wintered. For the present the score will be omitted.

Q	Number	Hive	Frames May 12
O	7 Two years	J P	5 2-7
O	13 One year	J P	6
Y	8	J P	6 1-2
Y	24	J Unp	6
Y	7	L Unp	6 2-7

Number	Frames June 15	Increase	Score
5 Two years	8	2 5-7	44
12 One year	8	2	82
8	9 2-3	3 1-6	97 1-2
24	9	3	75
7	9 2-7	3	75

Frames mean the number having at least one side well filled with brood eggs. To be scientifically exact, I should have counted the number of square inches of brood, but that was both impossible and impractical for me in the ordinary yard manipulations. When the yard records were taken there was no thought of publishing tabulations taken from them. So we shall have to rely upon the law of averages to even up results and make comparisons valid.

The two-year-old queens had been kept over because they were good queens the two previous years. Yet two of them failed after first examination in May, and were omitted from the June tabu-

lations. Had the entire seven been considered the amount of brood would have averaged much less in June. Besides, most of the two-year-old queens and one-year-old queens were in hives protected on six sides, while the young queens had hives protected on only five sides. Dr. Phillips says that to have the bottom insulated also is almost three times as good as having only five sides protected.

Results as shown by the tabulations are as follows:

1. The old queens show the least gain and are weakest at the beginning of the honey flow.

2. The young queens are ahead.

3. The young queens in protected hives are the best.

4. There is apparently no difference between colonies in unprotected jumbo and Langstroth hives. But since the jumbo frame is larger, there is about one-fourth more brood in the jumbo hives. Personally I like the jumbo frame because it holds so much brood and with proper wiring will contain brood clear to the top bar.

As mentioned previously, some colonies were run for comb honey, some for extracted honey, etc. To compare results, I had to score the colonies. The score is my estimation of the number of pounds of honey the colony would have produced on an extracted non-increase basis. With some colonies the score represents the exact amount of surplus honey, but not so with most colonies. I had a 50 per cent colony increase and have 1,200 lbs. of feed honey for spring which had to be credited to the producing colonies so these figures are way above my colony average. To put comb honey on an extracted honey basis, I added 50 per cent. At first I did not intend to include the honey crop in this paper, but the thought came to me that strong colonies should be valuable according to their strength. Were we selling package bees, then strong colonies would be justified merely on their brood, but our crop is honey, not bees. Furthermore, I know commercial beekeepers who do not want strong colonies because they claim

that colonies of medium strength store the most honey.

To go back to the table we find:

1. The lowest score was by the two-year-old queens.

2. The next lowest score was by young queens in unprotected hives. There is no difference between the L and J hives. This result is the only one which does not correspond with my former experience. In 1911 I had 20 L hives and 4 larger hives and all my surplus was a 50-lb. average from the larger hives, each producing about the same. I think the L hives this year were favored with queens much better than the average.

3. The third group was the old queens in jumbo protected hives.

4. The best group was the young queens in jumbo protected hives. This finding bears out Prof. Wilson's statement in the pamphlet, "Wintering Bees in Wisconsin," that cellar wintering in unprotected hives is only half a system.

I also compared scores according to the number of frames of brood in June regardless of the hives or the age of queens and divided the colonies into three classes according to their scores, with the following results:

Brood in—	First group (best)	Second group	Third group (poorest)
10 fr. to 13 fr.	17	7	6
8 fr. and 9 fr.	3	5	1
3 fr. to 7 fr.	1*	9	14

*Twenty-first colony.

Deductions:

1. The group having brood in 12 frames did best.

2. The break comes between those having brood in 7 fr. and in 8 fr. Colonies having brood in less than 8 fr. cannot be depended upon.

3. There were several poor yields among the strongest colonies. This is due to the fact that the strongest colonies are the hardest to manage to get results from according to their strength. They get ahead of the beekeeper and loaf on the job and often swarm or require treatment. It is much easier to get results from medium or weak colonies in proportion to their strength because they behave better.

I also had one colony not included in the first tabulation which

deserves special mention. This was my best colony both in score and in actual honey yield. The reason it isn't included is that it had a one-year-old queen and was in an unprotected jumbo hive. This is the kind of a colony we cite when we argue against protection. How is it possible that an old queen in an unprotected hive could have brood in 12 jumbo frames and surpass all others in honey production? This is my explanation. This queen was from my best stock. In the fall she raised a lot of young bees and came out strong enough in young bees because there were not enough bees to keep the brood nest warm. No matter how good a queen is, the size of the brood nest cannot expand beyond the space that the bees can keep warm. Very few colonies seem to have a sufficient force to keep up with a good queen in an unprotected hive. And for that reason practically all colonies need protection, and protection will save stores and conserve bee vitality for later honey gathering in even the strongest colonies, although it may not really be needed.

The preceding concludes the data I have on the year 1922, but I have other interesting results in queens in regard to honey crops for the fiscal beekeeping year 1920. In the summer of 1919 I decided to requeen all colonies with purchased queens. I ordered queens for August 1st. The first came the last of August and the last the first part of September. I began by introducing them to the queenless, the weak, the cross, and those with old queens. I had not yet learned how to introduce with practically no losses, and several queens were lost. When requeening was over I had 21 colonies with purchased queens from my stock. I expected great results from the purchased queens in 1920 in comparison with those I had raised from my common stock. The year 1920 was a great year and I got a high colony average, but results were not where I had expected them. In the first place, I lost during winter and spring 7 colonies with purchased

queens, and one with one of my own queens. Among the 11 best yielding colonies having surplus honey averages from 302 lbs. down to 139 lbs., there was only one colony with a purchased queen. Among the 17 best producing colonies down to 103 lbs. surplus there were 5 purchased queens.

What I learned is summarized as follows:

Young queens must have plenty of bees in the fall or they cannot build up for winter or spring. The best queens are those raised during the honey and given a chance to build up. The colonies with purchased queens that did best were those that were strong in bees before the new queen was introduced. I believe many queens are considered poor, but in fact never had a chance to prove this value because of some beekeeper's failure to provide proper conditions. Last fall (1922) I had a chance to profit by the experience just mentioned. I purchased several queens. One of them was a replacement and came late—September 14th. I began by uniting to 2 small colonies, but I knew the queen could never build up with so few bees. As I took off the last supers I would put those having a few bees in them on this colony. The queen was soon laying fine and October was mild. On October 24th, I opened the hive and found brood still in three frames, one of which contained eggs and brood in all stages. There were very few other hives in the yard having brood after October 1st. I shall be very much interested in this colony next summer.

In conclusion I believe one of the best opportunities for increasing the colony population in the fall. How often we wish that all colonies had done as well as the best. Well, why haven't they? To produce high uniform averages is not impossible. It has been done. And we should not complain of short crops when some colonies produce high yields.

IVAN WHITING.

Plymouth, Wis.

(This paper was given at the annual convention.)

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Dadant, C. P.—Dadant system of beekeeping. 1920.

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Pellett, F. C.—Practical queen rearing. 1918.

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MADISON WILL BE BEE-KEEPING CAPITAL, AUG. 15

On Wednesday, August 15, Madison will be the **beekeeping capital** of the United States. This is the regular day for issuing the market news service on HONEY and is also the day set aside for taking up the marketing troubles of Wisconsin Beekeepers. Instead of having the telegraphic market reports and the mail reports from producing sections come to Washington, they will for that one date be diverted to Madison, the data will be prepared and edited and issued right on the University camp grounds.

Mr. Harold J. Clay, in charge of this work for the Bureau of Agricultural Economics at Washington, D. C., will have reports with the ink still wet distributed to beekeepers when he gives his talk on "The Government Market News Service on Honey," at 2

o'clock that afternoon. He will tell in his talk how he gets the data, how it is assembled, and how it is issued to the beekeepers throughout the country.

A permanent exhibit during the entire week, August 13 to 18, showing the gathering of the material and its distribution with maps showing areas covered will be held.

If you have not received a copy of the Wisconsin Conference and Chautauqua program, August 13 to 18, write us and a copy will be sent to you by return mail.

Prize Recipes

(Bee and Honey Exhibit—State Fair, 1922)

Honey Orange Cookies—Class 25

1 cup honey
½ cup butter
2 eggs and 2 egg yolks
Rind of ½ orange, grated
1 teaspoon of orange extract
1 teaspoon soda in 2 tablespoons sour milk.

Flour enough to form into balls. Place on tins and flatten out. When baked, brush with egg white and sprinkle with coconut.

Miss E. M. Goelzer,
Oakwood, Wis.

Rolls

1 pint milk
1 pint water
½ cup salt
½ cup honey
1 tablespoon shortening
2 cents yeast
Flour enough to knead.

Mrs. J. M. Barr.

Baking Powder Raisin Buns

2 cups flour
3 teaspoons baking powder
2 tablespoons shortening
1 egg
¼ teaspoon salt
½ cup raisins
½ cup honey
½ cup milk.

Mix flour, baking powder and shortening together. Beat egg and add honey and milk. Stir into the dry ingredients. Roll out dough

and spread with a mixture of 1 cup granulated honey mixed with 4 tablespoons of butter. Sprinkle with cinnamon and raisins. Roll like jelly roll. Spread bottom of baking tin with part of the honey mixture, cut dough in inch pieces and place cut edges up in pan. When baked remove from pan at once, turn upside down on plate to serve.

E. M. Goelzer,
Oakwood, Wis.

Doughnuts

2 eggs
Butter, size of an egg
1 cup sour milk, or
1 cup of cream
1½ cup honey
Flour to roll; also add 2 teaspoons cream of tartar.
1 teaspoon soda added to sour milk or cream.

Honey Doughnuts

1 cup honey
1 cup sweet milk
3 level tablespoons butter
2 eggs
½ teaspoon salt
4 teaspoons baking powder mixed in flour enough to make stiff enough to roll.

Rocks

1 cup butter
1 cup honey
1 cup nuts
1 cup raisins
3 eggs
½ cup sour cream
1 teaspoon soda
Flavor to taste. Flour enough to drop from spoon.

Charlie Pritchard,
Wisconsin Rapids, Wis.

Bran Macaroons

1 cup flour
1 cup bran
1 tablespoon butter
1 egg
2 tablespoons honey
¾ cup milk
2 teaspoons baking powder
Pinch salt
Drop from a spoon on a buttered tin. Bake about ten minutes.

Mrs. J. M. Barr.

WISCONSIN HORTICULTURE

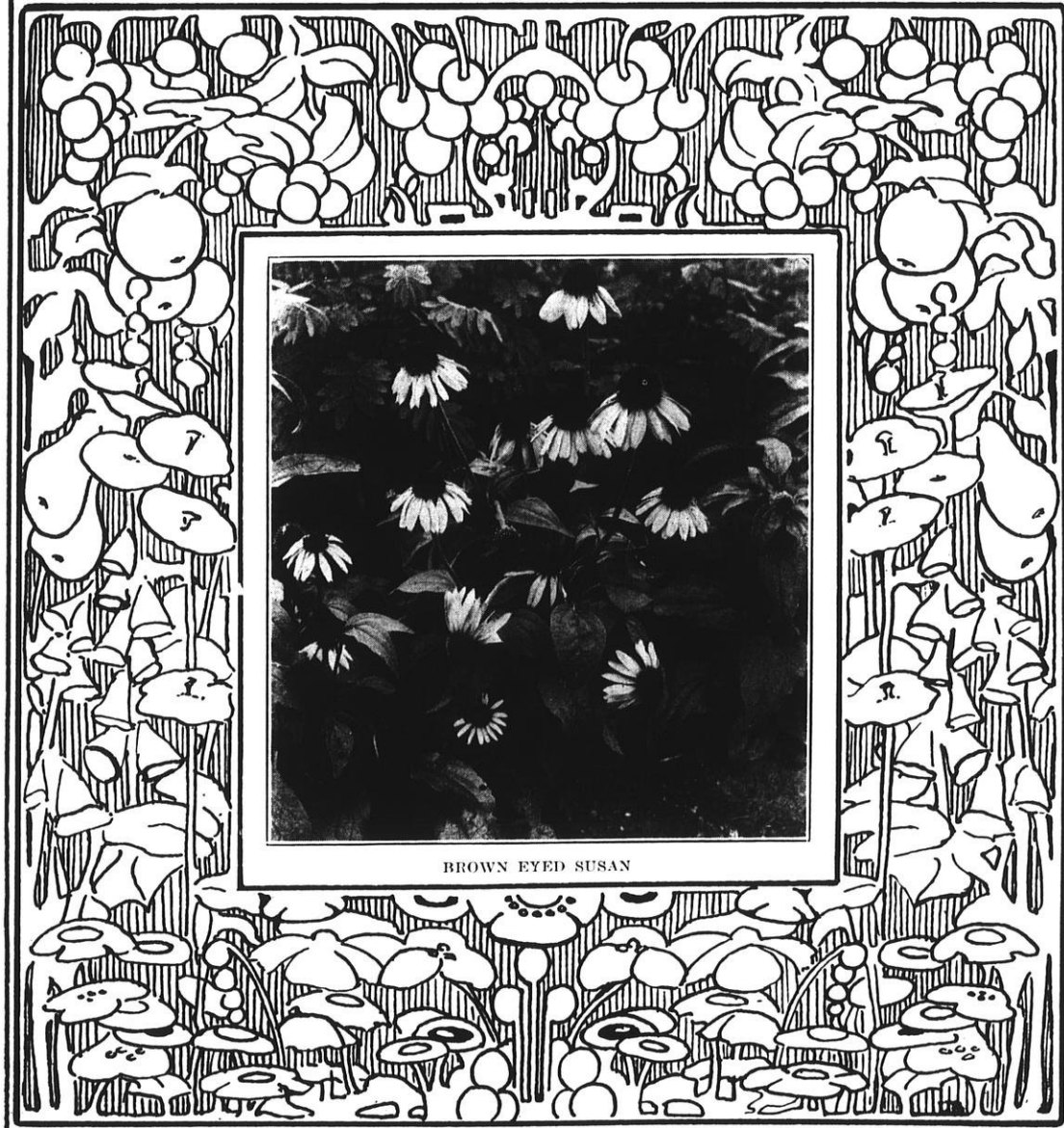
Vol. XIII

Madison, Wisconsin, August, 1923

No. 12



BROWN EYED SUSAN



Fire Blight, an Affliction or a Blessing in Disguise?

This is a good year for fire blight, about the best year the writer recalls. It is reasonably safe to say that there is not an apple orchard in the state that is not affected more or less, while in some every tree has blight. For the first time in all my experience I have seen trees, Wealthy and McMahan, twenty years old, or over, killed outright by fire blight. These trees were the youngest in an old orchard, fifty years old at least, and among the oldest trees were several Transcendent Crabs. It is reasonable to suppose that the Transcendent blighted first and that there has been blight in the orchard every year, increasing in severity each year until the most susceptible varieties have succumbed. It is interesting to note that the original sinners, the Transcendents, have survived and, although crippled, still put on more wood each year than is destroyed by blight. Now here is a further and damning indictment of the Transcendent: In 1914 a five acre orchard was planted alongside the old one, consisting mainly of Wealthy, Dudley, McMahan, Mackintosh, Fameuse and Patten, but among them a stray Transcendent. This stray was the first to blight and before it was removed blight had spread to the young trees in a circle around it.

These facts merely confirm the opinion of such of our pathologists who have approached the problem of fire blight with an open mind; that one of the things which must be done in controlling fire blight, if not the first, is to remove trees of varieties that are known to be "blight carriers" such as Transcendent Crab and Yellow Transparent apple.

Having reached the scientists in this discourse, it will be well to back up and start over for the benefit of the average amateur and such professionals who are unacquainted with blight, and there are many of them.

Fire blight has a long and ugly scientific name which is of no importance whatsoever so far as the orchardist is concerned. It is a bacterial disease working wholly within the tissues of the plant and is not affected by sprays of any kind. So far no one has offered a satisfactory explanation of how it is introduced or transmitted. When this has been positively determined we will be better able to control the disease. It manifests itself, speaking in non-scientific language, in three ways: as twig blight, the most conspicuous but least destructive form, causing the new growth, the strong upward growing shoots, to die rapidly, the leaves and bark turning brown. In large orchards, severely affected, one readily gets the impression of a fire dropping from the clouds and searing the tips of the trees. Twig blight most commonly affects young trees under twenty years and is not as serious as it appears. In trees making a rapid growth, as in cultivated land, the blight is more severe than on trees growing in sod. *There is absolutely nothing that can be done to check twig blight.* We will return to this later.

The second form, or rather point of attack, is spur blight, in which the germs seem to be brought to the blossoms, possibly by bees and other insects, and destroy not only the blossoms but the spurs, the shortened blossom-bearing branches found on old trees. Obviously the spur blight is far more serious than twig blight, as it requires three or

more years to produce a spur and only a single season to grow a twig. *Nothing can be done to check spur blight.*

The third phase or manifestation of blight is the blight canker found on the branches and trunks of trees affected with twig or spur blight; sunken areas of bark, dark brown in color turning to black. It is in finding and removing these cankers that our hope lies in controlling and possibly eliminating fire blight, for it is in these cankers, or in some of them at least, that the blight germs winter over. These cankers, or some of them, become active in the spring, spongy, and exude a sticky substance which scientists tell us is loaded with fire blight bacteria. The investigators add a further disquieting statement that a canker may lie dormant for a period of years and then become active.

During the fall, winter and early spring a diligent search should be made for these cankers and every one cut out and the wound disinfected. *There is no other effective remedy for fire blight in Wisconsin orchards,* whatever may be the case in the far west.

The work of Waite and others in California and Washington seemed to prove that cutting out blighted twigs checked the disease in pears and apples. For the twenty years following these experiments it has been hammered into us incessantly that blight can be controlled by "cutting out the blighted twigs," "cut back to sound wood," etc. This has been repeated parrot-like both by hack writers who got it from experiment station bulletins and by others who should have known better. Some of the latter are still repeating it.

The writer will be pleased to show any who may doubt the italics

in this article two cases where cutting was done on an extensive scale by, or under the personal supervision, of competent men, graduates of universities, men who exercised the greatest care in disinfecting cutting tools, etc., and in both cases the disease was aggravated, not checked. In both cases the blight was more severe the following year than in adjoining plots.

In view of these facts and observation of hundreds of other cases where evidence of damage rather than cure is evident, is it not about time for those who recommend cutting out affected twigs as a remedy for fire blight to resolve in the future to give better advice or else none at all?

Research work is being carried on, carefully, patiently and with a faithful adherence to the fundamentals of science by men both in our own and adjoining states. These men will not tell you that they know all about blight, nor will they advise cutting twigs as a remedy. Why should others?

THE SUM AND SUBSTANCE OF IT:

This is about all we know of fire blight: No variety is immune, but certain varieties seem to be very susceptible. Don't plant the susceptible kinds.

Cutting out blighting or blighted twigs does not check blight. It seems often to be the means of spreading blight.

While twig blight is not usually severe enough to cause serious damage, everything possible should be done to control it on account of the possibility of an outbreak of our blight later.

The only remedy worth while, in Wisconsin, is to cut out the "winning-over" or "holdover" cases, namely, the cankers. In searching for cankers we are bound to get

better acquainted with our trees and realize the need of treating them as living organisms requiring as much or more intelligent care as a cow or horse. If blight serves this purpose it may well prove a blessing in disguise, even as did the San Jose scale.

F. C.

Fruit Growing in Lincoln County

We have the consent of Mr. Gustav J. Schneider of Lincoln County to publish his interesting letter of recent date. His letter-head shows that his farm is "Forest Home" and carries an attractive picture of his house and grounds.

Mr. Schneider need be in no doubt in regard to the cause of the branches dying; it is fire blight beyond a doubt. Blight has spared but few orchards in Wisconsin this year. In another column we give some impressions gathered about blight.

"The orchards in Lincoln County have a sad appearance this summer. The apple trees have a disease, which looks like blight, but seems to be something worse, as not only the tips are dried up, but whole limbs of four to five feet. Though my orchard is not near as bad as most others, on account of regular spraying, I have to go through every other day in order to cut out some limbs and control insects and diseases. In looking closer good eyes can detect that the bark of a diseased limb is getting darker and is somewhat shrunk towards the trunk of the tree. Such limbs I cut off two inches in the sound wood. This seems to check it. Should I like to know more about this disease, whether you call it regular blight and whether it is all over the state.

"Besides this trouble, we have this season so many insects in the

orchards of our county as I never have seen before, though I have lived nearly a half a century in Wisconsin. Especially the tent caterpillar is of great trouble during all of this month. It is a terrible pest. As spraying did not help much, on account of the heavy rains we had around here, the only thing I could do was to cut off such infected limbs. This I had to do most every day for the last three weeks in my orchard as well as on other trees and shrubs on my premises wherever I found tent caterpillars.

"I have so far 115 fruit trees—from two to eight years old—twenty-five plum trees, ten cherry trees, three pear trees; the rest are apple trees. The plums are mostly Prof. Hansens, which do as well here as anywhere in the United States. The little trees are loaded every year, especially Sapa, Waneta and Kaga. Hanska grows more into wood and does not bear heavily. I also have one six-year-old German prune in good condition, but this did not bear so far.

"Of the cherry trees, Wragg, Montmorency and Early Richmond, the Montmorency does best. On account of late frosts and snow in May, we did not get any cherries this season, while in other years the cherry trees gave us lots of fruit. I don't think that any other one in our county tried to raise cherries. I have ten trees, about eight years old, seven to ten feet high, with a trunk four to five inches in diameter.

"Have tried to raise all the apple trees that I had any chance of growing in our climate and found that the following sorts do well in Lincoln County: Wealthy, Hibernial, Dudley, Patten's Greening, Yellow Transparent, Longfield,

(Continued on page 189)

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

The Editor Would Like to Know

Where all the contributions are for this department that were promised so fervently last January.

If some successful gardener would send her minute directions for growing head lettuce. I have followed all the "directions" I have ever read, have tried all sorts of "sure to head" varieties with the same result. They do not form heads, they go to seed. I have come to the conclusion that the writers of those directions for growing head lettuce successfully, left out something.

An Intimate Garden

There are gardens and gardens. There are wonderful gardens laid out with infinite care, exquisite pictures painted by a master hand. There are gardens in which it would seem the object of the designer or owner was to impress upon your mind just how much money could be spent for garden accessories, marble statues, garden seats, ornate fountains and pergolas.

There are gardens that are just gardens and there are intimate gardens. Aunt Sarah's garden was of the intimate variety—there was no graceful sweep of velvety lawn, no cleverly planted thickets to enhance the beauty of the beds of flowers, neither were there pergolas, pools or marble seats. It was just a flower garden enclosed by a paling fence, with a few scraggly old apple trees for a background; but the flowers were not "just flowers" to Aunt Sarah, they were the friends who had given them to her, they were memories of her childhood

home and her loved ones and every shrub and flower in this garden had its story. We loved to walk up and down the paths or sit near her as she worked among her beloved flowers, listening to the stories of bygone days, and so those flower folks became very real to us. The sister who, when the starry narcissus and waxen lillies of the valley

red and white bloom, Aunt Sarah would tell how these same plants had stood for years on a city lot, with never a blossom—transplanted in this bed—they responded immediately. She would look thoughtfully at them and wonder "if the giver could have been transplanted also, into the deep mellow soil of God's great outdoors, with the environment of trees, sunshine and flowers, if she, too, perhaps would not have been happier and bloomed out in sweetness and beauty. Aunt Sarah always believed she would.



Mrs. Strong's fruit garden in delphinium time.

were in bloom, walked up the aisle of a dim old church with her misty bridal veil around her, in her arms a great sheaf of these fragrant blossoms, we could see just how pretty and happy she looked. A little girl loved them too. Aunt Sarah's voice faltered when she told of the little hands that held them so closely one sunny spring day when she went to sleep so happily and forgot to wake up.

When the foliage of the peonies in the big round bed was almost hidden by immense heads of pink,

Children were especially fond of this garden—to them the pansies were fairy children who patiently waited for release from the spell laid upon them. Only when all the world remembered the lesson they tried to teach—"Freely give," could they return to the Fairy Palace. There was a twinkle in Aunt Sarah's eyes when she told the story and the children would smile happily as she filled their eager little hands with the coveted blossoms, they understood, this was the way of telling them that pansies

must be picked regularly, for this was but one of the many stories she told them.

There were stories of the flowers themselves, their color, sweetness beauty and habits, of what you needed to do in order to make them happy,—“for flowers were not happy unless they grew thriftily and bloomed beautifully.”

The flowers the children carried away from this garden were not “just flowers” to them. They could tell you their names and whether they grew from seed planted every spring, or whether they were tucked up under a blanket of leaves when the cold and snow came, there to sleep until the sunshine and warm spring rains came to wake them. They had been taught facts about the growing of flowers that would be of value to them in years to come, and those lessons were learned in the pleasantest and happiest way imaginable. They had a love, an intimate acquaintanceship with flowers that is impossible to gain in anything but an intimate garden.

There are gardens, and gardens, and the real flower lover loves them all, but we, Aunt Sarah, the children and myself, we especially love the intimate garden.

The Woman Horticulturist

God created woman for a help-mate for man, and the greatest talent any woman can possess (horticulturist or otherwise) is the ability to make a home a *real* home, in the full meaning of the word. An elegant house richly and tastefully furnished, possessing all modern conveniences, books, music and flowers, may still lack the sweet warm homey atmosphere, the fine spirit of hospitality, that causes all who are privileged to enter within

its walls, to feel that they have had a glimpse of paradise.

There is an indefinable something in such a home, that creates sociability and warmth of feeling and fellowship, that no mere elegance can inspire.

Some wise old sage once said “The way to a man’s heart leads through his stomach.” While this statement may not be literally true, it is true that a well spread table does add joy to the members of the household. The term “well spread” does not necessarily mean lavishly loaded with a great variety of rich foods; it does mean, however, that the food should be so chosen as to combine harmony of flavors. The meal may be served in courses or all placed on the table at once, as best suits the conditions, but the food must be carefully prepared, daintily served and the decorations in harmony with the occasion. The tablecloth may be fine linen, or common white cloth, the napkins may be linen or paper, it matters little, if she who presides, brings a cheerful, happy presence into the room and serves the food as though it was a pleasure and not a disagreeable task.

The home of the real horticulturist is always provided with an abundance of flowers, including shrubs, biennials, perennials and annuals, luscious fruits grace the table at all times, tempting the appetite of the most fastidious.

Modern methods of canning and preserving make it possible to place on our tables in winter, the summer fruits, in a condition and with a flavor nearly equal to and as delicate as when taken from the vines and bushes.

Most women have a peculiar love for fruit and flowers and the cultivation of, especially the latter pos-

sesses a charm that nothing else can give. To watch the development of the plants from the tiny shoots to the full bloom, is a delight to a real lover of the beautiful. Flowers like women instinctively turn to sunshine and congenial environment for development and having found such an atmosphere for the loving care bestowed.

Many horticulturists do not have the time or talent for doing experimental work in producing new varieties of fruits and flowers, but all honor is due to those who have spent their lives at such work.

God spread the earth with a rich mantle of beauty, and endowed man with the ability to enlarge and continue the work. Happy are they who by patient endeavor add one more to the already long list of beautiful flowers. Though it is a labor of love it is labor, hard labor, bending hours at a time, spreading pollen, budding, cutting scions, grafting and performing many other intricate, painstaking tasks that this beautiful old world of ours may be even a more beautiful home for those who can appreciate the beautiful.

Mrs. L. H. Palmer.

Baraboo.

When going for a long drive take along your own drinking cup. It is dangerous to use those that hang by the watering places, for there is no telling who may have used them, or what use they were put to last. Be careful about drinking direct from a spring, for there is danger of swallowing insects.

Wipe the windows with a soft paper before washing to remove the dust and grime.

THE FLORISTS PAGE

Edited by **Huron H. Smith**, Curator of Botany
Public Museum, Milwaukee, Wis.

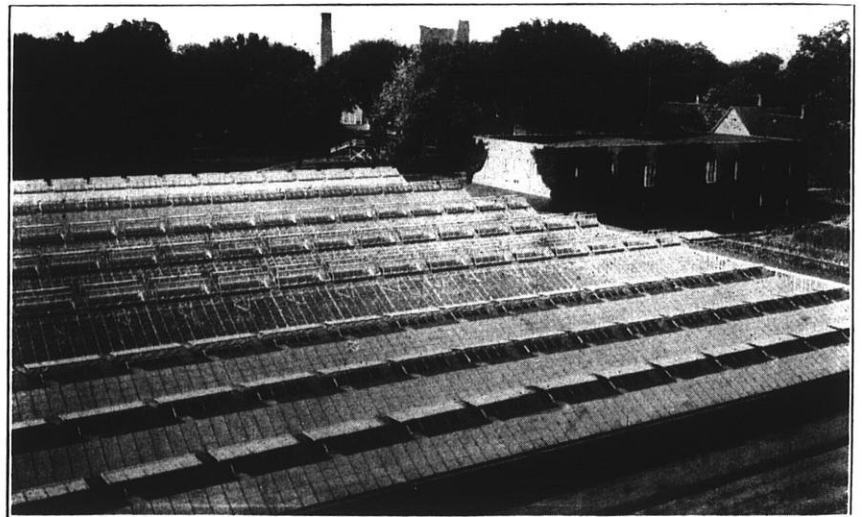
The Haentze Floral Company of Fond du Lac

The Haentze people could have celebrated their golden wedding to the florists business six years ago, had they wanted. Theirs is one of the oldest establishments of the kind in Wisconsin. Back in 1858 the father of the present owners came to Fond du Lac and started the business in 1867, on the same spot where the greenhouses now stand at 414 Linden Street at the corner of Tenth Street, just a block west of Highway 15 as you enter Fond du Lac from the south.

The business is now in the hands of the pioneer's children, President, Richard D. Haentze; Vice President and General Manager, Ernst Haentze, Jr., and Secretary-Treasurer, Mrs. Anna H. Ferdinand. Richard D., or Dick, has been in the business for 33 years, but for the past two years, Hizzonner the Mayor of Fond du Lac. He has four years yet to serve, and we gleaned our interview, in short pauses between visitors, with every sort of a request.

The Haentze Floral Company used to supply trade in northern Wisconsin and Michigan, but now find their hands full supplying trade within a radius of fifty miles. They have some agents in the smaller towns. Their city trade is quite extensive, in a city of 27,000. Hizzonner is quite proud of his city with its extensive manufacturing industries. It is quite a railroad center, with 60 passenger trains arriving and departing every day. Mayor Haentze does not get time for much of the business ex-

cept the down town store. For fifty years all of the business was transacted at the greenhouses, but for the last six years they have had a store on Main Street. They are now at 27 S. Main Street, having just moved in June, next door to the Palmer House. Their store is fitted as a tourist rest room, with



One end of the Haentze Floral Company's greenhouses. The other end is near(er) Sheboygan.

an extensive lot of canaries and fine florist accessories. They lean heavily on Gust Rusch, Milwaukee, for their supplies, and Gust has surely stocked them with good looking things.

Uncle Ernie is the genius of the greenhouses with Mr. Ferdinand as the mechanic, and we had a most enjoyable visit with them both. We almost won the honors in a "kidding match" with Uncle Ernie. It was a nice warm day with the thermometer around 95 degrees, but we religiously did our duty by inspecting everything. There are sixteen

large houses, with a total glass area of one hundred thousand feet. The houses are well arranged with the heating plant at the rear side in a separate building. Two Freeman and one Kröschell boilers consume eight hundred tons of coal in a season. Their traveling conveyor for unloading coal was undergoing an overhauling while we were there. A large elevated water tank gives fire protection and force for hosing plants inside and outside. Twenty-

eight employees take care of the greenhouses and two at the store.

In such a town, we find they do a very general business, furnishing quantities of bedding stock, small nursery stock for ornamental planting, and even vegetable stock for the home gardener.

Their outdoor space is ample and the old trees make it an attractive spot. Two huge hackberries are a source of speculation to the natives. Their sod pulverizer was interesting on account of its capacity. The ordinary machine they had could be choked by two men throwing in

dirt, so Ernie bought a junked Ford for \$10 and hooked up the engine to the grinder. Now three men can not choke it. But Lizzie isn't tin any more. She has a huge hood of galvanized iron and takes the weather the year around.

The stock room is Ford truck size clear across the end of the houses and opens into the concrete two story office building and garage. Masses of Virginia creeper give this office building the appearance of an age-old English manor, but the interior shows much sorting bench room, ice boxes, and an up to date office. Supplies in large quantities are carried on the second floor.

Just to hit the high spots on their stock, we noticed a whole house of asparagus ferns, and a huge assortment of other ferns and palms. There were a good many Easter lilies, snap dragons, and some beautiful purple *Veronica spicata*. There were two benches of *Swansonia*, white and the seldom seen red ones. There were nine thousand rose plants in such varieties as Columbia, Premier, Ophelia, Ward, Butterfly, Richmond and My Lady. They had 12,000 carnations, the White Matchless and Harvester, the Red Matchless and Nebraska, and pinks such as Super Supreme, Philadelphia and Eckhurst. They have an unusually large lot of mums, Mistletoe, Seidewitz, Turner, Pappworth, Chieftain, white and pink, Patty, December Gem, Oconto, Chas. Rager and twelve more.

Our visit was made on July 6th, when outdoor flowers were at their best, and we thought then, what a wonderful flower show, the florists could make at this season of the year. Hæntze's place gets as many visitors as a city park and

deserves it. If only more tourists knew what lies a block west, they would get more.

Huron H. Smith.

Robins and Small Fruit

My sympathy and a very brotherly feeling go out to Mr. Holston in reading his article on "Song Birds vs. Fruit Growing," in June Horticulture. Robins put the writer out of commercial strawberry business several years ago. After

seems to me to be practical and workable.

First: Do *not* plant trees on the country highways close together, like the city people do. That kind of planting has several objections. It shades the road too much, so it will not dry off quickly after rain. It cuts off the view as one goes by, or lives by. Much of the beauty of the country is the distant view.

How then? If one wishes the avenue effect on sections, plant



A "close up" of the office building, Hæntze Floral Company, Fond du Lac.

becoming a pest and eating much more than all the profit on good crops for several years, he quit that line. Now, let us hope that the custom of shooting robins when they arrive south in the fall will be continued with increased vigor and we may be somewhat relieved. I think any one is entirely justified if he kills birds to protect his own fruit, provided the killing is done on his own place.

Irving C. Smith, Ashland,

Plant Trees Sensibly

In answer to the question, Shall we plant roadside trees?

I would like to suggest a way of planting roadside trees which

about one hundred fifty feet apart—perhaps two hundred. That will give the avenue effect as one looks down a road and will neither cut off the scenic view or the view of the car coming just around the curve. The trees should not be headed too low, say fifteen to twenty feet. I. C. S.

The McKay Nursery Company and the Hawks Nursery Company have been with us as advertisers since November, 1911, and were in business many years previous to that. We know the men. They are with us at every convention. And we know their goods. They are dependable.

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Are Boys Worth Saving?

It is, we believe, the desire of our readers that the columns of WISCONSIN HORTICULTURE should be devoted to the interests of our Society and to matters horticultural. The editor has always been a stickler for that very thing, except in 1917 and 1918. Occasionally, however, something comes to the editorial desk containing an appeal that clings to the memory even if laid aside and out of sight. The Dousman Farm School is one of these. Those of us who have traveled from Madison to Milwaukee on the C. & N. W. Ry. any time during the past twenty years can scarcely have failed to notice this school. The school house and home buildings are close to the tracks

and rarely a train passes but a group of happy youngsters in overalls are waving greetings to the passengers who are flying by.

For years we thought it was some sort of "reformatory" camouflaged by an attractive name. Upon closer acquaintance we found that it is something quite different, one of those bright spots we find here and there along life's highway.

So we take the liberty of giving here the little story as told by those who are giving much more than money, giving *themselves* to this wonderful cause. No one has asked us to do this, the slip came as it comes, modestly once a year and,—here it is. It is not the purpose of the editor to solicit your subscription nor urge anyone to give but merely to have the story told and to vouch for the truth of it.

FACTS ABOUT THE FARM BOYS' HOME

The Farm School is a home on a farm, where needy and neglected boys are cared for and educated.

It is situated on the C. & N. W. Ry., about a mile from Dousman, in Waukesha county.

It is a philanthropic school, maintained by voluntary contributions. No state aid.

Its purpose is to make clean, manly and capable citizens of neglected, homeless and orphan boys.

Payments for the board and care of the boys are required, whenever a parent or guardian is able to pay.

Boys attend school nine months of the year, under a specially employed teacher. They also learn to do farm work and have ample opportunity for play, etc.

Boys are admitted through a committee who provide application blanks. Criminal records, mental deficiency and physical deformity

disqualify boys, as we have not the facilities adequate to meet the needs of such cases. No boy is barred on account of his poverty, religion, nationality, or lack of education.

The school is not a penal institution. There are no locks, bars, or stockades behind which our boys are confined.

It is not an orphan asylum. Many of our boys are not orphans, but are misfits in what would be their natural home. Some have never known a home of any kind.

It is not a home-finding society. When the boy enters our doors, he is at home, and we try to teach him to realize that fact. We want him to leave the home only when he has reached a self-supporting age.

Our officers and directors serve without pay. The only workers receiving salary are those who are giving their whole time to the work.

Boys are taken from all sections of the state, and remain until able to help themselves.

Yearly cost for care of boy (approximately) \$200.00.

The farm comprises 220 acres, purchased in 1905, for \$14,700.

Estimated value of total property, including the farm, live stock, machinery, tools, produce, and school buildings, \$55,000.00.

We have about thirty boys in the Home. A new \$8,000 School House was built in 1917. With one additional cottage we will be able to care for fifty boys.

All cash contributions to the work should be made payable to the Wisconsin Home and Farm School Association, and sent to W. J. C. Ralph, Financial Secretary, Hartland, Wis.

WILLIAM H. TURNBULL

William Turnbull died at his home in Kenosha, April 2, 1923. He will be greatly missed. For the past ten years at least Mr. Turnbull attended every meeting of our Society, both the summer and winter meetings. He never failed to express the pleasure and satisfaction he found in association with our members. While many of us, no doubt, for such is the way of the world, failed in return to tell him how much we enjoyed association with him it is certain that there is none but will feel sorrow on account of his departure. The following is from a Kenosha paper of April 3d:

William Harrison Turnbull was a native of Geneva, New York, where he was born, November 5, 1845. He came west with his parents when he was but two years of age and the family settled at Janesville. He was educated in the schools of Janesville and after completing his education he learned the trade of the wagon-maker. Going to Racine he was for many years associated with the Fish Brothers Wagon company in an executive position and after he gave up this work he became the buyer for the Mitchell Lewis company, long prominent in the wagon-making business in this section of the country.

When he resigned his position with the Mitchell Lewis company, he retired.

**The Wisconsin Russett Apple
Also Something About
Fertilizers**

Mr. Carroll A. Dutton, a successful fruit grower of Trempealeau county, writes an interesting letter, which we have permission to publish:

"I recall that in a former issue of the magazine you had an article concerning Wisconsin Russets. In

my orchard is a row of them seventeen years old, have never borne, and up to this season have never bloomed, except for a few stray blossoms. About a half bushel of scattering apples were picked last season. In the spring of 1922 they were treated with four pounds to each tree of equal parts nitrate of soda and sulphate of ammonia. They responded with vigorous growth and fruit bud formation. Bloomed profusely this spring, but a very small per cent of blooms have set fruit. I don't understand this.

"The trees are very symmetrical in growth and the fruit is as large as a Wealthy and a rich russet. But so far the tree is not a success. It is a late bloomer and may have been in a susceptible stage for frost injury. We had a snow storm in the pink and pre-pink stage, followed by three frosts and a temperature of 28 degrees. But so far no visible injury, unless it is the cause of failure in this variety to set. Two Golden Russet trees near by bloomed early and full and they set in heavy. Pewaukees bloomed full and set very light."

"Our orchard is hilly and in sod, but on very rich soil, yet older trees were looking pale, 'old and feeble.' The application of nitrogen has produced such a change in abundance and color of foliage, growth and bud formation as to be striking. A lesser application was made this season and from the appearance to date a still smaller application may be sufficient another season."

Quality Tomatoes at a Premium

That proper fertilization improves the quality of tomatoes, as well as increasing the yield, has been well demonstrated in Orange county, Indiana. At any rate, the

management of a local tomato cannery is so sure of the better quality and superior flavor of fertilized tomatoes that a bonus has been offered for fertilized tomatoes.

Early in the season the agriculturist of the company and County Agent E. E. Stimson got together and figured out that, if the growers could be induced to use 500 pounds of a 2-12-6 fertilizer, the company and the grower would both be benefited. The following plan was adopted:

Each grower agrees to put 500 pounds of 2-12-6 fertilizer on each acre grown for the cannery, the fertilizer being supplied by the cannery on advantageous terms. The cannery also pays a bonus of \$1.00 per ton for all tomatoes grown on fertilized land up until the price of the fertilizer has been reached.—News Bulletin; Soil Improvement Committee.

If this is true it is important and of interest to the amateur as well as the commercial grower. We all want quality. Further information is being sought.

Professor Roberts says that when everybody gets a chance to talk everybody goes home happy. He is quite right, but we take this occasion to observe that, his statement being true, there must have been a lot of unhappy fruit growers at the convention. We dropped in at the C. F. G. section at 2:30 Friday afternoon and Roberts was talking. We dropped in again at 5:30 p. m. and Roberts was talking, still, or again, or yet.

The late Elbert Hubbard said: "Don't take yourself so damn serious." Poor English, but good advice.

Switzerland of Wisconsin

BY JOHN A. HAZELWOOD

Chairman Wisconsin Highway Commission

Few men who have lived in Wisconsin appreciated more highly its beauties than the late John A. Hazelwood and none was more eager to tell others that they too might enjoy them. The following story is one of many written by him three years ago and has been widely published. We print it for the benefit of those who may not have read it and also to place it on record. In one way of looking at it it is only an account of a short automobile trip through a portion of southwestern Wisconsin but it is none the less a poem in the language of prose, a song of praise from a heart overflowing with the love of nature, a prayer of thankfulness.—Editor.

The Badger state is one of the most scenic commonwealths in the nation, especially during the Autumn season, when the foliage of the trees and shrubs take on all the hues and tints of the rainbow. A party of nature lovers left Madison on an early October morn on a three days' trip through a part of the Switzerland region of Wisconsin. The sun shone every day of the journey, for there was hardly a cloud in the sky, and the temperature was ideal for an excursion through the country.

RIDGE HIGHWAY

The initial part of the trip was made over State Trunk Highway No. 19, the so-called Ridge Road from Madison to Dodgeville. A great part of the highway has recently been re-located by the Highway Commission to eliminate fifteen dangerous railroad crossings. It is a beautiful drive on the crest of the ridge, with splendid farms lining each side of the highway. The famous Blue Mounds are witnessed for a long time before reached on account of their height and prominence. Here we see the second highest place in Wisconsin. Iowa County should secure title to the Mounds Section for a county

park. The road is fringed on both sides with native wild shrubs, the leaves of which are so pretty that often we were obliged to exclaim, "Oh! How beautiful!" The trees in the valleys and hillsides are gorgeous, rich in tint, color, and beauty.

DODGEVILLE

Dodgeville is an ancient city when compared with municipalities of northern Wisconsin. Many of the old homes are quaint in their appearance. The Court House is one of the oldest county buildings in the state. Many of the business places, especially the banks, are modern in every respect. Some beautiful homes are seen in suburban additions of the city.

The highway between Dodgeville and Mineral Point is almost as rough as the scenic railroad on Coney Island. It gives travelers a sample of the "ups" and "downs" in life. However, the expert engineers are working out changes in the roadway to do away with many of the steep grades and dangerous curves. The beauty of the ride is most appreciated when travelers pass down the hill to the narrow valley of the Pecatonica River and up the opposite side to the ridge leading to the old capitol village of Belmont. There is no stream in Wisconsin that runs so wild as the Pecatonica River during the rainy Spring months. This fact is observed on every hand as we cross the stream bottom.

BELMONT

The old capitol building which was occupied in 1836 by the first Wisconsin legislature has been purchased by the state and moved back to its original site. It is interesting as a matter of sentiment, situated in old Belmont with its site near the

great Belmont Mound that is noted for its symmetrical form and attractive setting. Tourists are warranted in pausing and meditating on what transpired on the almost holy grounds, where the birth of the great Territory of Wisconsin took place, and its first legislature and Supreme Court began work.

PLATTEVILLE

Platte Mound is skirted as we pass along to the city of lead mines and the site of Wisconsin's first normal school. Platteville segregated her saloons to a side street during the wet days. It has about as many beautiful trees lining its residential streets as any city of its size in America. The community spirit in Platteville has made its impressions on the city in providing parks and community buildings, such as must impress every studious visitor to the city.

MOUTH OF WISCONSIN RIVER SECTION

The trip from Platteville through Bloomington, the largest inland city of Wisconsin without railroad service, and across the Wisconsin River at the toll bridge at Bridgeport to Prairie du Chien, possesses an ever changing panoramic beauty that pleases the eye of the traveler. As we approach the city where Red Bird, in charge of the Indians, made his last stand against the U. S. forces under Major Whistler, we get a splendid view of the Nelson Dewey Park which borders on the mouth of the Wisconsin River, and lies for miles along the Father of Waters, the Mississippi. Old Fort Crawford, now a crumbling mass of brick and mortar, is passed as we enter Prairie du Chien. Here we find a unique and picturesque setting for a great city. The failure to make the most of water transport-

tation facilities is the reason for Prairie du Chien not being one of Wisconsin's largest municipalities.

CRAWFORD COUNTY SCENERY

No county in the state has more scenic places in it than Crawford County. As we ascend the east side of the Kickapoo region from the Mississippi valley section, we are impressed with the fact that Switzerland has a duplicate in Wisconsin. The long, long, winding trunk highway, which has just been newly graded and re-located, to do away with the many steep grades so that now the grade is apparently easy and continuous, make the travelers' eyes witness just oceans of Nature's beauties in various forms. You see the great state park in the distance, with the waters of two mighty rivers rolling by the foot of high bluffs; you observe hickory nut trees on the precipitous hillsides by the thousands, and in the distant valleys below many fields and farms.

"October donned a scarlet coat,
When Autumn nights were growing chill;
And left a trail of splendor where
She wa'ked o'er meadow, vale,
and hill."

KICKAPOO

The drive from Prairie du Chien to Mount Sterling is a revelation of throbbing beauty of many types. You study the delicate hues, shades, and colors on every side. Far to the westward can be seen the bluffs along the Mississippi, which seem to tower towards the sky as the Rocky Mountains. Toward the east you see the now peaceful, tranquil valley of the Kickapoo. The trees appear to have on beautiful party dresses suitable for high society, and the shrubs seem to vie with the trees in donning society

clothes. The maple, the oak, the sumac, and the ivy are gowned so beautifully that it is difficult to pick out the "best dressed."

GAYS MILLS

The descent from Mount Sterling, down some five miles to Gays Mills, surpasses in beauty and interest a trip down Pikes Peak. The highway winds around and around hills so that at one time you are on the east side, the next moment on the west, then on the north, and then on the sunny south, and this course is followed until almost as an act of magic you are right upon the mill pond north of Gays Mills. You pass alongside of a grist mill across a bridge, and right up the main street of the village to the depot ere you are aware you are in the heart of the metropolis of the Kickapoo Valley.

APPLEDORE

Appledore is an island off New England shore upon which not a tree is found, only a few sumac not as high as your knee. To compare this island with the great apple region of the Kickapoo is an insult to the fruit growers of Wisconsin. The Kickapoo apple orchards might well be contrasted with the great cherry orchards of Door County. As we ascend the high steep hills to the east of Gays Mills, we are given often to looking back down into the valley at the village. It is a most beautiful sight to look down on the little city at night time, and see the well lighted homes and streets. Interested parties drive for miles and miles when orchards are in blossom in June to smell the fragrance and enjoy the beauty of the apple blossoms.

SOLDIERS GROVE

We passed along the east ridge of Kickapoo hills, enjoying a pano-

rama of scenery seldom if ever witnessed anywhere. Passing down towards the Kickapoo River bed, we approach the pretty little Indian city of Soldiers Grove, the old home and business place of former Governor James O. Davidson. It is apparently a live business town, judging from appearances of buildings and streets.

COULEES OF KICKAPOO

Traveling from Soldiers Grove to Reedstown to Viroqua, we pass up and along the Kickapoo River for some distance, giving us a splendid opportunity to study the irregular river bed and many valleys and coulees. The coulees are noted for crags, outcrops of rock, and stony bottoms. It is in this section of the state one is reminded of the canyons and washes in the West. The wonderful coloring of the foliage pleases the eye of all who possess aesthetic tastes. Hazelbrush, columbine, sumac, and raspberry bushes grow thickly along the roadside, and furnish a pretty border.

COON VALLEY

Coon Valley possesses a world of interesting scenery. The deep cuts, the high hills, almost like mountains, the twisting, winding roadway, makes a visit to this section one which will never be forgotten. Wonderment and bewilderment possesses the soul of all visitors to the valley. The Berkshire Hills of Massachusetts are not comparable with the Vernon County Hills. Vegetation of all kinds common to this latitude help to make the scenery impressive and enticingly interesting.

WILD CAT MOUNTAIN

In the northeastern part of Vernon County, just outside of the vil-
(Continued on page 189)

Snake Skins in Birds' Nests

BY JOE ALEXANDER

"Why do flycatchers and catbirds weave cast-off snake skins into their nests?" That queer custom has been much studied, but never satisfactorily answered, by ornithologists who have devoted years to bird study in an effort to answer some of the many knotty questions that the entrancing pastime affords the sympathetic close observer.

The writer has been an interested student and observer of birds since early boyhood, and in his wanderings through woods and thickets he has long looked for a satisfactory answer to the question. This odd habit of placing cast-off snake skins, or "castings," in the nest is not uncommon among birds. It does seem, however, to be limited to the flycatcher family and to the common catbird.

If the old, dried and crinkly skins were found woven into the nests of less pugnacious birds we might be led to believe that they were used for nest protection from woodland marauders, but those who have watched the kingbird know that he is well able to defend his rights and property. So is the catbird. Let an intruding crow or blue jay on mischief bent prowl slinkingly through the berry patch near his nest and watch what happens promptly and to the accompaniment of an angry din entirely out of all proportion to the size of the catbird, even with his feathers ruffled in wrath. No, it hardly seems that birds which are both able and willing to defend their nests need depend upon snake skins for protection—at any rate while the lawful residents are at home or in the close vicinity.

The writer once heard the late John Burroughs, that grand old naturalist and bird lover, say relative to this matter: "It is not likely that snake skins are woven into birds' nests with the idea of ornamentation. Why they do it is an unanswered riddle." Birds do not try to make their nests conspicuous; on the other hand they show wonderful ingenuity in making nests blend with their environment. The nest of the wood pewee serves as an admirable example of woodland architecture at its best. Exquisitely woven of plant fibers, moss and rock lichens, and resting upon a branch of gnarled apple or oak, it harmonizes so perfectly with the limb as to appear to be nothing more than a healed limb scar.

Nor does it seem that snake skins are woven into nests to serve as "markers" which enable the keen eyed owners to find their own nest, though this explanation has been advanced. To assume that birds require such aids to memory for places is to belittle both eyesight and instinct, each of which they possess in ample measure. Is it sensible or logical to suppose that birds which find their way in the spring migration from the sunny southland to the tiny patch of woodland from which they disappeared the autumn before are dependent upon markers placed in the nest they have recently built? Hardly. The instinct that each year guides the martins back to my martin house, and that last year directed the flight of the first to arrive all the way from South America, and to direct its last two miles of flight across fog-hidden lake straight as a die to the old nest-box in my back yard—such instinct is beyond ken, and certainly inde-

pendent of flimsy landmarks visible only at close range.

But why then are the snake casts woven into nests? Is there a reason? Nature is not wasteful; there must be a purpose, and a good one, too.

Almost by accident the writer first observed what he now humbly offers as at least a partial answer to the question. On the old home farm in Wisconsin is a dense hedge of wild plum and hazel bushes beside an old, vine-shrouded stone wall. This hedge is truly a bird tenement, inhabited by birds of all kinds, literally living together in true neighborly harmony. But all was not well in this thicket. A flock of cowbirds, sometimes called cow blackbirds or buffalo birds, followed the Guernseys in the adjoining pasture. Our closer observation revealed the fact that these "parasites" depended upon the nests in the hedge as a handy nursery. Cowbirds, as we all know, do not set up an establishment of their own and keep house in the orthodox and highly respectable manner followed by other better loved birds. They slyly lay their eggs in the nests of the smaller songsters while the owners are away, thus leaving all the "chores" of incubation and feeding to the unfortunate foster parents. Nests most commonly selected by cowbirds for this labor-saving plan of raising a family by proxy are those of the yellowbird, song sparrow, American goldfinch and vireo.

But to return to the nests in the hedge. Cowbird eggs in the nests of other birds were more nearly the rule than the exception. One little yellowbird's nest contained four tiny eggs and in addition two much larger ones which had been

craftily deposited there while the wee owners were away. Soon all the eggs hatched. Within a week three of the baby yellows had been crowded out of their rightful home by the big lusty usurpers. The fourth somehow managed to survive. It was pitiful to watch the little foster parents as they tried to pacify the enormous appetites of the two adopted fledgelings, both of which were soon larger than the yellowbirds themselves. With such appetites as this to appease it is no great wonder that cowbirds do not take kindly to the thought of raising their families.

Within less than a rod was the nest of a catbird. Interwoven into the mixed fabric of the nest, along with a couple of pieces of dirty white rag and a bit of old newspaper, was a more or less badly weathered cast snake skin. This nest contained four pale blue eggs which hatched and developed without molestation. No cowbirds patronized it, though it was so easily seen that it could not possibly have escaped their notice. Is it not entirely possible that the snake skin twined among the twigs of the nest kept uninvited lodgers at a respectful distance? At any rate we have yet to find a "boarder" in a catbird's nest to which a snake skin dangles flapping pennant-like in the breeze.

It is not our wish to enter this as final proof that the snake skin is placed in the nest as a "scarecrow" to keep away unwelcome visitors. We do, however, have our own private opinion in the matter, and will be interested in hearing from others on the same point. Suffice it to state that a snake skin draped conspicuously over a stump in the pasture near the place where

the cows rested in the heat of mid-day kept the attending cowbirds at a very respectful distance and in a great state of excitement. Quite plainly they showed that they did not favor snake skins in their immediate vicinity. This experiment, though repeated on several occasions, never failed to produce the same result. Perhaps cowbirds have an instinctive dread of snakes. Possibly the catbirds have taken advantage of this fear. Who knows? Queerer things than this are known to happen in Nature.

Fruit Growing in Lincoln County.

(Continued from page 179.)

Duchess of Oldenburg, Wolf River, Snow, Scott Winter, Northwestern Greening, Minnetonka (related to Wealthy, it seems), Yahnke, and all the crabs. The following do fairly well: Red Astrachan, Mackintosh, Anisim, Malinda, Talman and Delicious. Others should not be planted in Lincoln County. Of pears the Flemish Beauty does well here. I also have Clapp's Favorite Dwarf.

"The farmers around here never think of spraying their orchards. They will learn something this year; I hope so at least. Otherwise I would have to fight the many orchard pests harder than ever. It would help considerably if the country teachers would teach their pupils that spraying the orchard trees is a necessity today, not only in well cultivated countries, but everywhere.

"I also have thirty grapevines, of which the Lucile does best in my garden. Niagara, Brighton and others don't get ripe every year. The Beta is fine for arbors."

Gustav J. Schneider.

Switzerland of America.

(Continued from page 187.)

lage of Ontario, we visit the observation tower of Wisconsin. Wild Cat Hill has Switzerland mountain scenery eclipsed. Our party spent a long time enjoying the panorama seen from the various points of the hill. It took some effort to get us to pass on from the scenic places on the Wild Cat Mountain. The day was ideal; the bright morning sun shining upon Nature's painted scenery made the invitation to linger longer almost irresistible. No painter could do justice to the picture.

CONCLUSION

After our visit to Wild Cat Hill, our party passed into Monroe County and visited the head waters of the Kickapoo. All along our trip we were refreshed time and again by drinks of pure water from bubbling springs by the roadsides. In almost every instance, it was evident that the springs had been cleaned out and made specially inviting to thirsty tourists. We returned to Madison from our trip through a part of the Switzerland of America feeling well satisfied with the roads, the hills and valleys, and the beauty and grandeur of the trees of Wisconsin. The closing part of our journey over the Baraboo Bluffs and Springfield hills made fitting closing scenes after what we had enjoyed on our journey through the Switzerland of Wisconsin.

If your garden is small you cannot afford to grow crops requiring lots of space. Potatoes, corn, and vine crops should usually be left out of the small garden.

Foliage crops (lettuce, spinach) are likely to do better in partial shade than the fruit crops (tomatoes, beans).—W. S. H. S. Garden Book.

The Cucumber Beetle Conquered (Continued)

In the June number my interest was attracted to the article on "The Striped Cucumber Beet'e," and the oft repeated accounts of failure to control them satisfactorily.

Perhaps our experience may be of value to some one else, as it relieved us of any anxiety or watchful care regarding the bug. Our method of control was very simple and effective, and moreover, very little expense.

We used to grow melons and cucumbers in amounts of about two to three acres, more or less, per year, and would order of some one who had chickens, about 50 little chickens and five hens to each acre of vines. These we divided among the hens and distributed them over the field, putting the hens in small coops made with lath up and down in front so a board could be slipped in behind the lath at night to prevent loss by rats, skunks, etc. The coops should be about 2x3½ feet on the bottom and have board floor so animals can not dig under.

The chickens were gotten in time so they were one or two weeks old when bug time arrived. They must be old enough to run good. We hired one of the nearby workers to open the coops at daylight and close them at dark, and bid good bye to the bugs. We never lost a plant by the bugs after we got to working the chicken scheme, and it was followed for a number of years.

Of course, the chickens must be fed and cared for in the usual way. After the bug season is over, if one does not wish to keep the chickens they can be sold for enough to pay the original price plus the care.

This is no fairy tale or imaginary possibility, but a plan that worked

very satisfactorily for years—no exceptions.

You can have your day of thanksgiving if you will follow out the foregoing plan and have cucumbers to eat in plenty. You will have no need for black leaf 40, nicotine sulphate, Bordeaux, or any of the numerous arsenical dopes which have been concocted within the last ten or fifteen years. Just chickens, that's all.

The U. S. Department of Agriculture, through the Washington office and its various state branches has done a great work in aiding the grower, but this is one instance where perhaps the grower may help Uncle Sam if he will only take to heart what is written.

Irving C. Smith,
Ashland, Wis.

Midwest Professors Tour Wisconsin

Sturgeon Bay, July 26th: Concluding their tour of Wisconsin fruit producing areas by a visit to Cherryland, members of the Great Plains section of the American Society of Horticultural Science voted this years convention and pilgrimage one of the most successful ever made by that organization. Their jaunt included an inspection of cranberry bogs in the vicinity of Wisconsin Rapids, a study of biennial bearing plants near Oshkosh, a visit to landscape gardening projects at Neenah and a survey of practical cherry and apple production in Door county.

Included in the caravan of overlanders were well known horticulturists from Iowa, Minnesota, North Dakota, Indiana, Michigan, Canada and Wisconsin. Among the visitors were horticultural officials of the United States Depart-

ment of Agriculture and Dominion of Canada.

At the conclusion of their formal conference on fruit growing problems, James G. Moore of the University of Wisconsin was chosen as president of the organization, succeeding W. H. Alderman of the University of Minnesota. W. R. Leslie, of the Dominion Experiment Station at Mordon, Manitoba, was chosen as secretary to succeed R. H. Roberts of the Wisconsin College of Agriculture. The 1924 session of the society will be held in Canada.

Building and Heating Green Houses

Glass farming, or the growing of flowers and vegetables in greenhouses, has become an important industry in the United States, and, according to the United States Department of Agriculture, the industry is constantly increasing because of the demand for vegetable and floral products of the quality that can be produced in the modern greenhouse. There are now more than 17,000 establishments employing some type of forcing structure for the production of plants, flowers, or vegetables, the glass area covering nearly 3,800 acres.

High quality greenhouse products are finding an increasing demand, and the industry offers special inducements to those having a knowledge of and a liking for the work. Success in this industry will depend much on the suitability and adequacy of the equipment. The fact that the quantity of coal used to maintain an acre of space inclosed in greenhouses at the required temperatures varies from 250 to 500 tons a season indicates the need for the practice of every

WISCONSIN NURSERIES

Our Motto:

Give fools their gold and knaves their power;

*Let fortune's bubbles rise and fall;
Who sows a field or trains a flower
Or plants a tree is more than all.*

—Whittier.

At it Twenty Years. Catalog for the asking.

**W. J. MOYLE & SONS,
Union Grove, Wis.**

Kellogg's Nursery

Janesville

Wisconsin

SIXTY-EIGHTH YEAR

Full line of standard varieties of Fruit Trees, Small Fruits, Peonies, Roses, Shrubs, Shade and Ornamental trees at prices that are right. Don't pay two prices to traveling salesmen. Order direct from a reliable nursery and save money.

possible economy. According to Farmers' Bulletin No. 1318, Greenhouse Construction and Heating, just published by the United States Department of Agriculture, fuel losses in greenhouse heating are sustained because of poorly constructed houses, a faulty heating system, or the lack of repair of the house or the heating plant.

The bulletin discusses the construction and heating of greenhouses, giving such information as will be useful to those contemplating engaging in the business, and may be secured free of charge from the United States Department of Agriculture, Washington, D. C.

Moving Currant Bushes

A member asks if the fall is a good season to move several large currant bushes. It is. The bushes should be mulched heavily after transplanting. Any time after the middle of September is a good time. This is also a good season to set out currant and gooseberry

plants, better than the spring. Mulch these also.

Maybe They Will Learn to Like Potato Bugs

During the first week of July a large shipment of dextiid and tachinid parasites of the Japanese beetle was received in Seattle. These insects came from Japan in cool storage and great care was exercised in preparing them for transcontinental shipment to the Japanese beetle laboratory of the Bureau of Entomology, United States Department of Agriculture, at Riverton, N. J. At Seattle representatives of the bureau had ready a number of 10-gallon ice cream freezers. The boxes of parasites were transferred directly to the tubs of these freezers, well iced, and started east with as little delay as possible. An express company cooperated in the work by seeing that the freezers were re-iced en route. The parasites are to be liberated in connection with Japanese beetle control work.

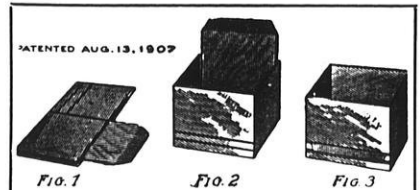
What He Needs Most Is a Library

The following very comprehensive request has been received at this office. Floriculture was omitted but that no doubt was an oversight.

Wisconsin State Horticultural Society, Madison, Wis.—Dear Sirs: Will you please forward to my address below bulletins and pamphlets pertaining to the proper care of fruit trees, currants and garden vegetables. Also information as to ways of identifying insects and diseases of trees and plants, and the proper solutions for spraying, and any other information on this subject, which will enable me to properly take care of above.

Thanking you very much in advance, I am,

Yours respectfully,



Berry Boxes

Crates, Bushel Boxes and Climax Baskets

As You Like Them

We manufacture the Ewald Patent Folding Berry Boxes of wood veneer that give satisfaction. Berry box and crate material in the K. D. in carload lots our specialty. We constantly carry in stock 16-quart crates all made up ready for use, either for strawberries or blueberries. No order too small or too large for us to handle. We can ship the folding boxes and crates in K. D. from Milwaukee. Promptness is essential in handling fruit and we aim to do our part well. A large discount for early orders. A postal brings our price list.

Cumberland Fruit Package Company

Dept. D, Cumberland, Wis.

Classified Advertisements

Our Market Place

If you do not want to rent a larger space try a "stall" in our Market Place for a month or a year. Rents are low. Write for terms.

No display type, no illustrations. Copy required five weeks in advance of date of issue. Address

**WISCONSIN HORTICULTURE
701 Gay Building Madison, Wis.**

HARDY PERENNIALS

FOR SALE:—Hardy Wisconsin grown perennial plants and strawflowers in season. Grown by J. F. Hauser, Superior View Farm, Bayfield, Wis. Send for list.

LANDSCAPE GARDENING

Landscape Work Done. Plans drawn and blue prints made. New building sites laid out; foundation plantings of shrubby and Evergreens; old home grounds beautified. We furnish trees, shrubbery, and perennials for you. We specialize in Evergreens for Lawn decoration and Farm Windbreaks. We do work anywhere in the State. Lake Rest Nursery, J. W. Roe & Son, Oshkosh, Wis., Fond du Lac Road.

NURSERY STOCK

ESCHRICH'S NURSERY, North Milwaukee, Wis., growers of ornamental nursery stock. Ask for prices and illustrated catalog.

The Opgenorth Line of Berry Box Material



United Fruit Package Co.
SHAWANO, WIS.

VENTILATED LINE

Ventilated Folding Boxes
Ventilated Boxes Made Up in Crates Complete
Ventilated Sides and Bottoms for Growers Who Wish to Make Up Their Own Material

PLAIN LINE

Improved Plain Folding Boxes
Plain Boxes Made Up in Crates Complete
Plain Sides and Bottoms for Growers Who Wish to Make Up Their Own Material

K. D. Crates Requiring One Nail to Complete

A Postal Card Will Bring Our Samples and Price to You



The Hawks Nursery Company

are in a position to furnish high grade Nursery Stock of all kinds and varieties suitable to Wisconsin and other northern districts.

Will be glad to figure on your wants either in large or small quantities

Wauwatosa . . . Wis.

McKAY NURSERY COMPANY

MADISON WISCONSIN

Nursery Stock of Quality

for Particular Buyers

Have all the standard varieties as well as the newer sorts. Can supply you with everything in

**Fruit Trees, Small Fruits,
Vines and Ornamentals.**

Let us suggest what to plant both in Orchard and in the decoration of your grounds. Prices and our new Catalog sent promptly upon receipt of your list of wants.

**Nurseries at
Waterloo, Wis.**

Protect Your Trees

FROM destructive rabbits, mice, borers and cut worms—from cultivator bruises and skinning. Eliminate costly replacement and save time lost in growth of young trees by using

Hawkeye Tree Protectors

Quick and easy to attach—wrap this chemically treated wood veneer protector around the tree and tie at top and bottom. It will last for years.

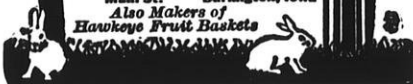
Special \$2 Trial Offer

Send us a \$2.00 bill and we will ship you 50 Hawkeye tree protectors by prepaid parcel post. Try these and you will order more. Send now.

Low prices for large quantities
BURLINGTON BASKET COMPANY

Main St. Burlington, Iowa

Also Makers of
Hawkeye Fruit Baskets



Listen son! If you will get an honest-to-goodness new subscriber (\$1.00) I will pay you fifty cents. Try it.

Rosenfield's Superb Peonies

Superb Stock—Superb Varieties

Send for beautiful illustrated peony booklet, *Superb Peonies*

Rosenfield Peony Gardens

72nd and Bedford Ave. OMAHA, NEBRASKA

WISCONSIN BEEKEEPING

Official Organ of The State Beekeepers Association

Supplement to WISCONSIN HORTICULTURE, August, 1923.

The Beekeepers' Chautauqua

The fifth annual conference and field meet of Wisconsin beekeepers was held at Madison, August 13 to 18, and over 350 persons were in attendance. The weather was fine and the program, although rather long, was full of new beekeeping facts. The next chautauqua will be held at Fond du Lac during the third week of August, 1924. Abstracts of some of the talks given during the week will be included in future issues.

Annual Convention

The next annual convention of the Wisconsin State Beekeepers' Association will be held in the Milwaukee Auditorium, December 6 and 7. The Board of Managers will meet in Room A, second floor, December 5, at 2 p. m. If you have a paper which you would like to present, please write the secretary before November 1. The convention will be held in connection with the Wisconsin Products Exposition and the State Association will have a honey booth—better and bigger than last year. Help the secretary by sending in your donations at once.

The Honey Booth

The same plan will be followed as for last year. You are all acquainted with the plan and the success gained in advertising. A minimum of \$200 is necessary to provide a representative booth. Refer to the February issue of our paper for honey and money donations of last year.

We plan to advertise "Badger Brand" honey to the fullest extent during the exposition and to make

the association trademark known to the 75,000 or more people who visit the show.

WHAT WILL YOU DO TO HELP? Money or honey will be welcome as a donation. If you send money, address to the secretary. If you prefer to send honey, make your gift not less than ten pounds. It has not yet been decided whether this honey will be sent to Madison or Milwaukee, so hold until shipping directions are sent you. However, let us know before November 1 how much you will give as a donation. Fill out the blank below and mail to the secretary.

Name

Address

Money donation of \$..... enclosed.

A honey donation of pounds will be shipped as soon as shipping instructions are received.

Honey to Sell

If you have more honey than you can sell locally and wish to sell some wholesale write the secretary for a special "Honey to Sell" report blank.

If you want your name on the list of those having honey to sell and do not wish the association to handle the details of the transaction, send in your name with amounts you have for sale.

Honey Week

Your secretary, Miss Fischer, has been doing a great deal of work toward getting a honey week for Wisconsin. Let us hope that her efforts will not be in vain. She reports that the Executive Committee of the State Association met on

August 15 and passed a motion recommending a honey week for the entire state during the week of November 19 to 25. This matter will be brought before the Label and Container Committee for a definite decision and the members notified. We should begin plans immediately for a State Honey Week. Full details for the plan will be published in our next issue. Every member using the "Badger Brand" lithographed pail or label should plan to advertise during this week, put on special exhibits at local stores and distribute posters to his grocers. Let us see just how much honey we can move during one week of intensive campaigning. If you have any questions about the honey week write the secretary.

The New Advertising Poster

The new honey poster has been made up and printed, and for the price it is an excellent piece of advertising material. Over 300 have already been sold. Every member of the association selling "Badger Brand" honey should have a supply of these posters for his storekeepers and should put some of them up in conspicuous places to advertise honey. Users of lithographed pails should make a special effort to place these pails in grocery stores and give the posters to your dealers to place in the store windows. If you have not seen the poster, send for a sample. They are 10 cents each.

This is what your secretary has to say about poster advertising: "Posters are silent salesmen. Pictorial posters such as ours will sell honey to the illiterate and to the

(Continued on next page.)

Wisconsin Beekeeping

H. F. WILSON, Editor

Officers of The Wisconsin State Beekeepers Association

President.....James Gwin, Gotham
 Vice President.....A. A. Brown, Juneau
 Treasurer.....C. W. Aspler, Oconomowoc
 Secretary.....Malitta D. Fischer
 Annual Membership Fee, \$1.00
 Remit to M. F. Fischer, Secy., Madison, Wis.

Lithographed Honey Pails

In addition to the labels bearing the "Badger Brand" trademark and the posters, 20,000 eloquent salesmen are being put to work in Wisconsin. Every time you sell one of the new pails, you are sending out another salesman. Thirteen hundred five-pound and 7,000 ten-pound pails will be distributed this year by the members of the State Association. There have been a few complications with the pails this year, but such things are bound to occur with every new undertaking. The pail company has agreed to make adjustments on improperly made pails or covers, and before this issue is out we hope to have all our beekeepers satisfied. Before another stock of pails is ordered, members are urged to consider this matter immediately so that arrangements can be made far enough in advance to prevent the difficulty that arose this year.

Orders ought to be placed at least four months in advance of shipping date so that the cans may be properly cured. This year orders were placed about a month previous to shipping date and the pails were therefore shipped out green, making them chip off easily, and the imprinting on the top of the pail was practically of no value. If all orders can be on file in this office by February 1, the company will guarantee to give us a good job of lithographing (not such a speckled job as this year), pack the pails

properly, a golden lacquer on the inside (if members want lacquer), imprinting on the covers that will not come off. Consider this matter now and when the call is issued for orders, be ready to fill out the order blank *at once* and return to this office.

Get as many of your brother members interested in this plan as possible. The more orders we can get together the lower the cost to you. Let's make it 50,000 pails for 1924, a car in four or five prominent shipping points to reduce freight.

Pails will be on exhibition at the Milwaukee convention so that members may decide on a definite type that will not give the cover trouble the pails gave this year. We must put this plan across.

Why are we so anxious to develop the lithographed container plan? Simply because the lithographed pail is the best advertising agent we have ever had to work with. It is a little bit expensive this year, but as the orders increase the cost will be reduced. It is the best plan we have, in that we can limit what goes in the container—only Wisconsin No. 1 white honey of the very best quality and flavor—and we can recommend the price for which it is retailed or wholesaled. Any member now using this container has agreed to

- (1) put only Wisconsin No. 1 white honey of the very best quality and flavor in this container, and
- (2) to sell these containers at uniform prices.

What are the advantages of such a container? The advertising value is permanent. It is a cleaner, more attractive package than the ordinary pail. It is all ready for honey, no label to put on, no grading to be

stamped on; everything is there. It gives the member the advantage of being identified with the State Association and, above all, it affords uniformity. The consumer is protected not only by the producer whose name is on the top of the cover, but also by the State Association's guarantee on the back, and also the statement that the honey is up to the grade requirements of the Division of Markets.

Advertising Poster

(Continued from front page.)

foreign born persons who can not read English. It reproduces exactly the trademark and the container so that it will cling to the reader so that when he goes to buy honey he will unconsciously search for that trademark.

Posters familiarize the public with the name and character of the product through repetition. Suppose you and your brother members distribute fifty of these posters in your city. Do you realize that you have fifty salesmen constantly calling attention to "Badger Brand" honey? They tell the story not only once, but over and over all day long and day after day, not only in one place, but in fifty different ones. A wide distribution of these in your city will serve a better purpose than if you gave out a hand bill to every man, woman, and child in town.

Order your posters now; we have had 5,000 printed and want to put these to work in every corner of the state. Order now for next week and order more for State Honey Week.

Why Do We Need a Trademark?

To build up a retail trade, one must have a trademark, something which appears on everything, the

symbol which distinguishes our product.

Here is our trademark. What will such a trademark do?



1. Safeguard the consumer against substitution and imitation. The housewife after getting acquainted with "Badger Brand" will always ask for this brand and look for the shallow extracting frame, state map, flowers, "Badger Brand."

2. Protect the producer's sales. A grocer will be more willing to handle a brand of honey that has a trademark than one that does not, since he is business man enough to know that anything that has a trademark has advertising value.

3. Fix responsibility and assure the consumer that the producer will maintain the standard he has adopted for his product.

"Badger Brand" trademark now appears on

- Stationery,
- Labels,
- Lithographed pails,
- Posters.

Are you taking advantage of your

membership privilege and using these? Every one of these items are permanent advertising mediums. Use stationery, labels, containers and posters that advertise.

M. D. F.

Movie Slides

A slide bearing the "Badger Brand" trademark in colors may be

Uniform Prices

Recommended by the State Price Committee

EXTRACTED HONEY

Retail—Direct to Consumer:

In lithographed container, 5-pound, \$1.15; 10-pound, \$2.20. Glass containers, 3-pound, 80 cents; 6-pound, \$1.40; 12-pound, \$2.60, 1-



FORTY-SIX REASONS WHY WE NEED UNIFORM PACKAGES AND LABELS.

Last year when your secretary sent out a call for honey to exhibit at the Wisconsin Products Exposition, here is what she received. Can there be any question that we need standard labels and containers?

secured through the secretary's office for \$1.25. You can get your local movie to run this slide every night for a very small charge. This is one of the best advertising mediums and still very reasonable. Order your slide today. We must get orders for 25 to get this price.

Members desiring to purchase grading stamps should send their orders direct to B. B. Jones, State Division of Markets, State Capitol, Madison. These stamps cost 30 cents each.

pound, 35 cents; 1/2-pound, 20 cents.

In plain pails, 5-pound, \$1.05; 10-pound, \$2.00.

In 60-pound cans, 17c per pound.

In lots of 6 or more 10-pound pails allow consumer 10 per cent less on regular price.

In lots of 12 or more 5-pound pails allow consumer 10 per cent less on regular price.

In lots of 10 or more 6-pound jugs allow consumer 10 per cent less on regular price.

In lots of 5 or more 12-pound

jugs allow consumer 10 per cent less on regular price.

To the Grocer:

Allow your grocer a discount of 20 per cent on the regular price to the consumer, which will give you the following prices:

In lithographed pails, 5-pound, 92 cents; 10-pound, \$1.76; 60-pound cans, \$8.16; 3-pound, 64 cents; 6-pound, \$1.12; 12-pound, \$2.08; 1-pound, 28 cents.

In plain pails, 5-pound, 84 cents; 10-pound, \$1.50.

It is understood the grocer will take at least 6 or more pails of one size or a case of 1-pound or 1/2-pound glass jars.

Wholesale:

Two 60-pound cans or more, 14 cents per pound.

500 pounds or more, 13 cents per pound.

1,000 pounds or more, 12 cents per pound.

COMB HONEY

Fancy—To consumer, per case, \$8.50; per section, 36 cents. To storekeeper, per case, \$6.50; per section, 27 cents. To wholesaler, same price to grocer less 10 per cent.

No. 1—To consumer, per case, \$8.00; per section, 33 cents. To storekeeper, per case, \$6.00; per section, 25 cents. To wholesaler, same price to grocer less 10 per cent.

No. 2—To consumer, per case, \$7.20; per section, 30 cents. To storekeeper, per case, \$5.50; per section, 23 cents. To wholesaler, same price to grocer less 10 per cent.

The western crop is short and their prices now are as high as ours.

State Association Price Committee.

C. W. Aeppler, Chairman;

A. A. Brown,

Edw. Hassinger, Jr.

M. D. Fischer,

F. J. Mongin,

H. F. Wilson.

Apiary Inspection Notes

Three counties are cooperating with the state department this year, the county board having appropriated funds sufficient to take care of one-third of the cost of area clean-up within their borders. They are Fond du Lac, Washington, and Ozaukee. Fond du Lac is the most extensive single area yet undertaken, as the county consists of nineteen townships, with beekeepers everywhere. Washington and Ozaukee counties have fewer beekeepers than expected and as soon as they are free from disease there will be some good beekeeping territory open in some of the best white clover districts in the world.

The report for the month of July

made by Dr. Fracker and Mr. Adams to Mr. Jones, the new Commissioner of Agriculture, is as follows:

Work in Jefferson, Milwaukee and Richland counties for the season has been completed and the crews have moved to Calumet, Manitowoc, and Vernon counties respectively. No new cases were found in the three counties named but the disease still persists in a few apiaries in each. Special efforts were made to complete the eradication work this year, but the final results will not be known till next season.

A summary of the work during the month follows:

County	FIRST INSPECTION					REINSPECTION				Ap. with Infected Equip. Only	Ap. with Immovable Frames	
	Total		AFB		EFB	Total		AFB			Ap.	Col.
	Ap.	Col.	Ap.	Col.	Ap.	Ap.	Col.	Ap.	Col.			
Barron	6	477			5							
Brown	3	126										
Calumet	10	193	1	7	1	1	13					
Crawford	1	37										
Dane	6	76	1	1					1	1		
Dodge	108	1376	30	174	1	8	46	1	1	8	19	42
Door	13	299	4	18	1							
Fond du Lac	90	939	16	52	3	22	559	1	1	4	15	41
Green	78	657	6	23						7	41	150
Jackson	2	173										
Jefferson	150	1134	12	23		18	177	2	2	4	20	44
Juneau	3	14	1	1	1							
Manitowoc	70	1595	15	74	7	9	308			4	8	35
Milwaukee	30	638	4	13		3	56	1	6		1	4
Monroe	3	60			2						1	3
Ozaukee	14	376	7	39								
Richland	66	1009	3	23	21	4	124	1	2		12	28
Rock	6	65			1						2	4
Rusk	15	169	2	3	2							
Sauk	9	275	3	3	7	1	28	1	4		2	9
Shawano	5	135	2	3								
Sheboygan	32	377	12	22	1	2	27	1	1	2	1	1
Vernon	5	68	5	42	1						1	2
Washara	1	102	1	8								
Walworth	2	93										
Washington	116	904	29	124	3					17	6	23
Waukesha	44	641	9	32		3	14			2	6	14
Winnebago	3	171	2	3								
Wood	1	22										
Total	892	12,201	165	688	57	71	1352	8	17	49	136	401

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