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# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

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Volume VIII Madison, Wisconsin, September, 1917 Number 1

Members of the State Horticultural Society have responded nobly to the appeals for increased food production and food conservation. We have planted and tended thousands of gardens; we urged others to plant and we have helped them over the rough places. All this we have done cheerfully, willingly and without expectation of reward, but our work is not yet finished. We have yet a greater task to perform, a greater duty that we owe our country.

Our soldiers are on their way to France to suffer and perhaps to die in the cause of freedom. They are brave boys and fear to face no foe, but are helpless against sneaking cowards who may stab them in the back.

While they are fighting in the trenches, we who are loyal, one hundred per cent Americans, must fight the insidious, dastardly element that is spreading the poison of discontent and preaching the gospel of treason often under the guise of patriotism.

We, who are tillers of the soil, may now lay aside the rake and the hoe until another year, but we are soldiers still and may not desert.

Our soldier sons must know that we are fighting for them as they are fighting for us. Strike at this monster of disloyalty wherever it may show its head, whether in your community, in the press, or the halls of Congress. Do not be afraid, Speak, Write, Act!

## Dry Surplus Fruits and Vegetables.

Published under the direction of the State Council of Defense by the Agricultural Extension Service of the University of Wisconsin.

At the present time when an increased amount of food is being raised for future use, it is important that it be preserved in the most economical way. Drying requires neither sugar, spice, nor special containers. Under the proper conditions, foods so preserved can be kept indefinitely.

If the supply of canning containers is limited, drying is a good method of saving the surplus.

### Methods of Drying

Preserving foods by drying may done in four ways:

*By sun drying*—Spread the prepared food in wire or netting trays, cover with netting to keep the food from insects and dry in the open air. This method is useful in dry, hot weather.

*By artficial heat—in the oven or a special drying apparatus*—When drying food in the oven, place it, properly prepared, on clean platters, dripping pans, or trays. Leave the oven door open during the process. Rapid ventilation is essential to **success.**

*By an air blast created by an electric fan.*

*By combining* any of the above methods. **Many find it desirable to start the drying process in the oven and complete it in the sun.**

### Ten Rules for Drying

*1. Use good material.* Food selected for drying should be in the same condition as that selected for immediate table use.

*2. Work rapidly.* All foods and vegetables should be dried as quickly as is consistent with good results.

*3. Slice large foods to get more drying surface*—Small fruits, vegetables, some berries, mature beans and peas, and small onions may be dried whole. Larger fruits and vegetables should be cut so as to expose more surface for drying. The usual way of doing this is to slice them.

*4. Do not overheat*—If the food is to be dryed in the oven, the temperature should not be too high, otherwise the food will cook rather than dry. Use low heat throughout the entire process. At the beginning the oven should be somewhat cooler than later. The temperature should never exceed 140° F. The use of a thermometer helps to avoid overheating. A cooking thermometer may be kept in the oven while the food is drying by placing it through two corks in which holes have been punched.

*5. Be sure food dries evenly*—Food should be stirred frequently during the drying process. This prevents overheating and the growth of molds.

*6. Keep food free from dirt and insects*—Foods dried out of doors must be protected from flies and other insects. Mosquito netting or cheese cloth stretched on frames may be used. Always be careful to avoid dust.

*7. Prevent dampness*—Do not allow food to become damp during the drying process. It is better to bring food which is being sundried indoors at night.

*8. "Conditioning"*—All food should be thoroughly dried before it is stored. It is best to allow it to remain in a dry place for several days, turning it frequently in the meantime; this permits more complete and effective drying. The process is technically known as "conditioning."

*9. Storing dried food*—Store dry food in paper bags, boxes, tin containers, such as pails, and cracker boxes. These should be kept in a dry place free from insects.

*10. Save the cooking liquid*—Soak all dried food twenty-four hours before cooking. Cook in the water in which it has been soaked; allow this to evaporate to small bulk, and serve with the fruit or vegetable or use in soups or sauces.

### How to Dry Vegetables

#### Corn—Method 1

Immediately after picking and husking place the ears in unsalted, boiling water for five minutes to set the starch and "milk;" plunge into cold water; drain or wipe with clean towels; cut kernels from cob being careful not to cut too close to the cob. Use sharp knife. Dry by any of the suggested methods, preferably in the oven.

#### Corn—Method 2

Husk freshly picked corn, remove tips of kernels with sharp knife or cabbage slicer; extract pulp or "milk" by scraping with a blunt knife; mix thoroughly; partially dry by placing corn pulp in a pan over hot water until mixture thickens. Spread on clean dripping pans or platters; stir occasionally while drying. When thoroughly dry, condition and pack.

#### String Beans—Method 1

Directly after picking, string the beans, wash in cold water, drain on soft paper or towels; cut in one-inch pieces or slice lengthwise. Dry by artificial heat.

### String Beans—Method 2

Directly after picking, string and wash beans; plunge immediately into boiling water for five minutes; then plunge into cold water; drain on soft paper or towels; cut into desired form — either one-inch pieces or thin slices cut lengthwise, —and dry by artificial heat.

If beans have become too old to use as string beans, allow them to ripen; then shell and store.

### Green Peas

Shell freshly picked peas, steam ten minutes or boil five minutes in covered kettle with a small amount of water; plunge into cold water, drain, and dry by artificial heat for six or eight hours.

### Greens and Herbs

Spinach, beet greens, lettuce, dandelions, and chard supply mineral material and other necessary food substances which may be lacking in the winter diet. As great a variety of these as possible should be dried.

Herbs are also valuable since they add variety to the flavor of winter foods. Celery tops, parsley, mint, sage, onion tops, pepper and cress are useful for this purpose.

All greens and herbs should be carefully picked over and washed in several waters. These may be steamed ten minutes before drying. The quicker oven method of drying makes them retain their natural color and flavor better. Only in very hot, dry weather should the sun-dry method be used. Dry thoroughly, condition and pack.

### Pumpkins and Squash

Prepare by steaming, boiling, or baking; mash and spread on clean dripping pans or platters, and dry in the oven, stirring frequently. Condition and pack as indicated for corn.

Pumpkin and squash may be sliced and dried without previous cooking.

### Other Vegetables

Any other vegetables, such as carrots, turnips, and potatoes may be dried. This, however, should be done only when storing facilities are poor or when the product is to be shipped a long distance. Wash, pare or scrape; cut into ¼ inch slices; dry and pack.

## HOW TO DRY FRUITS

### Small Fruits and Berries

Small berries, such as blueberries, currants, gooseberries, raspberries, and even cherries and grapes can be very successfully dried. The length of time required is from six to eight hours.

Use only sound, unbruised fruit; wash clean and drain on soft paper or clean towels. Spread on clean dripping pans or platters and dry in oven. Be careful that the oven is not too warm in the beginning. A low temperature (110° F.) at first will be about right. If this is gradually raised to 130° or 140° F., the best results will be produced.

Berries may be successfully dried in trays in open air where the weather is hot and dry.

### Apples and Pears

Wash fruit, pare, core, and cut into ¼ inch slices. Dip immediately into a weak salt solution made of three level tablespoonfuls of salt to one gallon of water. Drain; spread on trays, dripping pans, or platters; dry until somewhat leathery. Condition and pack.

### Rhubarb

Select young stems of rhubarb, wash and cut into one-half inch pieces, using a very sharp knife. If the skins are not removed, the rhubarb retains its pink color. Dry, condition and store.

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## Cherry Crop Being Destroyed by Birds.

The crop of cherries this year is liable to be a little short in this neighborhood, in fact, pretty short. There was a nice stand of the Early Richmonds but the birds beat the owners to it in nearly every case and the housewife who was able to get a few cans of them put up was lucky. In one garden of half a dozen good trees, where at least a bushel of cherries to the tree was ripening nicely, the owners did not get over two quarts in all, the birds taking them as fast as they turned. The later cherries, more sour than the Early Richmond, do not seem to appeal to the birds as much, but at that they are making great inroads upon them all over town. It is a question if this conservation and protection of birds is not slightly overdone sometimes, especially when the early cherries are considered. One enterprising farmer rigged up a number of cowbells in a tree, hitched a rope to it and tied it to a lever that worked back and forth on his windmill, which kept the bells ringing more or less and thus managed to save a part of his crop, even though the music got somewhat monotonous after a while.—*Fox Lake Representative.*

### How to Hull Corn.

In Grandmother's and mother's house freshly hulled corn was a most popular breakfast and supper dish, and it is now being prepared in many homes and meeting with a very generous welcome. Freshly hulled corn is far more delicious than any commercially canned, for freshness is as essential to hulled corn as it is to June peas.

It is usually eaten in milk and is a most wholesome, economical and nutritious food, suitable for children and adults. The food value of hulled corn is

| | |
|---|---|
| Water | 74.1% |
| Fat | .99% |
| Mineral matter | .5% |
| Protein | 2.3% |
| Carbohydrates | 22.2% |
| Calories, per pound | 490 |

There is an undeniable tendency to revert to the delicious and wholesome foods of the last century and in this hulled corn is rapidly becoming most popular. The hulled corn vendor is reappearing on the streets and in the markets of southern cities. Many women are finding in its preparation a gainful occupation, for they can easily sell it to their neighbors at a good profit.

How to Prepare Hulled Corn.

Dissolve half a ten cent can of lye in a quart of water and dilute to three gallons with more water in a large iron kettle. Put in four quarts of shelled corn and keep slightly below the boiling temperature, until the hulls have started to break. Then put into a large pan of cold water and rub with the hands thoroughly to loosen the hulls. Take off the hulls and scum from the water and add fresh water several times during the simmering. Stir well with wooden spoon. Change the water five or six times and wash and rub until the corn is white and clean. Keep it in cold water over night, then wash four or five times with hot water.

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### How to Peel Peaches, Pears and Plums With Lye.

Paring peaches, pears and plums with a knife cuts off and wastes considerable amount of fruit even with the most careful and skilled paring and careful paring takes a lot of time. Experts say the fruit next to the skin has the finest flavor and this part is cut off and thrown away with the skin when a paring knife however sharp is used. The use of the paring knife adds unnecessary labor and is far less cleanly than when lye is used. So peel these fruits with lye.

The process of peeling peaches, pears and plums by dipping in hot lye solution is approved by the U. S. Government Board of Food and Drug Inspection which reports that lye peeling has no bad effects on the quality or flavor of the fruit and is not contrary to the requirements of the Food and Drugs Act known as the Pure Food Law. Lye peeling saves time, fruit and trouble, is wholesome, rapid, cleanly and economical.

All you need is a good iron kettle big enough to hold plenty of water. A wire basket with side handle preferably, to hold the fruit—a ten cent can of lye and a little alum.

To nine gallons of cold water add half a ten cent can of lye and a half ounce of alum—bring to a boil. Have kettle large enough so that it is not over two-thirds filled with the water—this for safety to prevent splashing of the hot solution when the fruit is plunged into the kettle.

When the mixture is boiling, lower the fruit into the boiling so-

Showing how some of Madison's school children "do their bit." Madison is not exceptional, in fact is far behind many cities. West Allis with a population of 9,000 boasts twelve hundred and fifty "Liberty" gardens.

lution in a wire basket container or in a thin but firm cloth such as a cheese cloth. For smaller quantities of fruit, use 4 tablespoons lye to one gallon of water with a pinch of alum added.

Let the fruit remain two minutes in the hot lye solution, then put it through two cold water baths to thoroughly remove the lye, and in the second bath of cold water rub off with the hands, the small pices of fruit skins that sometimes persist in clinging to the fruit.

Keep the lye solution hot for use but abandon it for a fresh solution as soon as it turns dark for it has then lost its strength.

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### Cranberry Growers Meet.

The 30th annual summer meeting of the Wisconsin State Cranberry Growers' Association held at the pavilion near Nekoosa, Wis., Tuesday, Aug. 14, 1917, was largely attended both by near and far away members and friends, and full of interest from start to finish.

In the morning automobiles were in readiness to take visiting guests who wished to avail themselves of the opportunity to inspect the Cranmoor marshes.

The business session was called to order in the early afternoon by President Searls. The president's address followed in which among other things he told of the grievous loss sustained in the death of our secretary, Mr. J. W. Fitch, and the passing away of his father, Mr. W. H. Fitch, who, at an earlier date, also ably served this association as secretary. Of the appointment of Mrs. S. N. Whittlesey to act as secretary until the annual election. Of the crop prospects which at the present time are very uncertain owing to the extremely cold, late season. The bloom was unusually bountiful, and under favorable conditions, would have yielded one of the finest crops ever grown in our state.

After the reading of the minutes of last January meeting by the acting secretary, the program was taken up and held the close attention of all present.

Letters were read from Dr. C. L. Shear of Washington, D. C. Mr. A. U. Chaney, general manager of the American Cranberry Exchange of New York, and from several others expressing good will.

Reports on crop prospects were listened to from different sections of the state, all concurring with the opinion expressed by President Searls. C. L. Lewis of Beaver Brook had a most excellent article full of good ideas for future thought.

Mr. Chas. Schlosser, manager of Chicago district, thought marketing prospects good and with shortage of other fruits, prices ought to be satisfactory.

With the resignation of Mr. O. G. Malde as superintendent and manager of the experiment station and the withdrawal of aid by the University College of Agriculture, a new and serious problem confronted the growers which at this meeting received much attention. Prof. F. B. Morrison, assistant director, stated that ours was the only station wholly supported by the college and that it was no longer possible to extend this aid, because of the curtailment of $35,000 of the state budget for university work. Dr. E. D. Ball, state entomologist, gave a very earnest talk on our needs as he sees them and of our being awake to the danger of insect pests, not only to cranberries but to all vegetation and made the startling announcement that 20 per cent of crops in the United States had this year been destroyed by grasshoppers.

The meeting closed with every one impressed that what we can do —what we can have, and what we can agree on, are now matters for deep consideration.

MRS. S. N. WHITTLESEY,
Acting Sec. W. S. C. G. Assn.

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Chicago, Aug. 9, 1917.

Dear Cranefield:—

Glad to get the August issue of Hort. this morning. Sorry I can't get away to attend your summer doings.

That man from Colville, Wash., whose letter you printed brays like the four legged property of Balaam. I'm glad he is not going to read the Hort. any more. It's like casting pearls before swine. Maybe I can find some good American to take his place. Best wishes.

Yours sincerely,
GEORGE GIRLING.

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"While our soldiers and sailors are doing their manful work to hold back reaction in its most brutal and aggressive form we must oppose at home the organized and individual efforts of those dangerous elements who hide disloyally behind a screen of specious and evasive phrases."—*President Wilson in letter to Samuel Gompers, president of the American Federation of Labor.*

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Nice Old Professor—Ah, going out to make the world safe for democracy, are you, boys?

Recruit from Douglas Co.—Naw, I'm going over to educate the sucker who said America couldn't fight.

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All who are not for us are against us.

**Some Very Good Ideas From Northern Wisconsin.**

Of course the bulk of your field is southern Wisconsin, but your greatest future is northern Wisconsin. Articles from men like Vaughn, of Grand Rapids, and Marsh, of Antigo, are practical, to the point, and of great local application. I wish we might have something from each as to each variety of small fruits tried out, the conditions, the results and the conclusions. It would help us all a lot. My own experience dates back to the time when about five years ago someone foolishly gave you a dollar bill and my name. I got the habit, and commenced to read and to observe. I find that I have not only to read of the other fellows' failures, but I have to go and try it out myself before I really know it, and then my neighbors repeat the performance, with the difference that I have preceded them a year or two, and they are saved some of their mistakes, and have the way more definitely pointed out.

Two years ago I asked the manurial value of old, well rotted saw dust. Prof. Woll answered, showing that it was worth about the price of straw, and then slipped up by adding the cost of hauling to the value as shown by analysis. I have hauled a lot of it this winter, to use as mulching around small fruits, and shall plow under a little, and in another year or two I should have a definite and final answer. I am hauling out a lot of unleached manure for the apple trees and have a great thick mat around some of the trees. The drifts are so deep that we cannot reach all the trees, so we will have some check plots, whether we want it or not.

I find that in this section where the average farmer tries to cultivate his small trees he is almost sure to bark his trees, or to injure them in some way. My own trees are on a steep side hill, and after an unfortunate experience with gullying I decided to keep the trees in sod strips. That stopped the washing of the hill side, and stopped the barking of the trees, if I was close enough to talk to the teamster, and to threaten fines, but it also almost stopped the growth of the trees. This year I am mulching the sod strips, but think that the problem is one step nearer solution. If the old saw dust pile works out as Prof. Woll indicated, then the rest is easy.

I have noticed a tendency to recommend the Snyder blackberry in preference to the Ancient Briton. My experience leads me to think that the Ancient Briton is much the better. With me, on a bit of stiff soil, it is hardier, stands abuse better, is a better yielder, although not so early, and is much easier to lay down. My newer plantings will be of the Ancient Briton. I have none of the Eldorado, but a neighbor has quite a planting of them. He has neglected them badly, and they have winterkiled each year and he has no fruit that I know of. Ancient Briton is hardy enough so that some years it lives through without protection. I believe that on a steep north hillside it would get along without laying down.

A striking picture. The first thing that strikes you is the woodhouse, next is the schoolhouse and third is the outhouse. Why not reverse the order, or, perhaps, better still put the woodhouse *back* of the schoolhouse.

Of the red raspberries, I have two varieties, the King and Brandywine. I do not know which is which, but one variety is much hardier than the other, and I am taking new selections accordingly. I think that the King is the more hardy of the two. The weaker variety has a wider, more rank growth, and the new canes are brighter, more yellow color. In this section the

wild raspberries are so plentiful that bee men make quite a little from the raspberry honey, yet we find that it pays to have some right in the garden. The time taken to cultivate is less than the time it would take to go to and from the wild patch, and there is better and much more convenient picking at home. In fact, it sometimes means the difference between berries and no berries. We find that a small fruit patch means a big difference to the table the year around.

George G. Curtis.

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**A Trifle Discouraged.**

Your letter reminding me that my subscription to Wisconsin Horticulture has expired, received, and you may as well drop my name for the present. I have come to the conclusion that it is only wasting time trying to raise fruit here. I had Hibernal, Duchess, and Dudley winter killed last year. I think the heaving of the ground has a bad effect. I have seen pine stumps 4 feet across heaved up and split in two by frost. There is no subsoil drainage here. I am in the wrong place.

A. M.

This is from central Wisconsin and certainly sounds rather discouraging, but the writer is of the opinion that the trouble lies in poor location of this particular orchard. The last short sentence, "there is no subsoil drainage here," seems to tell the whole story. Probably also a lack of air drainage. Fruit trees need both soil and air drainage and both of these are usually lacking on the new farms of northern Wisconsin.

**Garden Notes at Sitka, Alaska, Station.**

By J. P. Anderson, Horticulturist.

APPLES.

Several varieties of apples matured fruit the past season. The best of these were the Yellow Transparent and Liveland Raspberry. Trees of these varieties bore quite good crops, as did also the Whitney crab. Apples grown here the past season reached about normal size, but were more pointed and angular than the same sorts grown in a warmer climate. A variety which has been labeled Sylvan Sweet bore good apples, but they were not sweet. Other varieties that matured a few apples are Duchess, Hyslop, Keswick (Keswick's Codlin), Peerless, Tetofski, and two unidentified sorts, one of which was a crab and the other similar to the Wealthy, perhaps being that variety. The Patten (Patten's Greening) set a good crop of fruit but did not mature before freezing weather. The quality of the fruit was good, but some sorts, especially the Yellow Transparent, showed some tendency to crack.

From the seed obtained in 1914, by crossing the native crab with cultivated varieties, only a few plants were secured. The work of crossing was continued this past season.

CURRANTS.

Currants did not do their best this year, owing to the blossoms being attacked by a fungus. The crop was fairly good, however, especially of the red sorts. Some varieties set out in the spring of 1914 produced a fair amount of fruit, but others bore little. The Perfection seems to be by all odds the best red currant so far tried. Many of the berries were more than half an inch in diameter, with an extreme of nine-sixteenths inch. This variety is also productive. White Grape (Imperial White) seems to be superior to the other white varieties grown, while Lee (Lee's Prolific) has not yet been surpassed by other black sorts. Red currants added to the collection the past season were Holland (Long Bunch Holland) and Moore Ruby. Three varieties of black currants were also added—Naples (Black Naples), Black Victoria, and Wales (Prince of Wales).

GOOSEBERRIES.

The Champion again proved to be the best all-round variety. The Whitesmith seems to be the best of the English sorts. Some of the English varieties are badly affected with mildew, while others suffer but little. The varieties set out in 1914 have not yet demonstrated their value, but Pearl seems very promising.

RASPBERRIES.

As usual the Cuthbert bore a heavy crop of excellent fruit of large size. A number of other varieties at the station have not had a fair chance to demonstrate their comparative value the past two years. One variety of the European species (*Rubus idoeus*), called the Orange, bears fruit of the very highest quality, but seems unable to properly maintain itself. Golden (Golden Queen) and St. Regis were added to the collection during the past season.

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## The Summer Meeting.

Once upon a time we held a summer meeting in La Crosse. In addition to the officers, the executive committee, and the speakers we had a total attendance of one. One lone farmer from somewhere behind the hills back of La Crosse wandered in but stayed only for one session.

Still back of that the writer recalls a summer meeting at Omro, about fifteen years ago, attended by the president, the secretary, the treasurer and four others.

During the past five or six years, however, there has been a big change and the attendance as well as the interest at the summer meetings has crowded closely that of the annual winter meeting. We all recall with pleasure the two meetings at Sturgeon Bay the former Oshkosh meeting, the Bayfield and the Lake Geneva meetings. It is a matter beyond dispute that one hundred or more members who attended the meeting at Oshkosh August 22nd and 23rd found it a profitable and entertaining experience. The marked feature was the tense interest in the program. The room was filled at least an hour before the time set to begin and none left until the last word was spoken.

The heat in the hall was intense at times but the only effect was a call for more open windows, no one thought of leaving.

Members were present from Sturgeon Bay, Green Bay, Neenah, Waupaca, Grand Rapids, Milwaukee, Madison, West Allis, Kenosha and many other points.

The second day was devoted to excursions, the forenoon visiting market gardens, the afternoon to a trip across country on the excursion steamer Leander Choate. This double-deck boat carries 500 people, has two funnels, an enormous stern paddle wheel, a flat bottom and is said to require only a heavy dew to float it.

After crossing Lake Butte des Morts, seven miles, we entered the Big Marshes several thousand acres in extent, through which the Fox winds, twists and turns for miles and miles. How we ever got to Omro the pilot only knows. For a time we would seem to be well on our way when suddenly we would cut across country and head back to Oshkosh or Waupaca or the Philipines but eventually we landed in the upper river and at Eureka. This trip no doubt seems commonplace to Oshkosh people but in the way of an excursion by *water* its got anything else beat in a dozen different ways. Those great marshes have a wild beauty all their own. Tall, waving grasses conceal a treacherous bog across which no man may go either afoot or otherwise except by one narrow channel. Here the wild fowl may bid defiance to the hunter and the heron, the rail and other denizens of marshes find a paradise. After crossing the marshes this great bulk of a steamer edges and shoulders its way through a narrow channel for miles, meadows, cornfields and gardens on either bank. It was certainly a novel and exciting experience to most of us and everybody got back tired and happy—but not hungry for the Oshkosh ladies brought more sandwiches, cake and other delicious eatables than could be eaten.

## Storing Vegetables.

Mr. Irving Smith of Ashland, having had long practical experience in storing vegetables, was invited to tell about it at the summer meeting. He did it but instead of writing it out, just talked off-hand and directly to the point. Here are a few of the "high lights," the balance we will get when the reporter's transcript comes.

The vegetables commonly stored are potatoes, cabbage and the different root crops such as carrots, parsnips, salsify, etc. The ideal storage place is the out-door or detached root-cellar or root house, commonly built in part below ground, frost proof, moist, and ventilated. Here vegetables will keep

throughout the winter without attention.

These vegetables may be subjected to a low temperature, short of actual freezing, for a long time without injury. An ordinary house cellar with earth floor affords conditions closely approaching those of the root-house. The gardener who has a house with furnace or other heating apparatus in the cellar is up against a difficult problem which can be met in part by partitioning a corner to provide a low temperature. Usually, however, the dryness of the air is still a problem which is met by packing the vegetables, except potatoes, in paper lined boxes and these covered with several layers of paper. Sand is not good packing material, it quickly loses its moisture and then sucks the moisture from the roots entrusted to its care. Cabbage is more difficult to keep, their roots dequiring a cool, dry place. Lay on board shelves, not touching, or suspend by the stalk from the ceiling.

### The State Fair.

The fair is one of the big educational institutions of the state. The fair is now managed by the Department of Agriculture which was created two years ago and includes, in addition to the state fair, the bureaus of entomology (nursery inspection), immigration, seed and fertilizer inspection and veterinary board. C. P. Norgord is at the head of the Department and is styled Commissioner of Agriculture. The fair is in charge of O. E. Remey, secretary, A. W. Kalbus, assistant, and an advisory board of ten.

These men work hard throughout the whole year to provide a good fair for you and me and the rest of us and it's little enough on our part to give them our support. The support they need most of all is your attendance and your half-dollar at the gate. It's your fair, provided for your benefit and it's always worth the price.

### This Applies to Wisconsin Also.

In this connection it is well to quote a few words uttered to the Union League club of New York by Elihu Root, who recently returned from Russia, where he was sent by this government as the head of a special commission to offer the hand of fellowship to the new Russian republic. Of Russian prospects Mr. Root spoke hopefully, but of certain things in this country he spoke in a less heartening tone. Here is a brief quotation from his words:

"There are men walking about the streets of this city tonight who ought to be taken out at sunrise tomorrow and shot for treason. They are doing their work under false pretense, they are pretending to be for their country and they are lying in every way and in every word. They are covering themselves with the cloak of pretended Americanism, and, if we are to be competent and fit for our liberty, we will find them out and get at them."

"There are some newspapers published in this city every day the editors of which deserve conviction and execution for treason. And sooner or later they will get it."

Mr. Root is not merely one of the ablest, most eminent and most patriotic of American citizens, he is one of our greatest lawyers and is accustomed to use words without heat and with accuracy and deliberation. This utterance expressed, and was intended to express, Mr. Root's deep sense of the mischief being done to the cause of liberty in Russia, by reports, busily retailed there by German agents, of the pro-German activities in our congress and among our people everywhere, and nowhere more actively than in Wisconsin; activities against the draft, in I. W. W. strikes and in pro-German newspapers and speeches. In the light of such denunciation from such a man, it is time for every American who loves his country to be serious, to be alarmed, but not afraid, and to be at work.—*Ellis B. Usher in Madison Democrat.*

### Receipts for Fifty-Seven Apple Products

Mrs. H. H. Morgan, Madison.

(Continued from August)

36. Sweet apples.

Peel, quarter and core,
Put on fire with water, anise seed, a little butter and ½ cup vinegar or lemon juice and cook until tender.

37. Apple marmalade.

Pare and core and put in pan of water acidulated with juice of 1 lemon to keep fruit white;
For every pound of fruit, take ½ lb. sugar;
Let it boil, skim carefully, add the thinly peeled rind of 1 lemon cut into small pieces; put in apples, stirring constantly;
Use but little water and select variety of apple that will not become pulpy.
May also use the juice of lemon and mash apples.
If, after 1 week, it becomes soft, cook again.

38. Apple-marmalade spiced.

Same as plain, using bag of spices while cooking,
1 teasp. cinnamon,
1 teasp. cloves,
½ teasp. nutmeg,
½ teasp. allspice.

39. Apples and rhubarb.

1 part canned rhubarb to 2 parts sour apples;
Cook and seal.

40. Apple jelly.

Lady Blush for red jelly,
Fall Pippins for white.
Cut in pieces without paring or coring,
Put into poreclain-lined kettle, barely covering with cold water,
Cover kettle, boil slowly until apples very tender;
Drain through flannel bag; do not squeeze or jelly will be cloudy.
To every pint of this juice, allow 1 lb. granulated sugar.
Put juice in kettle, bring quickly to boil;
Add the sugar, stir until dissolved, boil rapidly until it jellies, skimming as scum rises; 20 min. usually sufficient;
Commence testing after 15 min. boiling.

41. Crabapple jelly.

Cut large Siberian crabs into quarters and to every 5 lbs. of crabs, allow 1 pint of water;
Proceed as for apple jelly.

42. Apple-mint jelly.

4 lbs. Greenings,
1 cup mint chopped fine,
Sufficient water to keep from burning;
¾ cup sugar to 1 lb. juice.
Cook until ready to jelly, then add
4 teasp. lemon juice and green coloring.
Creme de menthe cordial may be used instead of fresh mint.

43. Apple-cranberry jelly.

2 cups cranberries cooked tender in ¾ cup water,
3 cups sliced apples cooked soft in ¾ cup water;
Strain together; make jelly as usual. 2 glasses.

44. Spiced apple jelly.

Slice sour apples.
Boil until soft in little vinegar with spice bag left over from pickles, or a small stick cinnamon and cloves;
Strain and use equal parts sugar and juice.

45. Apple lemon jelly.

1 qt. apple juice,
Juice 1 lemon,
1 qt. sugar,
Northern-spy gives best color;
Apple-orange jelly made same way.

46. Apple-orange jelly.

Made in same way as apple-lemon jelly.
Use 2 oranges. May use vegetable orange flavoring.

47. Crabapple-peach jelly.

3 parts crabaaple juice to 1 part peach juice;
Process same as other jelly.

48. Apple-grape jelly.

Use equal parts apple and grape juice and proceed as for other jelly.
Wild grape and apple, excellent meat relish.

49. Apple-quince jelly.

Use equal parts apple and quince juice and proceed as for other jelly.

50. Apple-barberry jelly.

Wash and pick over barberries and to every 4 qts. berries add 3 pints water and 1 doz. sour apples quartered and cored; boil slowly until fruit is soft, turn out into jelly bag and drip but do not squeeze. Boil 20 min., skim, measure; to every cup juice add 1 generous cup sugar. May require 30 min. boiling. Seal after 3 or 4 days.

Other apple-combination jellies.

52. Apple-strawberry.
52. Apple-blackberry.
53. Apple-pineapple.
54. Apple-pear.
55. Apple-rhubarb.
56. Apple-red raspberry.
57. Apple-geranium leaf.

Place leaf in bottom of glass; fiill with jelly.
Leaf will come to top and may be removed before jelly sets, if mild flavor is desired.

## Bayfield's Big Berries.

Bayfield, Wis., Aug. 4.—This has been one of the best seasons for Bayfield strawberry growers since fruit raising on the peninsula was undertaken on a commercial scale.

About twenty carloads of berries have been shipped, thirteen full cars and the others in less than car lots by express, have been sent out, and all of them were sold when loaded, none going on consignment.

The price range has been such that growers will net slightly better than $2 a crate on the average, barring any unexpectedly large loss claims and Manager Boutin of the growers' association considers it the best through-season record yet made.

Cherries are beginning to come into the market at a fair rate, the first carload having been sold already.

## Horticultural Projects

C. B. BLOSSER

This essay won the First Prize, twenty-five dollars, in the Students Speaking Contest, Annual Convention, Madison, Dec. 12th, 1916.

Agricultural Education has in the past concerned itself chiefly with agriculture as a science, recently however the interest of education has shifted to agriculture as an art: that is, the application of its principles to actual farm operations. The chief business of the teacher has been to inquire with his students into the fundamental principles underlying its problems without attempting any serious way to apply these laws in actual practice. What have been the methods employed by the teacher of agriculture in our grade and high schools? Sometimes laboratory facilities were available, occasionally meagre libraries, but far more frequently it has been the time worn method of the teacher and the book. The results we know only too well. And it is not surprising that there has developed among the farmers of our country, a stolid prejudice against this so-called book-farming. It did not require any great insight on the part of the agriculturist to realize that what was being taught under the guise of agriculture brought no solutions to his problems. Neither does it require the brilliance of a wizard to see that there is a vast difference between the understanding of a scientific principle and its application to the farmers every-day difficulties. To appreciate the fundamental principles of pruning a tree is for the scholar a comparatively simple matter, but to take a pruning shears or a saw and per-

form the actual operation is a different proposition. Not long since I knew of a young man in one of our state agricultural colleges who was so proficient in the science of poultry husbandry that he could answer quickly and accurately any questions relative to this subject; yet this same young man when assigned the task of operating an ordinary incubator, failed utterly. When given the care of a flock of baby chicks, made such ridiculous blunders that he became a laughing stock. This young man's difficulty was not that his scientific training was of no value; quite the contrary. He simply had not learned to apply his theories to the actual operations required in running a hatcher or caring for a brood of chicks.

*That* agricultural training, succeeds best therefore, which educates not away from theoretical thinking but towards its correlation with scientific practice. It is remarkable that the mass of educators have been so slow to recognize the weakness of our system. But it has been the recognition of this weakness that has brought about within recent years a radical change of attitude relative to the method of teaching this most important subject.

Serious attempts are at present being made in our secondary schools and colleges of agriculture to adjust courses of study to meet the new demands. As a result practical projects have been introduced into our schools to supplement and illuminate the principles taught in the classroom. So that for example, if a boy is taught the fundamentals of strawberry culture, he will also be required to prepare the soil, plant and care for an actual bed of strawberries. If the school in question is so fortunate as to have access to a plot of land, the projects are carried on at the school grounds, if not then the home grounds of the boys and girls are used and the experiment is called a home project. In any case the work is done under the direction of the teacher, or some other competent person.

Up to the present time there have been introduced into our educational system two more or less distinct types of projects. First and primarily for the benefit of city children in the grades, the practice of school gardening. Second, the above mentioned school or home project for the benefit of both city and country young people. It is here I contend that horticulture offers some of its largest educational opportunities. That it has already blazed the way as a pioneer is shown by the fact that school gardening *which is distinctively a horticultural field* has for some years been employed as an important educational agency in our cities.

To show what the possibilities of such a movement are we need only refer to those who have been most closely associated with the work. The founder of the children's school farm in New York wrote in her first report that she did not start a garden simply to grow a few vegetables, although many a poor family doubtless profited in a material way, but to teach some of the most necessary civic virtues. Thus the children become interested in the care of public property, they acquire habits of economy, honesty, self-reliance, civic pride, and a wholesome respect for physical labor. It seems evident, therefore, that the benefits are not educational only but industrial and social as well. The seriousness with which the movement is regarded is shown by the fact that gardening associations, local school boards, state boards of education, agricultural colleges, and horticultural societies have encouraged and superintended the work.

One reason why the Oshkosh meeting was a success. A regular monthly meeting of the Oshkosh local society.

In the second type of project, horticulture is destined to play an equally important part in the attempt to effect a working combination between theoretical school room information and its application to live problems.

In the first place, I am convinced on account of the broad scope of horticultural activities

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that there is no other field of agriculture that offers such a wealth of materials, or such a large number of workable projects that will at the same time solicit the interest of our boys and girls. I maintain that they can be easily induced to plant and care for a strawberry bed, or prune and spray an apple tree, or construct and care for a hotbed, or plan a garden, because, first: these are problems against which they feel capable of measuring their skill successfully; second, because it is not difficult to visualize lucious strawberries or ripe juicy apples, or crisp vegetables. From the very nature of circumstances they are attracted by the prospects of trying out such a problem.

Would not this principle apply equally well to the beautifying of the home ground as a landscape project, or the planning and care of a flower garden, or the production of clean, smooth potatoes by the application of the formalin treatment for scab? All of which projects appeal to the special senses with which youth is accustomed to investigate and pass judgment upon the quality of objects. I have enumerated only the most important possible projects but these together with numerous similar ones furnish the type of experiment in which is found a concrete basis for the judgment of results and this is essential.

A second advantage which may be fairly attributed to horticultural projects is the low cost of equipment: in fact the necessary materials are usually found in abundance on the average farm. A first class hotbed may be constructed with an outlay of but a few dollars: a pruning outfit and spray apparatus can be secured at a nominal cost. Indeed, the equipment required by the whole list of horticultural projects need not exceed fifty dollars. So too, the waste land of the farm may well be turned to good account by the boy or girl. Landscaping and beautifying the home grounds can be accomplished largely with native materials. Planning the home garden requires no outlay of cash. Certainly the average parent would not hesitate to turn over to the boy a few apple trees. In many cases the whole orchard might well be turned over to the junior member of the firm and his teacher. In short the expense of any single horticultural home project need never be a serious objection.

In the third place I contend that, although horticultural products

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may seem to occupy only a place of secondary importance on the average farm as compared to other farm crops, still they supply a universal need and therefore make the strongest appeal to both parents and students who are interested in farm problems. What lures the good housewife on the first warm days of spring to the roadside or orchard in search of the first shoots of dandelion or wny is the entire household, once the soil becomes tillable in spring, to be found in the early potato plot, the orchard or garden? Do you say to reduce the high cost of living? This may be a motive. But why are city folks during this season of the year willing to pay fabulous prices for fresh vegetables? It is more than a mere financial consideration. It is their inherent, insatiable craving for something green and fresh from the hand of nature. There was a time when the proverbial bread and meat satisfied the comparatively simple food demands of our forefathers, but not so today, for fruit and vegetables in the average American home are quite as essential a part of our diet as bread or meat and are absolutely necessary to the individual's best health. It is on the basis of this interest in orchard and garden products that horticultural projects can legitimately lay claim to the support of the American home and attract its young people to the educational possibilities of farm life.

Finally, I believe that horticulture is especially well adapted to the introduction of project work into the primary and secondary schools, because it furnishes a

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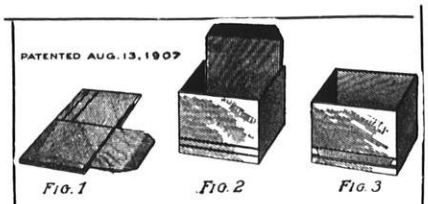


Fig. 1 Fig. 2 Fig. 3

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simple and direct method of bringing together in the spirit of cooperation the school and the home. The teacher's frequent excursions to the farms of the community furnish him the much needed opportunity to study the home conditions of his students. He becomes better acquainted with the parent and they learn to know him, so that they can no longer be considered as separate educational agencies but as a combined force. The teacher and the parent thus become cooperative factors in the theoretical as well as the practical education of the child. Their united efforts, I am confident, are destined to furnish the dynamic which shall instill into the boys and girls of America a greater interest in educational work, an infinitely greater respect for the farm and its activities, and, if need be, to develop out of their potential possibilities of today the successful farmers and their wives of tomorrow.

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# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

Volume VIII Madison, Wisconsin, October, 1917. Number 2

A hardy, free-flowering shrub well adapted to planting in borders and for screening unsightly fences, outbuildings, etc. Known to botanists as Sambucus Cana lensis; to everybody else as common Elder.

## Storage of Vegetables.

By J. R. Hepler, College of Agriculture, University of Wisconsin

Vegetables for winter use are ordinarily canned or stored. With most vegetables, storage is preferable to canning, as it is cheaper, requires less work, and the product is better, due to the fact that the characteristic flavor of the vegetable is preserved to a greater degree by this method. The factors governing the storage vary materially with the different vegetables. There is one requirement, however, that is common to all—the vegetable to be stored must be sound, that is, free from bruises or decay. Vegetables which have decayed at the time of placing in storage, not only are valueless, but usually spread disease to other vegetables. Vegetables which are bruised offer more favorable conditions for the entrance of rot than those which are sound. With the proper vegetable storage, the chief things to consider in storing are the variety used, temperature, moisture content of the air, and the maturity of the vegetable. The last three vary considerably with the different kinds of vegetables.

As regards the variety to be used, it is always desirable to select those varieties which are known to be good keepers. For example, it would be folly to grow an early variety of cabbage such as Jersey Wakefield, for winter storage.

The varieties best adapted to late storage are of the Danish Ballhead type, including Ballhead, Danish Roundhead, Hollander, and Amager. These varieties, in addition to being desirable for storage, are fairly resistant to the rot disease common in the field. They also have the advantage that they do not ordinarily burst their heads and are always very solid. Their disadvantages are that they require a very rich soil and are not of high quality. Succession, Sure Head, Flat Dutch, Brunswick, and All Head are varieties which keep very well until January and are especially well adapted to the making of sauerkraut. Volga is a high quality cabbage that keeps well until the holidays.

### *Methods in Storing Cababge*

Cabbage for storage should not be over-mature, particularly if it is of the mid-season variety, as this causes bursting of the heads. It must be free from disease and must be handled with care so as not to bruise it. It keeps best when stored in a low temperature, within a degree or two of freezing, and should have a fairly moist atmosphere.

For cellar storage, the usual method is to wrap the cabbage in newspaper or other heavy paper and keep it in the coolest part of the cellar, providing that the temperature does not go below the freezing point. Cabbage may also be stored in a box and covered with sand. The sand will absorb any disagreeable odors which may arise from decay. When stored in sand, it is particularly desirable to keep the temperature near the freezing point, to prevent premature growth.

### *Pit and Trench Storage*

Cabbage which is wanted for spring use may be stored out of doors, either in trenches or pits. In this method of storage only the outer leaves are removed from the head and the stems are left intact. The trench about six inches deep and sufficiently wide to accommodate three heads of cabbage placed sidewise, is dug on a well drained location. Three to four inches of straw or leaves are placed over the bottom of the trench, and the heads are placed in rows of three on this material. The stems of the outer heads are sloped towards the center. When the desired number of cabbages are in the trench, they are covered with about six inches of soil. After the upper inch or two of the soil has frozen, an additional layer of marsh hay or manure is put on to prevent alternate freezing and thawing. Pit storage does not differ from trench storage, except that the pit is usually round and somewhat deeper than the trench.

### *Ways of Storing Root Crops.*

Winter radishes, carrots, beets, turnips, rutabagas, parsnips, and salsify demand about the same storage conditions. The late varieties of these crops are best for storage. They should have a low temperature, close to the freezing point, and relatively large amounts of moisture. If this moisture is not provided, they will wilt and lose their flavor and become coarse in texture. After wilting, it is impossible to get them back to their original condition. They may be stored in sand which is moistened from time to time in order to prevent wilting. These vegetables may also be stored in pits, but with the exception of salsify and parsnips, must be covered sufficiently deep to prevent freezing, as they are spoiled if frozen. Parsnips and salsify may be left in the rows in the garden over winter and will be even better for use in the spring than in the fall. It may be desirable to put a light mulch of leaves or straw over the rows just after the ground has frozen.

*Storage Onions Must Be Mature.*

Onions for storage should be allowed to mature fully, which will be indicated when the stems naturally begin to break over. They may then be pulled and allowed to lie in the open for three or four days to mature, or they may be carried inside in a well ventilated room where they are protected from the sun. They should not be taken into a moist atmosphere. After they have cured the tops should be cut off and the bulbs stored in a dry and, preferably, dark place. Low temperatures are preferable to high temperatures, but well matured bulbs will keep at a temperature around fifty degrees. Changes in temperature or a moist atmosphere should be avoided as this is likely to cause premature growth of the onion.

*Store Green Varieties of Celery.*

The best varieties of celery for storage are the green ones, such as Giant Pascal or Winter Queen. Blanching ordinarily takes place after the plants are put in storage. Self-blanching varieties started somewhat late may also be stored, but will not give as satisfactory results. For late fall use, the celery may be trenched, covering with earth to within two or three inches of the top, and, on cold nights, covering the tops with blankets, rugs, or other protective material. Do not cover the entire tops with soil, as this will cause decay. Celery may be kept in this way until about December 1. It may also be kept in boxes buried in the ground or in hotbed pits.

The tops should be kept dry and the box well ventilated. In cellar storage, the common method is to set the roots of the plants in a quantity of sand or soil, sand being preferred. The plants are set in as closely as possible, and in this condition, if the temperature is sufficiently high, will make some growth during the winter. The celery and the stalks will be well blanched, giving the highest quality of celery to be had. The temperature should be kept as near 40 as possible.

*Medium Dry Storage for Squash.*

The Hubbard and Delicious varieties of winter squash are both excellent keepers. Mammoth, Large Cheese, and Big Tom are the best storage pumpkins. Ford Hook, Long Marrow, Delicata and Crook Neck are very good keepers, of the summer squash type. They should be kept in a fairly dry atmosphere and at a temperature ranging from 45 to 50. Only matured specimens should be stored. These should be harvested before exposed to frost sufficient to injure them.

---

## The Apple Grading Law.

Geo. F. Potter

In enacting an apple grading law Wisconsin is not trying an experiment, but is simply adopting a plan which has been demonstrated to be beneficial to the fruit industry in other sections. Our law is almost a copy of the New York statute, which is now being enforced for the fourth season. Several other eastern states have similar enactments, and in the western states where fancy box apples are packed, much more drastic laws are in effect.

The Canadian Fruit Marks Act preceded by several years the legislation in the United States, and it is probable that the operation of this law forced similar legislation in this country. The standard of pack of the Canadian growers was so materially raised that they abtained higher prices for their product. On the English market the trade showed a decided preference for Canadian fruit because of its uniformity, which was entirely lacking in the American product. Growers, dealers, and officials were pleased with the results, and it is not strange that American producers felt that they needed similar laws.

In 1912 Congress passed the Sulzer bill providing for standard grades of barreled apples in the United States. However, owing to the vastly different conditions under which apples are grown and packed in different sections, the government officials did not feel that any one law could be formulated which would fit all conditions. Accordingly, the Sulzer bill was not mandatory but left the grower free to decide whether or not he would pack under its provisions. In consequence the law has not been used, at least to any appreciable extent, and since a good quantity of any product must be put on the market before it can establish a reputation this law has been of little value. It simply demonstrates that a law of this sort must be compulsory if it is to be of value.

In contrast to this results from the New York law were immediate. During the winter following its enactment, I received the suggestion from a Duluth commission firm that if Wisconsin growers wished to get full value from their fruit it would best be packed according to a known standard such as the New York law.

During the fall of 1916 I had the opportunity to spend two weeks in the apple belt of Western New York, working in the apple har-

vest assisting in packing under the law, visiting growers, and talking to the representatives of large dealers who filled the hotels in this section at that time. Almost without exception I found that all concerned approved of the law, and would not for any consideration go back to the old system.

Under the old system there were almost as many opinions as to just what constitutes a first grade or a second grade apple as there were different growers. The numerous marks which have been used, as *A*, *B*, *1*, *2*, *A1*, *X*, etc., bear witness to this confusion. Under our law four grades based on color, shape, and blemishes, namely *Fancy*, *A*, *B*, and *Unclassified* are definitely defined. In each of these different sizes may be packed as desired. Now not only must the growers agree on their ideas of grades, but each must put his knowledge into practice if he is to sell his fruit in closed packages. If I now desire to sell a lot of apples I may wire or telephone a commission man, naming the varieties, grades, and sizes I have. The buyer knows these grades, and can accept my word for he knows that if the apples are not up to the standard he may bring suit against me for offering them for sale. He may then make his offer without risk. A basis of exchange and a business confidence are provided which were impossible under the old system.

That apples do thus sell according to the mark on the end of the barrel when the law is properly enforced is attested by the experience of a New York packer. This man had a lot of apples concerning the grade of which he was undecided. Owing to this there was a misunderstanding among those who were marking the barrels and part were marked one grade and part a lower grade. Although the apples were identical, the prices received corresponded to the way the barrels were marked.

I believe, therefore, that the law should prove of especial value to the small growers, of whom we have many in Wisconsin. The man who ships large quantities of fruit may establish a reputation and market to advantage even without the law because his product is known to many dealers. To this man the law offers that protection which comes from preventing the markets from being spoiled with inferior fruit. The great advantage to the small grower comes through having his pack known, although he personally may ship only a car or two.

The representative of a Chicago commission house stated to me this season that he considers the Wisconsin Wealthy to be better if free from disease and other pests than any which he is able to obtain from regions farther south. But it is not grown in sufficient quantities in any one center to make it pay to send out a buyer. It is my belief and hope that through our law many of these small lots of Wealthies packed in a standard honest pack may find an advantageous market without the intervention of the buyer.

The growers of the state will probably feel that it is a difficult matter to meet the requirements of the law. While more attention must be given to sizing and grading than in the past, I wish to assure any who are anxious that there is no need for apprehension. The Department of Agriculture will soon issue a bulletin explaining and defining more fully the terms of the law. Every packer should apply for a copy of this pamphlet.

Where operations are on a small scale the grading and sizing may be done at once from a packing table, placing each grade and size which it is desired to pack in a separate half bushel basket such as is ordinarily used in barrel packing. Where the operations are on a large scale, sizing machines are advantageous. The grading must be done by hand by inspection, but may be done either before or after sizing. If done before one grade at a time is run through the machine, if afterward the various sizes delivered from the machine are later separated into the respective grades. Proper racking of the barrel during the filling process is probably the most important factor in complying with the requirement of proper packing. After the addition of the first bushel of fruit over the faced layer, the barrel must be shaken with a sharp, short motion, and with the addition of each half bushel thereafter until it is full. In tailing off the surface with most varieties should be about an inch or inch and one-half higher than the chine of the barrel, and should be arranged so that the pressure in forcing in the head will be evenly distributed. It is not necessary to arrange the tailed layers in perfect concentric rings as is the faced layer. In forcing in the head, hammering and knocking should be dispensed with, as this breaks and bruises the fruit unnecessarily.

For convenience in properly marking the barrels most growers will obtain a stencil made to fit the head of the barrel and giving all the necessary data excepting that blank spaces are left for the grade, size, and variety, which will vary in the different barrels packed and may be filled in with rubber stamps or other stencils.

## DELPHINIUMS.

William Toole, Sr.

Among decorative plants for outdoor growth there is probably no class more broadly useful than are the Delphiniums. Botanically the name includes a number of species with hybrids and crosses of both annuals and perennials. Custom is leading to apply the name Larkspur to the annuals and Delphinium to the perennials, although they are all Larkspurs and all Delphiniums.

In this article I chose to consider the perennial section. We may, as a class, place them at the head of all the blue flowers, whether for decorative planting or cut flowers. Their coloring is not confined to blue, although that shade predominates. Among blues probably the Belladonna class is the generally favorite. The combination of light blue and white takes the lead, but some lovely shades of bright and dark blues of this class are being developed. If the fading flowers are removed the Belladonnas give a succession of bloom more quickly than others. There is a graceful inclination of the sprays to droop, which adds to their attractions.

The older Delphiniums, Formosa and Formosa Coelestina include nearly the same range of shades and markings as the Belladonnas. They are a little more rigid in outline of plant, yet we want them for their sturdy beauty. Because of old time associations we still like to see the old fashioned Bee Larkspur with its brown center, the resemblance of a bee crawling into a flower.

Among the newer creations classed as hybrids, especially among the doubles, we are given some wonderful combinations of shades, including blues and purples with changeable rose with or without white centers and hues which are indescribable.

From seed we are not yet able to secure pure whites of this class, although there is a white variety to be had which continues scarce, because it must be increased by division.

For length of spike of bloom and size of flowers some of the newer kinds both double and single are truly marvelous. The foreign growers send out named varieties which should be all alike in each variety but increase by division is too slow so choice selections of such of the varieties are scarce and after the first blooming those nearest to type are chosen to represent the kind named.

If seeds are sown early most of the kinds will produce flowers the same season.

There is a blending of pleasure and disappointment in raising

*(Continued on page 29)*

Delphiniums: "If grown in the open with plenty of room for each plant they seldom go down.

## KITCHEN PATRIOTISM.

Suggestions by U. S. Food Administrator.

### Patriotic Breads.

Here are some recipes which include the use of corn meal, rye and barley flour and other products which, if generally utilized, will release more wheat for export to our allies. These patriotic breads are easy to make and they will help in the patriotic movement, advocated by the United States Food Administration, to save wheat for our fighting men and our allies.

*Rye Muffins*—Sift together 1 cup of rye flour, 1 cup of white flour, 1 teaspoon of salt and three level teaspoons of baking powder. Beat up 1 egg, add 1 cup of milk and combine with the dry ingredients. Add 1 tablespoon of molasses and 1 tablespoon of melted fat. Bake in hot, well-greased muffin pans twenty-five minutes.

*Oatmeal Muffins*—Stir 1 cup of rolled oats and 1 tablespoon of fat into 1 cup of hot milk. Boil 1 minute, then allow to stand until luke warm. Soften 1 yeast cake in ¼ cup of luke warm water and add 1 tablespoon of sugar. Combine the two mixtures. Add 1 cup of flour and 1 teaspoon of salt and beat thoroughly. The batter should be stiff as for drop biscuit. Cover and set to rise until light—about an hour. Fill well-greased muffin pans two-thirds full. Let rise until light, then bake twenty-five minutes in a moderately hot oven.

*Barley Scones*—Sift together 1 cup of whole wheat flour, 1 cup of barley flour, ¼ teaspoon of salt, and 2 teaspoons of baking powder. Work into this 2 tablespoons of fat. Add 1-3 teaspoon of soda to ¾ of a cup of sour milk. Combine the two mixtures to form a soft dough. Turn out on a floured board and knead lightly. Roll out half an inch thick, cut in diamond shapes and bake in hot oven.

*Crisp Corn Cakes*—Sift together 1 cup of yellow cornmeal, 1 cup of flour, ½ teaspoon soda and ½ teaspoon of salt; then stir in 1 and ½ cups of sour milk. Add a beaten egg and beat batter five minutes. Add last 1 tablespoon of hissing hot fat. Pour into hot greased pie plates in a very thin sheet and bake in a quick oven until brown.

### Jams, Jellies and Preserves.

Possibly the price of butter has already suggested the use of jams, jellies and preserves in larger quantities than usual. But aside from the saving in cost, there is a national service as well.

Butter is readily transported and exported, whereas these other products, which are usually put up in glass jars, lend themselves best to home or local consumption. Eat as much as possible of the home-grown products, thus releasing foods which naturally flow in large commercial channels for shipment abroad. This policy has the endorsement of the United States Food Administration and is essentially sound.

Jams, jellies and preserves do not have the same kind of nutriment as butter and are not a substitute, but the judgment of the American housewife and mother is sufficient safeguard against an excessive reduction of butter consumption.

### Simple and Wasteful.

Could a housekeeper serve less than bacon, rolls, and coffee for breakfast? The answer is serve more, and waste less. Yes, waste less of what the Food Administration has asked the American people to use carefully. Bacon and wheat flour are two of these foods. The simple breakfast of bacon and rolls means eating too much of the concentrated foods needed for shipping to Europe, and too little of the perishable foods that can be used only at *home*. This substitution of the perishables for the foods that can be shipped is the small daily service asked of each householder.

: Rolls, Bacon, and Coffee— :
: A Simple Breakfast. :
: —And Wasteful! :

With this *simple* breakfast a boy of twelve will eat six rolls and all of the bacon you will allow, and then not be satisfied.

Rolls, bacon, and coffee—too much wheat, too much meat—a waste of the most precious products when we consider the world's needs; a waste of highly concentrated foods when we consider the limited shipping space available for sending food to our fighting men and allies.

How can the housekeeper get that simple breakfast in line with Americanism and simple humanity? Here is the answer. Replace the rolls with cornmeal muffins, cut the bacon to two rashers apiece, and add a generous dish of one of these locally produced perishables—apples, potatoes, or hominy grits.

This is a cheaper meal, a better balanced meal, and a less wasteful meal than that *simple breakfast*.

**Establishment of Potato Grades.**

Growers, shippers and distributors of potatoes met in Washington recently to discuss this year's potato crop and to determine the course of action to be pursued in the growing and distribution of next year's crop. In the opinion of this group of men, the regular channels of trade should be interrupted as little as possible, unless some unusual contingency should arise. In such event, they believe that the U. S. Food Administration is undoubtedly in position to take such action as will best serve the interests of all, and that such action would receive their hearty support and coöperation.

One of the features of the meeting was the recommendation that definite grades of potatoes be adopted. This was deemed advisable because of the tremendous economic waste due to improper grading; and also because the shipping of ungraded potatoes means cost of transportation, waste of railway equipment and labor in handling potatoes which, while worthless at destination, would have had some value as stock feed on the grower's farm.

U. S. Grade No. 1

This grade shall consist of sound potatoes of similar varietal characteristics, which are practically free from dirt or other foreign matter, frost injury, sunburn, second growth cuts, scab, blight, dry rot, and damage caused by disease, insects, or mechanical means. The minimum diameter of potatoes of the round varieties shall be one and seven-eighths (1⅞) inches, and of potatoes of the long varieties, one and three fourth (1¾) inches. In order to allow for variations incident to commercial grading and handling, five per centum by weight of any lot may be under the prescribed size, and, in addition, three per centum by weight of any such lot may be below the remaining requirements of this grade.

U. S. Grade No. 2

This grade shall consist of potatoes of similar varietal characteristics, which are practically free from frost injury and decay, and which are free from serious damage caused by dirt or other foreign matter, sunburn, second growth, cuts, scab, blight, dry rot, or other disease, insects, or mechanical means. The minimum diameter shall be one and one-half (1½) inches. In order to allow for variations incident to commercial grading and handling, five per centum by weight of any lot may be under the prescribed size, and, in addition, five per centum by weight of any such lot may be below the remaining requirements of this grade.

For the purpose of the above recommendations no attempt has been made to provide grades for potatoes of extra finer quality and size, or for lots of potatoes composed of different varietal characteristics, or for potatoes under the minimum diameter, and other requirements of U. S. Grade No. 2.

Unless shipped in bulk, potatoes of U. S. Grade No. 1 should be placed only in new, clean sacks or barrels, which should be well filled, securely sewed or covered and, in addition to any necessary statements or marks, should be plainly marked "U. S. No. 1."

Containers of potatoes of No. 2 grade also should be plainly marked "U. S. No. 2."

A joint committee representing the growers and the shippers and distributors at this conference went on record as recommending that the Bureau of Standards be urged to take the necessary steps as soon as possible toward the establishment of 100 pounds as the unit upon which quotation of prices and buying and selling of potatoes shall be based throughout the United States.

*U. S. Food Administration.*

Many of our rural schools show a curious blending of architectural features. Here, for instance, we have a school house of modern design and, close by, a wood house of the early, very early, Greek period indicated by "simplicity, symmetry, monumental repose". Some schools have the wood house in the rear but that is a matter of taste.

# Wisconsin Horticulture

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## Horticulture at the 1917 State Fair.

Some fears were expressed in the beginning that the fruit display at the fair would fall below that of 1916 and previous years, but our fears were unfounded.

In all except color the 1917 apple exhibit equalled that of any recent year. The show of barrels was quite as disappointing as usual, and it would seem that the money offered in this class could be used to better advantage elsewhere. When single barrel premiums of $10, $8, $6, $4, and $2, covering eight leading varieties with an aggregate of $240, brings out less than a dozen barrels, it's time to quit.

The same is true of the box apple class. Premiums of $5, $4, $3, $2 and $1 with a total of $180 for ten varieties brought an exhibit of 6 boxes.

A better apple year might bring out a bigger display, but it's a question if these classes are worth while. The peck and bushel lots shown on the tables certainly made a more attractive display, are educational and satisfactory to exhibitors.

The premiums for county exhibits of fruit in the horticultural building were dropped last year. These exhibits in past years failed wholly to serve the purpose intended, viz., to exploit the possibilities in fruit growing in different counties, and instead of being real **county** exhibits, rapidly developed into one-man exhibits every one out for the money.

For the first time in modern times vegetables were shown in the horticultural building, where they properly belong. In the hands of three expert growers, Supt. Rasmussen, H. C. Christensen and Wm. Nelson, all of Oshkosh, every class and every specimen was exhibited to advantage.

Both the professional and amateur flower exhibits were just a little better than ever before shown.

With the increased interest in gardening, the amateur flower show at the fair will soon require additional space.

A complete review of all exhibits is impractical in this journal and scarcely worth while, but a few facts stand out plainly:

The number of exhibitors is increasing steadily each year in all classes and this is a mighty significant point. We want the old timer, he knows how to exhibit his products attractively, but more than all we want a big lot of small exhibitors; we want new faces every year and we are getting them.

Owing to careful and expert judging the character of the exhibits is improving until no fair can show a higher grade of horticultural products than ours.

Fakirs of all descriptions have been eliminated and horticulture has the cleanest and the most quiet as well as the most popular and attractive building on the grounds.

The department of horticulture at the fair demands more room. We need a fifty thousand dollar building alongside the present one so that what we now have can be used as an annex. We will then be able in a measure to compete with the one hundred and fifty thousand dollar grand stand as an attraction.

### Lubsk Queen.

Oh, you glorious queen from the plains of Russia,
Your beautiful skin,
Your cheeks tinted with rose and carmine!

Your detractors say that your heart is false, that you deceive, that we should not be taught to look up to you, that you are a false, wicked queen and that we should worship at the shrine of McIntosh and Fameuse, but human nature is frail and weak and will forever bow to beauty.

And they all paid you homage at the Fair until your consort, Dudley, also from Door Co., turned all green with envy.

**Facts and Figures on Spraying.**

Prof. R. H. Roberts, well known to all who attend our conventions, puts in his spare time during spring and summer conducting spraying demonstrations. Mr. Roberts reports on the results obtained in one orchard in Fond du Lac county as follows:

"Regarding the report of our spraying results at the Thomas Roach farm the fruit has but lately been sold so that we could definitely sum up our results.

"From these trees which we helped Mr. Roach to spray we obtained eighty-five per cent of the first grade fruit, twelve per cent of the second grade, and three per cent culls, which sold at an average price of $1.14 per bushel. From the trees which were unsprayed, there was no first grade fruit, but thirty-seven per cent was second grade, the balance or sixty-three per cent being culls.

"The average price of this fruit was twenty-four cents a bushel. It is also to be noted that the unsprayed trees had a smaller crop than the others, due to smaller-sized fruits and the dropping of a large per cent of the crop due to apple scab. On the basis mentioned, however, we would have the gain of ninety cents per bushel, due to spraying. The cost including labor and material, was sixteen cents a bushel, or a net gain of seventy-four cents. The cost per bushel was high owing to a light yield as the cost per tree was about twenty-four cents. These figures apply to the variety, Gano.

"These results are due almost entirely to the spraying which Mr. Roach did while we were not present, as our spray plat included but a small portion of the trees on which we gathered data. The season gave one of the worst infections of apple scab that has been known, so we feel quite pleased with the results which we have obtained this year and feel confident that these can be duplicated by any farmer who follows carefully the time of application and the use of proper materials.

"The spray used this year was the commercial lime sulphur solution, one gallon to forty gallons of water, to which was added one and one-half pounds of powdered arsenate of lead to each fifty gallons of water.

"The applications were made as follows:

"(1) Just after the blossom buds separated in the cluster so as to permit the covering of their entire surfaces. This was just previous to the blossoms opening (2) Just after the blossoms fell. (3) Two weeks after the second spray. (4) About the first of August."

**Results in 1917.**

These facts and figures on spraying were submitted by Prof. Roberts just one year ago, but no opportunity was found to present them seasonably until now. In reference to a recent inquiry Prof. Roberts writes under date of Sept. 24th as follows:

"The results this season have been very similar to those of last, and also quite satisfactory. Two points of especial interest have been developed in checking over results. The first is the apparent failure of spraying to entirely control a bad infestation of curculio on apples. It would appear that in cases of other infestation, sanitary measures as cultivation or hogs would be needed to insure clean fruit. This conclusion could be based on the fact that at one of our demonstration orchards this year we entirely controlled apple scab, but had considerable curculio work on the fruit."

"The second point is the approximate completeness with which we have controlled apple scab. An illustration of this would be the results at Swartz Brothers, Waukesha, this year. I mention this because that is the only place where we have made definite counts of sprayed and unsprayed trees there was an even sparayed trees there was an even 100% of infected fruit and 74% of the fruits were so badly scabbed as to be worthless for market. On the sprayed trees 89% of the fruits were free from infection, ½% were severely scabbed, 2% had sufficient infection to place them in second grade fruit and the remaining 8% had infections ranging from mere dots in size to ⅛ of an inch in diameter."

"The cost has been slightly higher this year owing to more expensive chemicals and labor charges. The expense of the above work was .091 a bushel. This is lower than the average owing to the good yield of fruit on the sprayed trees, the range of expense being from 6 to 16c a bushel owing to the yield. The material used for the demonstration work was lime sulphur and arsenate of lead the same as last year."

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Plant tulips, hyacinths, narcissus and crocus now for spring blooming. A good list of varieties will be found on p. 14 of our Annual Report.

**A Tale of Mystery, a Fish Tale.**

On a busy day recently there came over the telephone the following interesting news item: "President Rasmussen and family spent Saturday and Sunday with friends in Madison; Mr. Rasmussen spent Saturday fishing and caught a twenty-three pound pickerel."

As the informant was known to the editor as a thoroughly reliable person, the item was filed for future use, and the day's work went on as usual, only the thoughts of the blue waves of Mendota, a gently rocking boat and the joys of deep water fishing would intrude in a most unseemly manner, where only canning, drying, and Liberty Gardens belonged. "The 1917 State Fair horticultural exhibit excelled in extent and,"—"twenty-three pound pickerel,"—"some fish, I wonder what spoon he used,"—variety that of 1916 by at least—"twenty-three pounds,—why that's the biggest fish taken out of Mendota since the days of Billy Dunn and Grover Cleveland, and not a word in the Madison papers. Some mystery here."

Land lubbers who rave over the pleasures of golf, knocking a little white ball across lots into holes and out again, silly business for grown men and women; baseball fans and even hunters really miss the real great big fun in life because they never go fishing.

And of all fishing, the deep water fishing is the kind that's best worth while. You sit in the stern of your skiff with another fellow to row, of course, your steel rod and patent reel grasped firmly in your good right hand, the glistening spoon with its enticing bait whirling fifty or one hundred feet astern and sending a delightful tremor through your arm; there you may sit for an hour or perhaps for two before anything happens to wake you from your delightful reverie, for you have the true fisherman's patience and your thoughts are of how good it is to be alive on this beautiful September day.

A sudden tug awakens you and **now** life is really worth living, for you have a strike! The line sings through the reel, sweetest music in all the world to the fisherman's ear, the rod bends until the tip is submerged and the fight is on, for he is a big one. It's a match between your skill aided by the patent reel and the instinct and strength of this four-foot muckle or pickerel. You "play" him, oh, boy, how carefully you play him, with thumb on the release you pay out just enough line, not too hard a pull or you will lose this twenty pounder, not too slack or,—one snap of those saw toothed jaws and your prize is gone with your spoon and as much of your line as could be grabbed in a mouthful. For ten, twenty, maybe for thirty minutes you play him. You are breathing hard, your nerves tingle to your finger tips as slowly, inch by inch, you reel in until your catch is in sight.

There is no use in **telling** you land lubbers about it, because you don't **know** and never will know the joy of that minute when you are first able to distinguish the outlines of your graceful, glistening prize. And as in all of life, the pleasure is tinged with doubt and fear for you haven't landed him yet. For all you know there may be just one more fight in that old timer and with what care you handle the line and gaff until finally the catch is over the side

**JEWELL MINNESOTA GROWN**

**Nursery Stock**

Complete assortment of Fruit and Ornamental stock in all varieties suited to northern culture. A specialty of Hardy Shade Trees, Windbreak Stock, Evergreens (Coniferous), Deciduous Shrubs, Apples and Native Plums.

AGENTS WANTED

**The Jewell Nursery Company**

Lake City, Minnesota

**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.**

and the day's fishing is over. You've got the big one and hauling in perch and bass seems like sacrilege now. So back you go, get out the scales and the camera and then you go boasting all over the place, and you have the right and the license to do it.

**Here is where the mystery** begins: For the writer **proclaims** this fact without fear of contradiction: Any man who catches a twenty-three pound pickerel in Mendota or elsewhere and keeps the fact to himself for two weeks is either too modest for this world or else the fish didn't really weigh twenty-three pounds, or else he fell asleep in the September sunshine and dreamed a dream of a twenty-three pound catch. But that won't hold, because the news came from his host, who is a most ardent fisherman and a man of undoubted integrity. But why didn't Mr. Rasmussen say something about it? Perhaps he didn't know anything about it then or now? The mystery deepens.

Here we have a perfectly authentic story of a twenty-three pound fish, but no head or tail to it. Anyway, it's something to take our minds off other and more serious things.

### The Apple Grading Law.

The enforcement of the apple grading law is vested in the Commissioner of Agriculture and has been assigned by him to the division of entomology, of which Dr. E. D. Ball is chief. Circular No. 6, State Department of Agriculture, contains rules and regulations laid down by the department as well as a copy of the law.

Every person in the state who ships a barrel of apples should read this circular carefully before nailing the head in the barrel. Copies may be had on application to the Department of Agriculture, State Capital, Madison, or to this office.

### Don't Believe All You Hear

Writers of popular fiction, including city bred people who furnish advice to gardeners, fruit growers and gardeners, amuse but rarely instruct. As their purpose in life is entertainment and making a living, they should not be taken too seriously.

### Choose Wisely

"Save seed from your gardens for next year's crop." "Seed will be very scarce next year." This is one line of popular fiction that is being circulated just now. We had the fruit jar comedy last spring. The press implored us to dig up every forgotten fruit jar, even to collecting from garbage so that the unprecedented shortage of glass jars might be overcome. As a matter of fact, there was never a shortage of jars, nor was the price advanced materially.

This seed saving scare is along the same line so far as the ordinary garden and flower seeds used by the amateur are concerned. The prospects are for a supply sufficient for all needs with the exception of parsnip. It is all well enough to save seed if you know how, but the average amateur who saves bean seed, for instance riddled with anthracnose would be apt to shed some tears next summer, over the horrors of war. Seed growing and saving is a highly specialized business and is best left to seed growers and market gardeners of long experience.


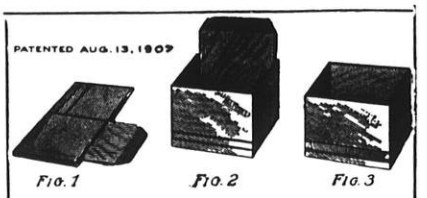


FIG. 1 FIG. 2 FIG. 3

**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.

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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.**


Divide and transplant peony, phlox and many other hardy perennials now.

### Crying Peace When There Can Be No Peace.

"The men who are speaking and writing and printing arguments against the war now, and against everything which is being done to carry on the war, are rendering more effective service to Germany than they ever could render in the field with arms in their hands. The purpose and effect of what they are doing is so plain that it is impossible to resist the conclusion that the greater part of them are at heart traitors to the United States and wilfully seeking to bring about the triumph of Germany and the humiliation and defeat of their own country."

"Anybody," he said in substance, "who speaks against the government or obstructs its policies in the prosecution of the war against Germany is a traitor at heart and wants Germany to win.

"Everyone was privileged to express an opinion on the advisability of the war before hostilities were declared. After the United States entered the war, discussion was closed"—Elihu Root.

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"I do not think that I am an alarmist, my friend; I have tried to view the situation calmly and without passion, but I am fully convinced that we are in the valley of decision, and that the great Armageddon between autocracy and democracy is on. In that great battle we cannot choose what side to take; there is but one side for Americans. Liberty is their birthright. Freedom's cause was bequeathed to them by sires who died at Lexington and Valley Forge and Yorktown that this great nation might live. Their voices come to us down the long years that have passed since then and they plead with us to keep the faith.

"The little people of the world stretch out their arms to us and appeal to us for protection; from the stricken cities and fields of Belgium and Servia and France, from the white lips of starving children and the gaping wounds of murdered women there comes the cry of outraged humanity to America, the great, the prosperous, the free; and thank God, America has heard the cry and is girding her loins for the conflict. She cannot lose for she fights for the Eternal Cause of Human Liberty.—*Hon. J. B. Winslow, Chief Justice State Supreme Court.*

A LARGE STOCK OF

**Apple, Cherry and Plum Trees, Grape Vines Blackberry and Raspberry Plants, and Strawberry Plants**

**Both Everbearing and common varieties.**

**And a general line of ORNAMENTAL TREES, SHRUBS and ROSES. All stock clean and thrifty, the best that can be grown in Wisconsin.**

**GREAT NORTHERN NURSERY CO.**

**Write for catalog and prices** **Baraboo, Wis.**

**The Kickapoo Valley** **WISCONSIN'S FAVORED FRUIT DISTRICT**

**Our Specialty: Planting and Developing orchards for non-residents. A few choice trees for sale. If interested, write us.**

**KICKAPOO DEVELOPMENT COMPANY**

**GAY MILLS, WISCONSIN**

### Potato "Dont's."

1. Don't injure the selling and storing quality of your potatoes by careless digging.
2. Don't glut the fall market and injure your winter market by placing large quantities of ungraded stock on the market at harvesting time.
3. Don't ship any frost-damaged potatoes. It is disastrous.
4. Don't demoralize the already overburdened transportation facilities by shipping cull potatoes. Unless potatoes are extremely high in price, culls will not bring transportation charges.
5. Don't overlook the advantages of "machine sizers." They are proving of great value in many shipping sections.
6. Don't expect machine sizers to grade for quality—only human hands can grade out the defective tubers.

**An Attractive Home Means Contentment**

Keep the ch.ldren at home by making them proud of it. The most effective and economical way to do this, is to beautify the lawn. Careful arrangement and good plants are essential. Our Landscape Department has specialized in th s work, is familiar with Wisconsin conditions, and has probably the largest assortment of choice nursery stock in the state to select from.

**White Elm Nursery Co.**

Oconomowoc, Wisconsin

7. Don't mix No. 1 and No. 2 grade potatoes. There are customers who desire each separately, but do not want them mixed.

8. Don't overlook the potato grades recommended by the United States Department of Agriculture and the United States Food Administration.

*U. S. Dept. of Agr.*

**HARDY OLD FASHIONED PLANTS**

**OUR SPECIALTY**

**The best varieties for Wisconsin conditions, carefully grown and carefully packed. Write for prices**

**WILLIAM TOOLE & SON**

**Hardy Plant and Pansy Farm** **Baraboo, Wis.**

### America Fights in Holy Cause.

"The soldier who follows America's flag fights in a holy cause. He is more truly consecrated than the Crusader who fought to deliver the Holy City from the infidel."—*Winslow.*

### Are People Honest?

On Monday morning of State Fair exactly one hundred apples were placed on a table 4 x 5 feet in the exhibit of the Horticultural Society. The table stood out in the open and through 5 days approximately 200,000 people passed by and around it. Not an apple was stolen or even disturbed during the entire week.

*(Continued from page 21)*

Delphiniums from seeds. The disappointment comes so often from poor seeds. No other kind of plants more easily bears transplanting either in the spring or in the summer after the first blooming period. Because of storms it is well to be prepared to stake the plants, especially if they are grown in the shrub border. If grown in the open with plenty of room for each plant they seldom go down.

There is a distinct section called Chinese, with smaller growth and more finely divided foliage. This class includes the Siberian. In this class may be had an abundance of clear white as well as various shades of blue and purple. If kept cultivated in the summer and given slight protection in the winter the Delphiniums are very enduring and will stay by one for many years.

## The 1917 Cherry Harvest in Door Co.

Door county's 1917 cherry crop will bring the growers approximately $200,000, it reaching about 250 carloads, the estimate made early in the season. Each car contains 500 cases, and each case 16 quarts, making the total crop 2,000,000 quarts. Both the Early Richmond, the early cherry, and the Montmorency, the late cherry, were good crops. The quality of both was also excellent but the late cherry was better not only in quality but also in yield and brought a better price. The price on the outside market ran from $1.40 to $1.75, being very satisfactory to the grower.

EXCEEDS TOTAL OF THREE YEARS.

The 1917 crop exceeds the total shipments of the combined crops of 1914-15-16. One day's shipment this season was equal to the entire crop of 1913.

There was no trouble in securing a market, the greatest difficulty being in supplying the great demand that there was for Door county cherries. Shipments were made as far west as Tulsa, Oklahoma, and a number of shipments were made to Cleveland, O. Minneapolis furnished its usual good market, and shipments were made into Chicago, which is usually supplied almost entirely by the Michigan cherries.

PICKERS RECEIVE $30,000.

During the five or six weeks that the pickers were employed in the orchards they were paid approximately $30,000. This large amount of money is paid almost entirely to women and children, and the amount earned is additional money brought into the families. While a portion of it is earned by young people who come here from outside, the fact that these young people are here places a large amount of the money in circulation that goes into local business channels.

The crop being an exceptionally large one, and picking being done on a number of young orchards where the trees are small, requiring no ladders, the pickers enjoyed the work and made good money. They are all anxious to return to Door county another year and help harvest the crop. The picking problem is one of the easiest problems of the cherry business. The different organizations represented here during the season by the pickers were the Y. M. C. A., Boy Scouts, Camp Fire Girls, Green Bay Orphans Home, besides the hundreds of pickers who were not connected in any way with any organization.

The Co-Operative Co. introduced Indian pickers this season, being the first to engage the services of the natives for this work, and they proved to be well adapted to it.

EIGHTY CARLOADS TO FACTORY.

The Reynolds Preserving Company will be about through canning cherries this week, although it might take a couple of days next week to clean up what comes in. The company has used about eighty car loads of the crop, 40,000 cases. The price on the first 30,000 was about $1.00 per case, but what was purchased above the original contract of 30,000 a much higher price was paid. The fact that part of the crop was being canned here had a tendency to stiffen the outside market, as there was no surplus to dispose of. The quality of cherries canned by the Reynolds Company is of the very best and a ready market is found for them.—*Door Co. Democrat.*

"We have a Fine Lot of Plants for the Garden"

SEND FOR LIST

J. E. MATHEWSON

SHEBOYGAN, WISCONSIN

Farm for Sale

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180 acres good sand loam adapted for potatoes, corn, clover and rye, beautiful trout stream flowing through pasture land; about 20 acres timber.

Orchard and Home 500 apple trees in their prime. Buildings worth $3000 excellent location

This property is a money making bargain to someone who likes to handle apples. Price $45.00 per acre.

Appleton Fruit Farm

Pine River, Wisconsin

Quality Stock

Strawberries

Native Plum Small Fruits

Apple

WISCONSIN GROWN

for Wisconsin Planters. Read our Price List before you buy, and save money.

62nd Year

Kellogg's Nurseries

Box 77, Janesville, Wis.

*(Continued from page 20)*

It is to be hoped that all growers of the state may appreciate the benefits which may come from this law, and by their cooperation render the enforcement of the law easy. It is only when all apples from this state are packed strictly in accordance with the law that the reputation of our apples will be bettered and prices to the grower raised.

One of the many homes our Landscape Department has helped to make attractive.

We are now ready to help you make your place a Beauty Spot.

A booklet showing places we have planned and planted is free.

You want the best varieties when planting your Orchard, Home Grounds or Fruit Garden. Our catalogue tells you about them.

**The Coe, Converse & Edwards Co., Nurserymen, Fort Atkinson, Wis**

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# State Horticultural Society

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Storage of fruits on the farm and the marketing of fruits will be discussed by specialists from the U. S. Department of Agriculture.

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We must feed the world, let's get together and plan how to do it.

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# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

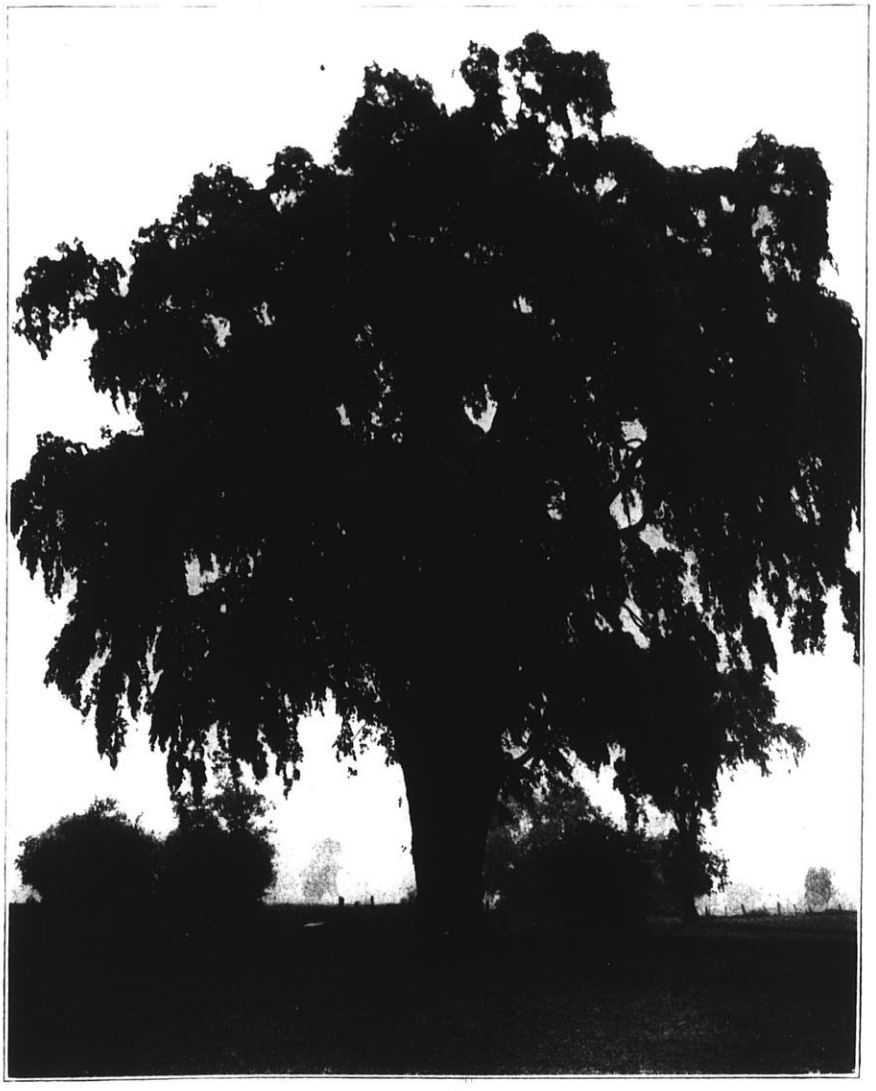
Volume VIII Madison, Wisconsin, November, 1917. Number 3

## Vandals and Vandalism.

We hear a great deal about Huns these days but not so much about Vandals altho we have in our midst plenty of the latter. Not necessarily descendants of the real tribe of Vandals but those falling within the definition, "one who wilfully destroys or mars a work of art or literature or wantonly mars anything beautiful." Of these we have many. Most of them own automobiles. They drive miles into the country where they are not readily identified, raid orchards and gardens, dig wild flowers and even invade door yards. The following from a Milwaukee paper shows a mild form of vandalism.

"The popularity of the so-called "bittersweet" berry has proven so great this year that the woods and fields within a radius of twenty

*(Continued on page 39)*



This is not, unfortunately, a Wisconsin tree; we are too young yet to have such majestic roadside trees, but such may be ours in time. This Connecticut Elm is probably two-hundred years old. If we plant carefully, prune wisely and protect from enemies our roadside elms, we may leave to coming generations such a heritage as this. Some of us will not leave much else. Let us plant and care for a tree.

## How to Store Vegetables for Winter Use.

Prof. J. G. Moore

This fall, more than ever before, it will be to the advantage not only of each family, but to the state and nation as well, if everyone who has a garden will store well the vegetables grown for winter use which are suitable for storage.

In many instances storing will be the best way of preserving vegetables for this winter's use. Prices are almost certain to be high, and storing is cheaper, requires less work, and with many crops, the product is better than if canned or dried. More of the characteristic flavor of vegetables is preserved by storing than by any other method.

### WHERE TO STORE

The places in which the home gardener may store his crops successfully are house-cellars, outside cellars, or caves and pits. All of these are not equally well adapted for storing all kinds of vegetables, but for a majority of kinds will answer the purpose very well. Where more than one type of storage is available greater success will be had if in selecting the storage, the storage requirements of the vegetable and the time it is desired for use are taken into consideration.

### STORING IN THE HOUSE-CELLAR

The house-cellar is by far the most frequently used storage place of vegetables grown in Wisconsin gardens. If it does not contain a furnace and the temperature does not fall below the freezing point, there will be little difficulty in keeping the vegetables well into the following spring. If, however, there is a furnace in the cellar, then the difficulties of successful storage are greatly increased. In such cellars a small portion, preferably well removed from the furnace, should be partitioned off. The storage room should possess at least one window which will make temperature control easier. The tighter the partition fits, the better. As the storage room probably will be quite permanent, it is advisable to exercise considerable care in constructing the partition. An insulated wall or a double wall with a dead air space between is to be preferred. A heavy cement wall is satisfactory. A single board wall is not to be recommended, but a storage room with such a wall gives better results than storing in the same room with the furnace. The storage room should preferably have a dirt floor. Proper storage of vegetables requires a certain amount but not too much moisture. A cement floor is too dry.

### REQUIREMENTS OF SUCCESSFUL STORAGE

The three chief essentials of successful storage are—sound vegetables, proper temperature, proper moisture. With certain vegetables maturity and ventilation are also of prime importance. Many people overlook the first of these storage requirements. Careful selection should be made of all vegetables to be stored. Soundness should include freedom from disease conditions likely to cause rot, and from mechanical or insect injury which provides an entrance for rot organisms or favorable conditions for their development. It is not the loss of the affected vegetable which is so important, but the fact that decay once started may destroy a considerable portion of the stored crop. The importance of soundness, however, does not stop with the selection of sound specimens. It includes careful handling during the storing process. All of us handle fruits which are to be stored with the utmost care, but practically disregard the bruising of vegetables. While the results are not so marked in the case of vegetables, often much of the loss in storage may be traced directly to rough handling.

### STORAGE TEMPERATURES FOR VEGETABLES

The best temperature for storing vegetables may vary considerably for different kinds. There are two fairly well defined limits for most vegetables. The temperature should not be so low that the vegetables freeze. It should not be so high as to encourage premature growth. High storage temperature is also more favorable to the development of most rot organisms, therefore with most vegetables the desired temperature is one close to the freezing point. Some vegetables, as cabbage, will stand slight freezing without injury, but it is usually safest to maintain the temperature of the storage room at not less than 31 or 32 degrees Fahrenheit. Vegetables will keep well at somewhat higher temperatures, 34 to 36 degrees, but only in the case of squash and pumpkin is a relatively high temperature to be preferred.

### SUPPLY SUFFICIENT MOISTURE

Large losses occur in storage because of improper moisture supply. The greater part of these losses is due to lack of sufficient moisture. The moisture content of all vegetables is high. When placed in a dry atmosphere, they lose moisture very rapidly and with it their

quality. With the exception of onions, squash, pumpkins and dry seeds, as beans, a relatively moist atmosphere is desirable. Excessive moisture is injurious, as it furnishes favorable conditions for rots. The aim, therefore, with most vegetables, is to keep the surroundings sufficiently moist to prevent wilting.

SOME OTHER REQUIREMENTS

Good ventilation is desirable for the best storage. It helps to regulate temperature and moisture, removes foul odors and may help to prevent decay.

Proper maturity influences storage. With some crops full maturity is necessary, with others slightly immature specimens store best while with some the stage of maturity makes little or no difference.

## Care of Bush Fruits.

Among the farm operations which engage the attention of the small fruit grower in the north during the late fall, winter, and early spring are the pruning of the plants and their protection from drying winds, snow, and cold.

CURRANTS AND GOOSEBERRIES.

Both of these fruits have stood without injury the extremes of low temperature and drying winds which prevail in the northern Great Plains region. These fruits, therefore, need no protection against the cold or winds of winter. Sometimes, however, in regions having a heavy snowfall, branches of the currant are broken down by the weight of snow and sleet. This danger may be easily avoided by drawing the branches together and tying them with coarse string. The tying may be done at any time after the leaves fall, but it is better to do this about the time the ground begins to freeze.

This period between the falling of the leaves in autumn and the starting of growth in spring is the season in which currants and gooseberries are pruned. The ideal currant bush at which the pruner should aim has six to

Abies concolor: White Fir. A beautiful pyramidal evergreen with pale green or silvery foliage. Native of Oregon where it grows to a height of two hundred feet.

eight main branches, while the gooseberry has eight to twelve. None of these branches should be over 3 years old. Two or three of the main branches of the currant and three to four main branches of the gooseberry should be removed each season, the older branches being cut out and a like number of the most vigorous canes of the current season's growth left to take their place. All other young canes and all canes bent to or near the ground should also be removed. If this system is followed each year after the bushes reach the age of 3 years, pruning will be relatively simple and the plantation kept in good condition.

RASPBERRIES AND BLACKBERRIES.

Raspberries and blackberries need winter protection in many parts of the North where low temperatures and drying winds prevail, especially where the snow covering is light. Certain varieties need protection, while others endure the same conditions without injury. Experience will indicate which varieties need this. Where the cold and drying winds are severe, as in the Great Plains region and in Colorado, canes of the tender varieties must be covered with soil. This should be done as late as possible, yet before the ground is frozen. Some of the soil should be removed from one side of the row either with a hoe or plow, the canes inclined to that side until they are in a horizontal position and then entirely covered with soil to a depth of 2 or 3 inches. As the canes of the blackberry are more brittle than those of the raspberry, they must be bent over with greater care. Often in practice the canes are bent over so that the top is alongside the next hill, some soil thrown over the ends of the canes in order to hold them down, and the remaining parts covered by the use of a spade or by throwing a shallow furrow over the canes with a plow. The canes should be uncovered in spring before the buds start, but not until after all danger of hard freezing is past. Straw and other similar materials have sometimes been used to cover the canes, but are unsatisfactory, as the air circulates through them and does not prevent winter injury.

(*Continued on p. 36*)

When the snowfall is heavy throughout the winter, it may cover the canes sufficiently to afford all the protection that is needed. Sometimes, however, in order to be adequately protected by the snow, the canes should be bent over. They may be held in this position by placing a few clods of earth on the tips; or sometimes forked sticks are used to pin them to the ground. In other cases rails or poles are placed across the canes to keep them in a reclining position. The tips, which are the tenderest part of the canes, should be nearest the ground and be best protected.

Usually no pruning is given either the raspberry or blackberry just before or during the winter. When the canes are to be protected with soil, however, all the weaker canes, as well as stronger ones not needed for the crop the following season should be removed. This thinning out of the canes will reduce the cost of covering. In the spring if the canes of the raspberry are long and are not to be supported by stakes or a trellis, the ends should be cut back. If cut back to a height of 3 feet, the canes should be able to support their crop, keeping the berries out of the dirt. Sometimes when the canes are slender it will be necessary to cut them back to 2½ feet in length. The side branches of the blackberries are usually pruned back in early spring. The length at which the lateral branches should be left depends on the habit of the variety. In some sections and with some varieties no pruning at this time is necessary, and experience in each locality must be the guide as to this.

### Winter Protection of Strawberries.

In all except the extreme southern and western districts the autumn or early winter is the season in which the strawberry fields should be covered with a mulch, partly to protect the plants from the continual freezing and thawing which occurs in many sections, partly to conserve moisture and keep down weeds during the following spring and during the fruiting season, and partly to keep the berries from contact with the soil when they ripen. This mulch may consist of some kind of straw or hay or of stable manure containing a large proportion of straw, but it should be free from weed seed. Wheat, rye, oat, and buckwheat straw, long-leaf pine needles, prairie hay, marsh hay, salt marsh hay, and other materials are frequently used for this purpose. The mulch should be placed on the berry field after the ground freezes and before it is covered with snow. If a rain follows the spreading of the mulch, less trouble will be experienced from scattering by the wind. The mulch should be spread evenly over the whole field. If available, sufficient material to make the depth of the mulch when it settles from 2 to 3 inches should be used.

Stable manure, though frequently used, is not always satisfactory. In some sections it causes a vigorous leaf growth the following spring and actually lessens the yield of berries. If either the stable manure or the straw contains weed seed, it may infest the berry field with weeds to an extent which decreases the yield and causes much expense in cleaning. When stable manure is applied, the solid portions as far as possible should be put between the rows and that part containing more straw placed over the row. In the spring before the plants start growth, sufficient straw should be removed from the rows to allow the plants to grow through the mulch. This straw may be thrown into the space between the rows. Where the ground is weedy, it will often be necessary to rake the mulch upon the rows of plants and cultivate the field. The mulch is then returned to the middles between the rows of plants to be left until after the picking season.

---

### Transplanting Evergreens.

When shall I transplant evergreens? This is a common question and shows that there is a difference of opinion. Bailey says that this difference of opinion means that there is more than one season in which they may be moved. Possibly, in climates less severe than this; but for Wisconsin, where we have six months dormant season, it is expecting too much of trees to survive when transplanted in the fall. Especially is this true of evergreens which on account of their dense foliage dry out more than deciduous trees.

One thing is very certain, the fall is *not* the best time in Wisconsin to transplant evergreens. Further, the most successful planters agree that best results are secured by rather late spring planting, after active growth has begun. In all cases transplanted evergreens should be protected from sun and wind for several weeks by some temporary shelter.

---

### Cold Frame for Bulbs.

A member asks,—"Can you explain the method employed in

using a cold frame for forcing bulbs? I have seen this advised in a fall catalog:"

The cold frame may be used to advantage as a storage place for bulbs potted or in flats.

The florist provides a shed or other room kept dark and a few degrees above freezing where he packs away the pots and flats (shallow boxes) of bulbs and covers them with sphagnum or sand. This treatment provides ideal conditions for root growth without top growth—the first requirement in bulb forcing. After a few weeks the pots may be brought in as required all through the winter.

When the amateur attempts to imitate the florist he finds himself handicapped by lack of moist, darkened storage room that can be kept at a low temperature.

The old fashioned farm cellar with earthen floor and banked windows would be ideal, but the city dweller's cement floored cellar with furnace is about the poorest place to be found for the first stage of bulb forcing. Constant, almost daily attention is required to control moisture at the roots even if the temperature can be controlled. Here is where the amateur may employ a cold frame or hotbed pit if he is fortunate enough to possess one. The potted or boxed bulbs covered with sand, the frame banked with manure and the frames covered with burlap or straw are accessible at any time. Even if the later ones freeze no harm will result.

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## A Charming Phlox.

W. J. Moyle.

The past summer has been very favorable for the growth and blooming of the phlox and one of the newer sorts that has particularly appealed to me is Madam Paul Dutrie. It has a good constitution, is a vigorous grower with large panicles of the most delicate rosy lilac flowers imaginable

ter killed with me even when planted in the most exposed places. The florets are large, pure white with a bright carmine eye.

Miss Lingard, one of the older va-

Perennial phlox, Miss Lingard; white with delicate pink center. The phlox is a hardy plant and may often be found in neglected or abandonded gardens struggling with grass and weeds. This, however, is not a good reason for starving this courageous flower by compelling it to fight for sunlight and nourishment in sod or in a barren strip by a house wall. The splendid specimen shown here was given a fair chance.

Another good old stand by with me is Richard Wallace. This is a tall growing variety and is extremely hardy, never having win-

rieties is also one of if not our best white, good grower, waxy white and a fine cut flower and, if kept cut back, an everlasting bloomer.

### Mice and Rabbits

Pine mice and cottontail rabbits occur throughout the eastern portion of the United States and do much harm to fruit and ornamental trees and shrubs as well as to garden produce and other farm crops.

Pine mice are seldom seen on account of their molelike habits, for they live in their own underground burrows or in mole runways. The presence of these mice in mole burrows can usually be detected by an occasional opening that they make to the surface from the runway. Pine mice are not so prolific as their near relatives, the meadow mice, but protected as they are by their underground habits they sometimes become abnormally abundant. This is especially apparent in states where hawks and owls, which are enemies of these rodents, are destroyed. The mice live upon roots, seeds, succulent vegetation, and bark of young trees, and are very destructive to sweet potatoes and other tubers as well as to trees and shrubs.

The most practical method of controlling this pest is by poisoning. Sweet potatoes cut into small pieces have proved to be the most effective bait. They are prepared as follows:

*Sweet-potato bait.*—Cut sweet potatoes into pieces about the size of large grapes. Moisten 4 quarts of these and drain off excess moisture. Slowly sift over them one-eighth ounce of powdered strychnine (alkaloid), using a pepper box or salt shaker for the purpose, and stir constantly to distribute the poison evenly.

One or two pieces of the poisoned sweet potatoes should be dropped into the tunnels through the natural openings, or through openings made with a stick. A systematic use of this poison invariably results in an almost complete extermination of pine mice. These pests are also easily trapped, but owing to the extra time and labor required, this method does not compare favorably with poisoning.

#### Cottontail Rabbits.

Cottontail rabbits breed rapidly, and in spite of the inroads made upon their numbers by predatory animals, such as the larger hawks and owls, cats, and dogs, and the excellent sport they furnish hunters, they sometimes become so abundant as to occasion serious losses. They eat all sorts of herbage, preferring such succulent foods as vegetables, clover or alfalfa, fallen fruits, etc. When snow cuts off the supply of their favorite food, they frequently kill trees and shrubs by gnawing the bark. In this way they often cause serious financial losses to nurserymen and orchardists.

The majority of eastern states protect rabbits during the greater part of the year, although half of these states have provisions enabling farmers and fruit growers to destroy the animals in order to protect their crops and trees.

In localities where cottontails are sufficiently abundant to be a continual menace, the safest and most nearly permanent method of securing immunity from their ravages is to fence against them. It has been found that woven wire netting of 1½-inch mesh and 30 inches high will exclude rabbits, provided that the lower board of the fence is buried 5 or 6 inches below the surface of the ground. In cases where a small number of trees are concerned, a cylinder of similar wire netting around each tree, if so fastened that it can not be pushed up close against the tree, serves the purpose more economically.

(May we add to the above what everyone in Wisconsin knows, that fencing against rabbits in this climate is usually a waste of time and money. Even a light fall of dry snow followed by a wind will provide a rabbit highway over the fence we built with so much care that would delight the heart of any Good Roads advocate. Better spend more on poison and also buy a gun.—*Editor.*)

When the law permits, poison can often be used to advantage, especially at times when the natural food of the rabbit is scarce. The following formulas have been employed with considerable success:

*Poisoned Oats.*—Mix together 1 ounce of powdered strychnine (alkaloid), 1 ounce of baking soda, ⅛ ounce of saccharine, and 3 heaping tablespoonfuls of flour. Stir with enough cold water to make a creamy paste and apply to 12 quarts of good, clean oats, mixing thoroughly. This same creamy paste can also be applied to orchard prunings. The smaller twigs should be cut up into 2 or 3 inch lengths and the poison applied in the same way as with oats.

*Poisoned green baits.*—Cut up a supply of carrots, parsnips, apples, or other similar baits into cubes ½ to 1 inch in diameter. Insert in each a small quantity of powdered strychnine or a small strychnine crystal. When a larger quantity is to be prepared, the powdered strychnine can be dusted over the bait by means of a salt shaker in the proportion of ⅛ ounce of strychnine to 2 quarts of the baits.

The poisoned oats, prunings, or

green baits are dropped along rabbit trails or in places frequented by the rabbits, care being exercised in placing them *to prevent any possible injury to live stock.*

The following poisoned wash has proved highly satisfactory in the west and promises to be one of the most popular methods of protecting trees from rabbits:

*Poisoned tree wash.*—Dissolve 1 ounce of strychnine sulphate in 3 quarts of boiling water and add ½ pint of laundry starch, previously dissolved in 1 pint of cold water. Boil this mixture until it becomes a clear paste. Add 1 ounce of glycerin and stir thoroughly. When sufficiently cool, apply to the trunks of trees with a paint brush. Rabbits that gnaw the bark will be killed before the tree is injured.

Many other repellent tree washes have been used with varying success. Other means of controlling cottontail rabbits, such as trapping and driving, are usually too slow and laborious to warrant their use.

—*U. S. Dept. of Agriculture.*

## Vandals and Vandalism

*(Continued from front page)*

miles of Milwaukee have become practically depleted.

Ever since the latter part of September when the berry, which is a creeper with a reddish yellow color, became ripe autoists have been driving out into the country and picking large quantities.

Hedges in the vicinity of the cement mills on the upper river, St. Francis and Menomonee Falls were covered with the berries in former years, but it is impossible to get them at these places unless one goes very early in the season. It is now necessary to make trips of from thirty to fifty miles. On the Fond du Lac road, between Milwaukee and Menomonee Falls, there is a hedge which is covered with the vine for about 100 feet but every berry, it seems, has been picked. Many were to be found in the vicinity of Meeker, just beyond Menomonee Falls, early in the season, but these have almost all disappeared. Some autoists now report that they have been able to find the berry in the vicinity of West Bend and St. Michael's, a drive of about forty miles over good roads."

Twenty years ago such vandalism was confined to the outskirts of cities and towns and committed only by reckless boys. How much of this sort of thing was done then by people who owned carriage teams? Which only shows how many different kinds of people own automobiles.

A fence row glowing in beautiful autumn colors, a joy to every passer by if undisturbed means nothing to the vandal except what he may plunder for his or her own selfish needs. The feminine pronoun is used here advisedly for it is a matter of common knowledge that in these matters women are often as bad or worse than men. Since the automobile has become common property wild flowers have been swept clean from fields and roadsides near cities never to return and are rapidly disappearing elsewhere. It is thoughtlessness and selfishness, lack of consideration for others that prompt these acts. In short it's ill-breeding. The real gentleman or lady never trespasses knowingly on the rights or pleasures of others.

### LET US REMEMBER!

**By Cleveland Moffett.**

**Let us remember that in a year or two the white souls of a million dead soldiers, American lads, our dear sons, will be speaking to us from their graves, on the battlefields of Europe, asking what we did over here to stand behind them, what we did over here for the cause of World Liberty. Was it merely a matter of talking? Was it merely a matter of signing checks and folding bandages?—Of cold business efficiency? Is that all? Did we face no personal danger? Did we suffer no personal inconvenience? In what way did we actually with our own bodies get into the trenches of sedition here? Into the foul and slimy labyrinths of treachery and disunion that are spreading and burrowing here into the heart of this nation? That is what the white souls of a million American lads, our sons, will be asking us in a year or two from their graves on the battlefields of Europe. And we must answer them. God! Let us answer worthily.**

## Fruit at the Convention.

Altho this was a poor apple year in Wisconsin the state fair exhibit was very good. If our apple growers both amateur and professional will give a little time right now to wrapping and packing apples our convention exhibit may easily be the biggest and best we have ever had. If you leave it all to the other fellow we may not have much. The potato growers will hold a convention in Madison late in November and the growers are planning to exhibit *carload* lots of spuds! Surely we can show pecks and bushels, if we try.

Prune the grape vines and lay them on the ground ready to cover with earth as soon as there is danger of the ground freezing. Prune severely, as too much wood and foliage means small, poor grapes.

# Wisconsin Horticulture

**Published Monthly by the**
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Official organ of the Society.

FREDERIC CRANEFIELD, Editor.
**Secretary W. S. H. S., Madison, Wis.**

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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 attached to a card, and pays for two years. Personal checks accepted.**

**Postage stamps not accepted.**



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## Convention Program.

While the convention program is still in the making and far from the final stage enough has been accomplished to assure a profitable three day session, rather better than usual. It's slow work and no fun making up a program. What do the people want? Shall we have new subjects for discussion or the same old ones? Shall we have outside speakers or our own members? Shall it be mostly amateur, largely professional or half-and-half? These are just samples of the questions that semi-annually vex the program maker and when these problems are settled in his mind, after a fashion, months ahead, there comes the other and bigger job of getting the right people to discuss the right subjects. If you begin too early in the season the persons solicited hesitate to promise so far in advance; if you wait too late replies are often delayed so that it is too late to print the program in time. Troubles and yet more troubles, hope, expectation, doubts of success and then after it's all over and you look back on the three days and you see, in memory, that eager, attentive audience hanging on to the words of the speaker, sometimes a dozen members on their feet at once after he has finished, eager to offer testimony or question the speaker, when you think of the long, long talks among members between sessions and evenings you wonder why you were ever concerned about the *program*. You say to yourself "hang the details, what these people really want is to *get together*." Come right down to it you get more out of the convention outside of the convention hall than you do in it.

Still there must be a program and one that is not lop-sided. As the result of observation the present program maker is convinced that most people want the everyday things rather than the new, a chance to discuss and compare notes on the things done last year which are the things that will be done next year and to that end the following is a very imperfect outline of what will happen at the forthcoming convention at Madison Dec. 11th, 12th and 13th.

Vegetable gardening: best crops to grow for Wisconsin markets.

Overhead irrigation, the Skinner system and other kinds. Representatives of different firms have been invited.

"War Gardens": Soil preparation; fertilizers, seed sowing; early crops; succession crops; tools, etc., one half day will be devoted to this subject.

Flowers for the home: Annuals and their culture; perennials for cut flowers; summer flowering bulbs; planning and planting the home grounds.

Commercial fruit growing: Cherry culture in Wisconsin; orchard cultivation; diseases of tree fruits; the apple grading law; fruit marketing.

There will be twenty-five subjects in all in addition to two evening sessions. One or more representatives of the U. S. Department of Agriculture will be present as well as several delegates from other states, but the bulk of the program will be by our own members.

The complete program will be given in the December number of Wisconsin Horticulture which will be mailed about Dec. 1st.

### THE COMING ATONEMENT.

**Every American woman is in a position to bring nearer the inevitable atonement for the brutal outrages in Belgium, Armenia and Serbia, the sinking of the Lusitania and other horrors, by her day-by-day economics.**

**There need be no fear that the sacrifices will be wasted.**

**Unless the Entente Allies are able to import the supplies necessary for the armies and the population, victory may slip from our united grasp.—Baron Rhondda, Food Controller of Great Britain.**

In order to be fair let us insert these two words between the third and fourth words of the first line,—**"and man"**—Editor.

### The Hour of Sacrifice.

Our country is involved in a gigantic and terrible war. We are fighting a government that has deliberately and ruthlessly broken every law of nations of man, of humanity and of decency.

We are in the war and in to stay to the very end. When peace is declared it will be an American peace dictated by an American president and conform to American ideals of right and justice. Over a million of our boys are now on their way to France and other millions will follow. Remember we are not suggesting that these boys go they are now on their way.

*They* are offering their lives; what are *we* doing? The demand of the hour is *sacrifice*. We do nothing worth while unless it costs us something, something of pleasure, something of comfort, of safety. No one of us but can sacrifice something. Each must answer what it is he can do but let no one say there is nothing. Duty calls. Shall we hide within the walls of ease and comfort and selfishness or shall we like our soldier boys when *their* call comes go forward nor heed the cost?

---

### There's a Long, Long Trail.

There's a long, long trail a-winding
Into No-Man's Land in France.
Where the shrapnel shells are bursting,
But we must advance.
There'll be lots of drills and hiking
Until our dreams all come true,
But we're going to show the Kaiser
How the Sammy boys come through.

### PREMIUM LIST

The following cash premiums are offered for exhibits at the annual convention Madison, Dec. 11, 12, 13, 1917:

| | | 1st Pre. | 2d Pre. | 3d Pre. | 4th Pre. |
|---|---|---|---|---|---|
| 1. | Best collection of apples, not less than 15 varieties | $10 00 | $6 00 | $4 00 | $2 00 |
| 2. | Best 5 plates (5 varieties) commercial apples for Wisconsin | 5 00 | 3 00 | 2 00 | 1 00 |
| 3. | Best Plate Ben Davis | 1 00 | 75 | 50 | 25 |
| 4. | Best Plate Dudley | 1 00 | 75 | 50 | 25 |
| 5. | Best Plate Fameuse | 1 00 | 75 | 50 | 25 |
| 6. | Best Plate Gano | 1 00 | 75 | 50 | 25 |
| 7. | Best Plate Gem | 1 00 | 75 | 50 | 25 |
| 8. | Best Plate Gideon | 1 00 | 75 | 50 | 25 |
| 9. | Best Plate Golden Russett | 1 00 | 75 | 50 | 25 |
| 10. | Best Plate Grimes Golden | 1 00 | 75 | 50 | 25 |
| 11. | Best Plate Jonathan | 1 00 | 75 | 50 | 25 |
| 12. | Best Plate King | 1 00 | 75 | 50 | 25 |
| 13. | Best Plate Maiden Blush | 1 00 | 75 | 50 | 25 |
| 14. | Best Plate Malinda | 1 00 | 75 | 50 | 25 |
| 15. | Best Plate McIntosh | 1 00 | 75 | 50 | 25 |
| 16. | Best Plate McMahan | 1 00 | 75 | 50 | 25 |
| 17. | Best Plate Newell | 1 00 | 75 | 50 | 25 |
| 18. | Best Plate Northern Spy | 1 00 | 75 | 50 | 25 |
| 19. | Best Plate Northwestern Greening | 1 00 | 75 | 50 | 25 |
| 20. | Best Plate Patten | 1 00 | 75 | 50 | 25 |
| 21. | Best Plate Pewaukee | 1 00 | 75 | 50 | 25 |
| 22. | Best Plate Plumb Cider | 1 00 | 75 | 50 | 25 |
| 23. | Best Plate Salome | 1 00 | 75 | 50 | 25 |
| 24. | Best Plate Seek-no-further | 1 00 | 75 | 50 | 25 |
| 25. | Best Plate Scott Winter | 1 00 | 75 | 50 | 25 |
| 26. | Best Plate Tolman | 1 00 | 75 | 50 | 25 |
| 27. | Best Plate Twenty Ounce | 1 00 | 75 | 50 | 25 |
| 28. | Best Plate Utter | 1 00 | 75 | 50 | 25 |
| 29. | Best Plate Wagener | 1 00 | 75 | 50 | 25 |
| 30. | Best Plate Wealthy | 1 00 | 75 | 50 | 25 |
| 31. | Best Plate Windsor | 1 00 | 75 | 50 | 25 |
| 32. | Best Plate Wolf River | 1 00 | 75 | 50 | 25 |
| 33. | Best Plate York Imperial | 1 00 | 75 | 50 | 25 |
| 34. | Best peck of each of the above named varieties | 2 00 | 1 00 | 75 | |
| 35. | Best bushel of each of the following varieties to be shown in trays: McIntosh, Northwestern, Wealthy, Tolman, Wolf River, Fameuse, Gano, Salome, McMahan, Seek-no-further, Windsor | 4 00 | 3 00 | 2 00 | |
| 36. | Best exhibit Pears | 1 00 | 75 | 50 | |
| 37. | Best exhibit Crabs | 1 00 | 75 | 50 | |

## VEGETABLES.

| | | 1st Pre. | 2d Pre. | 3d Pre. |
|---|---|---|---|---|
| 1. | Best collection, not less than 10 entries | $5 00 | $3 00 | $2 00 |
| 2. | Best 6 Blood Turnip Beets | 1 00 | 75 | 50 |
| 3. | Best 3 Round Turnips | 1 00 | 75 | 50 |
| 4. | Best 3 Rutabagas | 1 00 | 75 | 50 |
| 5. | Best 6 Chantenay Carrots | 1 00 | 75 | 50 |
| 6. | Best 6 Shorn Horn Carrots | 1 00 | 75 | 50 |
| 7. | Best 6 Salsify | 1 00 | 75 | 50 |
| 8. | Best 3 Winter Cabbage | 1 00 | 75 | 50 |
| 9. | Best 3 Red Cabbage | 1 00 | 75 | 50 |
| 10. | Best 6 Ears Pop Corn | 1 00 | 75 | 50 |
| 11. | Best 6 Red Onions | 1 00 | 75 | 50 |
| 12. | Best 6 Yellow Danvers Onions | 1 00 | 75 | 50 |
| 13. | Best 6 White Onions | 1 00 | 75 | 50 |
| 14. | Best 6 Gibraltar Onions | 1 00 | 75 | 50 |
| 15. | Best 6 Winter Radishes | 1 00 | 75 | 50 |
| 16. | Best 6 Parsnips | 1 00 | 75 | 50 |
| 17. | Best 6 Peppers | 1 00 | 75 | 50 |
| 18. | Best Hubbard Squash | 1 00 | 75 | 50 |
| 19. | Best 6 Heads Celery | 1 00 | 75 | 50 |

## CRANBERRIES.

Premiums will be awarded for exhibits of Cranberries as follows: Premium list by the Cranberry Growers' Association.

| | Variety | 1st Pre. | 2d Pre. | 3d Pre. |
|---|---|---|---|---|
| 1. | Bennett Jumbo | $2 00 | $1 00 | $0 50 |
| 2. | Searls Jumbo | 2 00 | 1 00 | 50 |
| 3. | Bell and Bugle | 2 00 | 1 00 | 50 |
| 4. | McFarlin | 2 00 | 1 00 | 50 |
| 5. | Metallic Bell | 2 00 | 1 00 | 50 |
| 6. | Bell and Cherry | 2 00 | 1 00 | 50 |

One pint is sufficient for an entry. Send all entries to Frederic Cranefield, Secretary, Madison, Wis., charges prepaid.

## RULES OF ENTRY.

1. Exhibits must be arranged ready for judges by 1:00 P. M., Tuesday, December 11. This will be strictly enforced.

2. Four apples constitute a plate, no more, no less.

3. Separate samples must be furnished for each entry, except for No. 1, which may include all entries.

4. Competition open to all residents of Wisconsin, but premiums paid only to members. Successful exhibitors, if not members, must forward

**JEWELL MINNESOTA GROWN**

**Nursery Stock**

Complete assortment of Fruit and Ornamental stock in all varieties suited to northern culture. A specialty of Hardy Shade Trees, Windbreak Stock, Evergreens (Coniferous), Deciduous Shrubs, Apples and Native Plums.

AGENTS WANTED

**The Jewell Nursery Company**

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**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.**

fee for membership before receiving check for premium; fee for annual membership, fifty cents.

Members or others unable to attend the meeting may send fruit to the secretary, who will make entries and place fruit on exhibition. Transportation charges must be prepaid.

All entries must be made on regular entry blanks which will be furnished by the secretary on application.

F. Cranefield, *Secretary W. S. H. S.*, Madison, Wisconsin.

### Buy Insecticides Now.

Prof. H. F. Wilson, chief of the department of Entomology at the College of Agriculture, has recently made a survey of the insecticide situation and reports as follows:

Arsenate of lead, calcium arsenate, and arsenate of zinc are the three insecticide materials which the grower may expect to use next season. Arsenate of lead is the only material which can be used with safety on the fruit trees. Arsenate of zinc is an efficient poison for potato insects but does not appear to be satisfactory for the control of cabbage worms. Calcium arsenate has proven to be a very satisfactory insecticide for both potatoes and cabbage. As this material is now selling at from 10c to 20c a pound less than arsenate of lead and Paris green, it should be the most desirable material to use for garden and field crops next season. The lowest price on wholesale lots of Paris green which I can secure at this time vary from 45c to 50c, indicating that the grower will be paying all the way from 60c to 80c per pound by next spring. Powdered arsenate of lead can be secured as low as 46½c a pound in large quantities. These are retail prices, the wholesale prices being somewhat lower. Calcium arsenate is being retailed at from 15c to 20c a pound in the paste form and from 31½c to 35c in the powdered form, depending upon the quantity. I have not been able to secure definite prices on arsenate of zinc but it is somewhat higher.

The main point in all of this is that if these prices go up, the dealers, although they may secure these materials at the present price, will run the prices up as high as possible, and the growers are going to have to pay considerably more in the spring than they will if they buy their supplies now.

### Horticulture in Alaska.

No doubt printing of notes on horticulture in Alaska seems to many of our readers a waste of good paper and ink. This may be so but the editor for many years has taken a keen interest in the development of horticulture in this far off region. As Alaska's mineral and forestry resources are developed the raising of vegetables and fruits should keep pace with the increase in population incident to their development and even outrun it. The following clipped from a trade paper shows that already the "export trade" in vegetables may be a matter of great interest to Alaskan gardeners.

Seattle, Sept. 28—The Ryan Fruit Company, which firm will handle the Alaska rutabaga and turnip account for the North Coast territory this year, says that first shipments will begin about Octo-

(Continued on page 44)

PATENTED AUG. 13, 1907

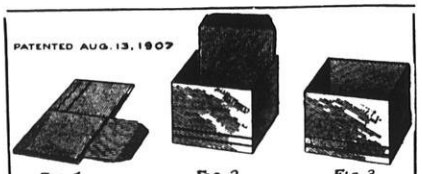

Fig. 1 Fig. 2 Fig. 3

**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 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**

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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 decoration of your grounds. Prices and our new Catalog sent promptly upon receipt of your list of wants.

**Nurseries at Waterloo, Wis.**

Sweet peas may sometimes be planted in the autumn with good results.

ber 15. An estimate of the crop is not yet available, but it is known that the acreage has been heavily increased during the past year.

Freight charges from shipping points to Seattle at $7 per ton unless shippers are willing to quote at a lower figure f. o. b. than in former years may prevent a ready sale of the rutabagas. Yakima is producing a good quality of rutabaga and Vice President E. A. Wanamaker, of the Ryan firm, says that Alaska growers must expect to meet competition in this territory with the product of Eastern Washington to insure demand. The Alaska rutabaga has been very popular with buyers here during the four years it has been on the market.

The Alaska yellow turnip, in the opinion of Mr. Wanamaker, has no competitor. "It is clean, free of fibre or pith, succulent in flavor and yields to the knife like a Washington Winesap apple," he said, "retaining its flavor uniformly throughout every 100-pound sack. Alaska growers have never been able to supply the Seattle demand."

The following notes are from the annual report of the horticulturist, Prof. Georgeson:

### Greenhouse.

The new greenhouse was practically completed and first occupied on March 17, in time to start plants for the season. During the summer a few cucumbers and tomatoes were grown, the tomatoes being especially successful. While the house was erected primarily for plant-breeding purposes, a limited number of greenhouse crops, especially florist's stocks, are being tried. It is too early yet to report results, but there are indications of as successful crops as conditions will permit. Lack of light is the limiting factor for plant growth during the winter months, as the day reaches a minimum length of about six and one-half hours in December, with the sky usually overcast, while the maximum elevation of the sun at the winter solstice is only 9½°. The cinerarias and primulas seem best able to thrive and bloom under these conditions. Nearly all stock tried is looking well, but the growth is slow, although calceolarias, primulas, ferns, cyclamen, geraniums, chrysanthemums, carnations, violets, snapdragons, begonias, and several other plants are making steady progress. The rose seems least able to stand the adverse conditions. Lettuce and parsley do fairly well.

### Climatic Conditions.

The latest date at which the temperature fell as low as 32° F. in the early part of the season at this station was on May 20, while the earliest date the same temperature was reached in the summer was on September 7, making a frost-free period of 109 days.

*Shrubs.*—In addition to the list reported last year the following have proved valuable: Siberian dogwood, golden-leaved elder, *Hydrangea paniculata grandiflora*, Spiræ Anthony Waterer, and *Ribes sanguineum*. The lilac and showing the past season than the showing the paset season than the previous one.

*Roses.*—Of the roses tried at the station the Md. Georges Bruant, an everblooming white Rugosa, hybrid, has proved exceedingly valuable. Agnes Emily Carmen has not done so well. An unknown red Rugosa hybrid is also very valuable. The buds on the Persian Yellow blasted before opening. Other roses are on trial but have not yet had a chance to prove how they will behave.

*Perennials.*—About 75 species and varieties of hardy perennials are now growing on the grounds at the station. Quite a number of these were started from seed

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**And a general line of ORNAMENTAL TREES, SHRUBS and ROSES. All stock clean and thrifty, the bestthat can be grown in Wisconsin.**

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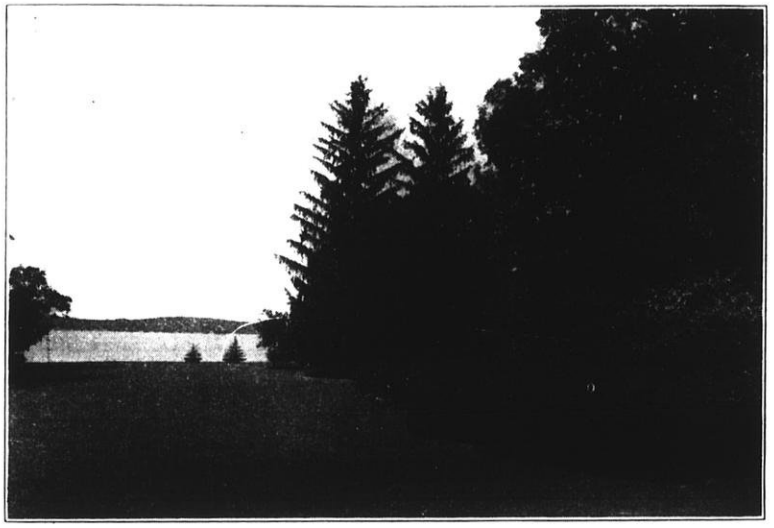

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Keep the children at home by making them proud of it. The most effective and economical way to do this, is to beautify the lawn. Careful arrangement and good plants are essential. Our Landscape Department has specialized in this work, is familiar with Wisconsin conditions, and has probably the largest assortment of choice nursery stock in the state to select from.

**White Elm Nursery Co.**

Oconomowoc, Wisconsin

the past year, hence their adaptability is not yet known. The following have proved from fairly to very satisfactory: *Achillea millefolium*, columbines, Carpathian harebell, Canterbury bells, crocus, cowslip, daffodil, English daisy, Shasta daisy, foxglove, forget-me-not, day lilies, Siberian iris, *Lychnis*, Iceland poppy, Oriental poppy, perennial phlox, English primrose, and sweet william.

Peonies produce a few good flowers, but the plants do not increase in size as they should. Among the perennials treated as annuals, the pansy stands the winter here unprotected.

*Annuals.*—About 60 varieties of annuals were grown, and the following proved highly satisfactory: Snapdragons (Antirrhinum), asters, calendulas, candytuft (Iberis), cornflower, chrysanthemums (mixed), coreopsis (mixed), Extra Early Large-Flowering cosmos, Chinese pinks (Dianthus), African Golden Orange daisy, California poppy (Eschscholtzia), feverfew, Gaillardia, African marigold, French marigold, mignonette, monkey flower, nasturtiums (tall and dwarf varieties), pansy, petunia (single mixed), *Phlox drummondii*, Burbank poppy, Shirley poppy, *Rudbeckia*, stocks, and sweet peas (tall and dwarf).

Marguerite carnations made a fine growth, but were just beginning to bloom when cold weather came. Those lifted and taken into the house have done finely. Centaureas, other than *C. cyanus*, and the morning-glory were failures, while Gypsophila elegans, marvel-of-Peru or four-o'clock, verbenas, and zinnias did moderately well.

**HARDY OLD FASHIONED PLANTS**

**OUR SPECIALTY**

**The best varieties for Wisconsin conditions, carefully grown and carefully packed. Write for prices**

**WILLIAM TOOLE & SON**

**Hardy Plant and Pansy Farm** **Baraboo, Wis.**

---

Have you a good supply of nuts for the winter? Take a day off and gather butternuts, walnuts, or hickory nuts for the winter.

Give the garden a final cleaning. Burn all rubbish. Leave the land clear.

---

Parsnips and salsify may be left in the ground over winter. As a rule, it is perhaps safer to dig and store them in a cool place in sand or soil. They are more easily got at for winter use when stored than when left in the field.

---

The value of spraying the orchard at the right time and in the right way again this season has been shown. Much wormy and scabby fruit is on the market from local growers. This moves slowly, while the clean well-graded fruit moves rapidly and at good prices.

### Storing Vegetables.

By storing, it is comparatively easy to keep such vegetables as beets, carrots, cabbage, celery, dry beans, dry lima beans, onions, parsnips, potatoes, sweet potatoes. With the exception of beans and turnips, these crops may be stored in the cellar, in pits or banks, or in caves and outdoor cellars.

Pits or banks should be made in a well-drained location. A shallow excavation some 8 or 10 inches deep and of suitable size should be made. This is lined with straw or leaves and the vegetables placed in a conical pile on this material. The vegetables are then covered with straw and then earth, the depth depending upon the severity of the winter. The pits may be covered with additional straw, corn stover or manure during very severe weather. The outdoor cellar or cave is even more satisfactory but the entailed expense is greater.

Beans may be kept in any dry place such as the attic or pantry. Now is the time of the year to care for these crops so that they may be made available during the winter and early spring.—*U. S. Food Administration.*

These suggestions regarding out-door pits may be valuable for milder climates than ours, but for Wisconsin conditions the out door pit or bank is a snare and a delusion. Unless covered with at least 18 inches of straw and earth in alternate layers the "interned" vegetables will freeze solid and if so covered will be inaccessible until spring. Better depend on a cellar.—Editor.

---

Prepare the land now for shrubbery or flower beds next spring.

Clumps and areas of sumac with their varigated colorings were one of the delights of riding through the country the last of September and early October. Sumac is easily transplanted and makes a fine plant to hold a bank that is too steep or sandy to seed. They should be mowed close to the ground each spring if the best appearance is to be maintained.

---

It is not too late to plant bulbs either for forcing or outside. Try a few and you will want more next year.

---

Wealthy and other late fall apples, picked carefully and wrapped in paper and put in a cool cellar, will keep much longer than if handled roughly in boxes or baskets.

---

Do not pile squash, cabbage or onions in large piles or bins in storage. They should have a good circulation of air about them.

---

Has the grass been removed from about the apple and other small trees? Rubbish about the tree makes a good harbor for mice over winter. Better put some sort of protector on the small tree to prevent sun-scald and rabbit injury.

---

Wartime gardens have been a success this year in very many cases. Some have grown to weeds and have been a liability rather than an asset, but nothing has turned people's attention to the value of garden produce like the conditions this year. Let's plan for more and getter gardens next year.

**"We have a Fine Lot of Plants for the Garden"**

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**With orchard that cannot be beat in Waushara County**

180 acres good sand loam adapted for potatoes, corn, clover and rye, beautiful trout stream flowing through pasture land; about 20 acres timber.

Orchard and Home: 500 apple trees in their prime. Buildings worth $3000 excellent location

This property is a money making bargain to someone who likes to handle apples.
Price $45.00 per acre.

**Appleton Fruit Farm**
Pine River, Wisconsin

**Quality Stock**

Strawberries
Native Plum Small Fruits
Apple

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62nd Year

**Kellogg's Nurseries**
Box 77, Janesville, Wis.

**GET OUT OF THE CITY AND STAY OUT.**

---

You can make more money than you are making now and live a healthier, saner life.

Men and women of the right sort are needed on the land now.

---

**Come to the Annual Convention at Madison, Dec. 11 to 13 and Learn How.**

One of the many homes our Landscape Department has helped to make attractive.

We are now ready to help you make your place a Beauty Spot.

A booklet showing places we have planned and planted is free.

You want the best varieties when planting your Orchard, Home Grounds or Fruit Garden. Our catalogue tells you about them.

**The Coe, Converse & Edwards Co., Nurserymen, Fort Atkinson, Wis**

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# Annual Convention

# State Horticultural Society

Madison, December 11, 12, 13, 1917

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# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

Volume VIII | Madison, Wisconsin, December, 1917. | Number 4

HORSE CHESTNUT, AESCULUS HIPPOCASTANUM, A NATIVE OF CENTRAL ASIA BUT QUITE HARDY IN WISCONSIN.

## Winter Protection for Fruit Trees, Berries and Roses.

We make no apology for giving below, word for word, directions for winter protection published in the October, 1916, issue of Wisconsin Horticulture. If the advice was good then it is good now. From present appearances there will be plenty of opportunity to cover berry bushes and roses early in December.

### THE ORCHARD

Don't prune. Leave that job until March or April. Pruning leaves wounds and these not only will not heal until growth begins, but the wood will check and the bark and underlying tissues die and thus prevent proper healing next spring.

Protect young trees from attacks of rabbits and mice. Wrap the trunks with tarred paper or use veneer strips fastened with string or wire. If paper or veneer is used it should be removed next spring. Tarred paper will surely injure the trunks if left on during the summer and veneer harbors insects.

For protection against mice mound earth around the trees to form a cone of six or eight inches. This is usually sufficient to turn mice. Tramping the snow around the trunks is sometimes effectual. Mice rarely trouble trees in cultivated orchards. Grass or weeds left around trees in the fall invariably attract mice.

### BERRIES

Except in the extreme southern part of the state raspberries and blackberries should be given winter protection in order to insure a full crop. Some market growers never cover berry plants and claim they get a satisfactory crop every year. Their claims are not usually well substantiated. Crops from unprotected fields are often light and not infrequently the canes killed to the ground. **It pays to give winter protection.** To the novice it seems an impossibility to bend down and cover with earth a row of six-foot canes and yet it can be done. Use only heavy forks, no spades, or shovels, Take out a little earth from one side of the clump, shove a fork down close to the canes on the other side and push and pull until the clump lies flat. It can be done. A few roots may crack but there will be plenty left. Anchor the tips with earth and proceed to the next clump. Later cover with 2 to 4 inches of earth. Some growers merely fasten the tips and depend on snow for covering. Sometimes we have plenty of snow.

### GRAPES

Prune heavily and cover the same as raspberries.

### CURRANTS AND GOOSEBERRIES

Require no winter protection.

### ROSES

The rugosas, the yellow garden roses, Persian and Austrian yellow, Scotch white and a few other hardy garden kinds require no winter protection, but the hybrids known variously as hybrid perpetuals, hybrid teas, etc., and including such varieties as "Jack," Paul Neyron, La France, etc., must be covered; also the climbers, Dorothy Perkins and Crimson Rambler. By careful work, bending at the roots at the same time pulling down on the tops even large bushes may be laid flat without breaking. Peg down the tops and leave until the ground has frozen, when mice will have picked out winter quarters elsewhere; then cover with straw or leaves. Carpets or sacks laid over the bushes furnish ample protection if fastened securely. It is sunshine that winter-kills roses, not frost.

Roses may also be protected without bending them down by tying the bushes top and bottom and wrapping with carpet or sacks. In this case fasten the covering securely at the bottom. The loss of a few inches of the tips merely saves that much spring pruning but if the wrapping works away from the bottom we may have to prune close to the ground next spring.

Herbaceous plants that are really hardy will come thru all right without any winter cover and no amount of cover will save half hardy or tender kinds. A light covering over the roots of hardy kinds will do no harm but should be removed very early in spring.

So much at least we should do in October or November. It seems like a lot of work, but it can all be done if the spirit to do it is present. It pays, pays in dollars and cents and in the feeling that we have done our share. We owe it to the trees and plants.

## Apple Tree Bulletin

(1) Rabbits and mice are both very fond of the bark of apple trees and very often "girdle" them.

Protect the trunks of your trees all the way from the ground to the first branches. Use strips of wire (mosquito) screen folded around the trunks and fastened with wire.

(2) Tarred paper or even heavy building paper may protect from rabbits but not from mice.

If either is used it must be removed next spring.

(3) A cone of earth around the base of tree (6 inches high) will usually turn mice.

(4) A shot-gun is also a good tree protector. The Game Laws permit you to kill rabbits, *on your own land,* at any time of the year even if you have no license. Be careful to observe the *underlined words.*

### Winter Protection for Strawberries

(1) Sometime before winter sets in, the strawberry bed must be covered, not to protect the plants from frost but to protect them from heat.

(2) We want the plants to freeze in the autumn and most of all we want them to remain frozen until spring. Alternate freezing and thawing will seriously injure the plants.

(3) After the ground is frozen and before heavy snow, cover the plants with any material that will keep out sunshine. A light covering is sufficient. The ideal material is marsh hay. Clean straw or cornstalks may be used. Branches of evergreen trees, hemlock, spruce, cedar, etc., furnish excellent material. Leaves are not desirable as these form a covering which is too compact. If stable manure is used it should be light and "strawy." Any material which contains weed or grass seeds is undesirable.

### Fresh Rhubarb in Winter

Canned rhubarb is good, fresh rhubarb is better. By digging a few roots from the garden before the ground freezes we may easily have the fresh kind nearly all winter. In the October, 1916, number of Wisconsin Horticulture, Pres. Rasmussen outlined the plan of procedure as follows:

Select three-year old plants, or as much older as you may have, dig late in the fall just before it freezes. Sink your spade full length of blade, cutting a circle close to the hill, then by carefully prying you can lift the hill in a solid clump without loosening the dirt or breaking the roots to any extent. Place these roots on the north side of a building or bush (out of the sun) and let them freeze for about four weeks, this is very essential for if they are not thoroughly frozen the crop will be a failure. Now take an old barrel of any kind put in about four inches of saw-dust or garden soil, even coal ashes will do, but saw-dust is light and clean and holds moisture well. Next place the frozen clump in and pack saw-dust or other material around roots and cover to the depth of about three inches. If you leave the crown exposed you will get too many small stalks. See that the filling is two or three inches higher around the outside of the barrel than in the center, thus preventing the water from running down the outside of the barrel onto the floor. Place in the cellar, water well and cover with carpet, burlap or anything convenient that will entirely exclude the light. Light would develop leaf at the expense of the stalk thereby lessening the crop; light would also rob the stalk of its rich red color, delicate flavor and tenderness.

Now all you have to do is to keep it watered and watch it grow. The temperature of your cellars may vary from 35 to 70 degrees Fahrenheit. The higher the temperature the faster it will grow, but any cellar will grow rhubarb. A hill of rhubarb handled in this way will produce more pounds of edible plant than if left in the ground as its food has all been stored in the root for the coming season and is all transformed into stalk insted of leaf.

Asparagus may be grown in the same way except that it must be kept warmer and must be given some light and it will be found more delicate to handle. Green onions may be grown from sets in flat boxes and may be given plenty of light. If one has plenty of room and a little time beet greens might also be added to the list, planting the old beets same as onions.

### A Most Wonderful Mixture

It's an unfortunate fact that the less a nursery agent knows, the more stock he can sell. The ignorance of many traveling representatives of nursery firms is profound. Witness the following: A member who lives in Milwaukee inquired of the agent of a well known Wisconsin nursery firm as to a disease affecting his raspberry plants and was told that it with anthracnose and was advised to spray with the following mixture:

¼ lb. paris green.
3 lbs. blue vitrol.
4 lbs. *air slaked* lime.
½ lb. wood ashes.
30 gallons water.

Make one day before using: two applications this fall, four days apart!

No doubt the paris green is designed to kill the "bugs" that cause the disease. The ½ pound of wood ashes in 30 gallons of mixture is undoubtedly meant to serve as a fertilizer next spring, but why, oh why, the *slaked* lime? May we suggest the addition of a pinch of Bull Durham and a little saleratus?

## The Gardener's Advisory Council

In order to utilize to the best advantage the great store of garden knowledge in our Society the Gardener's Advisory Council was formed and one hundred aides appointed.

The members selected were asked to spend four hours a week during the growing season in giving aid and comfort to back lot gardeners. Reports were received from a few members of the Council during the season showing that they took the plan seriously and were at work.

On Nov. 1st a call was sent to all members of the Council to report and the response was most gratifying. It's a mighty fine thing to be able to help someone and the members who spent a few hours this summer helping their less fortunate neighbors doing this missionary work among the heathen, must and do feel well repaid. The Council members were asked in particular to state how many of the real beginners met with success, how many fell by the wayside when the hot weather came and the weeds grew fast, and what proportion of the beginners are planning to have gardens next year. Here are extracts from a few of the reports:

Perhaps the most strenuous case of an amateur back yard garden to come under my notice was that of a city tailor who came to know about his back yard behind his store. On investigation it proved to be a common red clay bottom covered with two to four inches of coal ashes and had been used for years as a burning and delivery ground for teams. It was so hard that one had to use a pick to break it up. He got a man at it and hauled in some old manure and soft soil to mix with the clay, built a fence around it, and had quite a nice little garden about 16 x 30 ft. There was a row of red geraniums along one side, and several varieties of vegetables on the other part. This little spot was changed from the usual "back of the store" yard to quite a pleasant little garden.

So far as I know the only man who has expressed the idea of giving up is an architect in town who planted a patch of cabbage out in the country and got it very nicely started; then on his next visit his beds were all cleaned off. Much astonished and quite indignant, he went to his farmer to know what had happened to his cabbage patch. The answer came in one word—"woodchucks." So the architect thinks he will stick to his trade hereafter.

I think the "council" is a good stunt and ought to be continued. Think I have been able to give real help in a number of cases.—Irving C. Smith, Ashland, Wis.

Many vacant lots had been offered for gardens, and most of these were cultivated by women and children, and good results obtained.

I think the best work I did was to take extracts from the articles by Professor Moore and others, which appeared in Wisconsin Horticulture, and have them printed in our local papers. I know that many of our amatuer gardeners profited by them; also I know that in many families the household expenses have been reduced by this garden movement, and am quite sure that the garden spirit will continue, and will probably crystallize into a garden club, which will work together with the schools, giving opportunity for interchange of thought, and furthering a community spirit in the work.

I did not see the man, whom rumor located in our town, who bought a peck of seed potatoes and after depositing them all in one hole in the ground hilled them up and expected to raise 50 bushels or so. Think our club will educate him. Also the one who advised our people to save seeds from the best vegetables and serve the vegetables on the table after the seedshave been cut off.—H. J. F. Burlington.

I was not able to do as much in this capacity as I wanted to do for the reason that I have transferred my business to Milwaukee, but still have my home at Lake Mills. At Lake Mills gardening was quite successful this season, all those who planted and properly cared for their gardens were able to harvest good crops. One small patch of ground about 1 x 1½ rods produced four bushels of potatoes and this party will make an effort to do better by cultivating every available foot of ground on his lot next season.

Being in Milwaukee except Saturday and Sunday I attended to some advisory work here and succeeded in inducing a few of my neighbors to plant a back yard garden also several plots of potatoes. The vegetable gardens did very well and will be continued and extended next season but weather was bad for early potatoes in Milwaukee and the crops were not satisfactory. However all but one who tried will try again and I will advise them what to plant as seed and feel they will meet with more success.—Conrad Engsberg, Lake Mills.

In reference to your inquiry regarding the working of the Gardener's Council Advisory in that portion of this city with which I come in frequent contact, can say that I consider my efforts in that line have brought some success.

For one thing, I raised a quantity of cabbage plants from seeds of different varieties and distributed them around, and I consider that line of action brought more success than anything else, so I propose to raise more next year for that same purpose. A boy will come along some damp evening and get a few plants, and when shown how to tend them usually gets results. Plants appeal to him more than so much seed to sow. To anyone conversant with gardening it seems but little trouble to raise cabbage plants and the boys certainly appreciate them.

The School Board has also taken up the matter and appointed a teacher to each school, and are starting night schools for beginners to instruct them in the rudiments of raising vegetables, so the movement is getting well under way in this locality.

Regretting my inability to offer suggestions of any value, I am—E. Hawarden, Superior.

Replying to yours, as a member of the Gardener's Council, we about Wyocena, have been doing some very good work along the line of back yard

farming this season in spite of a severe hailstorm June 22 and 23. We can cite several cases of young people and others who have done some real good gardening and who are much encouraged as beginners.

So far as I know, all are planning to stay in the game for next year. Many, to adapt scripture, have a zeal of gardening but not according to knowledge. An office man planted potatoes for the first time in his life this year. In August he reported that he was disgusted with growing potatoes and should not try it again—they had not even blossomed but were turning yellow and seemed to be dying. Upon being advised to carefully dig up one of the plants to see what was the matter, he was overjoyed to find a good crop of spuds.—J. T. Fitchett, Janesville.

Dear Sir:

In response to your inquiry, please look the following over.

Beginners in gardening are made like beginners in farming. In both cases "there is land galore as the boy says, but there is nothing doing." They work while the spring fever lasts and when the weeds begin to interfere, their work is done. There is only a small per cent of the good intentions that are not carried out to completion, and those are such that like to start the race to coax others along and not patriotic enough to finish.

An amusing incident occurred to one of the old members of the Garden Club who had potted hyacinths. After all her patience had exhausted, she complained to one of her maids that the bulbs were failures. After investigating it was discovered that the bulbs were standing upon their heads. Think of it. Member of a Garden Club. Will you please pour me some more tea?

As a whole we have done wonderfully well. One young man did not recognize the sprouted seeds of many things he had sown, but his persistence in the work made him succeed. Inexperienced beginners should not spend too much time on novelties of the garden, like Brussels sprouts, celery, lima beans, egg plants, peppers. Celery will do if we persist and know how. Navy beans were not what they should be on account of late and early frosts. Beans crowded for space on rich soil were a complete failure. We had new troubles with onions and cucumbers. The former rotted when the bulbs were good size. The onion maggots usually attack in the early season. The cucumbers in many gardens died completely. The attack was near the root system or base of the vine. Could not find stem borers which I suspected. On light soils this did not happen.

"We'll make our fish story a potato story . Because of the shortage of seeds and wanting something for nothing, a young Mrs. handed her husband a pan of potato peelings which he should plant. It will not do to tell of his indignation and look he gave his wife, so she planted a short row in his absence, but requested him not to interfere with her garden, and she got results. This was land never cropped before. A few hills produced tremendously. Twenty-eight potatoes in one hill. Yes. But how large were they? That I'll not say, but will say that it was an *even market basket full.* Three tubers were too small for any use, but not too small to plant next spring.

Our local weather conditions were so good, i. e., in rainfall that fully ninety-five per cent of the beginners will try again.

One discouraging feature of this gardening is the excessive rent exacted by holders of idle lands. Acres and acres lay idle, but the moment anything becomes productive a tax is charged. In some cases more than the parcel of land can produce and the beginners not knowing its productivity, pays the rent and fails to get profitable returns, hence discouraged.—A. H. Lemke, D.D.S., Wausau, member of Gardener's Council Advisory.

(The owners of vacant lots in Wausau must be a fine patriotic, generous, charitable bunch! This is the first and only instance known where a cent has been charged for the use of vacant lots which were used for gardens.—*Editor.*)

Regarding the Gardener's Advisory Council I have had some experiences which I think must have been with real amateurs. Two different people have phoned to know "what is the matter with my cabbage, its all cracking open?" Quite a large number have called up about tomatoes. One woman wanted to known if she should pick the blossoms off. One complained that they were getting no tomatoes, and on going to see, I found a very fine kitchen garden of about four or five square rods of land. Everything in it was good and well cultivated; some things were very fine. The one stumbling block was the tomatoes. I or some one else had told them to prune off all the side branches and train to one or two stocks to the plant. They were cutting off everything and leaving bare arms, the trouble being that they did not know the difference between a large compound leaf and a branch. This seems to be a common error. Several people have called to know if they would have any potatoes because there were no blossoms, or because the blossoms all fell off. Of course I told them the crop of potatoes was not dependent on blossoms, while the woman with her tomatoes was told to leave the blossoms on.

We all of us intend to "come back" next year with renewed zeal, and excel all previous records. Yours for good gardens next year.—Scott S. Dey, Wyocena.

As Gardener's Counsel around Platteville, I had many back lot gardens to look after, and by keeping at owners to till the soil more and in some cases using water during dry times, the results were fair although many were well satisfied. Many small lots furnished the family with winter vegetables, as returns for their labor, and hope during 1918 to increase the work, making special effort to have more spraying done at proper times. I am making special effort to secure better seed for 1918.—N. E. France, Platteville.

In reply to your letter of inquiry regarding "Beginners' Gardening," will say that much was done both in the country and city to induce beginners and particularly school children to do something. For the past several years I have had, as county superintendent, the country pupils make gardens or at least take an active part in their parents' gardens. Every fall practically every country school had an agricultural exhibit in their school.

*(Continued on page 55)*

### Amateur Flowers at State Fair

Mrs. C. M. Strong, West Allis.

When Wisconsin Horticulture comes I usually read it through with pleasure and profit. Seldom do I disagree with the *Editor.* But when looking over the report of Horticulture at the 1917 State Fair I read that "The amateur flower exhibit was just a little bit better than ever before shown."

Mr. Editor, I rise to protest vigorously, vociferously and violently. Every amateur exhibitor will tell you singly and collectively, that the exhibit at the 1917 Fair was the poorest in years. But,—there is a reason why it looked better to most people. First, because there was such a small exhibit there was not the need of crowding as usual and second, our perfectly good superintendent added a shelf which helped to relieve the usual crowded condition. Why, actually one could tell there were flowers on exhibition instead of a conglomerate mass of something, no one knew exactly what.

You can imagine my thoughts one day, when standing near the exhibit I heard one woman say to another, "Why, Celosia and Centuria are two different flowers. I always supposed they were the same thing." Just imagine flowers being jammed together so folks think they all grow on one plant. We are very glad, however, that someone else besides ourselves are beginning to think we need more room. We have though so for a long time. Have said it very softly for several years and were really beginning to think we should have to do as the spoiled child does, "Shut our eyes and *howl"* until we were given *more space,* just so we would be still.

You ask for my idea of what an Amateur flower exhibit should be.

The building up of a spirit of generous competition, each exhibitor working not for premiums alone, but the broader and better wish, to have an exhibit that is worthy the name "Exhibit."

There is no reason why the Amateur Exhibit should not be a most beautiful display of the choicest treasures of the flower lover both garden and window flowers. It needs only a little help from those who are interested in the exhibits and co-operation on the part of the State Fair Board and the W. S. H. S.—of this we who are doing our best to be real exhibitors are sure of.

We are trying to make the exhibit more beautful by inducing other flower lovers to exhibit and we are sure we are going to get all the help we ask for. The space we have is small but perhaps ways may be found to increase it.

Now just a few things I have heard in twelve years of listening to comments on the exhibits. "My aren't those plants lovely, *But say,* if I could just bring my Fern or Fuchsia or Begonia, (it just depended on what particular pet plant they had) why it is just beautiful. But they don't give anything for single plants, only Palms. Why don't they?—why?

Then every year the same questions. "I wish I knew how many vases is meant by a display." "I have such beautiful Asters, or Snapdragon, or Dianthus, if they would only tell how many vases you must have to compete." "Do you suppose all those Asters were brought by one person?" "I could not bring that many because you see we only have a lot and we want to grow some vegetables too. But my flowers are so nice I would like to exhibit." Why should not those people have a chance?

Why could there not be a definite number of vases for some of the flowers. We need those people, they are the real flower loving exhibitors.

There should be an increase in the premiums of some of the exhibits. Annuals and Hardy perennials while others could be lowered as they are easy to grow and exhibit. Also some should be taken off the list as there has not been a real exhibit in them for years. Lillies, for example, and Sweet Peas, Nasturtiums, Decorative grasses, Hydrangeas, and as for Roses, the only real Rose exhibitor we have says she wishes something else was put in their place as she has no competition, and it is no fun.

Then, too, *why* can we not have exhibits of Garden Clubs, small clubs who will exhibit on something of the plan of County Exhibits. If the Garden Club idea was discussed at the Winter Meeting and at the Institutes this winter, and also given a boost in WISCONSIN HORTICULTURE, am sure the results would be gratifying at the Fair.

I have been very much pleased with the interest shown in our little Garden Club here at West Allis. People from different parts of the State have asked questions about our club. How we organized, how many members we had and why did we like the small Club? Would not a larger Club do better work? To that question I have always given this answer. The small Club usually *works,* the large Club *argues.* Also a small club is usually composed of members who are congenial, therefore they can do better work.

## Heroic Women of France

By Dr. Alonzo Taylor

My words are not powerful enough to do even scanty justice to the most heroic figure in the modern world, and of ages past—the woman of France.

Of the healthy men who are not engaged in the military service in France, practically all are engaged either in transportation of, or in the manufacture of munitions, leaving the agriculture absolutely to the women. Not only this, but they have stepped into the place of work animals; you can go into any section of France today and se women of magnificent, noble womanhood hitched to the plow and cultivating the soil. All of the agriculture rests upon their shoulders. The home, always an extremely efficient one, maintains a few old men the wounded and the tubercular. Uncomplaining, with high devotion, with an attitude that amounts almost to religious exaltation, the woman of France bears the burden.

Now, conditions being as they are, does it lie within the heart of the American people to preserve and hold to every convenience of our life at the expense of adding an additional burden to the womanhood of France? This is the exact question that is involved in our substitution of other cereals in place of wheat.

The women of France must be enabled to hold up the morale of the French soldier until next spring. The morale of the house decides the morale of the soldier in the fighting line. We can do this by giving them the greatest possible freedom in their food supply, and of this wheat is the chief factor.

## The Gardener's Advisory Council

*(Continued from page 53)*

In a few cases five or six schools combined these exhibits, or as I have called them, "School Fairs" in a central hall.

In the city about 350 children did some work in gardening. Of course not all saw the work through, but enough was done so that every ward school in the city had an agricultural exhibit. Small prizes were given in each ward school. The best of all exhibits was displayed in one of the windows of a down town store.

As for grown-ups and their gardens, will say that fully twice as much land in our city of Manitowoc was planted to gardens as ever before. About one-third of the additional gardeners had little experience in gardening. Many questions regarding gardens were asked of me. If I could not give the information, I referred them to men of more experience and also to state bulletins on the subject. I had on hand many bulletins which gave immediate help.

The work of school children's gardens will go on next year. How much other beginners in gardening will do next year is hard to say, but am inclined to believe more gardening in general will result from our first concerted action toward more and better gardening.—C. W. Meisnest, Manitowoc.

As this is not a city, but a farming locality, every farm has a so-called garden, but very few are real gardens. A real garden should be planted to enough vegetables to supply the daily table throughout the season, and a surplus of some varieties for canning and of some for winter storage. Most gardens had only a spring planting of some of the common vegetables, whereas successive planting of some varieties is not practiced at all, while some of our most delicious vegetables are unknown to many. In many instances cultivation was insufficient, as in the hot dry season when there were no weeds there was also no cultivation. My advice to those people is to plant more varieties and have successive plantings of some of them and also to do more cultivation to loosen the soil whether there are weeds or none.

Hoping my little work will do some good, and as I assume we will again have to do our duty to the country needs the coming season, I am ready to do my share.—Miss E. M. Goelzer.

The beginners in gardening, of whom there were more than usual, had the usual sorrows that go with the profession but with all the troubles, I am glad to say, there was some very good work done. Of the adult amateurs, probably half will not try it again but the other half will raise practically as much as all did this year.

The greatest difficulty was through lack of appreciation of the benefits of cultivation. One wholesome result is that many will realize more forcibly than ever before the fact that the people who raise their beans and potatoes need to know and do something besides dropping seeds into the ground. —E. H. Niles, Oconomowoc.

If there was any especial effort made to increase the products of the gardens in the village gardens, it was either potatoes or beans. Some of the yields of potatoes would do credit to a general farm crop. There are always a few who think they can buy cheaper than they can produce, and a few gardens would bear out the conclusion, if their owners earned enough any other way to purchase same. The garden excuses the purchase, and the chance to purchase excuses the garden. They are as easily satisfied as "Pat whose pig cost him more than it sold for six months later." He had the use of the pig.—H. H. Harris.

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Cyclamens are among the desirable house plants at this time of year. They may be kept over several weeks if kept in a cool room and if some attention is given to their watering. It takes about 18 months to bring the plant to flower from seed. Hence, it is not desirable to raise them in the house from seed.

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Be sure that the snow is well tramped about the apple and plum trees. This will discourage mice from nesting near them.

# Wisconsin Horticulture

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## The Annual Convention

Your attention is invited to the convention program which appears in this number. This three-day program is an expensive affair and has been prepared for your benefit. It rests wholly with you whether or not you get the benefit of it. Our meetings will be in the Capitol building, probably the Senate Chamber, and the fruit display will be staged in the rotunda on the second floor as last year. Exhibitors are reminded that all exhibits must be completely set up, tagged and ready

PROGRAM.

**Annual Convention, State Horticultural Society, State Capitol, Madison,**

Tuesday, Wednesday, and Thursday, Dec. 11th, 12th, and 13th, 1917.

Capital Hotel Headquarters for Officers and Delegates.

Tuesday Afternoon, 2:00 o'clock.

Opening Address.
Introduction of Delegates from Minnesota, Iowa, Illinois and Northern Illinois Societies.
Amateur Gardening in America.....Jas. Livingstone
Address: What Next?.....Wm. Toole, Sr.
Ten Perennial Plants That Everybody Ought to Grow...J. F. Hauser
Paper.....Axel Johnson
Roses for Everybody.....Cecil Britt
Illustrated Lecture: Planning and Planting the Farmstead for Efficiency and Beauty.....Prof. F. A. Aust

Tuesday Evening.

How Women Can Help Win the War in Horticulture and in the Home.

Address by Mrs. H. H. Morgan, Member of the State Council of Defense and Chairman of the Woman's Committee for Wisconsin of the National Defense Council.
Address by Miss A. L. Marlatt, Dept. of Home Economics and Home Economics Representative of the U. S. Food Administration.
How Women Can Help in the Garden Movement.....
.....Mrs. C. E. Strong, West Allis
Woman's Work and Social Service.....
.....Miss Louise Tillson, Milwaukee
War Garden Work in Oshkosh in 1917 and The Plan for 1918.....Mrs. J. J. Ihrig

Wednesday Forenoon, 9:00 o'clock.

Business Session from 9:00 to 10:00 o'clock.
President's Address: Report of Secretary, Trial Orchard Comittee, etc.
Election of Officers and Executive Committee.

---

Marketing Small Fruits.....W. D. Cowherd, Missouri
The Need of a National Law Licensing Commission Merchants.....Samuel Adams, Editor American Fruit Grower
Selling Apples Direct to the Consumer.....A. K. Bassett
The Wisconsin Apple Grading Law.....Dr. E. D. Ball

for the judges by one o'clock Tuesday afternoon. No fruit will be judged which is not ready at that time. Metings will be called to order promptly at the time indicated on the program.

### Pass the Apples

The following poem by Frank Simpson of Huntington, W. Va., was published in a recent number of the Kickapoo Courier of Gays Mills, J. A. Hays, Editor.

**Pass The Apples**

When every pool in Eden was a mirror,
That unto Eve her dainty charms proclaimed,
She went undraped without a single fear or
Thought that she had need to be ashamed.

'Twas only when she'd eaten of the apple
And found that evermore she'd have to grapple
With the much-debated problem of the nude.

Thereafter she devoted her attention,
Her time and all her money to her clothes,
And that was the beginning of Convention,
And Modesty, as well, I suppose.

Reaction's come about in fashions recent,
Now girls conceal so little from the men,
It would seem, in the name of all that's decent,
Some one ought to pass the apples round again.

Wednesday Afternoon, 2:00 o'clock.

Back Yard and Vacant Lot Gardens—The A. B. C. of Gardening:
Soils and Soil Preparation: Manures ---------- N. A. Rasmussen
Best Crops: Early crops, succession crops, vegetables for the cellar: best varieties ---------- A. Martini
Seed Sowing: Cultivation, Watering ---------- J. W. Roe
What I Accomplished in a City Garden ---------- Harry Hotchkiss, Oshkosh
What Boys and Girls Clubs Are Doing to Help Win the War ---------- Prof. T. A. Erickson, Minn.
The Sprinkling System for the Vegetable Garden ---------- G. C. Rasch
The Skinner System ---------- W. B. Coles, Representative

Wednesday Evening.

"Come over to our house for supper this evening." A very informal gathering of members and visiting delegates.

Thursday Forenoon, 9:00 o'clock.

The Culture of Small Fruits ---------- J. L. Hartwell, Illinois
Fifteen Red Raspberries and the Best Three ---------- W. J. Moyle
The Cranberry Industry in Wisconsin ---------- C. M. Seeker
Old Standard Varieties of Tree Fruits vs. New Ones ---------- O. M. McElvain, Illinois
The Fall Bearing Strawberries as a Market Crop ---------- M. S. Kellogg
Overhead Irrigation for Strawberries ---------- J. R. Williams

Thursday Afternoon, 2:00 o'clock.

Recent Significant Facts in Horticulture ---------- Prof. J. G. Moore
A South or Eastern Slope Best for Fruit Growing and Why ---------- W. J. Moyle
Cherry Growing in Door Co. ---------- Moulton B. Goff
Control of Cherry Leaf Spot ---------- Prof. G. W. Keitt
Winter Injury of Cherry Buds ---------- Prof. R. H. Roberts

### Markets for Cull Fruit

W. J. Wright, Alfred, N. Y.

Last week I had the pleasure of driving through a large portion of the western New York fruit belt. The peaches had been picked and apple harvest was in full swing. This year the apple crop is small and in many instances is poor in quality, but what impressed me more than anything else was the fact that there is a market for every apple. Buyers are keen for barrel stock, the evaporators are offering as high as forty and fifty cents a bushel for windfalls, while the cider mills and vinegar factories are in the market for such fruit as the evaporators and canners cannot use.

It is this opportunity to dispose of cull fruit to advantage which makes apple growing profitable in western New York. The orchards as a rule are not so well cared for as in some other parts of the country, there is much scale and disease, and though the climate is favorable, a yearly crop is by no means assured. On the other hand not a single apple need be wasted. Many growers told me that they sold their culls and windfalls for enough to pay for the cost of pick-

*(Continued on page 59)*

## Character Sketch of John Howard Hale

To start an industry by delivering your products in a push-cart and to see that industry grow until you deliver in self-owned refrigerator cars was the privilege of America's foremost horticulturist, John Howard Hale.

He was born November 25, 1853, in Glastonbury, Connecticut, and died in his native town October 12, 1917, being the son of John A. and Henrietta (Moseley) Hale. He was known as the "peach king" to all American horticulturists. His holdings in acreage comprised an 1,800 acre peach orchard at Fort Valley, Georgia, and two peach orchards in Connecticut, whose combined acreage is 1,200 acres. One of these orchards is at Glastonbury; the other, at Seymour.

When fourteen years of age he began work on a neighboring farm in New Britain. For this work he received $12.50 a month, worked fourteen hours every day, and seven days every week. During the first eight months of this time he spent only $23.00 the remainder he sent home. He used for personal expenses $7.00 of this money and $16.00 was used to buy fruit trees.

There stood in a fence corner of a field which John Hale plowed the first year at New Britain, a peach tree whose fruit was very luscious. The lad enjoyed these peaches. Then and there occurred to him the thought that on mother's rocky and hilly farm near by peaches like these would grow. From that moment on John Hale was a horticulturist.

He started with a spade, shovel, hoe, push-cart, and a few strawberry plants and increased his holdings until at the time of his death these comprised 3,000 acres of highly cultivated orchard lands in Georgia and Connecticut, with every modern equipment necessary to carry on the work in the most approved manner. Most of the methods used being of his own innovation.

He was the first American orchardist to sort, grade, and pack fruit, and to label, and to guarantee it according to its grade.

John Hale ranks as a creative genius, because of the many varieties of peaches he originated. Even in the department of agriculture at Washington he was considered the best authority on peach culture. When that department had puzzling problems on the growing of peaches it appealed to him for information.

The story of his denuded peach trees of one season, best illustrates his venturesome spirit. One of his Connecticut orchards was infested with "brown rot". He sprayed with Bordeaux mixture to control it, but used too much and all his trees lost their leaves.

He asked the horticulturists at Washington for help and all orchardists in whose knowledge he had faith, but there was none to advise him. He next consulted with his Connecticut helpers and soon a boat load of readily available nitrate of soda and muriate of potash from New York at $90.00 a ton was on that orchard. Providence helped by sending warm rains at just the right time and ultimately leaves were again on the trees and in August and September these trees bore the finest of peaches.

Mr. Hale is most widely known for his knowledge of growing peaches, but he also grew apples successfully and is equally as much a recognized authority on apple culture. However, his apple orchard was of more recent origin. Not many years ago he started it in Connecticut with the view to revive an interest in apple growing in his native state.

He was a writer on horticultural subjects for the *World's Work* and *Country Life In America*. For fifteen years he was associate editor of the *Philadelphia Farm Journal* and during that time was also editor of the agricultural column of the *Hartford Courant*.

He was numerously and variously honored as an intellectual, altho denied even a high school education.

The University of Wisconsin, in 1914, presented him with an honorary testimony recognizing his eminent services in the development of agriculture and in appreciation of his efforts for the improvement of the fruit industry

In presenting him with this degree of honorary recognition,

H. L. Russell, Dean of the College of Agriculture of the University of Wisconsin, said:

"John Howard Hale is one of the foremost orchardists of America. He has reached this position of prominence through sheer ability. Denied the benefits of even a high school education, he secured his training in the school of practical experience, and with no start in life except his natural ability, he has won distinction not only by the magnitude of his operations, but by the introduction of business methods in the marketing of his product."

He was a member, at the time of his death, of the Public Utility Commission of Connecticut. From 1894 to 1899 he was president of the Connecticut Pomological society. In 1894 he was president of the American Association of Nurserymen and since 1903 was president of the American Pomological society. This last is the highest gift within reach of the American fruit grower. In 1890 the government appointed him to take charge of the first special horticultural census, which work was not finished until 1893. He organized the Glastonbury grange and in 1886 was made master of the Connecticut state grange. He held this office for four years.—K. R.

### Markets for Cull Fruit

*(Continued from page 57)*

ing and packing their barrel stock with some to spare. One general farmer with a fair-sized orchard of old high trees was unable to spray this spring so shook the trees this fall and sold the fruit to the evaporator. It brought him about $30 per acre. Another, who could not secure help, instead of grading and barreling his fruit sold it to a cannery, orchard run, and figures that his net profit is more than it would have been if the fruit had been barreled.

This, it seems to me, is the greatest lesson to be learned from the New York fruit belt and one which might be profitably studied by other fruit-growing sections.

### How to Get Candy but Save Sugar

The problem of satisfying one's craving for candy without depleting the supply of sugar needed for the nations allied against Germany has been solved in part at least by the home economics division of the department of agriculture of the University of Minnesota. The solution suggests the use of corn syrup in the making of taffy. The recipe folows:

2 cups yellow Karo
1 teaspoon grated or scraped lemon rind
3 tablespoons lemon juice
1 teaspon vanilla.

Boil Karo to the hard crack stage as for any taffy. Remove from the fire and stir in scraped lemon rind, lemon juice and vanilla. Pour in well-oiled tins, and when cool enough to handle, pull until light and break into pieces.

The annual consumption of sugar in the United States is normally about ninety pounds per capita. In order that the immediate pressing needs of America's allies may be met, it has been suggested that the amount of sugar consumed in each household be reduced one-third. The preceding recipe points out a substitute and is recommended by those who have tried it.

**JEWELL MINNESOTA GROWN**

**Nursery Stock**

Complete assortment of Fruit and Ornamental stock in all varieties suited to northern culture. A specialty of Hardy Shade Trees, Windbreak Stock, Evergreens (Coniferous), Deciduous Shrubs, Apples and Native Plums.

AGENTS WANTED

**The Jewell Nursery Company**

Lake City, Minnesota

**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.**

### Fighting the War at Home

An article in the November 17th number of the Saturday Evening Post by A. Curtis Roth, former vice consul at Planen, Saxony, is well worth reading. Especially is it commended to pacifists and all other pussy footed weaklings who go padding about doing consciously or unconsciously the will of the German spy system described by Mr. Roth.

How soon will we realize that the war is being fought *here* as well as in France! Here in Wisconsin, in Madison, in Milwaukee, in Oshkosh, and in every corner of the land.

Mr. Roth says in part:—

"Scientific spying is a Prussian product. It knows no ethics, owns no friendships and enjoys no code of honor. It delights to operate through degenerates, international highbinders and licentious women. It shirks before no meanness or blackguardism to attain its ends. It is the most unlovely fruit of the appalling latter-day German logic of expediency. Corruption and furtive destruction are the blind arms of the German Army, often more dangerous than the visible army in the field. The Russian armies fell before the stealth of the German spy rather than before the charge of the Pomeranian grenadier.

Mr. Roth is able to give first hand information, as he came frequently in contact with high officials of the German spy system from 1912 to the time he left Germany. His long acquaintance with one of the chiefs of the system afforded him an opportunity to glimpse the inside workings of this highly "kultured" organization. Lest we get the idea that the work is all done by German citizens, listen to this:

"Most of the courier work of the German spy machine is done by neutrals. Some of the most dangerous foreign missions are carried out by traitorous citizens of enemy countries, and my secret-service friend informed me cynically that there was no trouble in finding plenty such of highest capacity, but that the only trouble lay in the choosing. He told me that Russians, Frenchmen and Englishmen of high standing were serving in the German intelligence forces."

"You would be surprised," he said to me one night, "to learn the names of some of your own countrymen acting as agents of our Foreign Office. I have done some very effective work through one of them in your country, a man of keen intellect and undisputed position."

We are good natured, lenient, and gullible. We hear lies about Red Cross work and either remain silent or pass them on. We hear disloyalty or sedition preached and we are too cowardly to resent it, either from the fear that it may hurt our business or because we don't want to quarrel with a neighbor. We hear peace talk and even when we know that there can be no peace we repeat it.

"To the German leaders peace and labor movements in enemy lands mean German victory and domination. More especially is the present peace propaganda spreading abroad in the world a two-edged weapon in the hands of the *Vaterland's* autocrats. It is a weapon more subtle, more insinuating, and far more difficult to combat than is the German Army in the field. He who talks peace to-day finds many sincerely responsive hearts, which, under the spell of their spiritual enthusiasm, can lightly be turned to uses the purpose of which they do not know or stop to analyze. The German agent or spy, talking peace is the sublimation of German cunning, and more dangerous to the liberties of the world than any poison gas yet flooded across the sad and brutalized fields of Northern France!

"The German agents are making a peace drive to-day to make the victories of the German armies good. They are striking at the sources of the enemy power arrayed against them. If this intrigue proves successful Germany will have won the war; it will have then justified its honorless, conscienceless but adroit intelligence machine. The Germans to-day bringing gifts are more dangerous than they are crouched behind their gas tanks and giant mortars!"

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Native Plum Small Fruits
Apple
WISCONSIN GROWN
for Wisconsin Planters. Read our Price List before you buy, and save money.
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**McKAY NURSERY COMPANY**
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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.**

**An Attractive Home Means Contentment**

Keep the children at home by making them proud of it. The most effective and economical way to do this, is to beautify the lawn. Careful arrangement and good plants are essential. Our Landscape Department has specialized in this work, is familiar with Wisconsin conditions, and has probably the largest assortment of choice nursery stock in the state to select from.

**White Elm Nursery Co.**

Oconomowoc, Wisconsin

Garden land should be plowed late in fall and left rough. This will destroy many insects, allow the water to go deep into the soil and give a chance for sod or green manure to decay.

---

Dig a few hills of rhubarb and let them freeze outside for a few weeks. Then they may be put in the cellar in soil, sand, or ashes, watered well, and shaded from sunlight, and will give some much appreciated sauce material during the winter.

---

Farmers' Bulletin No. 879 United States Department of Agriculture, is an interesting discussion of the home storage of vegetables. Send for it.

---

Draw up the currant and gooseberry branches and tie them together. This will prevent the snow from breaking them down.

---

Look over the fruits and vegetables in the cellar and see that none are decaying.

**HARDY OLD FASHIONED PLANTS**

**OUR SPECIALTY**

The best varieties for Wisconsin conditions, carefully grown and carefully packed. Write for prices

**WILLIAM TOOLE & SON**

Hardy Plant and Pansy Farm Baraboo, Wis.

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**Apple, Cherry and Plum Trees, Grape Vines, Blackberry, Raspberry and Strawberry Plants**

Both Everbearing and common varieties.

And a general line of ORNAMENTAL TREES, SHRUBS and ROSES. All stock clean and thrifty, the bestthat can be grown in Wisconsin.

**GREAT NORTHERN NURSERY CO.**

Write for catalog and prices Baraboo, Wis.

**The Kickapoo Valley** WISCONSIN'S FAVORED FRUIT DISTRICT

Our Specialty: Planting and Developing orchards for non-residents. A few choice tracts for sale. If interested, write us.

**KICKAPOO DEVELOPMENT COMPANY**

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### Not Loved Anywhere

Those misguided German residents of the United States who have carried their devotion to Prussianism to the point where they have laid up a heritage of hate for themselves and their children in this country cannot have even the poor consolation that their efforts have been appreciated in Germany. Former Ambassador James W. Gerard in his recent talk in Milwaukee, declared that such persons were hated in Germany even worse than the Americans.

He said concerning these people, "The hate which the Germans have for the Americans is exceeded by only one hate—and that is the hate for the German-Americans. Here's what one paper published in Germany said: "We only hope that the German-Americans will erase the word "German" from their names, that title being an insult to our people as well as to themselves."

The German rulers expected something more than lip-service and obstruction from their allies in this country. They expected them on the outbreak of war to take the first ship to Sweden or Switzerland or Holland and from there get back to Germany and enlist. Very few did this. All wished to stay here even while talking for Germany.

When the war broke out between Germany and the United States, Prussian autocrats expected their American allies to start riot and revolution in this country. Nothing of the kind followed. The consequence is that these German-Americans only succeeded in creating an antagonism that will follow them for generations in this country while making themselves despised in the nation from which they came.—

### What Do They Want?

The few German-Americans who still sympathize with Prussia will find it hard to answer the question which former Ambassador James W. Gerard asks in his Milwaukee speech.

"What do these people want?" he asks, "is it devotion to the Fatherland that they feel? Do they want to go back to Germany? If life in Germany was so agreeable to them why did they leave it? Do they want to go back to be shoved off the sidewalk by German officers or be struck in the face with a whip?"

These questions must have arisen to every one who has met those few Germans who still hold an allegiance to Prussia. What do they expect to gain by this double allegiance? Do they expect to make it pleasanter for their children in this country, or do they want their children to go back to Germany? Do they think this country would be a better country to live in if Germany won? Do they think it would be pleasanter for Germans in America because of the attitude that these few are now taking? What is it that they expect to accomplish by their present position?—*Wisconsin Patriotic Press Association.*

---

### One Hundred Per Cent. Americans

This is not a time for diluted Americanism. The only true American is the one-hundred per cent kind. There are just two kinds of people in these United States at the present time, Patriots and Traitors; no other classification can be made. This is well expressed in the following editorial in the Madison Democrat:



**Free!**

A 50-gallon barrel of Scalecide free to any one who will suggest a *fairer* guarantee than that given below.

**"SCALECIDE"**

As proof of our confidence and to strengthen yours, we will make the following proposition to any fruit grower of average honesty and veracity:
Divide your orchard in half, no matter how large or small. Spray one-half with "SCALECIDE", and the other with Lime-Sulfur for three years, everything else being equal. If at the end of that time, three disinterested fruit growers say that the part sprayed with "SCALECIDE" is not in every way better than that sprayed with Lime-Sulfur, we will return you the money you paid us for the "SCALECIDE".
Send for new free booklet, "Profits in Fall Spraying".

**B. G. Pratt Co., M'f'g Chemists**
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FOR 30 years I have sold **reliable seeds.** Thousands of customers testify to this. My seeds not only grow, but produce big yields. They must make good or I will. 31st annual catalog now ready. Write for copy.

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The best arranged, most comprehensive and easiest catalog to order from ever issued. A few specialties are:

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**Ped. greed Oats and Barley**
**Wheat, Speltz, Rye, Buckwheat**
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**Tested Garden and Flower Seeds**

Send postal today. Mention this paper. Will include packet flower seeds.

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**"We have a Fine Lot of Plants for the Garden"**

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**SHEBOYGAN, WISCONSIN**


Send to the Division of Publications, Washington, D. C., for Farmers' Bulletins No. 829 on asparagus and No. 837 on the asparagus beetle.

"The nation needs patriots,—brave, outspoken, courageous, enthusiastic lovers of their country. It needs patriots who are active, fearless, self-sacrificing, ready at all times, under all circumstances, no matter at what cost, to stand by the government, to support the administration, to fight the war through to decisive and final victory.

Passive patriotism will not do!

Such an expression is a contradiction in terms. Indeed, the so-called patriotism that is passive, inert, indifferent, is akin to disloyalty. It seeks to be on good terms with both sides, to avoid injuring the enemy if even it does not join hands with him.

Genuine patriotism on all occasions flames forth in indignation when in the presence of the country's enemies. It needs no urging. It looks for no reward. It waits for no command. It is ready on the moment when the nation is in danger, when its honor is at stake, when its interests are threatened, to spring to action, and if necessary engage in a death grapple with all enemies. Genuine patriotism is **NEVER UNDER SUSPICION**! Its motives are never questioned. Its purpose is never doubted. Its sincerity is never challenged. There is no skepticism, no misgiving, no mistrust about it.

Genuine patriotism makes everything secondary to love of country, to loyal support of the government, to prompt and complete vindication of the right. The true patriot has nothing in common with the enemies of his country. He considers them **HIS** enemies. He does not seek, nor would he accept their approval or support. In fact, he would feel discredited, if not disgraced were they to tender him their support, or manifest in any way their approval of his conduct.

**BETWEEN** the **PATRIOT** and the **TRAITOR** there is an impassable gulf!

What the one loves the other hates. What the one commends the other condemns.

What the country, yes what the world, needs today is true patriots who are always unselfish, not cynics, egotists, fault-finders who are always selfish!

In this world crisis when everything is at stake, when the foundations of our civilization are being undermined, when true freedom is assailed—at this moment when the lines are sharply drawn between autocracy and democracy, between civilization and savagery, there are but **TWO CLASSES** of men,—**PATRIOTS AND TRAITORS**, friends of the government and enemies of the government, and of them and each of them, it might be truly said, "By their works ye shall know them!"

The world today looks to America, and America looks to her loyal children, her patriot sons, for the strength and support necessary to preserve true freedom for mankind. There is but one test of loyalty today—active, earnest, unselfish, enthusiastic support of the government in carrying on the war.

President Wilson, after stating that "The world must be made safe for democracy," said:

"To such a task we can dedicate our lives, our fortunes, everything we are, everything we have with the pride of those who know the day has come when America is privilged to spend her blood and might for the principles that gave her birth."

In this great work we are now engaged and the man who is not heart and soul with us, who does not consider it a privilege to uphold the government, to fight our battles, to keep our people united in purpose, and strong and firm in resolution and determination, is not a patriot **BUT A TRAITOR**!

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The United States Department of Agriculture experts have estimated that the war gardens of the United States have added more than $100,000,000 to the country's wealth. They at least have acquainted many with gardening and outdoor life who did not appreciate either before.


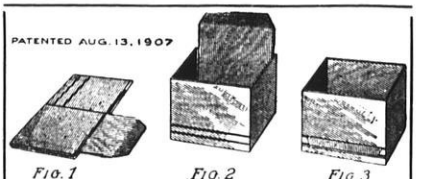

FIG. 1 FIG. 2 FIG 3

**BERRY BOXES**

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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.


Protect trees and shrubs from rabbits now. Some of the wire or wood protectors are good. Burlap, paper, or even corn fodder, may be tied on with good results.

---

Thoroughly rotted manure scattered over the lawn just before snow comes helps to keep the snow on over winter and also adds much needed fertility to the soil.

---

Tobacco preparations will keep the aphis or green fly found on house plants in check, but will not have much effect on the white fly. When plants are infested with white fly they may be thoroughly washed by dipping in water. If white flies are numerous, it may be safest to destroy the plant entirely to prevent the insect spreading to other plants.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

One of the many homes our Landscape Department has helped to make attractive.

We are now ready to help you make your place a Beauty Spot.

A booklet showing places we have planned and planted is free.

You want the best varieties when planting your Orchard, Home Grounds or Fruit Garden. Our catalogue tells you about them.

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# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

Volume VIII | Madison, Wisconsin, January 8, 1918 | Number 5

THIS intolerable thing of which the masters of Germany have shown us the ugly face, this menace of combined intrigue and force which we now see so clearly as the German power, a thing without conscience or honor or capacity for covenanted peace, must be crushed, and if it be not utterly brought to an end, at least shut out from the friendly intercourse of the nations. * * * *

"Let there be no misunderstanding. Our present and immediate task is to win the war and nothing shall turn us aside from it until it is accomplished. Every power and resource we possess, whether of men, of money, or of materials, is being devoted and will continue to be devoted to that purpose until it is achieved.

"Those who desire to bring peace about before that purpose is achieved I counsel to carry their advice elsewhere. We will not entertain it."—President Wilson.

Message to Congress Dec. 4, 1917.

## THE ANNUAL CONVENTION.

Report by E. R. McIntyre in Wisconsin Farmer of Dec. 20th.

Confronted with the war-time duty of developing to the utmost the commercial fruit and vegetable industries of the state on the one hand, and assuming direct leadership in teaching intensive home gardening as well, the fifty-second annual convention of the Wisconsin State Horticultural Society held at Madison, December 11–13, took on a most serious and deliberate tone. Sessions were held in the state capitol.

At the outset of the convention, the keynote of the situation was expressed by Secretary Frederic Cranefield, who emphasized the fact that it is now the absolute duty of every public or semi-public organization concerned in the production of food to postpone for a time such activities as relate only indirectly to that problem, and put extra force into methods of increasing and conserving the commissary stores.

In this line of work the State Horticultural Society has taken a leading part. It was the first in the field with a publication intended to aid the amateur gardener, namely, the special edition of the society's magazine, Wisconsin Horticulture, which was mailed to members and others interested on April 17th.

This initial drive for better home gardens as national food defense measures was quickly followed by the organization of The Wisconsin Gardener's Advisory Council, a group of volunteer workers who directed local efforts in fruit and vegetable growing.

Secretary Cranefield declared that nothing in his fourteen years of service as an official of the society equals the spirit and results accomplished by this brigade of garden guardians.

Members of the Gardener's Advisory Council went on record at the convention as firm believers in the ultimate good of the movement in which they were engaged, and pledged to continue the work with added reinforcements next spring. Many of the members stated that winter garden conferences have been planned in their districts in order to review the past season's successes and failures and create wider enthusiasm for future work.

They believe that the sum total in production from 100,000 well worked tenth-of-an-acre gardens is of greater economic importance than 10,000 acres devoted to market gardens. Mr. Cranefield said that Wisconsin does not have quite 5,000 acres devoted to commercial vegetable gardening, while it is not an overstatement to place the Wisconsin home garden area cultivated in 1917 at 200,000 gardens of one-twentieth of an acre each, or 10,000 acres.

Wives of the visiting delegates and others interested in county council of defense garden movements lent aid to the program. Mrs. H. H. Morgan, chairman of the women's committee for Wisconsin of the National Defense Council spoke in support of the state-wide garden movement, as did Miss Abby L. Marlatt, head of the home economics department of the University of Wisconsin and home economics representative of the United States Food Administration.

Mrs. Morgan urged closer unity and more thorough local organization of all women to the end that war work may become a vital part of home life and ambitions. Miss Marlatt dwelt in particular upon the conservation of fruits and vegetables, and asked horticulturists to support all present and future plans based upon intelligent and rational methods of kitchen economy. Miss Marlatt placed the services of herself and members of the home economics staff at the university at the disposal of women engaged in all phases of food thrift.

Mrs. C. E. Strong, of West Allis, presented the results of the war garden movement in that city. There during the past summer the loyal populace, aided by public information from the State Horticultural Society and the College of Agriculture, planted and cultivated fully 1,200 gardens, averaging 60 by 120 feet in size. Similar accounts of personal interest and devotion to back-lot farming were outlined by Mrs. J. J. Ihrig, Oshkosh, who gave a brief synopsis of the garden plans mapped out for that city next season.

N. A. Rasmussen, president of the society, aided by A. Martini, Lake Geneva, secretary of the Walworth County Foremen's and Gardeners' Association, then provided some technical information to aid the directors of forthcoming garden campaigns. They explained soil requirements and soil management, and gave hints on early crops, succession crops, and the storage of different varieties of fruits and vegetables. Next spring both Mr. Rasmussen and Mr. Martini, through the society's publication and by means of special lectures, will continue to lend help to the cause in many parts of the state.

Owing to the severe weather many of the numbers scheduled on the program had to be omitted.

The illness of two members of the society also reduced the exhibits somewhat. The display of Wisconsin grown apples and vegetables in the rotunda of the second floor of the capitol was, however, worth coming long distances to see. Hardly without exception, the exhibits of apples were placed by commercial growers, and represented the best products of the Bayfield peninsula, Door peninsula, the Lakeshore district, from Kewaunee county southward to Milwaukee county, and including choice specimens from the famous Kickapoo Valley orchards of Crawford county. Sauk county, with A. K. Bassett, of Baraboo, as its champion, came through the ordeal with a long string of prizes to its credit. Jefferson county was represented no less thoroughly by Fremont Lounsbury, Watertown, who likewise made some "cleanings" in standard varieties.

Nevertheless, there still continues to be a lamentable lack of interest in the annual state apple and fruit show, a fact not easily explained in a casual manner. Some attribute this indifference to a lack of suitable premium awards; some say it is due to the more pressing duties brought about by the national call to arms, while still other members believe the state fair and county and district horticultural shows have weaned away some of the faithful. Judging of exhibits was left to members of the horticultural department of the University of Wisconsin, J. G. Moore in charge.

Some interest was attached to the annual report of the trial orchard committee, William Toole, senior, Baraboo, and M. S. Kellogg, Janesville. In addition to maintaining a trial vineyard at Sparta for the past seven years, the society has eight different test orchards leased and under its personal management. In this work the Wisconsin society leads all other state horticultural association. The orchards are maintained for the sole purpose of determining to a nicety the sections of the state which can be recommended for this branch of food production on a commercial scale.

The vineyard at Sparta will be abandoned. After seven years' trial the society has found that grapes cannot be grown commercially with any assurance of success in that region. The decision need not act as a check on the efforts of home growers, however, the committee stated, but the fact remains, nevertheless, that only one profitable crop of grapes suitable in every way to Wisconsin conditions could be produced during the seven years in which the Sparta plot was in operation. The best of care and attention was given the project from the start.

The Wisconsin apple grading law, which makes compulsory the exact grading and packing of all apples for sale in the state, was discussed, and seemed to meet the hearty approval of the members. It is the first law regulating the fruit industry to be placed on the statute books in Wisconsin, and Dr. E. D. Ball, of the state department of agriculture, has charge of its administration.

The discussions brought out the fact that the law must be respected and upheld if for no other purpose than to open the way for further favorable legislation. To disregard the provisions of the law, which provide that all apples consigned to the regular box and barrel channels of trade must be marked according to four classified and one unclassified descriptions, would be suicide to the progress of Badger horticulture.

The future of Wisconsin horticulture and some things it must stand for was the subject of an address by J. G. Moore, college of agriculture. Mr. Moore's keynote was that Wisconsin commercial fruit growers must aid farmers in adopting better methods of caring for their home orchards. The commercial man has in some cases, Mr. Moore believes, been loath to impart his trade secrets or give useful suggestions to neighboring farm orchardists for fear that these private fruit growers might in time come in line for competition in the open market with a product equal to his own.

He said that the most significant thing in recent horticultural circles in Wisconsin was the awakened interest evinced by the average farm orchard owner in properly caring for his trees. With this in mind, Mr. Moore urged all commercial growers to at least "practice what they preach on their own holdings."

They must spray and prune and cultivate their orchards for the benefit of their farm neighbors as well as themselves. The speaker pointed out that the danger of possible competition from strictly amateur-grown fruit need not worry the commercial grower.

This is true because of two things, he said, namely, that a commercial man really suffers the most damaging sort of competition when lots of inferior, scabby fruit is thrown on the market. The poor stuff sets the price level. Then the premium price above that level which the commercial man gets for his improved article may not be as high relatively, after all, as would be the case in a market where

*(Continued on page 78)*

**The Prize Winners.**

Annual Convention, Madison, Dec. 11–13, 1917.

Best collection of apples—First, A. K. Bassett, Baraboo; second, Fremont Lounsbury, Watertown; third, F. B. Sherman, Edgerton.

Best five plates, commercial—First, Kickapoo Development Co., Gays Mills; second, H. H. Harris, Warrens; third, A. K. Bassett; fourth, Carl J. Baer, Baraboo.

Plate Ben Davis—First, Fremont Lounsbury; second, J. A. Hass, Ellison Bay; third, A. K. Bassett.

Delicious—First, D. E. Bingham; second, L. E. Birmingham.

Plate Fameuse—First, A. K. Bassett; second, Carl J. Baer; third, L. B. Irish, Baraboo; fourth, W. A. Toole, Baraboo.

Plate Gano—First, Carl J. Baer.

Plate Gem—First, A. K. Bassett; second, L. B. Irish; third, W. A. Toole.

Plate Gideon—First, Fremont Lounsbury; third, F. B. Sherman.

Plate Golden Russett—First, A. K. Bassett; second, Kickapoo Development Co.; third, Arno Meyer, Cascade; fourth, Carl J. Baer.

Plate Grimes Golden—First, Arno Meyer; second, F. B. Sherman.

Plate Jonathan—First, Fremont Lounsbury; second, A. K. Bassett; third, Rudolph Schultz, Lake Mills; fourth, W. A. Toole.

Plate Maiden Blush—First, N. A. Rasmussen, Oshkosh; second, Fremont Lounsbury.

Plate McIntosh—First, Kickapoo Development Co.; third, A. K. Bassett; fourth, F. B. Sherman.

Plate McMahan—First, Fremont Lounsbury; second, H. H. Harris; third, L. B. Irish; fourth, F. B. Sherman.

Plate Newell—First, Kickapoo Development Co.; second, Carl J. Baer; third, A. K. Bassett; fourth, W. A. Toole.

Plate Northern Spy—Third, Fremont Lounsbury.

Plate Northwestern Greening—First, Kickapoo Development Co.; second, A. K. Bassett; third, Carl J. Baer; fourth, H. H. Harris.

Plate Patten—First, H. H. Harris.

Plate Pewaukee—First, A. K. Bassett; second, N. A. Rasmussen; third, Arno Meyer; fourth, Fremont Lounsbury.

Plate Plumb Cider—First, Fremont Lounsbury; second, A. K. Bassett; third, F. B. Sherman.

Plate Salome—First, H. H. Harris; second, Rudolph Schultz.

Plate Seek-no-Further—First, A. K. Bassett; second, Fremont Lounsbury; third, W. A. Toole.

Plate Scott Winter—First, Carl J. Baer; second, H. H. Harris; third, W. A. Toole; fourth, L. B. Irish.

Plate Tolman—First, Carl J. Baer; second, A. K. Bassett; third, Kickapoo Development Co.; fourth, F. B. Sherman.

Plate Twenty Ounce—First, Fremont Lounsbury.

Plate Utter—First, A. K. Bassett; second, Fremont Lounsbury.

Plate Wagner—First, Fremont Lounsbury.

Plate Wealthy—First, Carl J. Baer; second, H. H. Harris; third, Kickapoo Development Co.; fourth, L. B. Irish.

Plate Windsor—First, F. B. Sherman.

Plate Wolf River—First, Carl J. Baer; second, Kickapoo Development Co.; third, H. H. Harris; fourth, N. A. Rasmussen.

Plate York Imperial—First, A. K. Bassett; second, Fremont Lounsbury.

Peck Ben Davis—First, A. K. Bassett; second, Fremont Lounsbury.

Peck Fameuse—First, Carl J. Baer; second, A. K. Bassett; third, L. B. Irish.

Peck Gano—First, Carl J. Baer.

Peck Gem—First, A. K. Bassett; second, L. B. Irish.

Peck Golden Russett—First, A. K. Bassett; second, Carl J. Baer; third, Arno Meyer.

Peck Jonathan—First, A. K. Bassett.

Peck Maiden Blush—First, Fremont Lounsbury.

Peck McIntosh—First, Kickapoo Development Co.; second, A. K. Bassett.

Peck McMahan—First, Fremont Lounsbury.

Peck Newell—First, Carl J. Baer; second, A. K. Bassett; third, L. B. Irish.

Peck Northern Spy—Second, Fremont Lounsbury.

Peck Northwestern Greening—First, Kickapoo Development Co.; second, A. K. Bassett; third, Carl J. Baer.

Peck Pewaukee—First, A. K. Bassett.

Peck Plumb Cider—First, Fremont Lounsbury; second, A. K. Bassett.

Peck Seek-no-Further—First, A. K. Bassett; second, Fremont Lounsbury.

Peck Scott Winter—First, Carl J. Baer; second, H. H. Harris; third, L. B. Irish.

Peck Tolman—First, Carl J. Baer; second, A. K. Bassett; third, Fremont Lounsbury.

Peck Twenty Ounce—First, Fremont Lounsbury.

Peck Utter—First, A. K. Bassett; second, Fremont Lounsbury.

Peck Wagener—First, Fremont Lounsbury.

Peck Wealthy—First, Kickapoo

Development Co.; second, L. B. Irish; third, Carl J. Baer.

Peck Wolf River—First, Carl J. Baer; second, N. A. Rasmussen.

Peck York Imperial—First, A. K. Bassett.

Bushel McIntosh—First, Kickapoo Development Co.

Bushel Northwestern Greening—First, Carl J. Baer; second, Fremont Lounsbury; third, L. B. Irish.

Bushel Wealthy—First, Carl J. Baer; second, Kickapoo Development Co.; third, A. K. Bassett.

Bushel Tolman—First, Carl J. Baer.

Bushel Fameuse—First, A K. Bassett; second, L. B. Irish; third, Fremont Lounsbury.

Bushel McMahan—First, Fremont Lounsbury.

Bushel Seek-no-Further—First, A. K. Bassett.

Best Exhibit Crabs—First, Fremont Lounsbury; second, A. K Bassett.

Best Seedling Apple—First, Rudolph Schultz.

### Cranberries.

Bennett Jumbo—First, Mrs. Pauline Smith, Grand Rapids; second, Arpin Cranberry Co.; third, Mrs. N. S. Whittlesey, Cranmoor.

Searles Jumbo—First, A. Searles & Son, Grand Rapids.

Bell & Bugle—First, Arpin Cranberry Co., Grand Rapids; second, Elmer Dana, Tomah.

McFarlin—First, E. K. Tuttle, Mather.

Metallic Bell—First, Arpin Cranberry Co.

Bell & Cherry—First, Mrs. Pauline Smith.

Prolific—First, Arpin Cranberry Co.; second, Mrs. S. N. Whittlesey.

### Vegetables.

Best Collection, not less than 10 entries—First, N. A. Rasmussen; second, John F. Hauser, Bayfield.

Six Blood Turnip Beets—Second, N. A. Rasmussen.

Three Round Turnips—Second, John F. Hauser; third, N. A. Rasmussen.

Three Rutabagas—First, John F. Hauser; second, N. A. Rasmussen.

Six Chantenay Carrots—First, N. A. Rasmussen; second, W. A. Toole; third, John F. Hauser.

Six Short Horn Carrots—First, E. L. Roloff, Madison; second, John F. Hauser; third, H. C. Christensen, Oshkosh.

Six Salsify—First, N. A. Rasmussen.

Three Winter Cabbage—First, Nic Sorenson, Lake Geneva; second, N. A. Rasmussen.

Three Red Cabbage—First, N. A. Rasmussen; second, Nic Sorensen.

Six Ears Pop Corn—First, N. A. Rasmussen; second, Albert Gilley, Stoughton.

Six Red Onions—First, Albert Gilley; second, L. B. Irish; third, N. A. Rasmussen.

Six Yellow Danvers Onions—First, W. A. Toole; second, N. A. Rasmussen.

Six White Onions—First, N. A. Rasmussen; second, L. B. Irish; third, H. C. Christensen.

Six Gibraltar Onions—First, A. Martini, Lake Geneva; second, N. A. Rasmussen.

Six Winter Radishes—First, John F. Hauser; second, N. A. Rasmussen.

Six Parsnips—First, E. L. Roloff; second, Albert Gilley.

Hubbard Squash—First, Mrs. Henry Miller, Middleton.

### Report of Secretary F. Cranefield.

(Presented at Annual Convention)

When we met in December 1916, one short year ago, we met with cheer and good will, with congratulations in our hearts and on our lips for then the spirit of our meeting, altho tinged with sorrow for the suffering peoples of all the warring nations, was but as a repetition of conventions which had preceded it.

We talked of apple scab, blight, roses, trial orchards, the best ways to kill bugs and Prof. Moore lectured us on our shortcomings. We discussed our profits and our losses, our hopes and our disappointments, how best to make more money and how we might better serve all the people of the commonwealth in our chosen life work.

Today we meet under different circumstances for our nation has been inevitably drawn into the war, the greatest and most terrible conflict of all ages.

This means that every citizen of the United States must assume his part in that conflict, every one, in some capacity must serve his country.

It means also that every public or semi-public organization, particularly those concerned in the production of food, must postpone for a time such activities as relate only indirectly to that problem and direct all of their energies to increasing the food supply.

To our Society this call comes with a force and an appeal that cannot be resisted even if we would, for are not we the guardians of the gardens? To us in the past has been entrusted the task of creating in the minds and the hearts of the people a desire for better fruits, better gardens and better homes. So accustomed are

we to dealing with big problems, so used to speaking in terms of car loads and of acres, so absorbed in developing the commercial fruit and vegetable industries of the state that sometimes we, or at least some of us, have overlooked the fact that the sum total of production of 100,000 gardens of 1/10 of an acre each is of greater economic importance than 10,000 acres devoted to market gardens. It is doubtful if we have in Wisconsin 10,000 acres devoted to commercial vegetable gardening and it is not too much to say that in the whole state 200,000 gradens of an average of 1/20 of an acre each were cultivated last season amounting to 10,000 acres. This is a very conservative estimate and there are some who have set the figure three times as high.

There is little need, then, for us at this time to canvass the broad field of horticulture for that which is best for us to do; the task is at hand.

This does not mean that we should neglect or even slight those things which have absorbed our attentions in the past, better fruit and more of it, the marketing of our produce, brightening the home by raising flowers; it only means that we must do more than we have ever done before, that we who are best equipped for the task must serve as leaders.

It is gratifying to me, your secretary, to be able to stand here today and say to you and through you to all the people of the state that the State Horticultural Society has taken a leading part in this work since April, 6th.

We were the first in the field with a publication intended to aid the amateur, viz., the special edition of our magazine mailed April, 17th, just two weeks earlier than any other similar publication.

The succeeding issues of our paper for several months were devoted almost wholly to the home garden and given as wide a circulation as possible.

Several meetings were arranged in communities where the need for help seemed greatest, each attended by one or more of our officers.

Predictions were not lacking by the Gloom Squad that interest would lag as the season advanced and in order to overcome this the Gardener's Advisory Council was organized. An account of the splendid work done by this group of volunteers appeared in the December number of WISCONSIN HORTICULTURE. Without belittling in any measure work done by members of our association in the past I find nothing in my fourteen years of service quite comparable in spirit and results accomplished equal to the work of this voluntary body, the Gardener's Advisory Council.

In these ways then the State Horticultural Society has aimed to serve as soldiers in the Great War.

We have not neglected to do the things which we set out to do before this other and greater opportunity to serve came to us.

In the field of legislation we have not been idle. Through the efforts of this Society the first important step has been taken toward the solution of the vexed problem of marketing by the enactment of the Apple Grading Law.

Through our efforts also the game laws have been so amended as to give reasonable protection to owners of apple trees from the attacks of that dear little furry quadraped, the cottontail.

Our relations with the College of Agriculture continue on the same cordial basis as in the past and on this account our members are coming to realize more fully than ever not only the need but the great value of every department of this splendid institution and I am sure every member will join with me in expressing to the departments of horticulture, entomology and plant pathology our grateful appreciation of the excellent work done by these departments in the advancement of horticulture in Wisconsin. We are immensely grateful that we have as leaders in the work of instruction and investigation in horticulture and therefore co-workers, men like Jones, Moore, Wilson, Keitt, Vaughn, Roberts, Milward, Potter and Aust. There is, there cannot be anything but the heartiest coöperation between these two departments.

In like manner our relations with the State department of agriculture draw closer each year until now that department has entrusted to our Society the conduct and management of the horticultural department at the State Fair.

The Trial Orchards have been conducted as in past years. The Trial Orchard Committee will report on the conduct and management of these.

The orchard census work begun so auspiciously in 1916 was suspended in 1917 owing to lack of funds. Your secretary has unlimited faith in this work and hopes that means and the man may be available the coming year to continue it. A complete orchard census of the commercial orchards of Wisconsin will serve as a foundation from which to build a system of crop reports which will be reliable and valuable not only to the grower but to the dealer and the consumer.

A Jew, David Lubin, who a few years ago was a farmer in California and probably unknown out-

side of his own community has become a figure of international importance through his successful efforts in finally establishing an international system of crop reports, especially of breadstuffs. The whole world now looks to the International Agricultural Institute of Rome for reliable information on the wheat crop.

Through the efforts of our executive committee we have for several years been able to have one or more special lecturers on horticultural subjects on the farm institute force.

Last year Supt. Luther complied with our request to hold 22 special fruit institutes during the season 1916–1917. These institutes conducted by Messrs. Bingham and Rasmussen were well attended and highly successful.

During the past two years we have been able to take part in hor ticultural affairs of more than state-wide importance. Our representatives have taken a leading part in the organization of the National Apple Growers Association and the National Congress of Horticulture; the first named an organization which has for its object the collection of reliable data on the apple crop throughout the whole country. This is work which is done very carefully and thoroughly each year by the National Apple Shippers Association which is an organization of buyers and if the growers can secure similar reliable data they should be in a position to make very good terms with the buyers.

The National Congress of Horticulture is much broader in scope than any other horticultural organization in the country.

The following preamble adopted at the recent meeting held in Boston states clearly the objects and aims of the Congress:

WHEREAS: The horticultural interest of the United States comprise one of its basic industries the approximate commercial value of the product derived therefrom being one billion dollars annually; and

WHEREAS: The welfare of the whole people of the United States depends largely upon the fostering and developing of these interests; and as there exist throughout the United States many state and other organizations for fostering and developing the various allied interests comprising the general field of horticulture; and as the work of all of these organizations and societies is carried on without unity of purpose and proper co-operation and co-ordination; and

WHEREAS: It is believed by many leading members of these organizations, state and otherwise, that the general welfare of the whole horticultural industry throughout the United States can be best conserved and developed by one general body comprising in its membership all of the separate organizations; and

WHEREAS: The National Council of Horticulture, a delegate body organized at Washington, D. C., Nov., 1916, up to the present time the only national organization endorsing these principles and having for its object their promulgation:

The Congress is strictly a delegate body to be composed of state horticultural societies, national societies and organizations both commercial and others. Our Society, as usual, heads the list of members.

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Use honey, corn sirup, dark sirup or maple sirup with hot cakes and in bread and muffins.

### Not "Bit" But Utmost.

The expression "do your bit" became popular in England when the war was still regarded as a storm that would soon blow over.

Then came the tragedy of Ypres with its appalling English losses, and England and her girdling commonwealths faced the grim truth, that the war was a life and death struggle with the autocratic power of Germany—that the invasion of Belgium was a violation of the good faith of nations—that imperial Prussia must be punished or her dogma of "might is right" would drive from the world those principles of democracy that now bind together the British Empire.

A great people faced a great danger, and the trivialty of "doing one's bit" disappeared. Not one's bit but one's utmost was demanded of every citizen of the United Kingdom.

Every nerve was strained toward that maximum efficiency necessary for victory—factories were put in high gear, the manufacture of luxuries curbed, ship building was speeded up, imports cut down, food waste reduced to a minimum, women substituted for men in factory and field—in short every force was directed to the common end, the defeat of Germany.

England did not accomplish this reorganization in a day or a month; but day by day, as war became the prime factor directing all business, the single purpose of the Empire imposed itself upon the interests of the individual. The spirit of embattled England was emblazoned one day through the streets of London by women workers in munition plants. On this banner was the legend.

*(Continued on page 76)*

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## Convention Notes.

The proceedings were marked by seriousness and earnestness. Never in recent years has the attendance been as good. Usually during sessions one-third or more of the members might be found in the lobbies or lounging around the fruit exhibit but this year both places were deserted as long as there was any chance to listen to papers or ask questions.

A very complete newspaper report of the convention appears on another page written by Mr. E. R. McIntyre of the department of agricultural journalism at the university and published in the Wisconsin Farmer of Dec. 20. Mr. McIntyre attended every session and has given us a very comprehensive account of the proceedings.

The score card system of judging fruit as conducted by Prof. Moore at the state fair was adopted this year at the convention and with satisfaction to everybody.

The fruit exhibit excelled in quantity and quality that of last year by at least 25 per cent.

Mrs. Whittlesey secretary of the state cranberry growers association gave us a big idea. When forwarding entries for the cranberry exhibit she wrote: "Do not return the berries but sell them and turn the money over to the Red Cross." Thus was born the big idea that netted $36.60 for the Red Cross not from cranberries alone for when the vegetable and apple exhibitors were approached every one contributed, some their entire exhibit others such part as had not been sold at private sale before the announcement was made. Our versatile president besides being a perfectly good president and successful market gardener is also, it seems, an auctioneer, at any rate his skill was not questioned when he secured 25 cents a piece for onions, and a dollar for 4 ears of pop corn.

Most of the exhibits, pecks and plates of fruit and pecks of vegetables, were bought for use and only once did the bidding get into the field of friendly rivalry to see who would do the most for the cause when Sheriff "Hank" Ireland of Madison tried to get the peck of 1st premium Wealthy apples away from A. W. Bellitz of the Revisor's office. Mr. Ireland quit at $2.75. Mr. Bellitz immediately turned the apples back and this time the peck brought $1.50.

The auction idea is a good one. Even if no contribution cause is involved it is a satisfactory method of disposing of the exhibits.

## Significant and Encouraging Facts.

Prof. Moore presented a paper at the convention entitled Some Recent Significant Facts in Horticulture, marking certain mile posts and danger signals for the horticultural society. It was extremely well done but naturally covered only the period of 1917 up to the convention. If Prof. Moore could now rewrite this paper there is no doubt he would include one other significant fact, the organization of two auxiliaries to the state society, the woman's auxiliary and a group of commercial fruit growers as yet without name.

This shows that the society is growing not only in numbers but in influence and scope. The society has grown beyond a mutual admiration society, beyond petty selfish aims, beyond the point where its influence or prestige may be used for the benefit of any particular individual or line of business and now it appears it has grown to include factors that want to unite to the end that they may not only help themselves but through the society help to an even greater extent than before in the promotion and uplift of horticulture in our state. Truly we are growing and in the right direction.

## Helping Hands.

A group of women who have attended conventions for years got together this year and organized a Woman's Auxiliary Club.

The following officers were elected: President, Mrs. E. L. Roloff, Madison; vice president, Mrs. N. A. Rasmussen; secretary,

Mrs. L. H. Palmer, Baraboo; treasurer, Mrs. C. E. Strong, West Allis; Board of Directors, Mrs. Wm. Longland, Lake Geneva; Mrs. R. J. Coe, Ft. Atkinson; Mrs. M. E. Brand, Madison; Miss J. Lundauer, West Allis; Mrs. C. E. Estabrook, Milwaukee; Mrs. W. E. Lovell, Omro; Mrs. A. R. Reinking, Baraboo; Mrs. S. N. Whittlesey, Cranmoor, and Mrs. D. E. Bingham, Sturgeon Bay. In addition to the above the following signed as charter members: Mrs. John Leuders, Madison; Mrs. J. J. Ihrig, Oshkosh; Mrs. G. W. Reigle, Madison; Mrs. W. A. Toole, Baraboo; Mrs. L. E. Birmingham, Sturgeon Bay; Mrs. Geo. Miller, Oshkosh; Mrs. Wm. Nelson Oshkosh; Mrs. F. Cranefield, Madison, and Mrs. F. B. Sherman, Edgerton.

Committees were appointed on by-laws, membership, program etc., all to report at the summer meeting.

The aims and objects of the club are expressed in the title, auxiliary,—which means aid, help.

### A Call for Volunters.

The Gardener's Advisory Council is now more than a mere name. It represents a band of earnest workers who gave freely of their time to help beginners in gardening.

We were all handicapped last year on account of lack of time and everything had to be done within one short month at least anything that was worth while. This year we can begin earlier and the experience of the past season will guide us in the right direction.

The board of managers last year selected 100 names from our membership list advising each that he had been "drafted" as a garden advisor. The idea was to cover the entire state as far as possible, but fortunately our membership is not evenly distributed over the state. In some cities we have a few members, in others of considerable size none at all. In Oshkosh, for instance, we have over one hundred members but in La Crosse not one. Again, the secretary who was called on to make up the "draft list" was obliged to depend, in many instances on chance, not having personal knowledge of the fitness of the persons selected.

This year the "draft" system will be changed to the "volunteer" plan. Those who worked last year will be asked to volunteer for another season's service and the lists are now open for other volunteers. Who will help? We will need not 100 but 500 or 1,000 helpers in the garden work. We want especially good amateur gardeners, those who have been successful in raising the commoner garden vegetables to volunteer; first, to begin now to make a garden survey of your neighborhood, ward or city to find where gardens can be planted, vacant lots that can be had free etc.; second; to find people, men, women or children to plant gardens either on their own premises if land is available, otherwise on the vacant lots; third to look up seed supplies and suggest to prospective gardeners amounts required In fact one who has made a garden will readily think of many other things that can be done. After you volunteer the fact will be mentioned in your home paper and people invited to call on you for advice.

The actual time that you will be required to take from your work or your business will not be great, much of the help can be given by telephone during the planting season. It means that you will give up your leisure moments, that you will often be disturbed when you are tired, that on account of this you will work longer days than you have been accustomed to work but I have yet to meet a horticulturist who was unwilling to do that. So many good-hearted loyal people are wondering what they can do now to *help*. If you know how to plant and tend a garden here is a chance. We will need dozens of volunteers in Milwaukee and more than one in every town and city. In doing this we are doing our part just as truly as the conscientious farmer who is straining all his resources to raise more food; as much as any one who is engaged in manufacturing clothing or munitions even more, as food is the *first* essential to success. Do you want to do your share? Send in your name to Secretary Cranefield at once. We need at least one hundred women. Last year we were able to locate only a few. Women are the very best of garden advisors. We need helpers from small communities as well as from the larger places. We need advisors from the country as well as from the city. The lists are open! Who will be first?

If you are *sure* you cannot qualify as a garden advisor please name some one who can. It is not essential that the one named be a member of the society, we want volunteers wherever they may be found.

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If you must sweeten breakfast cereals, try figs, dates, raisins, sirup or a light sprinkling of maple sugar.

---

Replace white sugar candies with sirup candies, or sweets made from figs, dates, and raisins combined with nuts.

### Estimates Nation's Insecticide Needs.

To procure for farmers an ample supply of insecticides at fair prices, the Division of Chemicals, U. S. Food Administration, urges users to report indications of unreasonable prices or unwarranted attempts to force the placing of orders on the plea of scarcity of materials.

By the President's recent proclamation placing the arsenic insecticide industry under government control the Food Administration now has general supervision over the market handling and distribution of this class of chemical products. The Administration is now taking stock of the Nation's probable insecticide needs for 1918 as a preliminary step for out-maneuvering attacks of pests on the food products grown during the coming season.

Officers of agricultural and horticultural associations in all states are requested at once to make an estimate or census of their requirements and those of the state and send these estimates to the Division of Chemicals, U. S. Food Administration, Washington, D. C.

"It is hoped" declares C. W. Merrill, head of this Division "that farmers' organizations will take carload lots of insecticides from the manufacturers at a wholesale price. In the determination of this price, excessive profits will not be permitted. Such organizations are also urged to provide not only for immediate wants but also for the maintenance of a stock of insecticides in order to insure against loss of crops through sudden insect plagues."

The Division of Chemicals will be glad to put officers of such organizations in communication with the nearest wholesaler who is in a position to supply their requirements. By such procedure, the elimination of unreasonable profits and the shortest route from the producer to the consumer can best be secured.

*Yellow*

*It was a little yellow cur, with battered hide and stumpy tail,*
*Whose life path was a weary round from village dump to garbage pail.*
*A mongrel, mangy, fleasome pup, the sort which men forbear to shoot,*
*But frighten yelping up the street with stone or stick or lifted boot.*
*And this same cur, one autumn morn, sat sadly down to scratch, and try*
*To answer this soul-searching quiz: "Lives there a creature low as I?*
*Breathes there one living thing"—so ran his pessimistic monologue—*
*"Which, viewed apart by decent folk, is meaner than a yellow dog?"*

*He thought and thought. "Suppose," he mused, "I were a man born o'er the sea,*
*Who fled from hopeless, slavish toil to this bright country of the free;*
*Where, lifted by that country's hand, reared 'neath her laws, I rose to power*
*And comfort, station, wealth—until to her, Columbia, came the hour*
*When, fighting for her life, she asked my aid, and I refused, and tried*
*To help her foe, because, forsooth, I hated one she fought beside.*
*I am a yellow dog," his tail gave to the road one earnest pat.*
*"Men call me mean and low; but still I think I'm not so mean as that!*

*"Or shall we postulate this case? An editor am I, whose pen*
*Writes, in an alien tongue, the words read by some still half-alien men*
*Whose fathers came, as mine did, here, forswearing all they left behind,*
*To sieze the chance she offered—she, America, the great and kind!*
*All that I have and am I owe to her; but now, when foes attack,*
*With venomed pen I lie in wait to slyly stab her in the back.*
*I'm sure," the pup soliloquized, as in the roadside dust he sat,*
*"No yellow dog of all I know has such a yellow streak as that!*

*"Or let's suppose," quoth he, "I am a politician of the breed*
*Which, seeking place, cries shrilly, 'Peace!' and strives the foolish mob to lead.*
*I rail 'gainst duty, honor, truth, my country's name and flag—and all*
*That I my slimy self may drag a little higher up the wall.*
*Suppose I were a thing like that! Suppose in hall or senate I——*
*But no!"—the cur leaped to his feet—"I'll not suppose it!..No; nor try!*
*I am, thank God, a yellow dog." He trotted off with head erect.*
*Compared to these, he felt he had abundant cause for self-respect.*
*—Joseph C. Lincoln.*

*Reprinted from the Saturday Evening Post, Philadelphia. Copyrighted 1917 by the Curtis Publishing Company, Philadelphia.*

### Somewhere in France.

Mr. Ernest Gonzenbach of Sheboygan, one-time member of the executive committee, who is well known to many of our members is now "somewhere in France." Mr. Gonzenbach, a civil engineer by profession with many years of successful experience in railway construction work, was manager of an electric line running out of Sheboygan at the time of the declaration of war.

Although far beyond the draft age, engaged in work suited to his taste and talents, with a delightful home and family, a little farm and orchard where his hobby, fruit growing, might be indulged, without hesitation he enlisted in the first corps of engineers organized for service and is now at or near the fighting front and for all we know was engaged in the Cambrai offensive.

The following letter from Mr. Gonzenbach was received early in November:

Somewhere in France,
Sept. 8, 1917.

My Dear Cranefield:—

It may interest you to know that we are stationed in a rich farming section of France and the country looks much like that between Madison and Baraboo. There is much fruit growing but no large orchards, the largest I have seen are 2 to 3 acres and these mostly dwarf varieties of standard apples and pears. They seem to make a success here of dwarfs, and they are also used extensively as espaliers

trained on the stone walls of houses and lawns. All fruit trees are well pruned but spraying is not much in evidence. This is of course not the spraying season but I have seen no spray outfits and the native "habitants" shake their heads when I ask them,—they have heard of it and to them it's one of the strange things of life. In spite of the lack of spraying there are comparatively few wormy apples, but in the ones I have bitten into the worms sem fatter, healthier and happier than any I have ever seen in America. They taste richer too.

I have the advantage of speaking French fairly well and make it a point to talk with as many farmers as possible and it's really wonderful what sacrifices these people have made for their country—and how they do welcome the Americans! We shall all be like spoiled children when we get back. They have cows too, but I hope Prof. Humphrey and Dean Otis will not visit this section for if they should they would get the shock of their young lives. No ventilation, and stables hermetically sealed. No gutters behind the cows and flanks and udders of cows hung with caked manure like sleigh bells. Otherwise the cattle look sleek and fat and resemble a cross between a Guernsey and Hereford, giving an amount of milk about like a Hereford and beef like a Guernsey.

The flowers in the dooryards are wonderful and not a farmhouse without a great splash of color and an aroma like a florist's shop. The flowers are mostly annuals.

I hope you will keep an eye on that orchard of mine up at Sheboygan Falls and please send me regularly an extra copy of Wisconsin Horticulture.

There are a lot of German war prisoners at work around here and if I shut my eyes at roll call I can make myself believe it's a roster of the Wisconsin Legislature. My mailing address is and will be,

Captain Ernest Gonzenbach,
16th Engineers, U. S. Army in France,
Care Adjutant General,
Washington, D. C.

**Mr. Slice O'Bread.**

I am a Slice of Bread.

I measure three inches by two-and-a-half, and my thickness is half-an-inch.

My weight is exactly an ounce.

I am wasted once a day by 48,000,000 people of Britain.

I am "the bit left over;" the slice eaten absent mindedly when really I wasn't needed; I am the waste crust.

If you collected me and my companions for a whole week you would find that we amounted to 9,380 tons of good bread—

WASTED!

Two Shiploads of Good Bread!

Almost as much—striking an average—as twenty German Submarines could sink—even if they had good luck.

When you throw me away or waste me you are adding twenty submarines to the German Navy.

(Copy of handbill sent out by National War Savings Committee, England.) For the United States multiply this by 2¼.—Editor.

---

Sweeten fruit drinks with honey or corn sirup.

**JEWELL MINNESOTA GROWN**

**Nursery Stock**

Complete assortment of Fruit and Ornamental stock in all varieties suited to northern culture. A specialty of Hardy Shade Trees, Windbreak Stock, Evergreens (Coniferous), Deciduous Shrubs, Apples and Native Plums.

AGENTS WANTED

**The Jewell Nursery Company**

Lake City, Minnesota

**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 samll quantities.

**Wauwatosa, Wis.**

### "Brer" Rabbit Can Do His Bit

At festival season the rabbit has always held a place of honor on the English board. A Christmas stagecoach without its full hampers and dangling rabbits for town tables would not have been a stagecoach at all. Mr. Pickwick would not have ridden in it, and there would have been no pretty Arabella with fur topped boots. Thanksgiving—1917—should see the American rabbit raised to the food peerage or knighted upon the field. "Brer" Rabbit elevated to Sir Rabbit may then well break a lance with Sir Lion and drive him from the lists.

The rabbit has such possibilities that you can hardly go wrong when you have once caught your rabbit. What can you do with a rabbit? Exactly what you can do with a chicken—roast, pan, fry, fricassee, and a dozen ways besides. Try one of these for your Thanksgiving dinner.

Roast Rabbit—Wash the rabbit with soda water. Lay in salted water for an hour. Stuff the rabbit with onion, celery or chestnut dressing and sew up. Line a baking pan with the following: one onion and one carrot cut up, a few cloves, whole peppercorns and one bay leaf. Rub rabbit with salt and pepper and lay it upon this dressing, putting fat or oleo here and there over the rabbit. Sift a little flour over the top and pour a cup of stock or hot water into the pan. Cover tight and roast, basting frequently. When ready to serve, put on a hot platter and garnish with slices of lemon and cranberry jelly or currant jelly.

Spiced Rabbit—Wash rabbit in soda water. Disjoint hind legs; cut off the saddle; remove the forequarters, making in all nine pieces. Lay in salt water about an hour. Place rabbit in dish with vinegar poured over it and let it remain over night. Remove from pickle, salt each piece lightly, and arrange in baking pan. Cut up an onion in it, adding one bay leaf, a dozen pepper corns, part of a celery root, a cup of stock, and a little vinegar from the pickle. Cover with another pan, put in a quick oven and bake an hour. Remove upper pan, and brown, basting frequently. When brown, remove and arrange pieces on a hot dish. To the pan add a tablespoon of flour browned in fat drippings and a cup of stock. If not spiced enough, add pepper and a very little mace. If desired, add a can of mushrooms that have been drained and washed. Pour the gravy over the rabbit, dust with chopped parsley, and send to the table.

Chestnut Stuffing—Shell one quart of Italian chestnuts. Boil until skin is softened, then drain and remove the skins; put back in water and boil until soft and rub through a sieve while hot. Season the mashed chestnuts with one tablespoon bacon fat, one teaspoon each of salt, grated lemon rind and chopped parsley. Add three tablespoons of grated bread crumbs and two well-beaten eggs. Be sure the stuffing is not too wet.

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### NOT "BIT" BUT UTMOST

*(Continued from page 71)*

THING AND SEND THEM PLENTY OF MUNITIONS."

This today is the imperative call of America to every citizen, "Drop every mortal thing and send them plenty of munitions, fuel, food and ships." Does personal business block the way? Sweep it aside, and stand by the soldiers, we owe them everything.

Not "bit" but utmost is our country's need. What is a "bit"? According to the dictionary the smallest quantity; a whit; a jot. Is a "bit" then the offering of America to a bleeding world? A "bit" the toll a patriot pays for the defense of the flag? A "bit" the price we pay for sons who give their all that we may live?

The war has reached a grave crisis. America's share grows ever bigger. The war zone stretches from San Francisco to Berlin. Every individual is personally responsible for holding that line. Our business now is war, and "doing one's bit" should have no place in our vocabulary or thought. America has undertaken the most gigantic task in military history, a task that calls for our *utmost* in strength and intelligence. Solidarity in America and unity of aims with our Allies mean victory, and the guarantee, in all the ages to come, of human liberty and secure peace. The end is worth our *all*.

**Quality Stock**
Strawberries
Native Plum Small Fruits
Apple
WISCONSIN GROWN
for Wisconsin Planters. Read our Price List before you buy, and save money.
62nd Year
**Kellogg's Nurseries**
Box 77, Janesville, Wis.

**Help Wanted**
Reliable young men for farm and garden work. Will hire by the month or for the year. Write
**Rasmussen's Fruit Farm**
Oshkosh, Wis.

**An Attractive Home Means Contentment**

Keep the children at home by making them proud of it. The most effective and economical way to do this, is to beautify the lawn. Careful arrangement and good plants are essential. Our Landscape Department has specialized in this work, is familiar with Wisconsin conditions, and has probably the largest assortment of choice nursery stock in the state to select from.

**White Elm Nursery Co.**

Oconomowoc, Wisconsin

### Four-and-Twenty Sparrows Baked In a Pie.

Jacob Riis describes in one of his delightful essays how the good old housekeeper in his Danish home used to climb to the eaves to rob the sparrows' nests for a delectable pie. Now Mr. James Hunt of Philadelphia, who is crusading against the English sparrow, advocates the pie as the true destiny of the sparrow. He furnished the sparrows for such a pie opened in Washington recently at a luncheon served by the Philadelphia Public Ledger.

The guests declared that the pie was good, and the flavor of the sparrow was superior to chicken and equal to partridge. Washington boys found this out long ago in their secret sparrow roasts where dozens of these tidbits were spitted on wires before the blaze and devoured by these food pirates.

Cleaning a sparrow is a simple matter of cutting the breast away from all other parts and skinning. Special traps are used for catching sparrows. These are set near favorite rookeries and dozens of sparrows are caught at a time.

**HARDY OLD FASHIONED PLANTS**

**OUR SPECIALTY**

**The best varieties for Wisconsin conditions, carefully grown and carefully packed. Write for prices**

**WILLIAM TOOLE & SON**

**Hardy Plant and Pansy Farm** **Baraboo, Wis.**

A LARGE STOCK OF

**Apple, Cherry and Plum Trees, Grape Vines, Blackberry, Raspberry and Strawberry Plants**

**Both Everbearing and common varieties.**

**And a general line of ORNAMENTAL TREES, SHRUBS and ROSES. All stock clean and thrifty, the bestthat can be grown in Wisconsin.**

**GREAT NORTHERN NURSERY CO.**

**Write for catalog and prices** **Baraboo, Wis.**

**The Kickapoo Valley** **WISCONSIN'S FAVORED FRUIT DISTRICT**

**Our Specialty: Planting and Developing orchards for non-residents. A few choice tracts for sale. If interested, write us.**

**KICKAPOO DEVELOPMENT COMPANY**

**GAYS MILLS, WISCONSIN**

THE ANNUAL CONVENTION

*(Continued from page 67)*

plenty of excellent fruit establishes a higher average price level to start with. The other point is that consumption and demand are always greater and more even when an abundance of high-grade stock is on the market for the public to admire and buy more generally and readily.

Strawberry culture, particularly that of the late varieties, was discussed by M. S. Kellogg, Janesville. These ever-bearing, "double-barreled" varieties will yield a late summer crop of excellent quality with the proper care. They have probably shown success as a home garden crop rather than a commercial proposition in Wisconsin thus far in the trials, Mr. Kellogg stated. Their backwardness in securing public favor as a dependable commercial crop was laid to the strong competition which the everbearing kinds must face in a market glutted with peaches, pears and early apples. From now on the success of the everbearing kinds depends solely upon a vigorous campaign of education, to set the public at rest as to their merits and calling the housewives' attention to the fact that all home-grown strawberries are not gone by the second week in July. Mr. Kellogg also urged farmers to consider small fruits more carefully next spring, as they would aid the sum total of food production on odd corners of the farm at little expense in time and a relatively small labor outlay, results in average seasons considered.

The best varieties, honesty and care in packing—with or without a state law—were the maxims for successful commercial apple production set forth by A. K. Bassett, well-known Baraboo fruit farmer. When Mr. Bassett bought his present farm it contained a fifty-year-old, neglected orchard. He cleaned, renovated, sprayed and pruned and has since set out sixty-five acres to apple trees. Although receiving an average of $6 a barrel this season, f. o. b. Baraboo, for his winter stocks, with less valuable kinds selling for 75 cents a bushel, containers returnable, Mr. Bassett complains of labor shortage as a drawback to expanding his business just now. His earlier varieties are the Snow or Fameuse, McIntosh, Wealthy, Northwestern Greening and the extra early Duchess of Oldenburg. For strictly winter keeping qualities, he supplies his trade with Salome, Windsor, Russett and Tolman Sweet. All these he has found adapted to south-central Wisconsin conditions over a period of ten years. Mail order shipments direct to consumers took 40 per cent of his crop this year, and dealers in northern and western Wisconsin towns took most of the remaining lots.

Not forgetting the side of home life which ministers to the soul, and helps to imbue a stronger love of country, talks on farmstead planning for beauty as well as utility were given by F. A. Aust and Cecil Britt, University of Wisconsin. Mr. Aust explained the elements to be sought in landscape architecture, using good, hardy Wisconsin vines and shrubs advocated by the college of agriculture and the horticultural society. Mr. Britt, a veteran gardener who comes from Warwickshire, England, with much lore about rose culture, gave the society an interesting ten-minute talk on the chief things which Wisconsin must look for in the successful growing of the national flower of Albion.

R. H. Roberts, of the university horticultural department, in his

**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.**

**Don't Think Only of Scale**

when you think of

**"SCALECIDE"**

it is all there is to

**Dormant Spraying**

Does *all* that any other spray will do—but no other spray will do *all* that "SCALECIDE" will do. Kills all kinds of scale—all forms of fungus and insects that can be reached in dormant season—and invigorates your trees—and costs no more. *Read our money-back proposition* before ordering anything else.

Send for free booklet, "Profits in Fall Spraying"

B. G. Pratt Co., *M'f'g Chemists*

50 Church St. Dept. New York

**"We have a Fine Lot of Plants for the Garden"**

SEND FOR LIST

**J. E. MATHEWSON**

SHEBOYGAN, WISCONSIN

paper on the cause and control of winter injury to cherry blossom buds, attributed it chiefly to the condition of the buds when winter starts. The more developed the buds are at this season the more susceptible they are to harm. These observations lead one to conclude that much of the winter injury common to older, weaker-growing trees could be prevented by maintaining a more vigorous tree, and thus arrest the extreme development of the blossom buds to the stage at which they are found to be very subject to frost.

More action for central frost-proof warehouses where cranberries could be sorted and shipped with less delay and loss due to frequent and careless handling is the crying need of Wisconsin, said E. K. Tuttle, Tomah, in a brief discussion. At present each grower in the Badger cranberry area works practically alone in his own warehouse in spite of greatly improved conditions brought about by recent successful organizations. Wisconsin raised between 20,000 and 30,000 barrels of cranberries this year, Mr. Tuttle says. Most of the larger, fancy varieties are shipped west, although Chicago annually receives much Badger stock.

Excellent progress in control investigations with respect to the cherry leaf spot was reported by G. W. Keitt, plant disease specialist, University of Wisconsin, who has been conducting coöperative experiments with Door county growers for the past three years. Turning under of dead leaves before blossoming time, plus two, sometimes three spray applications later in the season works wonders against this disease of the cherry. Mr. Keitt and coöperating growers found that three pounds of copper sulphate mixed with three pounds of fresh lime to fifty gallons of water was as effective for commercial control of cherry leaf spot as the 4-4-50 solution. In times of high prices for spray chemicals this means quite a saving besides. The only possible substitute for Bordeaux mixture in times of high prices is lime sulphur, Mr. Keitt says. This, at the rate of five to six quarts to fifty gallons of water in combination with arsenate of lead for insect control, is advised.

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### Household Helps by U. S. Food Administration

SUGAR-SAVING DESSERTS

Saving sugar is imperative at this stage of the war, and the U. S. Food Administration offers the following recipes, tested by practical housekeepers, as ways for the thrifty farm housewife to aid in the national sugar economy campaign:

Pumpkin Pudding—2 cups stewed pumpkin; ½ cup brown sugar; ½ cup honey or maple sirup; 2 eggs; 1 tablespoon flour; 1 teaspoon cinnamon; ½ teaspoon nutmeg; ⅛ teaspoon cloves; ⅛ teaspoon ginger; 1 teaspoon vanilla; 1 pinch of salt; 2 cups of milk.

Mix all ingredients and bake in greased pudding dish. Serve hot or cold.

Peach Souffle—1 quart canned peaches; ½ cup honey or sirup; 3 eggs.

Drain and mash through colander one quart of canned peaches. Add one-half cup of honey or sirup and well beaten yolks. Beat thoroughly, then beat whites stiff and fold carefully into the peach mixture. Turn the whole into a greased baking dish and bake in a quick oven six minutes.


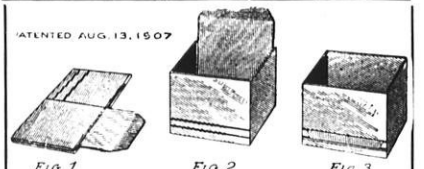

FIG. 1 FIG. 2 FIG. 3

**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.

**FOR SALE**

Choice Strawberry Plants in large or small quantities. We make a specialty of Warfield and Senator Dunlap, Wisconsin's standard varieties. We also have the leading varieties of Raspberries. Write for price list.

**Rasmussen's Fruit Farm**
**Oshkosh, Wis.**

**OLDS' Seed Book**

**and Packet Flower Seed FREE**

FOR 30 years I have sold **reliable seeds.** Thousands of customers testify to this. My seeds not only grow, but produce big yields. They must make good or I will. 31st annual catalog now ready. Write for copy.

**Lists All Kinds of Farm Garden and Flower Seeds**

The best arranged, most comprehensive and easiest catalog to order from ever issued. A few specialties are:

**Certified Seed Potatoes**
**Wisconsin Grown Seed Corn**
**Pedigreed Oats and Barley**
**Wheat, Speltz, Rye, Buckwheat**
**Northern Clover and Alfalfa**
**Tested Garden and Flower Seeds**

Send postal today. Mention this paper. Will include packet flower seeds.

**L. L. OLDS SEED COMPANY**
**Drawer 84 MADISON, WIS.**

One of the many homes our Landscape Department has helped to make attractive.

We are now ready to help you make your place a Beauty Spot.

A booklet showing places we have planned adn planted is free.

You want the best varieties when planting your Orchard, Home Grounds or Fruit Garden. Our catalogue tells you about them.

**The Coe, Converse & Edwards Co., Nurserymen, Fort Atkinson, Wis.**

---

# ORDER NOW

## ARSENATE OF LEAD AND LIME SULPHUR

THAT IS

## MADE IN WISCONSIN

MANUFACTURED BY THE

## CREAM CITY CHEMICAL WORKS

772-778 Kinnicknic Avenue ---o--- MILWAUKEE, WISCONSIN

WRITE FOR CIRCULARS AND INFORMATION

# WISCONSIN HORTICULTURE

COLLEGE OF AGRICULTURE
UNIVERSITY OF WISCONSIN
MADISON

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

Volume VIII | Madison, Wisconsin, February, 1918 | Number 6

## WHY AMERICA ENTERED WAR

WE entered this war because violations of right had occurred which touched us to the quick and made the life of our own people impossible unless they were corrected and the world secured once for all against their recurrence. What we demand in this war, therefore, is nothing peculiar to ourselves. It is that the world be made fit and safe to live in; and particularly that it be made safe for every peace-loving nation which, like our own, wishes to live its own life, determine its own institutions, be assured of justice and fair dealing by the other people of the world against force and selfish aggression. All the peoples of the world are in effect partners in this interest and for our own part we see very clearly that unless justice be done to others, it will not be done to us.

From President Wilson's Address, January 8, 1918.

## What One City Accomplished in War Garden Work

Anna A. Ihrig, Oshkosh

Presented at Annual Convention, Madison, Dec. 12th, 1917

I am glad to tell you of the measure of success we have secured in Oshkosh the past season. While we deplore the cause, we can but rejoice in the impetus givn to our home gardens by our war gardens.

We who are familiar with gardens, who know their worth not alone from an economic standpoint, but as an indispensable adjunct to all home life, to individual character and to normal growth from childhood to old age, can only be glad that we are what we are. That we were ready when the need came and are doing our bit. The Rotary Club of Oshkosh started a movement for a more beautiful and efficient city early in the year. When the war garden cry was heard simultaneously all over the land, emphasis was placed on efficiency. The Rotary Club voted $400 to finance the garden movement and placed this sum with their Garden Club committee. This committee was ably seconded by every available force in Oshkosh, the people the press, the commission council, the school board instructors in both city and normal schools, the various business clubs and social societies, including our local Horticultural society. This committee of the Rotary club, with the able assistance of Mr. A. S. Hotchkiss, directory of recreation, and Mr. T. W. Garry, director of the Community club, perfected a plan of work which has given Oshkosh an excellent season's work, aroused the enthusiasm of the entire city and placed it in a position to continue the work next season without the handicap of inertia in any vital point. There are four classes of members in the Oshkosh Garden club, junior membership, limited to children under sixteen years of age; home garden membership and plotted vacant lot garden membership, each without any limit and entire vacant lot membership, limited to adults. A fee of ten cents was required of junior members upon payment of which they received a membership ticket and were guaranteed, 1st, one book garden instructions; 2nd, visitation, advice and supervision during the season; 3rd, the right of entry into contests for prizes in district and final contest; 5th, packages of seeds as follows: Two flowers, three vegetables and five tomato plants. They agreed to cultivate not less than 100 square feet of garden during the season at home.

Home garden members' fee was 25c and they received five vegetable seed packets and were required to cultivate at least 200 square feet of garden, other conditions being the same as for juniors.

The Rotary club offered the following prizes to juniors: Five prizes of fifty cents each at each of two preliminary exhibits to be held in each of ten centers during the season. Five prizes at each of two final exhibits at the City Hall as follows: 1st, $2.00; 2nd, $1.50; 3rd, $1.00; 4th, 75c; 5th, 50c. Prizes for best junior gardens during the entire season: 1st, $5.00; 2nd, $3.00; 3rd, $2.00; 4th, $2.00, and 5th, $2.00. Total prizes to juniors $75.50.

Home gardeners' prizes were also offered, but as there were only a small number of the latter, they were classed with the juniors. The club caused to be printed one book of instructions, of which I have a sample. It contains Instructions for Planning, Rotation of Crops, Planting, Transplanting, Cultivation, Irrigation, Thinning, Spraying and miscellaneous advice. A page is allotted to each important vegetable, giving a brief history of the plant, soil preferred, time and manner of planting, quantity of plant, culture, enemies, and season of maturity. In the preparation of this book the committee was assisted by members of the local Horticultural society. A thousand copies were printed at a total cost of $90, which was paid by the advertising matter which it contained.

Besides the book of instructions the printed matter used consisted of membership blanks. A card containing the rules and regulations of the club and the prizes offered, together with a printed blank application for membership. A card for the use of supervisors in grading the gardens and a cordial invitation to attend the exhibits. There were 445 gardens in these two classes, 435 juniors' and 10 home gardens. These were divided into ten districts and supervised by the directors of the various Playground centers, 1,347 visits being made. The gardens were scored on the following points: General Impression, Drainage, Cultivation, Lack of Plant pests, Healthy Growth of Plants and Weeding. A card index of each garden showing the score for each visit was kept and the final award went to the one having the highest score. Two brothers were tied for this honor, having 560 points

out of a possible 600, and the first prize was divided between them.

An exhibit was held at each center in July and again in August. Also two finals one in July and one in August. The vegetables grown were radish, carrots, beets and tomatoes. Director Hotchkiss placed a conservative estimate of the value of the vegetables grown in these gardens at $2,000 for the season. Of these gardeners 90% had never before made a garden.

The vacant lot gardens plan resolved itself into a plan to bring vacant lots and gardners together. The commission council financed this movement and plowed or spaded such lots as were made available by donation of the owners of the lots or otherwise. Mrs. E. R. Smith was in charge of the work. She reports 1,000 gardens. These were furnished to members of the Garden club who paid a fee of from $.50 to $2.50 according to the size of the plat received. In this class preference was given to those whose names were found on the city poor list and to these were furnished seed potatoes and seed beans with the understanding that the seed should be returned in the fall. $150 worth of potatoes were used and about 2 bushels of beans. The plots of ground ranged from plots 20 ft. square to those containing as high as 20 acres. The larger areas were allotted in acre or half acre plats. These gardens were taken almost entirely by persons who knew something about gardening and were very productive except in a few cases where quack grass was abundant. Several lectures were given at the city hall by members of the Oshkosh Horticultural Society and our Mr. Roe, Mr. Rasmussen and Mr. Christensen acted as a self constituted committee to extend garden knowledge to all who were in doubt. These gentlemen also gave freely of their services in judging exhibits and otherwise assisting in this movement. The plan for next year is to continue the work along these lines using the knowledge we have acquired this season for a better campaign next year.

Before closing this report I wish to call your attention to the value to a community of a live Horticultural Society. In every locality there are men and women who know the value of a garden, who know the pleasure of gardening, who know the appeal of growing things, who rejoice at the instant response for the little care given a plant and who would be lost without their garden. These people should be waked up and made to see the value of organization and there should be in every community a local society, be it great or small, which will cooperate with this, our state society, in bringing the value of a garden home to their neighbors and their neighborhood.

I earnestly urge all members of this society to give some thought to the value of a garden for every home and do their bit to bring about such a condition.

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### Black Raspberry Culture

Frank Hays, Wyanet, Ill.

(Read at convention of N. Ill. Hort. Society, De Kalb, Ill., Dec. 6th, 1917.)

The black raspberry, if properly grown, is a fine attractive fruit; but the dried-up seedy kind we frequently see is about the sorriest thing in the way of fruit that one can think of. But there is always a big demand for good ones. In Bureau County, where I live, there are never nearly enough to go around, and I understand the same condition exists over a large part of the state. The taste people have for it is indeed remarkable. It is no wonder this society is interested in so popular a fruit

The successful growing of the black raspberry has for at least twenty years been considered quite a problem. The difficulty is largely due to a widespread disease that attacks the plant and causes that scabby condition we so frequently observe on the bark and we must to a large extent avoid that condition or we can't succeed in growing profitable crops. We must avoid the scab rather than depend on any spray mixture to control it. So far as I have been able to learn, there has not yet appeared an effective and practical spray for that sort of scab. The best way I have found to beat it is to have the patch on good fertile soil and put the plants in close—eighteen inches apart in the row and use only good, strong, freshly dug plants. Hoe and cultivate frequently until toward fall. When plants are up about sixteen inches go along the rows with a knife and hack off a couple of inches of the tops; that will make them branch out and form much better bushes.

You should have by fall a thick growth of strong, healthy bushes, large enough to yield a profitable crop of the finest berries the following year. But if the plants had been set two and one-half or three feet apart, as is often recommended, there would not have been enough of them to make the

plant growth necessary to produce a worthwhile crop. It would be like a farmer planting one kernel of corn in a hill. Unless we can grow the first season bushes thick enough and large enough to produce a profitable crop the following year, we **never will** get from that field a profitable crop, the scab will take it before it has time to amount to anything. Scab does not show up so much the first year, but about the second season there is an abundance of it; however, if we have a thick, hardy growth of bushes the first year, the new growth of the second year will also be thick and a good deal of it will, of course, be affected with scab, but where there is an abundant growth of bushes, though there be as many as half of them affected, we can cut out the diseased ones and still have left enough healthy canes for a fairly good stand. But if we had only a weak, thin stand to start with there would not be enough of them escape the scab to be worth while to leave. A bush if well cultivated will mature its fruit even if somewhat affected, but if practically covered with the disease it should by all means be cut out for the berries will dry up in spite of us. Don't try to get more than two crops from the same planting. I have tried it several times and failed every time. Put out a new patch every spring. To keep the system going, arrange it as follows. If you wish to fruit say four rows each year, two of these rows should be yearlings, and two rows should be two-year olds and you should plant in the spring two new rows and you should mow off and plow up the two rows of two-year-olds as soon as you have taken from them the season's crop.

For a number of years I have set the rows six and one-half feet apart but I believe six feet will do just as well, so next spring I shall set them that width. I mark out rows with single shovel the same as marking out for potatoes. I use plants from my own patch, usually taking them from the rows of the yearlings. Wherever a branch of the black raspberry touches the ground it takes root provided the soil is loose and the season not too dry. In a well grown patch there are hundreds of such plants. But it is a good plan to go in with a hoe about the middle of August and pull some dirt over the tops, even bending down some of the branches and covering them. It will help them to take root sooner and form stronger plants.

The system I am describing requires a lot of plants, and we must be careful to propagate all we can. The first trimming of the patch should be done the following spring. There has been a lot of discussion as to whether or not it is a paying proposition to provide a trellis of some kind to support the bushes. I am one of those who consider it well worth while to wire them up. Without a support of some kind the wind blows them over and breaks off a lot of good canes. And at fruiting time a lot of the berries are down in the dirt and have to be discarded. Also they cannot be thoroughly cultivated while in that shape and the grass and weeds have a better chance to start and the patch has a pretty slack appearance generally.

The material to wire them will last for years, so the annual expense for material will figure low. It requires considerable labor, but that is more than balanced by the saving in bushes, the better cultivation afforded, the better condition of the fruit and the convenience and satisfaction of having them in such perfect order. I have a system of wiring that I have not seen used elsewhere, but of course it may be elsewhere. I set one post at each end of the row. With a post auger I bore down four feet and put in 6 foot posts, leaving two feet above ground. Set at that depth they require no braces. Next drive a stake every thirty feet in the row. To get the stakes I take seven-foot round, white cedar posts and saw them in the middle, then quarter each half and sharpen them with a hand ax. In that way one post costing 30 cents will make enough stakes for a row of berries two hundred and seventy feet long. Drive the stakes down good and solid but leave at least two feet above ground. Then nail to the stakes a cross-arm, after the fashion of the cross-arm on a telephone pole. The cross-arms should be one inch thick, fourteen inches long and two or three inches wide, —whatever one happens to have, —and should be nailed 20 inches from the ground.

Now everything is ready for the two trellis wires. The size of the wire should be number 12 or 14. On one of the posts of each row should be fastened a couple of ratchets, one on each side of the post. The ratchet is a little device with which the wires can always be kept tight by turning up with a monkey wrench. They cost about three cents apiece and can be secured from most any mail order house. I would not

think of doing without them. The best way to attach the ratchets to the post is to first fasten one to each end of a fifteen inch piece of trellis wire by twisting the ends of the wire in the form of a hook and hooking into the eye of the ratchet, then closing up the hook so it can't slip off. Place this wire and ratchets crossways against the back of the post 20 inches from the ground and staple it midway between the two ratchets; then take the ratchets, one in each hand, and pull them forward toward the front of the post; attach end of trellis wire to roller of ratchet and string wire to other end of row, go around the post with it and back on the other side and attach wire to the other ratchet. Lay the wires up on the crossarms and staple them one foot apart. Don't drive staple down tight against wire but leave so wire will slip through as it is tightened. It is a good plan to put across a tie wire half way between the stakes, otherwise the weight of the bushes is apt to spread the wires a little too far apart at those points. Any old rusty wire will do for that purpose. A roll of old telephone wire will furnish material for a long time. Now tighten up the wires by turning up the ratchets and all is ready to begin trimming.

For trimming use leather gloves. Go down one side at a time and with pruning shears cut loose from the ground all branches on that side that have taken root and as you go along bend all branches around and up between the wires, thinning out of course, if too thick, and removing all diseased branches.

The idea of tying raspberries is, I know, more than most growers can swallow. But we tie grapevines, often making two or three ties to one cane; while with raspberries we never tie a branch more than once and much oftener two at a time and frequently three or four at a time. Many are not tied at all as they are prevented from coming down by the tying of the others. So the work goes along quite rapidly.

For tying I use grape twine, such as is used in the Michigan grape-growing district. It comes in balls just the right size to go in the pocket and unwinds from the center of the ball.

To protect the hands while tying wear cotton flannel gloves with the ends of the thumbs and forefingers cut off, which liberates the fingers so they can make the tie. The twine is cut with the pruning shears, which are held between the knees while making the tie. It makes an easier job of it to trim a row, then tie a row. When the trimming and tying is completed it is time to dig out the plants from between the rows and set out a new patch. When plants are out of the way proceed to cultivate and hoe and do it frequently until along toward fall,—especially the cultivating. The new growth will begin to start soon after we are through trimming. Sprouts from the crowns of these yearlings will shoot upward very rapidly and we must give attention to those shoots for they are what form the bushes that bear the fruit the following year. Go down the rows occasionally with a knife and clip the ends from all shoots that are as much as eighteen inches high. The rows will soon be a mass of green and as attractive to look at as a well-kept ornamental hedge and will attract a lot of attention, especially along about the Fourth of July when they are covered with ripening fruit.

We are now done with pruning until the spring of the next year, when all badly diseased bushes must be removed and the branches on those we leave cut back.

The bushes of this second year's growth are much larger and stronger than those of the first year and with the support of the wire will stand without tying. It is a good plan at this time to bring the wires on the cross arms closer together, also to tie the wires between the stakes together. By so doing the bushes are more firmly held. Rake brush from between the rows and cultivate until crop is gathered; then mow it off and plow it up. Managed in this way the very finest of black raspberries can still be profitably grown.

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## SOME RECENT SIGNIFICANT FACTS IN HORTICULTURE.

Prof. J. G. Moore at Annual Convention.

There is an old saying to the effect that "Coming events cast their shadows before them." The prophet of old was the man who, reading the "signs of the times" had the ability to reason out what the logical result of the current action would be. We are horticultural prophets only in so far as we observe present tendencies and correctly interpret their ultimate influence on horticultural development. In interpreting the facts, we should be exceedingly careful not to let our desires for certain results prejudice our interpretation. We are all desirous of seeing horticulture and the horticul-

turist advance. Does the recent developments in Wisconsin horticulture warrant us in prophesying the attainment of those ideals for which we should at least all be working?

It is somewhat difficult to say which facts in horticulture may be of greatest significance. Doubtless were we all to make selections of those which we considered most important, no two of us would submit the same ones. Occasionally a fact seemingly insignificant, due to our inability to judge rightly, portends some of the greatest and most important developments later on. If I suggest some things which to you may seem unimportant, it is only because to me they indicate possibly the early beginnings of movements which later on will exert a great influence on Wisconsin horticulture.

At our Convention last year it was suggested that one of the great needs of Wisconsin Horticulture was a compulsory grading and package law. I think the most significant horticultural fact so far as Wisconsin is concerned is that we now have such a law on our statute books. In passing it is fitting to remark that it is a fact largely through the efforts of our Secretary.

What is the significance of this fact? At first we might say that the most important thing about this law will be that there is now removed in the selling of Wisconsin apples in closed packages the chance for fraud which previously existed and that much of the evil accruing from such practice will disappear. This certainly is a very important consideration, but to me this new fact in Wisconsin horticulture carries a hidden significance of even greater import.

I believe I am correct in saying that other than the nursery inspection law that this is the first law regulating the fruit industry to be placed on our statute books. That in itself is a significant thing but that which means most to Wisconsin horticulture is not the law but our attitude towards the law.

So far as I know no regulatory law was ever passed which did not meet with some disapproval. "It is hard to teach an old dog new tricks", and if he did crooked tricks, it is still harder because of his objection to learning how to play the game fair. The new grading law, is going to meet opposition. Some of it may come from influential men. Wires will be pulled and failures in enforcement will be used as reasons for its repeal. Who can hold this first line trench which has been captured? Organized horticulture! Cranefield may do his bit, the State Department of Agriculture and the University may help, but unless they receive the support of the organizations, the ground gained may be lost. I do not wish to appear as a pessimist, but I do want to impress upon you the importance of helping to make this law successful, not alone by giving it your moral support, but if necessary active support. We do not hesitate to say that probably all the members of the State Society favor a grading and package law and so far as their own crops are concerned will enthusiastically co-operate in its operation, but there are others who will need to be converted to the fact that it is beneficial to them and perchance need help in meeting its provisions. You owe it to the society and to the industry to do what you can to help make of such persons enthusiastic supporters of the law rather than conscientious objectors to it.

Perhaps some of us feel that we have reason to complain of some of the provisions of the law. Such is every man's privilege, but let us adjust our differences within our organization and then pull together rather than to lose by disagreement the ground we have already won.

Why is our united support so important at this time? Because this is our opportunity as a society and as individuals to give practical proof that we favor regulating legislation for the improving of our industry. This is not the only regulatory law which is needed. Perhaps some which we may desire in the future may not be obtained so easily, but if we expect such laws we will need to show the people of the state that we are a unit in supporting the laws we already have. Wisconsin is not alone in enacting regulatory laws regarding the sale of fruit. Sister states have recently enacted such legislation. This portends important legislation affecting the fruit industry of the entire country. A few years ago when attempts were made to get Congress to pass a compulsory grading and package law similar to that of Canada, strong opposition was met, largely upon the part of the fruit growers. As a result the Sulzer law, an optional grading law, which has been of no real value to the fruit industry, was written upon the statutes because a compulsory law could not be passed. Recent state legislation seems to indicate that at an early date Congress will enact a law standardizing so far as possible the grades and packages for apples and possibly some other fruits as well. Thus we see that

accomplished facts indicate greatly improved conditions under which we will market our fruit in the future.

Last spring we received a letter asking us to direct an orchardist in this state to some one to whom he could lease his farm orchard of something less than four acres. He stated he was a busy farmer and did not have time to care for the orchard even though he knew how. After considerable correspondence we arranged to use this orchard for a pruning and spraying demonstration. In one of the earlier letters from the farmer, he says, "The last two years the orchard has blossomed full and produced very few apples. This last season I got only about 25 bushels of very inferior apples." On November 2 he writes, "We have realized $525.00 from apples so far and have a lot to sell yet, so we consider that the project was sure a successful one." It cost approximately $25.00 to produce this result. The significant part of his letter, however, was contained in the remark, "I have not yet decided just what to get for next year's use."

Regardless of what our attitude towards this type of farm orchard is we are sure of one thing, that, like the poor, we will always have them with us. That they exert a marked effect upon our fruit industry can scarcely be denied. When you consider that the larger part of the fruit produced in Wisconsin and, I also believe, the larger part of the fruit marketed in the state comes from just such orchards as this, we cannot, ostrich-like, stick our heads in the sand of our personal opinion and thereby perform our greatest service to Wisconsin horticulture.

The incident I have recited is just one of many that come to our attention every year. The significant fact is that the farm orchardist is awakening to the fact that he should do something for his orchard. He frequently does not know what or how, but he is expressing an eagerness to learn and when he has once "been shown", he becomes another disciple to the slogan of "Better Wisconsin Fruit." Most of us can remember when it required much persuasion to even induce the commercial orchardist in this state to spray and we still experience some difficulty in getting some of them to follow the approved methods. It is to be expected that the task of getting the farm orchardist to spray will be much greater for his heart is supposedly set on cows or corn, not fruit. Never-the-less the signs of the times would seem to indicate that "the field is golden unto the harvest" for a campaign for better methods in the management of the farm orchard. You may say, go ahead; that is part of the business of the Horticultural Department. We have been going ahead as fast as the facilities which we are able to command have permitted but we can only scrape the surface of this job. Wisconsin is a large state, its farm orchards are numerous, the demands for help are many. If we are to accomplish the most possible at this opportune time, we will all have to lend a hand. You can do much in your community by setting a good example. That is especially true if you are not now doing it. If you are professing to spray and not doing a good job at it, a job which will give satisfactory returns, you are hindering, not aiding the development of the fruit industry of the state. If you are setting the right kind of an example, make your orchard a demonstration orchard. Be neighborly, invite in your friend who does not give his orchard proper care and diplomatically inoculate him with the "better fruit germ". It may take the infection quite a long time to show any results, but in the majority of cases it will produce them sooner or later.

Sometimes we are inclined to look out for No. 1 so much that we lose our persepctive and instead of helping, hinder ourselves. You may now have the only real good fruit coming into your market and therefore suffer little competition in marketing your product. Perhaps you are asking, Why should I encourage my neighbors to become my competitors in this class and thus make my problem of marketing more difficult? If you hold such views, it seems to me you are looking at the problem from the wrong angle. In the first place you suffer competition even though you have the only good fruit on the market. The poor quality stuff sets the market price, because it is the bulk of the fruit coming on the market. You may get a premium, but it is a premium over an unusually low price and probably not as high as if you were receiving no premium on a market set by good quality fruit.

An additional fact which should not be overlooked is that if a larger percentage of better fruit was available, the consumption and therefore the demand would increase.

What shall we do then as concerns this significant fact of an awakened sentiment for better management of the home orchard?

*(Continued on page 94)*

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## A Chance to Serve.

Of the 1,600 members of the State Horticultural Society it is a fair guess that 1,000 are gardeners; some of them experts, but mostly just plain gardeners. Men and women who have "made garden" more or less for years. They know about how deep to plant seeds, that corn and peas may be planted two or three inches deep but beans and beets would never see daylight if planted more than an inch deep; they know how far apart to space cabbage and parsnips; know that a "hill" of cucumbers or beans does not mean a little hill or elevation built up of earth and the seeds planted on the top or under it but merely four or six or a dozen seeds grouped in one place and covered the proper depth instead of being planted singly in rows; in brief, they have the **garden sense.**

For these members there is now a splendid opportunity to **serve,** especially those who live in towns and cities.

Your society, through its officers, and in cooperation with the horticultural department of the University and the State Council of Defense, is heading the biggest garden driven ever undertaken in the state. Every available dollar of the Society's funds that can possibly be spared is being used to finance the work.

Several publications, brief bulletins on seeds, seed sowing, cultivation, garden plans, transplanting etc., will be printed and furnished to the heads of the garden movement in cities, and in fifty or more cities speakers will be sent to give help to beginners. This comprises two kinds of help, the printed word and word of mouth. In both ways those who need help can get it, but all of it is acquired while the snow is still on the ground, or at least before the garden begins to grow. The time when the gardener needs help most is in midsummer and then is the time when our one thousand garneders can serve. We want to extend our Advisory Council to cover every city and village in the state. Do you want to do something to help win the war? Don't miss this opportunity but write to the Secretary, State Horticultural Society, and offer your services.

Don't look on this as something trivial, a mere sentimental fancy of the editor, as events proved last year that Council members performed a very real service. Some, only a few, accepted the appointment and immediately forgot all about it but nearly all meant what they said and went out into the highways and byways looking for a chance to serve. And all of them found an opportunity to serve.

The ignorance and helplessness of the average beginner in gardening is vast and profound. You can help him over the rough places if you will. Invest in a postal card, address it as above across the back write, "Gardeners' Advisory Council: I Will" and sign your own name.

## A Printer's Blunder

The article, "Not Bit, But Utmost," beginning on page 71 of January Wisconsin Horticulture and concluded on page 76, was wretchedly marred by the printer dropping a whole line of capital letters from the bottom of the column on page 71. The legend on the banner carried by the munition workers read: "DROP EVERY MORTAL THING AND SEND THEM PLENTY OF MUNITIONS." This makes sense: the maimed quotation as printed did not.

Unless looked after carefully, jardinieres make good coffins for house plants. Plants must have air at their roots as well as tops and will not stand wet roots or soggy soil. Keep the soil sweet and clean as well as the room in which the plant is kept. Plants need fresh pure air as well as people.

## A State Wide Organization of Forces for War Garden Work.

Members of the State Horticultural Society will be gratified to learn that their society has taken the initiative in organizing the war garden movement throughout the state.

The declaration of war on April 9th, 1917, stirred the nation to action and horticulturists no less than others, but owing to the near approach of the gardening season there was no time for organization. Everybody pitched in and did their utmost, but in many, if not most places, the result was confusion and much duplication of effort. Everybody meant well and everybody worked hard but usually there was no organized effort. This year it will be different.

The State Horticultural Society has enlisted the aid of the State Council of Defense and this body will, through the County Councils, organize the various working forces in the cities. By way of information the plan as prepared at the request of the State Council is given below.

Members in cities are requested to take up this matter with their County Council of Defense rather than direct with this office.

### ORGANIZATION OF FORCES FOR WAR GARDEN WORK IN CITIES OF 5,000 POPULATION AND OVER IN 1918.

Submitted to the State Council of Defense by The State Horticultural Society.

The State Horticultural Society as well as other agencies was active in promoting the war garden work in 1917, but the call for this extra effort came so late in the season that there was insufficient time for organization in the cities. This year there is no excuse available for any of us who are interested and want to help in this movement. Let's begin now, there is no time to waste.

In every city there is one or more of the following organizations, in some all of them and all eager to do something: Woman's Club; Commercial Club or Board of Commerce; Kiwanis Club; Rotary Club; Associated Charities and Boy Scouts in addition to church organizations, etc.

Usually all of these will be willing to work but it can be readily seen that these various forces should be organized in order to avoid duplication of effort.

Call a meeting at an early date of every one interested, for the purpose of effecting the following:

(1) To secure a sum of money: Sometimes a fund of $100.00 will be sufficient to finance the garden movement in a city of 20,000 or it may happen that $1,000 may be spent to advantage. There should be no need to furnish free seeds or plants or anything else wholly free.

(2) List all available lots and vacant land and as soon as possible list all who want gardens. Last year many lots lay idle when many people failed to make a garden for lack of land.

(3) If possible, and not too expensive, secure the services of some competent person to supervise the whole garden movement in your city, children's gardens as well as others, through April, May, June, and July at least. If the right person can be found, one who has both garden sense, some executive ability and tact, money paid for his services will be well expended.

(4) Plan for co-operative plowing. If A, B, C, D, and E, all living on one street each bargains independently for plowing a lot it may cost each one $1.50 or a total of $7.50 and may be done by five different teams. By means of a little planning one teamster can do all of this work at less than one-half the expense; in fact a man and a team can usually be hired by the day for $7.50.

(5) Plan for the growing of tomato, cabbage and other plants, good ones. The plants offered for sale at stores are usually crowded in boxes, stunted and almost worthless. This is because amateur gardeners have not known the need of better plants nor demanded them. Secure the services of some one who knows how to grow good plants and arrange to sell them at cost.

(6) Plan to secure the voluntary services of a good amateur gardener in every block if possible to give advice, aid and comfort to the beginner. Such persons can be found and as a rule are anxious to serve. Such helpers are facetiously termed "Block-heads" in some cities.

These six things should be done in every city and each city organization will find many other local needs to be met.

The State Horticultural Society and the Horticultural Department of the Agricultural College working together propose to furnish help to such cities as respond promptly to this appeal and to those only. Some of the things we propose to do are as follows:

The Horticultural Department of the Agricultural College and the State Horticultural Society, working together, offer our services to cities having an organization through which these departments can work.

We receive many requests for help from individuals and organizations acting independently and aim to supply all of them with the help asked for but much more effective work can be done if all of the forces in each city working toward this common end, more gardens, are organized under a common head. We can then communicate with each city through this central organization and arrange dates for lectures at a lessened expense and can more effectively distribute literature, etc.

Therefore, no applications for lectures and literature can be considered from cities having no organized war garden association until demands from organized cities have been met.

Publications: Bulletins will be published from time to time giving in compact form timely information on gardens and gardening written always for the beginner. The practiced gardener needs no help.

Two of these are now in preparation and will contain among other things lists of varieties best suited to small gardens and the quantity of seed of each necessary to plant a given area; other elementary facts concerning seeds and seed buying, and garden plans.

This information has been furnished by expert gardeners, amateur and professional and can be relied on.

Other circulars will follow on such subjects as:

(2) Selection of garden site; soils, etc.

(3) Plowing and spading; good and bad; manures.

(4) Garden plans; double cropping; succession crops.

(5) How to sow seeds, depth, distance apart, etc.

(6) Cultivation.

(7) Watering; transplanting.

(8) Insects.

(9) Diseases.

(10) Storing vegetables.

These will be printed in quantities sufficient to supply every one who asks for them.

We must, however, have some means of knowing approximately the number required and have a reasonable assurance that not more will be called for than will be used. To determine this will be the duty of the local organization.

Inspection: In addition to the plan of local district aid suggested in the city plan the State Horticultural Society will this year extend the membership of the Gardeners Advisory Council to include, if possible, every city in the state. This Council is composed of members of the society having garden knowledge who volunteer to answer questions personally or by telephone and when practical visit the gardens. This work was well received last year and gave excellent results.

These are some of the things that the horticultural forces aim to do but in order to get best results there must be local organizations through which they can work. Communicate with the Secretary of your County Council of Defense and urge immediate action.

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### Oh, Happy Day!

There has never been any lack of organization among the Door County fruit growers, rather there has been too much organization. Now after ten years of hanging apart, all the cherry growers have arranged to hang together. The following account from the Democrat of Sturgeon Bay, Jan. 4th, explains the situation.

At a meeting last Saturday afternoon of the fruit growers of both the Door County Fruit Exchange and Fruit Growers' Association, the Door County Fruit Growers' Union was formed with a capital stock of $15,000. The business and purpose of the organization will be to buy, sell, market and exchange, to hold for storage, and to dispose of all kinds of fruit and produce; to deal at wholesale and retail in any products and material used in the growing, packing and shipping of all kinds of fruit and produce, to acquire and hold real estate and fruit lands, to construct and maintain or to acquire and maintain, a canning factory for the canning of fruit, to do and perform any and all acts to promote the growing of fruit and produce within Door county.

The meeting was attended by fifty of the leading fruit growers of the county, and the constitution and by-laws of the new organization were read and after being thoroughly discussed were adopted unanimously. The company being capitalized for $15,000 it was necessary to have one-half of the stock subscribed, which was secured at the meeting, the large growers taking the bulk of the stock.

The board of directors of the new organization will consist of nine members, the seven members on the old Union board, who so successfully conducted the business for the two associations, were made members of the new board. The nine directors being as follows:

H. W. Ullsperger, A. W. Lawrence, M. B. Goff for a term of three years; D. E. Bingham, J. G. Martin and W. S. Reynolds for a term of two years; W. O. Brown, R. B. Cornish and Melvin Haines for a term of one year.

A. W. Lawrence was elected president, M. B. Goff vice-president, and Earl Johnson secretary and treasurer.

An auditing committee consist-

ing of Henry Ernhardt, C. M. Stephenson and John Boler was elected.

Forming of the Fruit Growers Union results in combining all of the fruit growers in one organization, where formerly they were divided into two different organizatons. The fruit business has developed to such an extent in Door county that it has great possibilities before it, among which is a canning proposition which is now under consideration by the officers of the new organization.

While the Union is incorporated to also deal in farm produce the fruit business will be its main object, and only those who grow fruit are entitled to membership.

All members shall market all fruit sold by them for the market through the association, and there will be no exception to this rule. A penalty has been attached to apply to those who violate this rule of the organization and it is the intention of the officers to strictly enforce it.

As the output of cherries alone last season was 117,000 crates and many of the orchards are not fully matured, another year or two will bring the crop up to where if all the cherries and other fruit are marketed through this one organization it will mean the handling of one of the largest business propositions in Door county.

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### The Sprinkling System for the Vegetable Garden.

G. C. Rasch, Burlington.

To begin with I am not a professional gardener, but I love to play in the dirt. I enjoy planting things. I take much comfort in seeing my plantings grow, and to appreciate this to the fullest extent, we must have the proper amount of moisture and at the right time so this brings us face to face with the sprinkling problem.

I will give you as briefly as possible my experience on "Sprinkling".

In order to produce the quick, luxuriant, tender growth of vegetables, we require water, and water enough at the proper time.

We have all heard much about irrigation. In many parts of the country irrigating is done by flooding the land and this method may do very well in arid localities, but these parts a system of over-head irrigation appeals to me as the most practical,—especially when it refers to Vegetable Gardens.

About six years ago I wrote the department of Agriculture at Washington for information on an over-head irrigating system, they referred me to the Skinner Company of Troy, Ohio, and after due consideration, I decided to install at Spring Brook Farms, the Skinner System of over-head irrigation, covering a patch of ground about 280 feet wide by 500 feet long.

The first step towards installing the system, was to make a plan of the ground I wanted to cover, giving slope, distance from source of water and a general outline, sent it to the manufacturers of the System and they at once advised how to proceed.

As the name indicates "Spring Brook Farms" we have a fine brook running through it, which never goes dry. I constructed a small dam across the brook giving me a small pond or reservoir of water about 200 feet from the garden plot. The main feed line is a four inch galvanized iron pipe laid underground deep enough not to interfere with cultivation. This main feed line contains a two inch connection every 56 feet holding a two inch upright; this now constitutes my connection for the lateral

**JEWELL MINNESOTA GROWN**

**Nursery Stock**

Complete assortment of Fruit and Ornamental stock in all varieties suited to northern culture. A specialty of Hardy Shade Trees, Windbreak Stock, Evergreens (Coniferous), Deciduous Shrubs, Apples and Native Plums.

AGENTS WANTED

**The Jewell Nursery Company**

Lake City, Minnesota

**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 samll quantities.

**Wauwatosa, Wis.**

pipe lines 250 feet in each direction from my feeders.

These lateral lines are graduated in size from about 1¼ inch at the feeder to ¾ inch at the extreme ends.

Each of these lateral lines has a small special nozzle every 4 feet the entire length.

These lateral lines are suspended about 8 feet above ground, from a galvanized wire cable. The cable of each lateral line is supported by 18 ft. two inch iron pipe posts, set in three feet of concrete 125 feet apart, the cable is anchored at each end and has turn buckles so it can be given the proper tension. These lateral lines are connected to the feeder uprights with a flexible union so the laterals may be rotated to give any desired angle to the nozzles, thereby controlling the distance of the spray. The advantage found in the overhead system is the noninterference with cultivation; my entire plot of 140,000 square feet has only twenty posts of two inch gaspipe, 56 feet by 125 feet apart.

I have four lines of laterals 500 feet long, 56 feet apart, and by rotating the laterals, I can cover 28 feet in each direction from the laterals, with finest kind of artificial rain. The power required for my system is an 8 horse power electric motor connected to a Centrifugal pump at the brook—pumping direct into the system. It can also be accomplished by a gravity tank, which requires pumping the water into it, but I prefer pumping direct.

All of these details as to the best method depends largely upon locations.

By making a plan of your garden be sure to have the rows run parallel with your laterals or sprinkler lines, so that if you have crops that do not require as much moisture as others, you can confine your spray on such rows or crops that need it more. You can pick strawberries on a portion of your patch, and as soon as you have picked a few rows you can follow with the sprinkler on the picked-over portion. The further advantage of the overhead system of irrigation over the flooding of the soil, or running water in trenches between the rows, is that you can work the soil almost immediately after sprinkling, which is impossible by the flood or trench system. This feature alone is worth much, besides you wash the foliage keeping it fresh and green, which is not accomplished by the flooding of the ground.

Now then you no doubt want to know the benefits derived in the way of crops etc. In this regard I wish to mention that I believe that crops can be doubled and trebled, by applying water in proper amount at the right time. When I first installed the system, I told my gardener to make a test on Melons; he planted a plot of about 250 feet square, one half the plot under the system and the other half out of the reach of it. The irrigated half plot netted $275.00 worth of uniform size fine flavored melons and the other half of the plot not irrigated, netted $47.00 worth of illshaped stunted melons of inferior flavor. In this particular test it showed a gain of about five to one in dollars and cents.

On Strawberries or any fruit that needs water just at the right time it insures the crop, generally speaking, *it can be termed crop insurance.*

**Quality Stock**
Strawberries
Native Plum Small Fruits
Apple
WISCONSIN GROWN
for Wisconsin Planters. Read our Price List before you buy, and save money.
62nd Year
**Kellogg's Nurseries**
Box 77, Janesville, Wis.

**Help Wanted**
Reliable young men for farm and garden work. Will hire by the month or for the year. Write
**Rasmussen's Fruit Farm**
Oshkosh, Wis.

**GLADIOLUS**
(The People's Orchid)
Our bulbs are all our own grown.
Price list covering only choice varieties Gladiolus and Peonies sent on application. We make good anything sent out not as represented.
**Lincoln Gardens**
EAU CLARE, WIS.

After heavy snow storms it is a good plan to shake the snow from evergreen branches. Too much snow is likely to cause them to break down.

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Let us not give up the culture of flowers this year entirely, but give increased attention to growing good gardens.

**An Attractive Home Means Contentment**

Keep the children at home by making them proud of it. The most effective and economical way to do this, is to beautify the lawn. Careful arrangement and good plants are essential. Our Landscape Department has specialized in this work, is familiar with Wisconsin conditions, and has probably the largest assortment of choice nursery stock in the state to select from.

**White Elm Nursery Co.**

Oconomowoc, Wisconsin

### Rye Hoe-Cakes

The legend of rye hoe-cakes still lingers in hoe-cake country. These crisp cakes are served like the English toasted muffins—that is split, buttered and spread with marmalade. Rye hoe-cakes may be the Scotch representative of this tea room specialty, or they may be a survival of the famous cakes that King Alfred allowed to burn while he dreamed of battle.

Rye hoe-cakes are made from a three to one rye and wheat flour biscuit dough. Roll very thin and bake on the iron griddle or "hoe". And by-the-way the "hoe" is the stove lid and not the chopping hoe. Brown slowly on both sides, pile up where they will keep hot, and send to the table when you have an ample stack—it takes a whole rye stack to go around.

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Plants that are inclined to mildew may be dusted with liver of sulphur. The best plan, however, is to remove the cause of mildew, which may be a draught of air or moisture conditions.

**HARDY OLD FASHIONED PLANTS**

**OUR SPECIALTY**

**The best varieties for Wisconsin conditions, carefully grown and carefully packed. Write for prices**

**WILLIAM TOOLE & SON**

**Hardy Plant and Pansy Farm** **Baraboo, Wis.**

A LARGE STOCK OF

**Apple, Cherry and Plum Trees, Grape Vines, Blackberry, Raspberry and Strawberry Plants**

**Both Everbearing and common varieties.**

**And a general line of ORNAMENTAL TREES, SHRUBS and ROSES. All stock clean and thrifty, the best that can be grown in Wisconsin.**

**GREAT NORTHERN NURSERY CO.**

**Write for catalog and prices** **Baraboo, Wis.**

**The Kickapoo Valley** **WISCONSIN'S FAVORED FRUIT DISTRICT**

**Our Specialty: Planting and Developing orchards for non-residents. A few choice tracts for sale. If interested, write us.**

**KICKAPOO DEVELOPMENT COMPANY**

**GAYS MILLS, WISCONSIN**

### A Worth While Garden

Stories about big gardens or big stories about little gardens are always interesting and sometimes helpful. Usually on investigation it is found that the 24 dollar garden was produced at a cost of about $117.83 plus gasoline. Many of the successful (?) amateur gardeners of 1917 made the trips between home and garden in a three or five thousand dollar automobile.

The following, however, seems to be a horse of another color. Mrs Strong of West Allis secured these figures from Mrs. Stolte, who made the garden and declares that there was no horse or automobile or even a street car connected with it; that Mrs. Stolte was a busy woman aside from gardening; that she walked a long distance to the garden; that green lice and other pests were very bad; that the soil was only fairly good and not well prepared and that there was no joy but only grief until,—the plants began to grow.

*Report on planting of a lot 60x120 by Mrs. R. E. Stolte Wauwatosa, Wisconsin. Soil; fairly good:*

| Name | Cost of seed | Planted | Amount | Returns | Valued | Remarks |
|---|---|---|---|---|---|---|
| Onions, large red Wethersfield | $0.25 | April 14 | 1 oz | 4 bushels | $6.00 | |
| Prizetaker | .50 | May 5 | 2 oz. | | | |
| Radishes | .05 | April 14 | 1 pkg. | 10 bunch's | .25 | |
| Beets, extra early Egyptian | .10 | " | 1 pkg | ¼ pushel | .85 | |
| Parsnips | .15 | " | 1 pkg. | ¼ " | .50 | |
| Peas, Dreer's American Wonder | .20 | " | 1 pint | 3 pecks | 1.80 | |
| Lettuce | .05 | " | 1 pkg. | 2 doz. hds. | .60 | |
| Early beans | .30 | May 5 | 1 pint | 1¼ bushel | 3.00 | |
| Peas | .20 | " | 1 pint | 2 pecks | 1.20 | |
| Carrots | .0 | " | 1 oz. | 2 bushels | 1.60 | |
| Beets, Detroit dark red | .10 | " | 1 oz. | ¼ " | .50 | |
| Radishes | .05 | " | 1 pkg. | 8 bunches | .20 | |
| Kohlrabi | .05 | " | 1 pkg. | 4 doz. | .60 | |
| Potatoes, early rose | 2.00 | May 19 | 2 pecks | 2 bushels | 3.00 | failure on acct. |
| " western | 4.00 | June 2 | 4 pecks | 2 " | 3.00 | of green lice |
| Beans, Dreer's stringless | .70 | " | 2 pints | 4 " | 8.00 | |
| Early corn, Blue Mexican | .10 | " | ..... | 8 doz. | 1.40 | |
| Tomatoes | ..... | ..... | ..... | 2 bushels | 3.00 | |
| Peas, telephone | .30 | June 16 | 1 pint | 3 pecks | 1.50 | |
| Cucumbers | .10 | " | 2 pkgs | ..... | ..... | green lice |
| Sugar melons | .25 | " | 1 pkg. | ..... | ..... | |
| Evergreen corn | .25 | " | ½ pint | 10 doz. | 1.35 | |
| Golden Bantam corn | .25 | " | ½ pint | 14 doz | 2.10 | |
| Lima beans | .60 | " | 2 pints | 1 quart | .20 | summer to dry |
| Pole beans | .30 | " | 1 pint | ½ bushel | 1.00 | |
| Peas, eatable pods | .30 | July 7 | 1 pint | 3 pecks | 1.50 | |
| Beans, wax stringless | .70 | " | 2 pints | 5 bushels | 9 00 | |
| Cabbage, plants | 1.20 | ..... | ..... | ..... | 1.50 | |
| | $13.25 | | | | $53.65 | |
| | | | | Net.... | $40.40 | |

*(Continued from page 87)*

Shall we encourage or discourage it? Shall we say to our friend of the letter, "Your type of orchard is an injury to yourself and the fruit industry. You had better cut it down." Or shall we say, "Your orchard under your awakened interest in better management may do its part in a greater and better fruit industry in Wisconsin?"

A dry house atmosphere is not desirable to live in and it will not permit the raising of good house plants. Plants must not be kept too dry or warm. Fresh air is essential to them as well as to human beings.

---

Orchard trees may be pruned on warm days in late winter if the snow is not too deep.

**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.**


**Free!**

A 50-gallon barrel of Scalecide free to any any one who will suggest a *fairer* guarantee than that given below.

**"SCALECIDE"**

As proof of our confidence and to strengthen yours, we will make the following proposition to any fruit grower of average honesty and veracity:
Divide your orchard in half, no matter how large or small. Spray one-half with "SCALECIDE", and the other with Lime-Sulfur for three years, everything else being equal. If at the end of that time, three disinterested fruit growers say that the part sprayed with "SCALECIDE" is not in every way better than that sprayed with Lime-Sulfur, we will return you the money you paid us for the "SCALECIDE".
Send for new free booklet, "Profits in Fall Spraying".

**B. G. Pratt Co., M'f'g Chemists**
**50 Church St. Dept. X1 New York**

**"We have a Fine Lot of Plants for the Garden"**

**SEND FOR LIST**

**J. E. MATHEWSON**

**SHEBOYGAN, WISCONSIN**

# ASK QUESTIONS

Members are privileged to ask questions. Tear out this sheet, send to Secretary State Horticultural Society, Madison, with not more than 10 questions. Answers will be published in succeeding issues of Wisconsin Horticulture. Don't ask questions for the sake of asking, but don't fail to ask if you really want to know. No questions will be answered unless name and address of writer are given. No names will be published without consent of writer.

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## Cranberry News

By Mrs. S. N. Whittlesey, Secretary Wis. State Cranberry Growers' Association

The 31st annual meeting of the Wisconsin State Cranberry Growers' Association convened in Grand Rapids, Wis., Jan. 8, 1918. Owing to bad weather and congested conditions of railroads caused by high wind and heavy snowfall, arrivals were tardy and many were not able to come at all. After a long (in time) and very roundabout trip from Chicago, President Searls was able to reach us and called the meeting to order at 10:00 a. m. Also on account of time consumed in this trip, Mr. Searls was not able to give us his usually prepared address but gave a talk dwelling principally on the Black head fire worm—a pest that now threatens great destruction unless stringent measures are taken in proper time.

The minutes of the 30th summer meeting were read and approved, as were reports of Treasurer and Secretary. The two latter not differing greatly from those of a year ago. Owing to uncertainty of liabilities from destruction of records last February, it was deemed best to be sure of same before making inroads on assets in evidence. These will now be taken care of and the results published in our 31st Annual report. By unanimous vote of the house, the Secretary was instructed to cast a ballot for the old officers, namely: Andrew Searls, President; F. J. Hoffman, Vice President; H. J. Gehbardt, Treasurer, J. J. Emmerick, member Ex. Com.; and Mrs. S. N. Whittlesey, Secretary, for the ensuing term.

The entire morning session was devoted to business and reports, the discussions from which ought to prove fruitful.

A number of valuable papers were given in the afternoon, noticeably "Co-operation Between Banker and Grower" by Guy O. Babcock of the Wood Co. Nat'l Bank. "Observations and Suggestions" by A. N. Chaney, general manager American Cranberry Exchange. "Shall We Advertise?" by Herman J. Gebhardt, Treasurer W. S. C. G. Ass'n. "Value of State Fair Exhibit" by Chas. Schlosser, Chicago manager Wis. Cranberry Sales Co., "Marketing" by S. N. Whittlesey and "The State Fair" by Chelcie Treat.

The only drawback to this interesting meeting was the absence of many members whose presence we enjoy and whose help and cooperation we need.

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## Farmers Want to Share in Responsibility of Winning the War

It is unwise to deny one-third of the people of the United States any real part in handling the problems of the war. The farmers are constantly told that the war will be won by the food they supply. Yet the farmers of America have today little voice, if any, in deciding the great questions, even the food and farm questions, upon which the issue of the war depends. So far as we have learned there is not a single genuine farmer, representative of the organized farmers of America, in any position of authority in the Food Administration, the Advisory Council of National Defense, or any of the other special boards charged with the conduct of the war. When contrasted with the recognition properly accorded to organized labor and the vast possibilities entrusted to the representatives of organized business, such treatment amounts to notice to the organized farmers that their partnership is not desired.

Sustained or increased production is impossible unless the organized farmers of America are given a voice in the conduct of the war commensurate with the importance of their part in winning it.


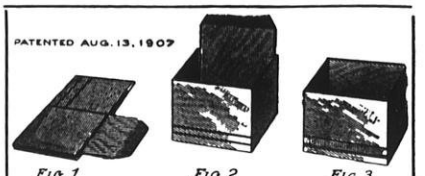

Fig. 1 Fig. 2 Fig. 3

**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.

**FOR SALE**

Choice Strawberry Plants in large or small quantities. We make a specialty of Warfield and Senator Dunlap, Wisconsin's standard varieties. We also have the leading varieties of Raspberries. Write for price list.

**Rasmussen's Fruit Farm**
**Oshkosh, Wis.**

One of the many homes our Landscape Department has helped to make attractive.

We are now ready to help you make your place a Beauty Spot.

A booklet showing places we have planned and planted is free.

You want the best varieties when planting your Orchard, Home Grounds or Fruit Garden. Our catalogue tells you about them.

**The Coe, Converse & Edwards Co., Nurserymen, Fort Atkinson, Wis.**

---

**ORDER NOW**

# ARSENATE OF LEAD AND LIME SULPHUR

THAT IS

# MADE IN WISCONSIN

MANUFACTURED BY THE

## CREAM CITY CHEMICAL WORKS

**772-678 Kinnickinic Avenue** ---o--- **MILWAUKEE, WISCONSIN**

WRITE FOR CIRCULARS AND INFORMATION

# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONS N STATE HORTICULTURAL SOCIETY

Volume VIII | Madison, Wisconsin, March, 1918 | Number 7

A tree, undoubtedly, is one of the most beautiful objects in nature. Airy and delicate in its youth, luxuriant and majestic in its prime, venerable and picturesque in its old age, it constitutes in its various forms, the greatest charm and beauty of the earth in all countries.—*Downing.*

### Roses for Cut Flowers.

Rose lovers who heretofore have confined their attention to general-purpose roses, cutting their house flowers from plants used for lawn or border ornamentation, or for covers for arbors, should find it desirable to plant a special rose garden for cut flowers. This is practically the only plan that will result in the production of blossoms of highest quality. The hybrid perpetuals are the hardiest of the cut-flower roses and are the only ones to be relied upon in the colder parts of the country and in the rural districts of the dry-land region. They usually bloom only in the early summer, but sometimes bloom a second time if thoroughly pruned, especially if given a midsummer check by dry weather.

#### Choice of Stock

Roses adapted to culture for cut flowers, the gardener will find, show most plainly the results of the long period through which roses have been selected and bred. Greater specialization in methods of treatment also will be found here than among other types of flowers. Plants may be had from nurseries in "own root" "budded," or "grafted" form.

The advantage of grafted and budded roses is that they are more vigorous the first few years, but they have to be watched closely to prevent shoots starting from the stock, as such shoots take the sap and thus starve the scion. The expert who constantly can watch his plants may be successful with grafted and budded roses, but the average grower would do best to use own-rooted plants, even though they do not grow so fast. The few varieties that succeed only when grafted should not be tried until the grower has become expert in handling roses. Climbing roses are grafted less often than hybrid perpetuals, hybrid teas, and teas. The size or age of the plant to use is largely a matter of choice. They are offered in various sizes, from 1 to 3 years. The plants from cuttings are smaller than the other plants of the same age and variety. Three-year-old plants give the quickest results. Two-year-old plants can be transplanted more successfully than older ones and are rather more satisfactory. One year old plants have to be grown for a year before any real results are obtained in the way of bloom. The first year the flower buds should be picked from this small size as soon as formed, to let all the strength go into growth.

#### Soil, Drainage and Fertilizer

Cut-flower roses thrive in a well drained soil that is not too dry and is well supplied with organic matter. The hybrid perpetuals succeed best in clay loam or in a soil with a clay subsoil. They do not succeed so well in gravel soils. A well-enriched soil and one reasonably constant in its ability to supply the plant with moisture is the chief requirement. On the other hand, it must be well drained, as roses will not grow when water stands about their roots.

In heavy clay soils or wherever water is liable to stand, it is desirable to provide artificial drainage. This is best done by excavating to a depth of 3 feet, placing a 12-inch layer of stones in the bottom, covering these with the inverted sods, and then refilling the bed with well-prepared soil. This layer of drainage should be connected with some proper outlet for carrying off the water. A drain of a similar layer of stones 1 foot or more wide, or a tile, should lead to some main drain, a sewer, or to an opening on lower land, so that surplus water will be carried away immediately. In well-drained soils such special precaution is not necessary. Sometimes the layer of stones without the outlet drain will be sufficient.

The recommendations already made about manures and fertilizers are equally applicable to cut-flower roses. The use of rotted cow manure or well-prepared compost is even more important for cut-flower roses than for border roses.

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### The Care of Lawns.

Home owners who wish to get the best results from their lawns should begin to work on them the last of February or early in March, according to the lawn specialists of the United States Department of Agriculture. Too many people delay giving any attention to their grass plots until the weather becomes warm and thus lose an opportunity to take advantage of melting snow and the alternate night freezing and thawing of the ground.

If the lawn has not already been fertilized, some form of commercial fertilizer should be used at once. Manure applied this late will not be effective in most cases. Ground bone is probably the best fertilizer to use, although tankage and fish scraps, some of which, however, have an unpleasant smell, also give good results. Prepared sheep manure is an excellent fertilizer for use at this sea-

son. Cottonseed meal where obtainable at a low enough price may be used to advantage. In connection with those fertilizers, however, it is desirable to use some wood ashes or other fertilizer containing potash. As fertilizers with this element are unusually high priced this year, the natural inclination will be to use minimum quantities. With soils that have been well fertilized in the past, failure to use a normal amount of potash will probably not affect the lawn badly in one season. These fertilizers should be applied at the earliest possible moment.

Temptation to get on the lawn and clean it up is strong as soon as the snow is gone and the weather begins to settle. Impatience, however, should be curbed until the ground is settled fairly well so that footmarks will not show in the turf. Where a lawn has been trampled down during the winter or played upon when it was soft in winter or early spring, the owner should take steps to compact its surface at the earliest possible moment. This compacting, however, should not be done until all trash has been removed. As soon as the ground is sufficiently settled so that a rake does not dig into the turf, the owner should rake it gently with a wooden-toothed rake. Frequently, however, all that is necessary is to pick off the litter. If a lawn has been covered with manure in the fall, it will be necessary to break the manure up with a rake in the spring, and remove some of the coarser portions. A wooden rake is best for this purpose, as it will leave so much more of the fine material upon the ground.

Do not rake off so much of the manure that the lawn will have a thoroughly clean appearance. All of the fine manure that the summer growth of grass can possibly hide should be left. It is surprising how much litter the grass will obscure in a lawn, as one or two heavy rains will beat down a quantity of such material.

Before freezing weather is entirely over, fresh grass seed should be sown, for it must be remembered that only by repeated applications of grass seed can a good lawn be produced. The ordinary seeding of grass on a new lawn is 1 pound of seed to every 400 square feet—that is, to a piece 20 feet square. For reseeding a lawn, one-tenth to one-half of this amount should be used, according to the condition of the lawn at the time. For the northern part of the United States, Kentucky blue grass and redtop are the standard varieties. However, where there are many bare spaces it will be found well to use some white clover. About one-tenth the quantity of clover as of the other grasses mentioned will be required.

Probably as good a time as any to apply grass seed will be some morning when the ground is frozen, so that when the ground thaws during the middle of the day the sown seed will be covered sufficiently to germinate well. The most successful seeding is that done while the ground is freezing a little each night and thawing again in the day time. Many people have success in sowing grass seed upon a light snowfall at a time when the snow is likely soon to melt. With either of these methods, however, there is danger that birds will eat some of the seeds before it is covered in the soil. In spite of this, however, there is a better chance of getting a good lawn by these methods than when the seed is sown on land that will not quickly cover it.

The last operation in the preliminary spring care of a lawn is to give it a good rolling. This rolling, which should be done with as heavy a roller as can be handled, should not be begun, however, until after the lawn is dry enough so that the roller passes over it without sinking at any point below the general level. If the land is too wet the roller will leave depressions. This rolling should be done just as soon as the land is dry enough to permit it, as rolling compacts the soil about the roots of the plants, brings them into closer contact with the soil, and gives them a better opportunity to make a quick start as soon as weather conditions are favorable.

Grass cutting should begin just as soon as the lawn mower can get a good hold. The very early cutting may be made with the lawn mower set close to the ground. As soon as the growth of grass becomes a little less vigorous, the mower should be set just as high as possible. This high cutting should be done as frequently as though the grass were being cut shorter.

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This is the time to study spraying. Spraying is serious business and the spraying campaign should be well worked out in advance. Know first what insects or diseases you are going to combat, then get the best materials to meet them and learn when and how best to apply them.

# CRANBERRY CULTURE

Edited by Mrs. S. N. Whittlesey, Cranmoor, Secretary Wisconsin Cranberry Growers Association

To the Members of the Wisconsin State Cranberry Growers' Association:

Through the courtesy of Secretary Cranefield in tendering a generous amount of space in the Wisconsin Horticulture for cranberry news, the growers have an unusual opportunity to ask questions—to exchange opinions at frequent intervals, and impart information along the many lines connected with our industry. While the secretary was appointed to take charge of this cranberry corner, it was the understanding the members would furnish the material. The benefit derived will depend largely on your individual efforts in giving of your knowledge and experience. Without further invitation or notice please feel these columns are open for your use.

Of late years Pres. Searls has had phenomenal success in raising good crops. He is ever willing to help and has told us this month his first work in the spring toward insuring this success. Mr. Searls also writes—"There has been some fearful butchering of innocent plants under the disguise of pruning" and suggests a paper on this topic by Mr. Whittlesey whom he thinks "has this down to a science."

Mrs. S. N. Whittlesey, Sec.

## Water for the Winter Protection of Cranberries.

Andrew Searls.

The time is near at hand when I think it should be taken off, so I will give you my conclusions. When I first took a hand in trying to cultivate the cranberry, it was the custom to retain the winter flood until the first of June, keeping everythin under a deep covering of water. The reason given by growers at that time was to hold back, or keep the vines from growing and being killed by the late frosts in the spring; so of course I did likewise for some years. Then I became skeptical regarding the wisdom of this practice. Upon close observation I noticed the wild vines growing in our vicinity bore much heavier crops of berries when they escaped the late frostes of spring and the winter winds and cold, having been protected by the winter snows—than did our vines which had been blessed by our method of protection. I also noticed the wild vines were not inclined to grow until late in May in a normal season.

Then why keep our vines under water so late in the season? The cold nights of April and early May seemed to do the wild vines no harm, as they had not made any new growth. I observed our vines that had been protected until the first of June would blossom and seemed to promise an immense crop of berries, but when the crop of young berries should have shown up, a very large portion had blashed.

About that time we had a very dry spring and we were unable to keep our vines under water, in fact the most of the vines were exposed, there only being a few inches of water on the ground In season our vines blossomed fine and when the season advanced showed nearly every blossom had produced a berry showing a very marked improvement over any previous season. About this time we had one of our dikes give way in April exposing a small field and we were able to hold sufficient water to give protection to the vines when the new growth took place the latter part of May. This field showed a very marked improvement over the other fields in the crop yield, being almost entirely free from blight. I then revised this water question in about this fashion. Put on a winter flood when the vines need protection, and that is usually late in November, and take it off as soon as winter is past.

My usual orders to the caretakers of the marshes I am interested in is—get your flume boards out of your flumes before the snow and ice begins to melt in March, and allow the water to escape as it melts, allowing the water to drain entirely out of the ditches. In this way any frost that may be in the bog, will not draw out readily, as it will on upland, and will usually hold back any vine growth unless we have a very warm April, and it must be unusually warm when a bog is well drained, to cause any movement of life in the vines. Should this be the case, it is, of course, necessary to again flood up and hold them back, as it is not wise to allow the vines to get under way in April or early May. My opinion is, the late holding of water on a bog weakens the vitality of the vine, causing blight of the young berries.

### Personal Items.

Early in December, 1917, Roy M. Potter, one of our youngest cranberry growers and Sales Co. inspector, enlisted as a truck driver. After three weeks at Jefferson Barracks, Mo., he was sent to Kelly Field, Texas. Here the boys were put to digging ditches —not new work for him as that was the last work he did at home. He writes "the boys have a little song that goes like this—I am not an aviator, nor an aviator's son, but will handle pick and shovel, till the aviators come." He is glad he is not raising cranberries in Texas where the days are awfully warm and the nights very cold. Roy was one of sixty chosen out of twelve hundred to take up Liberty Motor work, and is now spending six hours a day studying at Dunwoody Institute, Minneapolis, Minn.

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Mr. Earle Pease, V. Pres. of 1st Natl. Bank of Grand Rapids, is avoiding some of our extremely cold weather by spending a few weeks with Mrs. Pease who is at Lake Worth, Florida, for the winter.

We are pleased to notice a winter visit of Henry H. Gebhardt of Black River Falls. His trip extended east to Pennsylvania and was a very pleasant one.

As is the usual custom of Mr. and Mrs. Robert Skeel they are spending part of the winter with the latter's parents at Waupaca, Wis.

Pres. and Mrs. Searls and daughter, Miss Mayme, are visitors at Beaver Dam for a short time.

Mr. and Mrs. H. B. Tuttle will make their home another year at the E. K. Tuttle marsh near Valley Junction.

Mr. and Mrs. B. P. Clinton of Cranmoor are enjoying the winter at the home of their daughter, Mrs. Young, in Hydro, Oklahoma.

Mr. J. B. Arpin of the Arpin Cranberry Co., has been south to the Gulf states looking after his dredging interests. Mrs. Arpin and their son, Leon, accompanying him. Leon decided to remain through the summer.

Mrs. S. A. Warner, formerly of Warrens, Wis., but now of Harris, Iowa, was called to the home of her brother, Robert Regin, at Cranmoor to help care for her mother, Mrs. Daniel Regin, Sr., who has been a sufferer many months.

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### Pruning.

That position of the upright of the cranberry vine most favorable to the formation of the terminal fruit bud and especially to the development of that bud into a good crop of cranberries seems to be a position nearly perpendicular and as independent and untrammeld of its fellows as possible.

The object of pruning is to get the vines into that most favorable position, which is also most favorable for gathering the crop with the rake or scoop. The tools are a common wooden-toothed hand hay rake and a similar rake or pruner with about four steel teeth instead of a dozen wooden ones, and these four are sharp edged, slightly hooked, short knives.

The method is first to use the hay rake to comb out the vines. straighten and even up what is twisted or trodden down, and to remove rake ends and rubbish and to discover superfluous runners and useless long vines that grow high among the uprights. Next use the pruner to cut out the superfluous long vines, carrying the tool lightly and evenly thru the uprights (not dragging it) high among the tops, twitching the tool with quick stroke to right and to left, the operator moving backwards, the operation and the wad of vines following him—doing a strip say five feet wide and as long as he can remember, say thirty feet, then another strip and so on. We always comb, prune, and rake from west to east—the nap of the vines seems to demand it. The operator should keep his pruner sharp, and his wits. It is not profitable to cut out roots, nor uprights.

Pruning is best done after picking in the fall, and may be done in the spring before sap starts in the vines.

S. N. Whittlesey.

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### Bulletins of the War Garden Series.

Two circulars or bulletins of the War Garden Series announced in the February number, have been published and are ready for distribution, Getting Ready for the War Garden, by Prof. J. G. Moore and Seed Sense, edited by F. Cranefield. Both are reprinted in this number. Copies may be had on application to this office or to the College of Agriculture. We want every one who will plant a garden this year to have a copy of these as well as the ones now in preparation. Ask for exactly the number you can distribute to good advantage—no more, no less.

# THE TREE THAT FOUGHT FOR FRANCE

By EDWARD W. FRENTZ

One hot September day in the fall of 1915 a little boy lay quietly on his back, looking up through the branches of a great big tree that lavished its protecting shade above him. He was thinking of the tree, and of all that it had seen, and of what it could tell if only its whispering leaves could talk; for he had heard a part of the story many times, and he wished that he could hear the tree tell the whole of it.

It was his great-grandfather, Philip Le Blanc, and his great-grandmother who had come there first, so long ago that there were no houses and no other people anywhere near. When they saw the tree, which even then was greater than any round it, and when they had drunk of the spring that watered its roots, his great-grandmother had said, "Here let us stay;" and so they unyoked the oxen from the great wagon and began to make a home in the Ohio wilderness. But all that first summer the tree was their real home, for under it they cooked and ate their meals, and under it they slept when the nights were hot.

And by and by, even before they had finished the log cabin on the little knoll to the east, a son was born to them; and him, too, they called Philip; and his father said when he named him, "I have little to give thee, my son; but what God gave to me, that give I also to thee. Thou shalt have the great tree that has sheltered us in the wilderness, and that was thy first home. It shall be thine forever."

And so the tree came very early to be known as "Philip's tree."

The second Philip, who was the little boy's grandfather, had spent his life in making the forests into fields and in planting corn and wheat, and he, too, had a son whom he named Philip; and when he christened him he said, "My son, I have much to give thee, but nothing else so beautiful as the great tree that I had of my father. That, then, shall be your christening gift." And so the tree was still called "Philip's tree"; but this time the Philip that was meant was the little boy's father.

Those things, of course, the little boy could not remember, for they happened long before he was born; but what he did remember was the day when his father had first told him the story of the tree and at the end had said, "And now, my son, as my grandfather, the first Philip Le Blanc, gave the tree to my father, so I, the third in line, and the third to bear the name, now give it to you, for your very own, to love and cherish as we have loved and cherished it."

All those things the little boy thought of as he lay there and watched the sunlight dotting the leaves with gold. "And it is now *my* tree," he said happily to himself; "my very own!"

He thought that he had spoken only to himself, and so he was startled to hear a little rustle in the grass and a man's voice saying,

"Yours, is it, my son? Then you are a lucky boy, for there are few like it now." Then the stranger asked where the little boy's father was, and went over to the house to see him.

Philip saw him go in at the front door, and after a little while come out again, but this time Philip's father was with him. The two of them crossed the dooryard and the road, and came over to where Philip was sitting. "There!" said Philip's father. "Ask him yourself." And he smiled.

Then the stranger said, "My boy, who owns this tree?"

Philip rose to his feet, for, although he could not tell why, it seemed as if something great were at hand—something in the presence of which it was not fitting to remain seated. So he stood up straight before the man and said, "I own it, sir."

"And will you sell it—to me—for a great deal of money—for a hundred dollars?"

For a moment Philip looked at the man in wonder. "Sell it?" he said. "Sell my tree? No, sir."

Then the stranger turned to Philip's father. "May I tell him the story?" he asked.

"Yes, tell him. Tell him as you told me; for the tree is his, and he shall decide for himself."

And so, as they sat there under the tree, the stranger told the little boy of the great war; of how French men had been killed and French women had been driven from their homes and little French children were starving. He spoke of the many things that France needed and could get only in this country; and then he rose and, laying his hand on the trunk of the tree, he said, "She needs your tree. She needs it for gunstocks, for it is a black walnut, and so large that it will make hundreds of stocks, and of no other wood can

good stocks be made. It is a noble tree. It has been in your family for generations—I know the story—and it is like an old and dear friend. But your people and your father's people came from France many years ago to help this country when it was poor, and the land has blessed them and made them rich. Now France needs your help—she needs your tree. Will you sell it to me—to fight for France?"

The little boy looked with wide, startled eyes at his father. "Is it true, father, what the man says?"

"Yes, my son, it is all true."

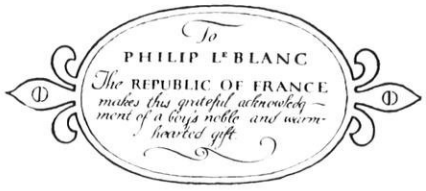
Philip turned to the stranger. "Then you may have my tree," he said. "But I will not sell it to you; I will give it—to France."

"Will you let him do it?" asked the man of Philip's father.

"It is his, and he has done as he wished," said his father, and laid his hand on Philip's head; then he and the man walked away together.

In a week workmen came with saws and axes and laid the great tree low. Then they brought a little mill and cut the log into blocks and the blocks into slices and the slices into strips, and loaded them on trucks and hauled them away. And the place where the tree had stood was lonesome and bare. But as Philip thought of the strips of wood that the trucks had hauled away, it seemed to him that every one of them was a tough little brown soldier gone to fight for France.

I do not know who told the story, or how it got across the sea, but a little more than a year afterwards there came to Philip a big wooden box with strange, foreign-looking labels on it; and within was a case of polished walnut that held a wonderfully beautiful rifle. The metal parts were richly engraved, and the stock was of that lovely curly wood that comes only from the part of the tree where the trunk joins the roots; and set into the stock was a plate of gold on which was engraved:




Never again will the birds sing in the branches of the old walnut, but in a boy's heart will sing throughout all his life voices sweeter than those of bird or flute, for they are the voices of patriotism and sacrifice and service.

*Reprinted from the Youth's Companion, Boston. Copyrighted 1918 by Perry Mason Company, Boston.*

## Apple Activity in Iowa

In its campaign to increase fruit production as a contribution to the nation's stock of food, the Iowa State Horticultural Society points out the high percentage of sugar in ripe apples. At the request of the society, Professor C. N. Kinney of Drake University has furnished striking figures supplementary to resolutions passed at the last meeting urging extensive fruit-growing activity.

According to Professor Kinney, the best grade of ripe apples runs from 15 to 18 per cent in food value, mainly sugar; thus in 12 cars of apples there would be something like two cars of sugar and other food constituents. If 1,500,000 bushels of apples going to waste annually in Iowa could be saved, there would be conserved some 12,000,000 pounds of sugar and food constituents.

In calling attention to these figures, the Iowa State Horticultural Society hopes to overcome the popular impression that apples are merely a tonic or relish used for dessert and show that on the contrary they are a valuable food product.

## California Returns Gift

Five and one-half million pounds of seed beans and 1,500,000 two-year-old French prune trees are being gathered in California for shipment to Northern France to rehabilitate the fields and orchards devastated by the Germans in their retreat.

The beans are pink and blackeye varieties, and the quantity is sufficient to plant 69,000 acres. The prune trees will convert 15,000 acres into bearing orchards within two years.

There is a bit of sentiment in California's sending young orchards to France, as it was this war-torn republic that gave the state its first prune trees. This was in 1856, and since that time the prune orchards cover nearly 100,000 acres and bring to the growers more than $10,000,000 a year.

If an average crop is raised from the California seed it will mean an addition to the food supply of France of more than two and one-half pounds of beans next summer to each of the 40,000,000 residents. Shipments will begin immediately after the new year.—Philadelphia Record.

Go over the celery, cabbage and root crops in the cellar and pick out any that are starting to decay.

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## Keeping the Faith

The Youths Companion of Boston has been published for nearly a century and still maintains a high standard of excellence. The writer has had the great privilege of being a constant reader of the Companion for thirty-seven years and enjoys it now quite as much as in the beginning. It is **clean** from cover to cover. Its fiction possesses high literary merit, is never morbid, but always inspirational.

Two reasons have inspired this unsolicited tribute: a deep, heartfelt appreciation of what I believe this periodical has done for the youth of our country and to call attention to the beautiful little story taken from the Children's page of the Companion and printed elsewhere in this issue. I want to believe and do believe it is truth and not fiction.

F. Cranefield.

## The Business of Winning.

It is time that we began to think in concrete personal terms about the business of winning the war. To a good many people in America that has been and still is somebody's else business.

The President can't win this war. The Democratic Party can't win it. Neither can the Army nor the Navy, nor the farmers, nor the laborers, nor the capitalists. You, whoever you are and whatever you are doing, must win it personally. The business of winning is everybody's business. Any man who is not ready to make it his personal affair is a coward running from the field of battle.

**From this time on there can be only three classes in the United States—Americans, pro-Germans and yellow dogs.** Many people would lump the two last, but wrongly, because in the third group there are many who, once awakened to a class consciousness of their yellow dogginess, may be saved. We refer, of course, to the men who are seeking party and partisan advantage in this crisis; to the red-tapers and incompetents who are obstructing and muddling everything they touch; to the grandstanders and limelighters who see nothing but an opportunity for personal advertising and aggrandizement in the national peril; and to the profiteers, to whom all dollars look alike, even those that are blood-stained.

Let there be no misunderstanding in the mind of any man about these things. Votes made now by specious appeals to discontent mean lives lost. Incompetents continued in office mean trenches taken by the enemy. Strikes that squeeze the last penny out of our need for haste mean men drowning in the Atlantic and soldiers sacrificed in France.

The yellow dogs are in a minority. They must be converted or sent to the pound. The pro-Germans should be there now. The great silent majority of us who are single-hearted for America cannot be soldiers, but every man and woman of us can back up a soldier to the limit.

—Saturday Evening Post.

## 'Whispering Traitors' Denounced by Taft.

**Chicago**—"Whispering traitors," said ex-President Taft before the national service congress, "have been the centers throughout the country of discontent. In little communities you will find that the presence of two or three who have suggested reasons why we ought not to have gone into the war, why we did wrong to Germany in this, why we did wrong to her in that—should have kept us out of the war, and that has a paralyzing effect upon the enthusiasm of our people. It takes the fine edge off patriotism among those to whom these suggestions are rendered.

"The time is coming, my friends—we might as well face it—the time is coming when we may

meet disaster, when this devilish malignity of the Germans shall make them suggest a trap for fools among us by which an inconclusive peace is to be brought about—that we shall have to call on the strength and pride of our people to stand up against any such lure and have the Germans know that they cannot lead a moral people like us to give up a moral fight like this.''

### A Letter and an Answer.

Dear Sir: The farmers in this section nearly all have some apple trees but realize very little from apples. About 85% of Duchess, McMahan, Wealthy, etc., are left to rot on the ground. There are very few that spray the trees, as they claim it does not pay to bother with apples at the price offered for them. Would a plant for evaporating apples pay, and what would you estimate the cost ofsuch a plant? I have an orchard of 1,100 trees that will come in bearing soon. About 80% of my trees are Wealthy.

M. O.,
Vernon Co.

I have your interesting letter of Feb. 16th, but will admit that I have no ready solution for the problem you propose. For 25 years I have pleaded with the farmers of Wisconsin to take better care of their orchards. Many others connected with the Agricultural College have done the same thing, but we have met with poor success.

The farmers of Wisconsin do not take care of their orchards, and I doubt if they ever will. **Of course** the apples rot on the ground. How can it be otherwise? In the first place less than one-half of them are fit for market. There are too many good apples for the buyer to bother with wormy and scabby ones. Even if the farmer should properly care for his trees so as to have clean, marketable fruit he would still be handicapped because he is not equipped for marketing. His crop is so small and of so many different kinds that he would find difficulty in disposing of it in the wholesole market to say nothing of buying barrels and learning the art of packing, and the local market as a rule is easily glutted.

If you ask me the answer of this problem I will reply that I have none to offer unless it is this; if the farmers of any community will cultivate their orchards, prune the trees and spray them, giving the same attention to their apple trees that they do to their corn crop and will then co-operate in packing and shipping, they can dispose of their crops profitably. If they are unwilling to do this they should dig out their orchards except a dozen or two dozen trees from which they can take what they get from year to year for home use. My hobby is that the fruit in Wisconsin should be grown by **fruit growers,** specialists, who will give proper attention to their trees. You would easily fall within this class as you have 1,100 trees. I think, however, that you have a disproportionate amount of Wealthy, 80%. You have too many eggs in one basket. However, I am sure you will find no difficulty in disposing of your crop to advantage.

We are investigating the evaporating business and hope to have something interesting to offer soon. Sec. W. S. H. S.

### About Garden Peas.

Smooth peas may be safely planted earlier than wrinkled peas.

Of the wrinkled varieties some are hardier than others and may be planted earlier. The Alaska is the hardiest of all the kinds commonly sold, Gradus next, and Laxton third.

The late pea, Stratagem, is the best all around variety, is half-high and does not require support. Champion of England is better quality than Stratagem but requires support.

N. A. Rasmussen.

Much can they praise the trees so straight and hy,
The sayling pine, the cedar proud and tall,
The vine-propp elme, the poplar never dry,
The builder oake, sole king of forrests all,
The aspine good for staves, the cypresse funerall.

The laurell, meed of mightie conquerours
And poets sage, the firre that weepeth still,
The willow worne of f rlorne paramours,
The eugh obedient to the benders will,
The birch for shafts, the sallow for the mill,
The mirrhe sweete bleeding in the bitter wound,
The warlike beech, the ash for nothing ill,
The fruitful olive, and the platane round,
The carver holme, the maple seldom inward sound.

Spenser's *Fairie Queen.*

## Fruits and Flowers for the Home

This is the title of a little six page folder issued by this society for distribution at the state fair and to enclose in letters. It is reprinted here for the benefit of prospective planters. The lists here given are for the guidance of beginners especially for the farm orchard and back lot garden. Preserve this paper for reference when the nursery agent calls.

This information is for the home owner whether in the city or country.

Many farmers raise sufficient fruit for the family needs; every farmer should do so.

Back lots in cities and villages often offer splendid opportunities for fruit growing.

### WHAT TO PLANT

The fruits named below are all standard, reliable, hardy sorts that have been grown in Wisconsin for fifty years or more.

Apples—(1 dozen trees enough for the farm home) 3 Duchess (early), 5 Wealthy (mid season), 4 Northwestern Greening (winter).

If a greater variety is desired add: McIntosh (mid-season), Tolman (winter), Windsor (winter),

For north-central Wisconsin substitute Patten Greening for Northwestern and omit McIntosh, etc.

Do *not* plant Transcendant crab anywhere in Wisconsin on account of its tendency to blight. Plant Martha or Hyslop instead.

Plums—Surprise, DeSoto, Hawkeye, all natives, all reliably hardy anywhere in Wisconsin and all sure croppers.

None of the European or Japanese plums are long-lived in Wisconsin but trees of certain varieties often live to bear several crops.

Try: Green Gage, Lombard and Moore's Arctic, for European and Burbank for Japanese.

Cherries—Where cherries thrive plant Early Richmond and Montmorency, no others.

Grapes—Concord and Niagara, mostly Concord.

Blackberries—Eldorado.

Strawberries—Dunlap and Warfield.

Raspberries—black, Plum Farmer; red, Cuthbert; purple, Columbian.

Currants—Red Cross.

Gooseberries—Downing.

Do not buy novelties and newly introduced varieties unless you can afford to lose money. Stick to the old reliable kinds.

### WHEN TO BUY

Place your order in fall or winter for early spring delivery. Do not plant fruit trees in the fall.

### CATALOG VS. AGENT

Very good trees and plants may be had from nurseries that sell only by catalog.

The agent solicits your order, delivers the plants at your door and will usually come again the following year. Take your choice, both plans are good.

For advertisements of reliable nurseries consult *Wisconsin Horticulture.*

### TREES FOR SHADE AND ORNAMENT

Roadside and Street Trees— Elm, Basswood, Norway Maple.

Lawn Trees—For large lawns any of the three named above or Hackberry, Green Ash, Scarlet Maple.

Consider carefully the future before planting any large growing trees on small lawns.

Flowering Shrubs—Common lilac, Persian lilac, Tartarian honeysuckle, Rosa rugosa, Syringa, Van Houten's spirea (bridal wreath) Barberry. These are all hardy in any part of Wisconsin.

### ROSES

Harrison Yellow, Persian Yellow, Rosa rugosa and various types of the old Provence or Cabbage rose are all as hardy as hazel brush and need no winter protection anywhere in Wisconsin.

For finer roses plant Gen. Jack, Magna Charta and Paul Neyron, but give these thorough winter protection.

For a more extended list see Annual Report State Horticultural Society.

Do not buy "tree" roses or other high-priced novelties.

Three hardy perennial vines—Ampelopsis or American Ivy, Wild Grape and Trumpet Honeysuckle.

Six hardy herbaceous perennials—Peony, phlox, larspur, bleeding heart, lily of the valley and day lily.

### SPRING FLOWERING BULBS

These must be planted in the fall, September or October, and bloom early in spring.

Tulips—Artus, red; Chrysolora, yellow; Cottage Maid, pink.

Hyacinth—Charles Dickens, pink; Baroness von Thuyll, white; Baron von Thuyll, blue.

Crocus—Mixed.

Narcissus (daffodil)—Von Sion.

The State Horticultural Society will furnish information free of charge about the kinds of trees and plants suitable for planting in Wisconsin, their hardiness and adaptability for specific purposes, etc., but does not furnish planting plans.

### Order Seeds Now.

There will probably be seeds enough of the common garden vegetables to go around, but in order to be sure of the kinds you want, order at once. At that you may be disappointed in some of your favorite kinds, but that will not be a calamity. There are at least a dozen kinds of very good beans and the same of peas. Two or three days' difference in earliness or the shape or color of pod is not serious.

### The New Spray Gun.

A member wants to know about size of hose to use on spray pump and also says: "I notice all firms manufacturing spray pumps are advertising spray guns as a great improvement over the spray rod. Have you had any experience with them? Is it really an improvement? Do you think they will replace the rods?"

Dr. E. D. Ball, state entomologist, replies as follows:

I would recommend ½" hose. If heavy walled high pressure hose is used this size is heavy enough to handle, and, at the same time, the bore is large enough to carry all the liquid necessary.

The spray gun as advertised by the spray pump manufacturing companies is not intended to replace the spray rod in the spraying of orchard trees and in places of this kind. The real advantage of the spray rod in the orchard is that one is able to bring the nozzle up close to the tree and by the use of a bend or angle at the end of the rod the spray can be directed in any direction, and a thorough job of spraying done. The spray gun, on the other hand, is for reaching the tops of tall shade trees and places like that, where a rod is not even long enough. They are using these guns to spray elm trees in the New England states, throwing a spray from 40 to 60 feet in the air. This is used for distributing poison for leaf-eating insects, such as the Gipsy Moth, Brown-Tail Moth, Elm Leaf Beetle, and insects of that class and is probable satisfactory for this work. We do not have many calls for this class of work in Wisconsin, so it will be only of minor importance with us.

### Something About Strawberries.

A member asks: Which is the better system for growing strawberries, the hill system or the matted row? For the benefit of the amateur: Strawberry plants set out in the spring send out runners from which new plants are formed. Strawberry plants set 2 feet apart in rows 3 feet apart will cover the entire space by fall if not restricted. In the matted row plan the runners are restricted to a space eighteen inches to two feet wide and a space left clear between the rows for cultivation. The hill system consists in removing all runners as they appear, throwing all the strength into the original plant. The plants may be set much closer by this plan.

The hill system yields larger and finer berries than the matted row, but the yield per acre is less and the cost of production is much greater.

For all ordinary markets grow strawberries by the matted row plan. This is the accepted method, yields profitable crops under all

**JEWELL MINNESOTA GROWN**

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Complete assortment of Fruit and Ornamental stock in all varieties suited to northern culture. A specialty of Hardy Shade Trees, Windbreak Stock, Evergreens (Coniferous), Deciduous Shrubs, Apples and Native Plums.

AGENTS WANTED

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**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 samll quantities.

**Wauwatosa, Wis.**

ordinary conditions and is inexpensive compared with the other plan.

How long may strawberry beds be kept fruiting without renewal, hill system?

A. The strawberry plant is perennial and theoretically it should fruit indefinitely. While the plants might, by exercising extraordinary care, live several years, it will be found that the "hill" plants will not yield profitable crops much longer than by the matted row plan, three or four years.

### Punishment to Fit the Crime.

Why not take citizenship away from those whose words and acts show them to be violating their oaths of allegiance? America took these people into the national family. It gave them the rights for which thousands of Americans died and suffered in the past. This was done with the understanding that these new citizens would defend those rights and hand them on.

That citizenship was not given to be used to destroy the rights of democracy or to give aid to the autocracy from which the people of this country fled and against which they have fought for a century. Those who in this time of crisis refuse to work and fight for democracy prove their unfitness to enjoy citizenship.

Citizenship is a privilege not a right. Taking it away from those who have abused the privilege is making the punishment fit the crime.

Such a punishment would curb the disloyalty of those who make political capital out of their anti-Americanism. Those leaders of Wisconsin Pro-Germanism who first counted noses to see whether it would pay to exploit the race hatred and un-Americanism they cultivate, would find their political capital confiscated if their citizenship was taken away. Even those native born Americans who are seeking political profit from race hatred and disloyalty would be discouraged if they understood that naturalized voters who followed them would lose their right of citizenship.

If those naturalized citizens who are seeking to trade in this treasonable market were certain that they could never realize their political profits it is probable that many of them would lose their interest in the success of the Kaiser.

*Wisconsin Patriotic Press Ass'n.*

### Opening Up the Fruit Farm

D. E. Bingham, at Minn. Society Convention

Let us take it for granted that your Secretary in putting this topic on the programme, as he did, had reference more particularly to the tree fruit farm. While the same conditions apply in many instances, in some they differ. For instance, strawberries and some of the other small fruits will grow and do well on *good* orchard land and will also grow well on land *not* good orchard land.

It seems to me one of the first points to consider in opening up the fruit farm is selection of the soil, for this is a long time investment and the soil must have a good foundation. There is danger of disappointment if the subsoil is too sandy, or too wet, a hard-pan, etc. Trees will not do well for long on soil of such character. We prefer a good clay loam with a good clay subsoil of such a nature as to insure good drainage. If we could have some gravel or lime rock in the subsoil all the better.

Suppose we have such a soil, we have other facts to consider also before it is a good orchard site. Air drainage is important. There should be nothing to obstruct the free movement of the air and the site should have sufficient elevation to insure good air drainage.

The soil should not be too rich in nitrogen. Land that would pro-

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Strawberries
Native Plum Small Fruits
Apple
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Reliable young men for farm and garden work. Will hire by the month or for the year. Write
**Rasmussen's Fruit Farm**
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**GLADIOLUS**
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Our bulbs are all our own grown.
Price list covering only choice varieties Gladiolus and Peonies sent on application. We make good anything sent out not as represented.
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**White Elm Nursery Co.**

Oconomowoc, Wisconsin

duce a good crop of corn might produce too much wood growth. This must be determined by observing the crops and the growth of the trees; if inclined to be excessive, the fertility should be reduced by cropping.

*Planting.* The varieties for the orchard, either for cherries or apples, differ with different localities and different individuals. We all have our notions, and that coupled with the difference in location widens the list of varieties commercially. Four to six varieties for forty acres is sufficient.

I am going to select four varieties and these all red apples, Snow, McIntosh, Dudley and Wealthy. (This for eastern Wisconsin, Secy.) These all have faults, and it is hard to find a variety that hasn't some faults. To those who object to the four I have mentioned I might suggest three or four more, Wagener, Salome, Seek no further and Liveland, all with some color.

One must consider the variety somewhat in determining the distance apart to plant. In the Northwest we can plant closer than in a milder climate. Our trees bear

**HARDY OLD FASHIONED PLANTS**

**OUR SPECIALTY**

The best varieties for Wisconsin conditions, carefully grown and carefully packed. Write for prices

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**Apple, Cherry and Plum Trees, Grape Vines, Blackberry, Raspberry and Strawberry Plants**

Both Everbearing and common varieties.

And a general line of ORNAMENTAL TREES, SHRUBS and ROSES. All stock clean and thrifty, the bestthat can be grown in Wisconsin.

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Write for catalog and prices Baraboo, Wis.

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Our Specialty: Planting and Developing orchards for non-residents. A few choice tracts for sale. If interested, write us.

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Pride of Wisconsin Seed Man
MANITOWOC, WIS.

young and consequently do not reach the size they do in the East and the Southeast.

We plant Wealthy twenty feet; McIntosh, Snow and Dudley twenty-five feet, Wagener twenty feet, Salome twenty-five feet, Liveland twenty, but if planted in with other varieties twenty-five feet. Were all these varieties to be planted in alternating strips of several rows each, across a piece of land, twenty-five feet would be the distance I would use.

*Method of Planting.* Our method is first to stake out our land, twenty-five feet square, lining up the stakes so they are in perfect rows, leaving twenty-five to thirty feet margin at the ends for convenience in turning later on. We use the tree placer of which I have a model. This device insures perfectly straight rows with all sorts of workers.

Holes are dug amply large and deep enough to take in the roots without bending. Long roots are removed or shortened into reasonable length for planting. By using a tree placer and placing it against the stake then tipping the point back it can stay in position until the hole is dug and the tree placed in the hole straight up. Then the point is again tipped down, and the tree comes where the stake was.

*Nursery Stock.* In either cherry or apple a two year, five to six foot tree, well branched, medium low head is about the ideal tree. The reason I choose a two year tree is that the roots are sufficiently large to be woody enough to allow a ready formation of calluses, while

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MADISON, WISCONSIN

**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.

**Nurseries at Waterloo, Wis.**

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Does *all* that any other spray will do —but no other spray will do *all* that "SCALECIDE" will do. Kills all kinds of scale—all forms of fungus and insects that can be reached in dormant season—and invigorates your trees—and costs no more. ***Read our money-back proposition*** before ordering anything else.

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Twenty-five acres, 1½ miles from Egg Harbor, about 1 mile from Horse Shoe Bay Club House. Five acres apple trees, four years planted, in fine condition, ⅔ McIntosh, ⅓ Fameuse, balance of farm meadow and wood lot. Excellent site for summer cottage. Will sell all or part. For details and blue print, address

C. W. DAVIS, BOX 444
Madison, Wis.

the roots on the one year tree will be principally bark and very much slower to callus.

Now that we have said two year, five to six foot tree—where must they be grown? I do not care where they are grown—Kansas, Alabama, Nebraska, Indiana, New York, Wisconsin or Minnesota—as long as they are five to six feet, well branched, healthy, and good root systems. The first cherries planted in Door County, Wisconsin, were from Alabama—below the blizzard line as they say, and five thousand acres now growing in the county all came from Alabama and Indiana, also most of the apples.

*Fall Dug Against Spring Dug Stock.* I prefer fall dug stock stored with roots in dirt, not in moss, or three-fourths of the roots may dry out during the winter. We want the mangled end of the roots to heal over, and, what is more important, we do not prune the roots of fall dug stock we plant in the spring. If they are pruned at all it should be done when stored and not after they come out of storage, as nature has healed the wounds, and you should not make new ones.

We should plant early, as soon as land is in good condition to work and before the trees have burst into leaf. Should the terminal buds be open, the tree should be pruned as soon as planted to take off that source of evaporation and keep the tree dormant as long as possible. Our best success is where the pruning and planting are done early and the trees remain dormant till roots have started to grow.

*Pruning.* Our rule in pruning is three-fourths of the top should be removed in a systematic manner, spacing the limbs right for after years and leaving only a few buds, cutting side branches shorter than the leader and to an outside or a side bud, though this is not absolutely necessary to the future shape of the tree.

The second year we can rearrange the head somewhat, and after that the good work should continue every spring.

*Cultivation.* Should crops be grown in the orchard, the cultivation conforms to the necessities of the crop being grown. Plowing in the spring and six or seven harrowings constitute pretty fair orchard culture. At all events use level culture, that is, do not ridge the tree rows one year and level them down the next. Always level culture. The gang plow, reversible disc, common cutaway disc, spring tooth, are what we use.

We consider early cultivation important at least every other year. On land that is to be built up we use the following method: cultivate till June tenth, then sow clover, a mixture of alfalfa, red clover and sweet clover, if you please. Leave this till June 1st of the following year, then plow it under. Continue cultivating till August. The next year cultivate till June tenth and repeat.

*Winter Protection.* When the orchard is young and on an exposed location the snow sometimes blows off and winter injury results. To avoid this if the orchard is being cropped one should sow a strip of oats or allow weeds to grow along the tree row to catch the snow.


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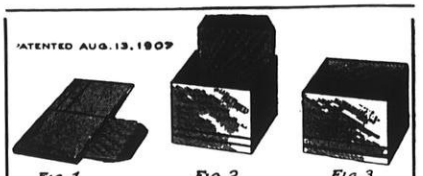


Fig. 1 Fig. 2 Fig. 3

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We are now ready to help you make your place a Beauty Spot.

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SUPPLEMENT

# Wisconsin Horticulture

Volume VIII | Madison, Wisconsin, March, 1918 | Number 7

# PLANT A GARDEN AND HELP WIN THE WAR

**Circulars One and Two, War Garden Series.**

## GETTING READY FOR THE WAR GARDEN

**Prof. J. G. Moore, Dept. of Horticulture.**

(War Garden Series No. 1).

Most folks think February a poor gardening month but the fact is that the work done in February and March may largely determine the success of the garden. It is time now to begin to make definite plans for the garden work which is to be done later on. The planting season will be here before we know it.

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 tried to make this substitution last year and failed. Good garden tracts may be spoiled by worthless, often self-planted, trees or shrubs. Cut them out so your vevetables may not have to compete with them for sunlight, food and water. You will probably find, also, that your back yard looks better without them.

If it is impractical to remove the offending plants, or if buildings shade your garden for the greater part of the day begin at once to make arrangements for a suitable garden tract. Ask the aid of the local organization which is helping to get gardeners and the garden tracts together.

### That 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? The professional gardener finds a plan necessary for best results. A definite plan is of even more importance for the small garden if the best results are to be secured. Hap-hazard, hit-or-miss garden planting usually results in poor use of the soil and lessened production. 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.

As soon as you know where your garden is to be, measure your tract and then plant your garden on paper. A good working plan should show:

1. Location of the different crops.
2. Distances between rows.
3. If more than one crop is to occupy the same area during the season.
4. Approximate dates for making different plantings of lettuce, peas, radishes or other vegetables of which more than one planting is made.

Use heavy paper and ink so that your plan will stand a season's use in the garden.

It is well to use a definite and fairly large scale in showing distance between rows. For a small garden one-fourth or one-half inch on the plan to every foot in the garden is a convenient scale. The more carefully your plan is made the greater will be the returns from your garden.

In making a war garden there are certain things to remember.

**1. Make every foot of land work all the time.** As soon as one crop is harvested another should take its place if there is room for its proper growth. Practically all of the garden should grow two crops and part of it ought to produce three. Warm season crops such as beans and tomatoes, and late seeded crops like turnips may follow early cool season crops such as lettuce, spinach, radishes and onion sets.

**2. Vegetables which can be stored for winter use should be considered first.** The vegetables will be more appreciated when the supply is low and the price is high.

**3. First plan for the long season crops—the short season crops will take care of themselves.** Grow short season crops (lettuce, radishes, spinach) between the rows of long season crops. Globe radishes may be grown in the rows of carrots, parsnips and beets. They can also be grown between the young plants of cabbage, tomatoes, or corn in hills.

**4. 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. If these are grown the smaller, quick-growing crops should occupy the space until it is needed by the permanent crop.

**5. Foliage crops (lettuce, spinach) are likely to do better in partial shade than the fruit crops (tomatoes, beans).**

**6. Do not plant high-growing plants (corn, tomatoes to be staked) where they will shade the sun-loving plants.** The difficulties arising from shading can be greatly lessened by having the rows run north and south.

**7. Unless you have had previous experience do not waste your 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 advisable to give their space to more certain crops.

**8. Remember that in a small garden there is plenty of space "up and down" but it is limited sidewise.** Tomatoes should be trained to trellises or stakes. Tall growing peas trellised and planted between rows of smaller vegetables require no more space than dwarf varieties and usually produce larger crops. If you think you must grow cucumbers try the trellis method.

**9. "Variety is the spice of life."** Provide for as large a variety of vegetables as practical. You might get tired of a steady diet of one kind.

**10. Leave sufficient space between the rows to provide for good tillage.** It is better to have slightly too much than too little space. The beginner will need a wider space between the rows than the experienced gardener. Be on the safe side.

### Space Needed for Various Vegetables

The distance between the rows will vary with the method of cultivation, the size of the variety, and the fertility of the soil. The distances given below are for hand or wheel-hoe cultivation and average fertile soil.

8– 9 in.—Peas when planted in double rows.
9–12 in.—Radish.
12 in.—Cress.
12–15 in.—Beets, carrots, lettuce, onion, spinach.
15–18 in.—Bush beans, endive, parsley, rutabaga, salsify, turnip.
18–20 in.—Parsnips, peppers.
18–24 in.—Cabbage (early), chard, kohlrabi.
24–30 in.—Cabbage (late), peas, tomatoes (staked).
30–36 in.—Egg-plant, potatoes, sweet corn.
30–48 in.—Celery (depends largely on method of blanching).
42–48 in.—Squash (bush), tomatoes (unstaked).
4– 6 feet—Cucumber.
5– 6 feet—Muskmelon.
7– 9—Squash (running).
8–10 feet—Pumpkin.

When vegetables of different kinds are planted in adjoining rows the distance between the rows should be approximately one-half of the total distance allowed for the crops. For example, if celery, for which is allowed 4 feet between rows, and cabbage, for which a distance of 2 feet is allowed, occupy adjoining rows the distance between the rows should be about 3 feet.

### Time Crops Occupy Land

The length of the time between starting the crop in the garden and that at which it is ready to use and the time it will occupy the land are important factors in garden planting. Seasonal conditions and the variety will greatly modify the time required for vegetables to be ready for use.

The following list shows the average time needed to grow the different vegetables. In planning for crops to follow early vegetables or which will occupy the space used by an early crop, add to the time given in the table below the probable length of time required to use the early crop or the length of time required for it to become unfit for use.

The dates given are the approximate dates of planting at Madison. For the central part of the state the dates would be from 10 to 12 days later, and for upper Wisconsin, 18 to 20 days later.

In the table which follows, * placed before the name of a crop indicates that other plantings may be made; ** indicates that the crop occupies the land until the end of the season. In the case of *** other plantings may be made as the crop is used, but the winter crop occupies the land until the end of the season. Early cabbage will occupy the land unitl August 15 or later.

* Bean (bush) snap—May 10–15—7 to 8.
** Bean (bush) dry—May 10–15.
** Bean (pole)—May 10–15—8 to 9.
*** Beets—April 15–20—8 to 9.
Cabbage (early, plants)—April 25–30—12 to 13.
** Cabbage (late, plants)—June 25.
*** Carrots—April 15–20—9 to 11.
** Celery (plants)—June 20—7 to 8.
* Corn (early)—May 5–10—9 to 10.
** Corn (late)—May 15, June 10.
Cress—April 15–20—4 to 5.
** Cucumber—May 15–20.
** Egg plant—June 5–10.
*** Kohlrabi—April 20–25—9 to 10.
* Lettuce (seed)—April 15–20—6 to 8.
* Lettuce (plants)—April 20—4 to 6.
** Muskmelon—June 1 (start plants under glass).
** Onions (seed)—April 15–20.
** Onions (sets)—April 15–20—9 to 10.
* Parsley—April 15–20—12 to 14.
** Parsnip—April 15–20.
* Peas—April 15–20—8 to 10.
** Peppers—June 5–10.
Potato (early—May 1–5—10 to 12.
** Potato (late)—June 1–10.
** Pumpkin—June 1.
* Radish—April 15–20—4 to 6.
** Radish (winter)—July 15.
** Rutabaga—July 1.
** Salsify—April 15–20.
* Spinach—April 10–15—4 to 6.
** Squash (bush)—May 10–15.
** Squash (runner)—May 10–15.
** Tomato (plants)—May 15–20.
Turnips (spring)—April 15–20—8 to 10.
** Turnips (late)—July 20.

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## HINTS FOR THE WAR GARDEN

(War Garden Series No. 2).

Frederick Cranefield, Secretary,
Wisconsin State Horticultural Society.

The beginner in gardening is apt to attempt too much. **A small garden well tilled is better than a larger one neglected.**

Amateur, home, or so called "war" gardens may be divided into two classes; the small back lot gardens ranging in size from 6 x 10 feet to those of as many yards, and the gardens of the more ambitious amateurs occupying an entire lot or even more.

### To Plant or Not to Plant

In the small garden confine the list to kinds requiring but little room such as:

Bean, beet, cabbage, carrot, lettuce, onions, parsnip, pea, radish, spinach and tomato. Not much more should be attempted except that late turnips or rutabagas may be grown as succession crops.

**These Demand Much Elbow Room**—Sweet corn, cucumber, squash and pumpkin require much room and with potatoes should be attempted only where plenty of land is available.

**These Are Too Fancy**—Brussels sprouts, cauliflower, celery, endive, egg plant, peppers and lima beans are kinds that require rather more skill to grow than the average amateur is apt to possess and should not be included in the beginners' list.

Soil conditions and the taste of the gardener are factors that should be considered.

The beginner is usually very ambitious and is apt to try everything named in the catalog. The old-timer confines his efforts to a few kinds, the ones most in demand in the kitchen.

### The "Best" Varieties

Ask each of a dozen expert gardeners to make a list of "best" varieties and the result will be a dozen different lists, for each has his favorites, but on discussion it will usually be found that their distinctions are too slight to be considered seriously. All the important garden vegetables are classified by the experts as to **types** such as the round radishes and the long radishes, round beets and flat beets, etc. Each seedsman has varieties which he exploits as the "best" of these types.

The following lists may not include the best kinds in the opinion of many expert gardeners but all are standard, reliable and thoroly tested and at least plenty good enough for anybody:

**Bean: Dwarf;** Refugee wax; Refugee 1000 to 1 (green pod.) **Pole or climbing:** Cranberry or Horticultural; Kentucky Wonder. The last two varieties are climbing or pole beans and are recommended where space is very limited. The Cranberry, a climbing or pole variety, is very prolific, and the partly matured beans shelled are as good as Lima Beans.

**Beet:** Detroit dark red or Crosby's Egyptian. The first named is round, the second, flat or turnip shaped.

**Cabbage:** For early cabbage Charleston Wakefield, for late Danish ball head.

**Carrot:** Chantenay: this is a half-long carrot and better adapted to home gardens either for summer use or cellar storage than the Oxheart or other large types.

**Kohl Rabi:** White Vienna.

**Lettuce:** For early "leaf" lettuce either Curled Simpson or Grand Rapids. The Grand Rapids is rather better in quality than the Simpson but does not grow as rapidly nor stand as much hardship. The Grand Rapids is ideal for hot-bed culture.

For head lettuce plant only May King.

**Onion:** Yellow Globe Danvers or Southport Red Globe.

**Parsnip:** Hollow Crown.

**Pea:** Laxtonian; this is one of the best of the large podded, early dwarf peas and may be sown in succession. For a late maturing variety plant Champion of England or Telephone. The latter are tall growing kinds and require support.

**Radish:** Early scarlet globe or any early round or turnip shaped variety sown in succession. For a later variety Crimson Giant; does not get "pithy" in hot weather.

**Rutabaga:** American Purple Top.

**Spinach:** Bloomsdale Savoy.

**Tomato:** Chalk's Early Jewel; Ponderosa.

**Turnip:** Purple Top White Globe: The Yellow Globe is a large late maturing yellow flesh variety closely resembling rutabaga and of better quality.

### Plants or Sets

For early onions plant onion sets. For early cabbage and tomato buy plants; plants for late cabbage may be easily grown in the garden; plant a packet of seed at the time of sowing early vegetables.

### For the Gardener Who Has Plenty of Room and Time

**Cauliflower:** Early Snow Ball.

**Celery:** White Plume.

**Cucumber:** Improved Long Green.

**Sweet Corn:** Golden Bantam.

**Egg Plant:** Black Beauty.

**Lima Beans:** Burpee's Bush Lima, or Henderson's Bush Lima.

**Muskmelon:** Milwaukee Market.

**Parsley:** Champion Moss Curled; (Six plants enough.)

**Pepper:** Crimson Giant (sweet).

### How to Buy

Buy seeds only from reliable seedsmen. They advertise in reliable papers. Avoid "bargains" in seeds, the best is the cheapest. The cost of seed is not a big item considering the returns. Penny packets and department store bargains are to be avoided. "Seed Tape" is expensive and of doubtful value.

### Quantity of Seed Required

The problem of how much seed to buy is one beset with many difficulties and not easily solved.

If we were certain that every seed we buy would germinate and produce a vigorous plant under the adverse conditions of soil and climate commonly encountered, we would need to buy but very little seed.

Carrots, for instance, should be spaced at least two inches apart in the row for best results. A package of carrot seeds contains about 5000 seeds which spaced at two inches would be enough to plant over 800 feet of row. In practice an average packet is enough to plant a little less than 40 feet of row. Why use so much seed? Firstly, because not all the seeds will germinate and as all the poor seeds may fall in one place we must allow enough to insure a good stand.

Secondly: conditions in the garden are never perfect for germination and growth and many of the plants perish before reaching daylight.

Thirdly: Seeds must be covered with earth, which is a dead weight that must be lifted by the plantlets. We must, therefore, plant seeds enough to afford lifting power to break the surface crust.

Fewer seeds are required when sowing later in the season than for earlier sowing, as the ground is then more mellow and seeds come up easier.

As war gardeners are interested only in small areas, ounces and quarts may be left out of consideration and attention directed mainly to packets of seed. In order to learn something of the actual size or contents of "packets" offered by reliable seedsmen 31 packets of seed were purchased from four seed firms and the seeds in each counted. The results follow:

Seedsman A—Onion, 1210; Carrot, 5427; Beet, 335; Bean, 156; Pea, 257; Radish, 1032; Spinach, 777; Parsnip, 1126.

Seedsman B—Onion, 1016; Beet, 500; Bean, 265; Pea, 394; Radish, 1408; Spinach, 990; Parsley, 850.

Seedsman C—Onion, 910; Carrot, 3720; Beet, 356; Bean, 258; Pea, 340; Radish, 1108; Spinach, 440; Parsley, 700.

Seedsman D—Onion, 1690; Beet, 585; Bean, 94; Pea, 169; Radish, 790; Spinach, 782; Parsley, 1892.

Av.—1206, 5473, 444, 193, 290, 1084, 747, 1142.

Combining these figures with the experience of skilled gardeners as to the proper number of seeds to plant per inch or foot, one packet of onion will plant 10 feet of row, carrot 40 feet, beet 29 feet, bean 20 feet, pea 25 feet, radish 10 feet.

**Summing up it may b said that for the average family garden one packet of seed is enough of any of the kinds named 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.**

### Plant a Few Flowers

While food production should be the main consideration in our garden making efforts, every gardener may, at slight additional expenditure of time and money, add cheer and brightness to the garden by planting a few packets of flower seeds. Seeds of common annual flowers may be sown at practically the same time, in the same manner and in the same garden as the vegetable seeds. Aster and beet, mignonette and onion will grow in the same row and never quarrel.

In making out your seed list include one packet of each of these: Aster, Snapdragon, Candytuft, Alyssum, Coxcomb, California Poppy, Marigold, Mignonette, Nasturtium, Zinnia.

For additional copies of this bulletin address State Horticultural Society, Madison, or Colltge of Agriculture, Madison.

The next circular in this series will be by the Department of Horticulture, University of Wisconsin.

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Potatoes should be kept in a temperature of about 38 degrees. If the air is dry, they should be covered with sand. They should also be kept from light, which will turn them green. Keep off till sprouts.

By means of the Florists' Telegraph Delivery it is possible to send flowers to any part of the United States by giving the order to a florist who is a member of this organization. They may even be sent to the soldiers in the French hospitals through the connections of this society in France.

Cut out old wood and thin the new growth of currants and gooseberries when the snow goes off. Too much brush and no cultivation make small berries.

## War Gardens

Read at the Sauk Co. Hort. Society's First Annual Meeting, Baraboo, Wednesday, January 16, 1918, by C. A. Hofmann.

The subject assigned me for this evening, "War Gardens," is so expansive as to preclude the possibility of a thorough exposition in the time at my disposal.

I will, therefore, assail only the essentials, dwelling at some length upon the more necessary activities and leaving to your thought and future experience the minor details. First: what does the subject imply? Our Nation's Life and Liberty depends upon food. Every man, woman, and child who tills the soil, and produces food crops, must do the work of two, and yea—even more this year, if we are to remain a free nation.

The demand for food, the world over, is far greater than ever before—the millions upon millions of soldiers, sailors, ammunition workers and Red Cross workers, both men and women, have to be fed. Millions of our strongest and best young men have been taken from the ranks of the producers and it is therefore up to us, who remain at home, to do more than double duty, and do it quickly, if we would win this conflict. Remember we have no food surplus carried over to help out should we face a crop shortage or failure this year. Everything depends upon what we, as "Soldiers of the Soil," produce this season. Do not tarry with indecision, but put your whole patriotic effort into the work this year to grow the biggest and best bumper crops that you have ever grown. And if there are those among this gathering this evening, either large or small, who, in the past, have made no effort in this direction, let them pledge themselves to-night to buckle on the armor and go forth, with the advent of Spring, to do their all for God and Country.

Do not wait until it is too late—make your plans immediately—start your field work earlier than ever, till your soil oftener and more carefully. And in making your plans and in prosecuting your work let one all important thought prevail, "**Plant Only Carefully Saved and Accurately Tested Seeds**"—so much depends upon this. The original sin of the gardening cult is the waste of seed. This not only applies to the amateur, but also in a measure to the professional grower. Don't do it. Hooverize! Good seed is already scarce, and it is growing scarcer as days go by, for already thousands of the world's best seed growers have laid down their lives for Liberty.

I presume that all who are present this evening are deeply interested in this War Garden work, but should there be those among us who are here from idle curiosity let me say to you, as well as the others, that if you will but embark upon this work you will be amply rewarded, not only in dollars and cents, for your earnest work and thought, but better than that, you will have the conscious conviction that you are doing, not only "Your Bit," but "Your All" for the Life and Liberty of this Glorious Country we all love so well. Now let us consider the requisites for success in any garden, be it large or small. The first is the proper preparation of the soil which is to produce the crop. Be the plot, one which has never been cropped with vegetables or has grown to grass and weeds, or has produced a hay crop for a number of years, or be it one which has been worked constantly it must either be plowed or spaded. A general mistake is the accepted shallow plowing or spading.

My experience is that ground should be worked to a depth of from 10 to 12 inches and if possible, the late fall is the better time to do this. But before doing this a thorough coating of good fertilizer should be applied except, perhaps in the case of land which has previously grown clover or timothy and even with that a light scattering of well decayed manure is beneficial.

This is very necessary if good results are to be obtained. You would not expect your cows to produce milk if not fed, neither can you expect your soil to bring forth good crops without proper and judicious feeding.

When possible use manure which has thoroughly decayed except perhaps in the case of heavy clayey soils, when that consisting of more litter, such as hay, straw or corn fodder, can be used to lighten up the ground.

The more common manures, readily procurable, and their relative plant food values are as follows: Sheep, Hog, Poultry, Cattle and Horse Manures. Then where these are not easily obtained there are the commercial fertilizers or fertilizer ingredients such as Phosphates, Nitrates, Tankage and Muriates. The latter, however, require a greater knowledge of application than the former and are not advised except with a thorough knowldge of the necessity and use.

Where it is expensive to secure a proper quantity of home-made

or commercial fertilizer, many sow rye or legumes and when they have attained the desired growth plow them under for the later planted crops.

Where ground has been fertilizer and plowed the preceding fall, all that is necessary in the spring is to thoroughly work the ground with a disc harrow followed by a smoothing with a spring tooth one. In the case of small gardens the same results may be obtained by thoroughly and deeply hoeing then leveling with the garden rake And now that we have our ground in shape let us consider the problem of sowing the seed. Of course, long before it was possible even to get into the garden for any work, the professional grower had long since planted seed for his early vegetable plants and they are now also ready for setting out.

The amateur grower also has made his attempts in this direction but usually with less fortunate results than in the case of the former, owing to his not being properly equipped. It is very necessary in order to produce the earliest vegetables, and from a monetary standpoint the best paying, to have proper equipment for the propagation and growth of good plants, ready for the garden at the earliest possible moment when danger of frost has passed, and as the small or amateur gardener cannot thus equip himself my advice is that he arrange to purchase his wants in this direction from some reputable grower as it is essential that he have at least a few of each variety, whether it be for profit or for the pleasure of his own table. For the plants of the later vegetables, where out of door seed beds can be used, any one can successfully grow with the same results as attained by the professional grower. Now as to the sowing in the garden or field. Many mistakes are made in sowing, with the result that the seedsman is often blamed for supplying seeds that fail to germinate, when, as a matter of fact, in a large proportion of cases, the failure is due to the lack of understanding a few fundamental principles in seed germination. Three conditions are necessary, namely: moisture, air and warmth, for proper germination. Frequently the cause of failure is due to sowing too deep, which either causes the seed to lie dormant or rot in the ground.

The approximate depths at which to sow are as follows: peas, corn, beans and seeds of similar size: two to three inches; beets, cucumbers, melons, etc., one inch; carrot, cabbage, parsnip, lettuce, turnip, tomato, pepper, etc., one-half inch. Very small seeds should only be pressed into the soil and slightly covered with sifted soil. While I advise the amateur not to attempt the growing of plants indoors, for the earliest vegetables, this advice is not extended to the production of plants for the later or main crops. My principal reason for advising against trying to raise plants for the earliest vegetables is that these require sowing indoors during February or first of March and with improper top light, a condition most prevalent in ordinary homes, the plants become drawn or leggy and thin, long before the weather is suitable for transplanting them to the garden, with the result that even if they survive transplanting, they never obtain perfect shapes or yield as they should.

However, for the production of plants for the later or main crop, select a warm sunny corner sheltered at the back by a fence or wall, if possible, secure an old window sash and fit it to a shallow frame and use as a seed bed. The sash is a great protection to the young plants during the cool nights. In such a bed, early cabbage, cauliflower and celery plants may be successfully grown. If the soil is dug out for the frame and fresh stable manure is tightly packed in the bottom of the frame sufficient heat will be generated for starting the seeds of such tender plants as tomatoes, peppers and egg plants, or these may be started in the house during the first part of April and transplanted to the frame when the early cabbages, etc., have been set out. Never seed while the ground is wet as, during rapid evaporation, the ground will bake and retard, if not entirely stop, the growth. And now to an all important procedure to ultimate success: Cultivation. During the past season I inspected many gardens where this action was almost entirely neglected or superficially done. In the former, weeds were choking the plants while in the latter, they were dwarfed and stunted from lack of moisture. To obtain the best results keep the soil loose and fine by frequent workings, as deeply as possible, without injury to the plants. Keep up this thorough cultivation throughout the season never allowing the soil to become hard and baked. A mulch of dusty surface soil, even to the depth of two or more inches, is preferable to a hard baked surface, as this kind of cultivation tends to conserve the moisture so necessary in time of excessive drought. I also

noticed that many preferred watering to cultivating. Watering, at times, is beneficial but let nature provide that, if possible, and you continue the thorough and deep cultivation at all times except when the ground is too wet.

I have been frequently asked, "What shall we plant in our garden?" This is a question for each gardener to answer for himself.

Plant those vegetables, in small gardens, which will best suit the palates of the family for whom you are producing and also which you can store for winter's use. To those who cultivate large tracts I advise the study of the needs of the market for the earlier vegetables and the planting of more of the keepers which can be stored and sold to advantage during the late fall and winter months. And les us also remember, that, upon well enriched soils, several crops may be grown on the same plot in one season: I have frequently taken four crops from the same soil in one season.

If you are growing for market it is well to remember that you must exercise care in the selection and preparation of the vegetables so offered if you are to retain the patronage of the public. Gather as soon as the vegetables have reached sufficient size.

With most vegetables the finest flavor and freshest condition is obtained by gathering early in the morning. With top crops, trim off all excess and discolored leaves and with root crops wash with cold water, using a vegetable brush. Bunch and tie so that they look tempting, as appearance counts for much. Much can be added to the pleasure and profit of the small garden especially by adding a few of the small fruits, some rhubarb, horse radish, herbs and above all, a small asparagus bed.

As to the storage of excess crops I advise gathering when thoroughly ripe and before danger of freezing, and storing in cellars or root houses where the temperature can be kept just under that of freezing.

In passing I wish to compliment all upon the success of last season's effort, especially the boys, who made such heroic and successful attempts. This War Garden Work, however, is not alone for "Our Boys," but also for "Our Girls," and I would be more than pleased to see all who can take it up the coming season, if only in a small way. So no matter what you desire to grow, ask for any information you may desire, and you will receive it without any cost to you. In conclusion, make the soil as rich as possible, plant the best seeds obtainable, and plant again and again and again. Every citizen is comprised in the sum total of the nation's strength.

There are, and can be, no shirkers. Oportunity abounds for every American tc contribute to the nation's support in one way or another. The war cannot be won if we continue to live in ease and comfort, carefree, and ignoring the responsibilities and duties that fall upon us individually, if the principle of human liberty is maintained.

Each individual in the nation is given an opportunity for personal heroism, sacrifice and greatness is the cause of liberty and freedom. This is yours, my friends, plant wisely and well and keep on planting.

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Keep sand over the root crops in the cellar now. It will prevent their drying out.

### Every Gardener His Own Seed Grower.

This is the very thing we have argued against in the past, believing that the average amateur gardener is apt to make a sorry mess of seed growing. Present conditions, however, have changed many things and ideas and opinions that seemed to us very important must needs be changed or modified. The fact is staring us in the face that garden seeds are scarce this year and the supply is apt to be even smaller next year.

It is also true that any one can raise seeds of many of the common kinds of flowers and vegetables sufficient for his own needs. Even if these seeds are not of the very highest grade, they will fill a gap until such time as the seedsman can provide us with something better.

The following directions for garden seed growing are by Prof. W. T. Macoun, of the Dominion Farms, Canada.

The ordinary garden soil or that found on the vacant lot will be found satisfactory in growing vegetable seeds and, while soil that is fertile and in good condition will give the best results, no special kind of soil or manure is necessary.

After the roots or plants have been set out in the garden, keep the surface soil loose and the ground free of weeds, in order to make the conditions as favourable as possible for strong growth. If there is danger of the plants being broken down, as there will be in the case of cabbage and celery and perhaps some of the others, a wooden stake should be driven down near the plant and the latter tied to it. The space required for plants of beet, cabbage, carrot, parsnip and turnips to develop is

from 2x3 to 3x3 feet, for celery about 1x3 feet, and for onions about 6 inches by 2 to 3 feet. *One row of seed plants across one end of a twenty-five foot plot will take up little room and will be sufficient to grow more than enough of the seeds that would be required of, at least, seven kinds of vegetables.* Parsnips and carrots make the sturdiest plants, hence these might be planted at each end of the row, which might be planted thus: 2 parsnips, 2 turnips, each 2 feet apart; 3 celery each 1 foot apart: 5 onions each 6 inches apart; 2 cabbages, 2 carrots, each 2 feet apart. Between this row of seed plants and the first row of vegetables there should be about three feet.

After the seed is ready to harvest, the sooner it is harvested, dried and cleaned, the better. Care should be taken that when drying there is a good circulation of air through the seed heads or pods so that they will not mould. When cleaned, put in paper bags or envelopes and keep in a dry place until spring. As mice are very fond of some kinds of seed see that they are safe from them.

The following table will give some idea of the probable seed yields per plant of the different kinds:

| Kind of Vegetable | Yield per plant, in ounces. |
|---|---|
| Beet | 2½ to 5½ |
| Cabbage | 2 to 5 |
| Carrot | 1½ to 2½ |
| Celery | 1 to 2½ |
| Onions | ¼ to ½ |
| Parsnip | 2 to 4 |
| Turnip | 5 to 9 |

Beets.—One good beet will produce more than enough seed for an average vacant lot or city garden. Before the winter's supply is used up, select two well-shaped specimens, in case anything should happen to one, and set aside until spring, making sure that the beet is of good, dark colour by taking a small piece out. When the soil is ready for seeding, plant the beet deep enough in the ground so that the top will be slightly below the surface. The flower stalks will soon be thrown up and when the plant is well grown it is desirable to tie the stalks loosely to a stake as they are liable to be broken down. Most of the seed will ripen at one time. When the seed begins to turn brown and before it is quite ripe, cut the plant and tie up for a few days to dry thoroughly, then,with a light stick, thresh off the seed and blow clean, and keep dry until spring.

Cabbage.—One head of cabbage will produce more than enough seed for the part of a city lot which is likely to be used for this vegetable. Save two solid heads and as soon as the ground is ready in the spring, plant about one-third of the head in the ground, and make a slit with a knife cross-wise over the top of the head, which will give the seed stalks a better chance to push out. In a short time these will do so and soon the plant will be in flower, pods will be formed and seed will develop. It is necessary to plant, at least, two cabbages as the flowers of one must be crossed with those of another in order to get pods well filled with seeds on either. This cross-pollination is done by insects. It is more satisfactory to plant the whole cabbage with the root attached, as there is less danger of the head rotting when this is done. When the roots are left on, the head simply rests on the soil, the roots only being planted. Good seed can be grown from the stump or root after the head has been removed, though this method is not recommended. Where only a small quantity of seed is grown the earliest ripe pods can be cut off as they turn yellow and the others as the mature. The seed is beaten out when dry, and cleaned.

Cauliflower.—As in most parts of Canada it is not possible to carry cauliflower plants over the winter the seed of this vegetable is more difficult to grow than most kinds, but plants started early will, in some places, go to seed if the heads are left uncut. Sometimes cauliflower seed is grown in a greenhouse.

Carrot.—One carrot will produce enough seed for a home garden. Save two shapely ones and in the spring plant as recommended for beets. The seed ripens much more unevenly than the beet and it is necessary to harvest each head as the seed gets ripe. Keep these clusters of seeds in a dry, airy place, and, when the seed is thoroughly dry, rub or beat out clean and keep dry until spring.

Celery.—One plant will produce enough seed for the home garden, but as disease sometimes attacks them it would be safer to plant three. At Ottawa, plants of both early and late varieties have been kept over winter outside by opening a trench just before severe frost and putting the plants close together and deep enough so that the tops are about level with the surface of the ground. A heavy layer of about a foot of straw is put over the tops and then soil thrown over to a depth of about fifteen inches. Even if the plants kept in the house or outside over winter have nothing but the heart or inner stalks left in good condi-

tion by spring, they will produce seed of good quality.

Plant in the spring about the depth the plant was when taken up in the autumn. It will not be long before the seed stalk will be thrown up. The seed does not all ripen at the same time but as seed will give good results even if harvested a little on the green side, the heads should be cut before much of the earliest ripe seed drops. When, however, there is the crop of only one plant to harvest, the seed can be gathered as it ripens. If the plant is cut before the seed is ripe it should be hung up to dry. Celery shells easily when the seed is ripe and as it is very valuable, loss should be avoided.

Onions.—A few well-shaped, firm onions should be saved for seed purposes. They should be planted out early in the spring about 6 inches apart in the row. If the onions have sprouted, the sprout should be cut off when being planted as straighter stalks will be thrown up if this is done. The upper side of the bulbs should be an inch or two below the surface of the ground after being planted. This will protect them from spring frosts. When the plants have grown sufficiently they should be banked up about 6 inches to help support the plants when the tops become heavy with flowers and seed. When the seed stalks show yellow near the ground the seed balls are cut off with about two inches of the stalk attached. The heads or seed balls are then spread out to dry and later the seed is threshed out. It is important to dry onion seed as rapidly as possible and to keep it dry.

Parsnip.—The parsnip is treated much as the carrot and it is surprising to a beginner in growing seeds to find how much seed can be produced from one root. In saving a parsnip for seed, select one that is the most free from side roots and one of the shortest and thickest available. There is a worm which is liable to eat the parsnip seed before it is ripe but the worms can be picked off by hand before they do much harm if one is on the lookout for them.

Salsify.—Save two or three plants of salsify for seed and plant and treat like the other roots.

Turnip.—Select two of the best shaped, sound turnips and set aside for seed purposes. The roots are planted as the carrot. beet, onion and parsnip and seed harvested when the pods turn yellowish-brown.

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### The Lengthening Days.

Wm. Toole, Sr.

With the lengthening of the days and the approach of spring the thoughts of those who love the great outdoors and especially their home surroundings, will again center upon what and where to plant the different varieties of flowers, shrubs and vegetables.

In touching upon shrubs and perennials it might not be amiss to state that these are damaged most by the winter season during the month of March; it is the occasional thaw and warm spells that draw the frost out of the ground, especially on southern exposures and induce the plants to grow only to be severely checked when the thermometer again goes back below the freezing point. The object in mulching plants and shrubs for the winter season is to keep the frost in the ground until the growing season is at hand and not to keep it out as many may be inclined to think. Therefore it is not a good practice to cover too soon in the fall or uncover too soon in the spring.

So anybody who neglected to cover plants or shrubs last fall or winter can still do so, providing the ground is frozen, and thereby save a lot of damage; to cover at this time it is not advisable to use fresh stable manure, any other thing will do providing it does not make an air tight job.

By the time these notes appear in print or soon thereafter the time has come when one's attention can be turned to the hot bed While most people know how to make a hot bed, it might be said that while the seeds or plants get plenty of sun to warm up things by day it is necessary to have at least 18 inches of warm horse manure at the bottom and plenty packed around the outside to prevent the cold night air from lowering the temperature of the soil inside. It is also highly necessary to ventilate the beds on bright days in order to keep the plants or seedlings from drawing up and damping off. About 5 inches of soil on top of the manure is sufficient in most cases. All early vegetables, and some of the early annuals can be seeded as soon as th soil in the hot bed is warm enough, which will be about four to five days after the hot bed is done; this is also one of the best places to start canna roots.

In closing be sure to procure the best seed obtainable and then sow sparingly; more harm is done by most amateurs by using too much seed than not enough.

COLLEGE OF AGRICULTURE
UNIVERSITY OF WISCONSIN
MADISON

# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

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This lucky youngster has found a fine clump of Blood Root common in Wisconsin woods and fence rows in April. Later he will learn that botanists have named it **Sanguinaria Canadensis.**

## Eliminate the Barberry and Increase the Food Supply.

Copy of Circular Issued by The State Council of Defense, Dr. E. D. Ball, State Entomologist.

### Introduction.

Secretary of Agriculture, D. F. Houston, has requested the Governor of Wisconsin and the State Council of Defense to join the surrounding states of the upper Mississippi Valley in a campaign for eradication of the tall barberry. The black stem rust of wheat makes its first appearance in the spring on this bush and spreads from it to the wheat, oat, rye and barley fields. In this way widespread epidemics of rust disease have caused enormous losses to the farmers in past years and materially reduced the food supply.

The stem rust is the most severe disease with which the grain grower has to contend. In 1916, for example, the estimated shortage of the wheat crop in the United States was about 180 million bushels. Of this loss over 100 million bushels were directly attributed to rust injury.

### Disease is Spread by the Wind.

The disease is known to spread long distances by germs or spores carried by the wind. These spores start new infections from which the disease is later distributed to still more distant points, so it may travel over a wide area after it has once been started. To control it effectively, therefore, the barberry should be eradicated at the same time from all parts of the spring wheat area of the Upper Mississippi Valley.

### Eradication Has Been Successful.

In Denmark epidemics of black rust used to occur at intervals of a few years before the barberry was destroyed. Eradication of these shrubs was begun in 1904 and within a few years they were so completely eliminated that the rust epidemics have ceased to appear. Due to the success of the work in Denmark, the central European countries started barberry eradication several years ago.

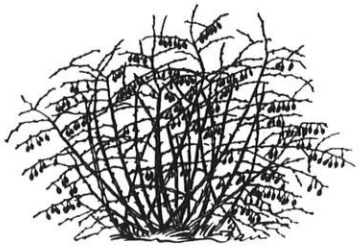
The Dangerous Barberry

### Eradication in This Country.

The state of North Dakota practically wiped out the barberry last year and has prohibited the growing of this plant within the state. Much progress already has been made in Iowa in reducing the number of these bushes. Minnesota has made the eradication of the barberry a war measure and will eliminate it from that region during the coming season as a patriotic act to increase the food supply of the world. Two Canadian provinces are reported to have passed eradication measures and the Canadian government has requested the cooperation of the United States government in a joint effort to eliminate this serious disease.

### Wisconsin's Share in the Fight.

The state of Wisconsin produces oats and barley and is planning to increase the wheat acreage the coming season by about 40 per cent. An active campaign at this time, resulting in the elimination of the barberry from the state,



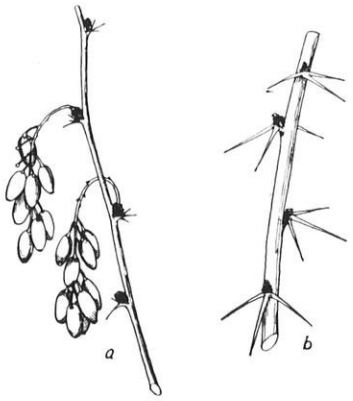
The Harmless Barberry

would be of material assistance to the producers in their patriotic struggle to increase our food supply. Wisconsin will join loyally with her sister states of the upper Mississippi Valley to eradicate, quickly and effectively, this menace to food production.

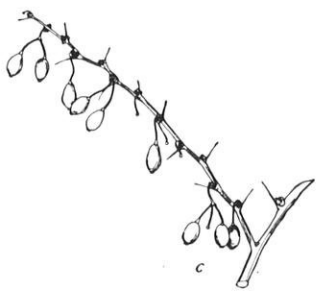
### Two Kinds of Barberry.

There are two kinds of barberry commonly planted in Wisconsin: the tall green or purple leaved bush called the European barberry and the low spreading reddish one or Japanese barberry.

THE DANGEROUS KIND. The tall barberry *(B. vulgaris)*, shown in Figures 1, 1a and 1b, has either green or purple leaves (var. purpurea) but can always be told by its upright growth and the fact that the spines are in threes and the red berries hang in clusters. When untrimmed it forms a tall, slender bush from four or five feet up to ten or more in height. This is the dangerous kind and should be removed at once.




Destroy this one




Leave this one

THE HARMLESS KIND. The Japanese barberry (B. thunbergii), is a low spreading, much branched, reddish shrub from 2 to 4 feet in height, with single spines and long rows of berries hanging singly or in twos on the spreading branches. This form is harmless and can be grown with safety. In later years it has been gaining in favor and has been planted much more commonly than the old fashioned tall form.

Eliminate the Tall Barberry.

In view of the serious food situation existing and the possibilities of checking these losses, the State Council of Defense requests that nurserymen, park commissioners and all others growing the tall barberry take immediate steps to destroy these bushes and that no more be planted in the state.

The Council further recommends that the County Councils of Defense take appropriate action in their respective territories and that they request all the available agencies, such as the county agricultural agents emergency food agents, weed commissioners, school officers, commercial clubs, boy scouts, and last, but by no means least, the women's clubs, to assist in securing the eradication of these bushes by or before Arbor Day, so that the propagation of this disease and transmission of this year's crop of grain be effectively prevented.

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**Purchasing Power of Money in War Time.**

The slogan, "business as usual," promoted both by "big business" and little business in England early in the war very nearly brought about national defeat and surely served to prolong the war. It is decidedly not "business as usual" in England now. War is the business of every man, woman and child.

We are going through the same period here now. Manufacturers and dealers in non-essentials of whatever kind, especially pleasure automobiles, are struggling to hold on to their trade and are urging people to spend money. The newspapers, bribed by fat fees for advertising, aid and abet the game. Very rarely do you find an editorial urging people to **save.** More often it's a plea to **spend** money even on things not essential so as to keep business as usual. This is selfish and unpatriotic and an unsound economic philosophy.

A committee of eminent economists engaged by the government in the study of the purchasing power of money in war time has reached a different conclusion.

After exhaustive investigations this committee has reached its conclusion unanimously. It would impress upon us the imperative need of a reduction of consumption and an increase of production, of the repression of nonessentials, and of promotion of organization and redirection of industry.

"In meeting the great national readjustment to war conditions," the committee says, "we must not let our 'business-as-usual' impulses prevent the needed saving and shifting of industry, lest we pay a terrific penalty in higher cost of living and national inefficiency."

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Use fruit and nuts, candied honey or maple sugar for cake fillings.

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For dessert serve a fruit salad or fruit omelet; cream cheese with honey or fine preserves; friut desserts with honey or just enough white sugar to bring out the fruit flavor.

# CRANBERRY CULTURE

Edited by Mrs. S. N. Whittlesey, Cranmoor, Secretary Wisconsin Cranberry Growers Association

**Observations and Suggestions by**

A. W. CHANEY.

*Fighting the Fire Worm:* Wisconsin seems to have suffered unusual damage from this pest last season. Probably the cold summer was the cause of the eggs hatching so irregularly that repeated floodings seemed necessary. These repeated floodings greatly reduced and often destroyed the crops. For a number of years the New Jersey growers have suffered severe ravages of the fire worm. The New Jersey growers, Mr. Scammel and other government experts, have tried many experiments. Some of them seem to have proven very successful. During last season I made diligent inquiry as to methods and results. Mr. Scammel seems to have proven that nicotine, mixed one gallon to seven or eight hundred gallons of water and sprayed at the proper time, is very effective. When the fire worm appears in the blossoming period or after the fruit is set, flooding is very likely to injure or destroy the crop, whereas spraying with nicotine greatly retards the fireworm damage and even frequently totally destroys them. Mr. White, Mr. Harrison, Mr. Holman and other well known growers have proven that by spraying at these times they often save at least one-half of the crop, whereas the flooding at that dangerous period would totally destroy it.

This nicotine is a contact poison, known as "Black Leaf 40," and is much more effective than food poison, such as aresnate of lead, Paris Green, etc. It costs around $10.00 per gallon; but using only one gallon to eight hundred gallons of water does not make it expensive. Two sprayings are often advisable, and the sprayings should be two or three days apart, as it is strictly a contact poison. That which appears to have been the most successful remedy is about as follows: In the spring, before taking the water off, lower the head so that the vines are just barely covered with water. This shallow flooding will help to warm the soil and give the vines an opportunity for an early start. Then at about the usual time, take the water off and leave it off from three to five weeks, watching very closely for the fireworm to appear. After they have appeared pretty generally over the bog and most of the eggs have apparently hatched, re-flood, covering everything with water and keeping it under water five days.

Make a kerosene torch with a gas pipe or tubular handle to hold the oil fuel, and wade over the bog, or go over it with boats, and *burn* everything that sticks above the water, such as high vines, grasses or weeds, giving the worms no opportunity to crawl above the water and live. Some suggest that cutting off these grasses or weeds that stick above the water and letting them fall into the water will accomplish the same results. This method seems to have effectively destroyed the fireworm when flooded at the right time. Some growers insist that when the eggs are almost ready to hatch, that by putting them under the water for several days they will never hatch. It is well then to have some Black Leaf 40 on hand ready to use, and, if the second crop does appear during or after the blossoming period, spray with the Black Leaf 40 to avoid endangering your crop. Give it two or three sprayings.

*Another Method*—One of the largest and very successful growers in New Jersey seems to have overcome the fireworm very completely by using the following plan. He makes it a practice to spray with Black Leaf 40 as soon as the buds begin to burst, using one gallon to 700 gallons of water. He follows this spraying with a re-flooding after any worms that are left appear, or have had ample time to appear and become about half an inch long, or have dropped to the ground. He says he has not lost 500 bushels by the fireworm in the last four years by following this method. He thinks, and it seems to me he has demonstrated it, that by spraying before the fireworm is easily seen and follow with the flooding, is more successful than the first plan mentioned.

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Two typographical errors occurred in the March number which we think best to correct. Near the bottom of second column on page 100 "blashed" should be—blighted—and top line of third column on page 101 "remove rake ends" should be—remove rake wads.

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The Lester Cranberry Co. have decided to put in a pumping plant to improve their water supply. Probably a 3,000 gallon a minute pump.

## Control of Cherry Leaf Spot in Wisconsin*

G. W. Keitt

Bulletin 286 Wisconsin Agricultural Experiment Station.

*The matter presented in this bulletin is to be accepted as a report of progress based upon two seasons' work. It was Dr. Keitt's plan to continue this work for a third season and present the detailed data in a research bulletin. Owing to his absence in war service it has seemed best in order to meet the practical needs of the fruit growers to publish the essential results in the present form. When conditions permit it is expected that the investigations will be completed and the full data published as originally planned.

L. R. JONES,
Professor of Plant Pathology.

Leaf spot is the most serious fungus disease of the cherry in Wisconsin. Its control is necessary for profitable commercial cherry culture in this state.

For many years Wisconsin orchardists have been able to control this disease by persistent spraying with Bordeaux mixture. However, the time and number of applications and the concentration of the spray necessary for the best and most economical results have remained to be determined. Furthermore, the recent high prices of copper sulphate and the scarcity of labor have made it extremely important to reduce the cost and labor of control measures and to develop, in case of need, a control program which is independent of Bordeaux mixture.

### The Nature of Leaf Spot Injury

The leaf spot disease affects not only the foliage, but also the fruit and fruit stems. On the leaves, it appears as small roundish spots which often occur so abundantly that they run together and form large irregular dead patches. Under certain conditions, the dead spots drop out and on account of the resulting appearance of the leaves the disease has often been called "shot hole." Badly affected leaves ordinarily turn yellow and drop. This has led many to call the disease "yellow leaf." It should be borne in mind, however, that certain other troubles may show very similar symptoms, and that there is danger of confusing leaf spot with other foliage injuries. On the fruit and the fruit stems the disease appears as small brownish or reddish spots. The chief injury to the fruit, however, results from the loss of vitality of the tree, due to loss of leaves. In cases of severe attacks, the fruit often fails to mature, and wood and bud formation are seriously hindered. Repeated severe attacks may kill the tree.

**Leaf spot is caused by a fungus.** This parasite lives in the diseased parts of the cherry plant in the summer and passes the winter in the dead leaves on the ground. In the spring it produces spores ("winter spores") which are shot into the air. Some of these lodge on living cherry leaves. Here they germinate, grow into the leaf, and produce the disease. On the under surface of the resulting spots, small "blisters" usually develop. These break open, and a whitish material ozzes out. This is made up of thousands of spores of another type ("summer spores") which spread the disease very rapidly.

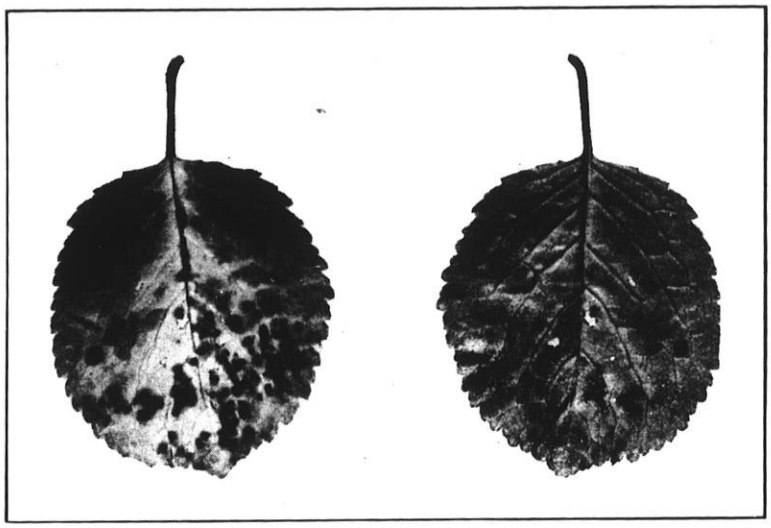

FIG. 1—CHERRY LEAF SPOT

Diseased leaves bear roundish brown spots, on the under surfaces of which "blisters" usually develop (right figure). These "blisters" are filled with spores, which rapidly spread the disease. Such leaves usually turn yellow before they fall. Often the dead areas fall out and a "shothole" effect results.

### Early Clean Cultivation

Leaf spot may be fought by means other than spraying. The weakest point in the life history of the leaf spot fungus occurs when it passes the winter in the dead leaves on the ground. If all these dead leaves could be destroyed and if the fungus harbored on no other plants, spraying would not be necessary. While it is not practicable to practice sanitation with such thoroughness as to make spraying unnecessary, it is possible greatly to strengthen the spray schedule by turning under as many of these leaves as is feasible by clean cultivation in the spring before the spores of the fungus are discharged. Our studies of the fungus have shown that "winter spores" usually begin to be discharged at about the time the blossom buds of the cherry begin to break open. Clean cultivation should precede this period. Most Wisconsin growers cultivate before this time anyway. Therefore, much may be gained with little additional expense by making the cultivation as clean as is practicable instead of leaving unturned strips or large blocks about the bases of trees.

### Spraying

**The spray to use.** The following sprays were tested comparatively: Bordeaux mixture (various strengths), lime-sulphur (various strengths), self-boiled lime-sulphur (8 lbs. lime and 8 lbs. sulphur in 50 gals.), "atomic sulphur" (5 lbs. in 50 gals.), and "barium sulphur" (3 lbs. in 50 gals.) Four applications were made, approximately as follows. (1) when the blossom buds showed white, just before blooming, (2) just after the petals fell, (3) about two weeks later, and (4) just after the fruit was harvested. Similar tests were made in which the first treatment was omitted. Arsenate of lead powder (¾ to 1 lb. in 50 gals.) was added to the fungicide in each application.

Bordeaux mixture and lime-sulphur controlled the disease very satisfactorily. The other sprays tested failed to control the disease satisfactorily. The results in the two years were confirmatory. It is evident from these experiments that, under Wisconsin conditions, either Bordeaux mixture or lime-sulphur in combination with arsenate of lead, properly applied,

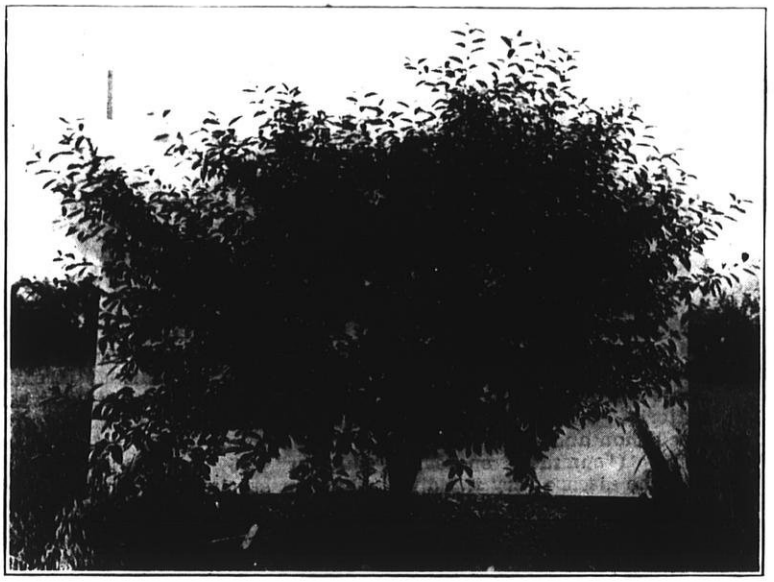

FIG. 2.—EARLY CLEAN CULTIVATION PROTECTED THIS TREE

The development of leaf spot was checked by turning under the dead leaves in early spring before the fungus in them could discharge its spores. Early clean cultivation strongly reenforces spraying, but will not take its place. (Photographed July 27, 1916.)

will satisfactorily control leaf spot. In these experiments, however, lime-sulphur without arsenate of lead gave distinctly less satisfactory results than when the arsenate was added.

**The time and number of treatments.** Bordeaux mixture (4-4-50, that is, 4 lbs. copper sulphate and 4 lbs. stone lime in 50 gals., in 1916 and 3-3-50 in 1917) and lime-sulphur (1-40, that is, 1. gal. 33° B.—1.2946 sp. gr.—commercial concentrate in 40 gals.), both with arsenate of lead, were applied, approximately as follows: (1) when the blossom buds showed white, just before blooming, (2) soon after the petals fell, (3) about two weeks later, and (4) just after the fruit was harvested. On trees which received all four treatments, the disease was controlled excellently. Where the treatment before the blossoms opened was omitted, the control was as satisfactory as that which resulted from the full four treatments. When the second or third treatment was omitted, the control was not satisfactory and much foliage was lost. Where the last treatment was omitted, the result was practically as good as where it was applied. Both in 1916 and 1917, two treatments applied (1) soon after the petals fell and (2) about two weeks later, gave excellent commercial control. In some cases it may be advisable to make the application after picking the fruit, but ordinarily these two treatments, thoroughly applied and reenforced by thorough early clean cultivation, will be sufficient. They will not be sufficient if the work is not well done.

The timing of the first of these treatments is a very important practical matter. The greatest efficiency results when this spray is delayed as long as safety permits, because this ensures the covering of the greatest practicable amount of the rapidly increasing leaf surface. However, if the application is too long delayed, the disease will not be controlled. Our experiments show that in such seasons as those of 1915, 1916, and 1917, in all of which leaf spot was very severe, the first treatment may be made with safety at any time during the week after most of the petals have fallen. Where thorough sanitation is practiced and no important source of infection is near, this period may be slightly extended. Within these limits, the timing of the first treatment should be determined by the individual grower to meet his local conditions. In the larger orchards where spraying equipment is used at its full capacity, it may be necessary to work through the entire range of the safety period. The smaller orchardist who may wish to increase the effectiveness of his spray by a slight delay after the falling of the petals must take into account the possibilities of further delay by unfavorable weather conditions. In case unusually warm weather occurs during or immediately following the blooming period, the first treatment should be applied as soon as practicable after most of the petals are off.

**The concentration of the spray.** In 1916 and 1917 plats were sprayed comparatively with Bordeaux mixture, 4-4-50, 3-3-50, 2-2-50, and 1-1-50, and lime-sulphur, 1-30, 1-40, and 1-50. In each case arsenate of lead (powder, ¾ to 1 lb. in 50 gals.) was added to the fungicide.

Bordeaux mixture 3-3-50 and 2-2-50

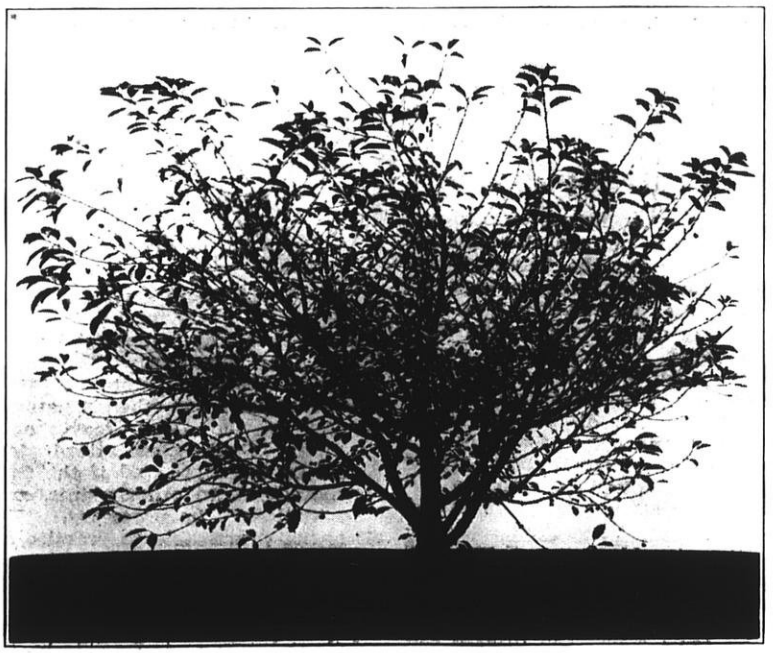

FIG. 3.—LACK OF EARLY CLEAN CULTIVATION ALLOWED LEAF SPOT TO DEVELOP

This tree received no early clean cultivation. Otherwise it was treated as the tree shown in Figure 2, which was in the same orchard. Compare. (Photographed July 27, 1916.)

gave as satisfactory results as did the 4-4-50. Even the 1-1-50 formula gave a fair control in 1916 and a good commercial control in 1917. It is, however, too weak to be recommended for commercial use. These experiments show that the 3-3-50 formula may be recommended with full confidence for commercial use in Wisconsin cherry orchards. Even the 2-2-50 formula may be used with safety if good sanitation is practiced and the applications are thorough and timely. It will not be satisfactory, however, if the work is not well done.

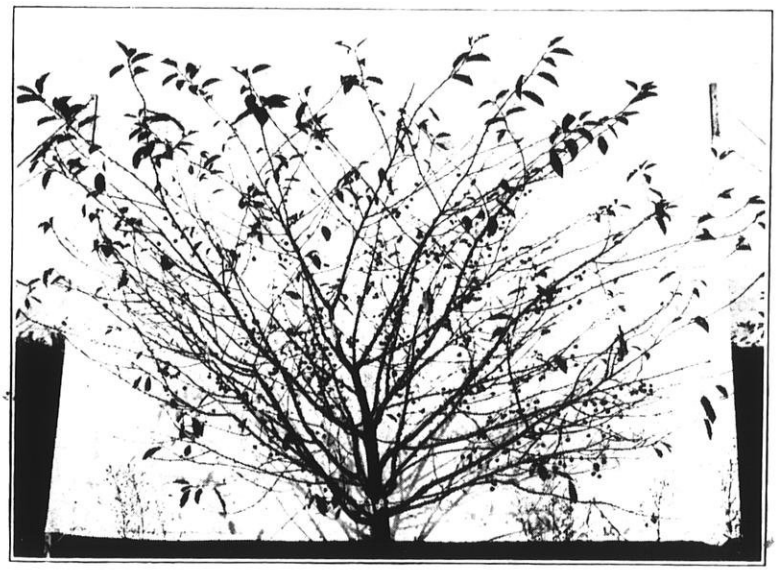

FIG. 4.—UNSPRAYED TREE AT THE END OF THE SEASON

This tree lost its leaves in early summer. The fruit failed to mature and was a total lost, much of it hanging on until frost. (Photographed Sept. 29, 1917.)

Lime-sulphur, at all the three concentrations used, gave satisfactory results. As no injury resulted from the higher concentrations and the spray is relatively inexpensive, it seems best to use either the 1-40 or the 1-30 dilution. The 1-50 dilution is not recommended. Lime-sulphur 1-40 has been used more extensively in these experiments than any other dilution, and has given uniformly good results. In all these tests lime-sulphur was used in combination with arsenate of lead. When it was applied alone the results were less satisfactory.

### Recommendations

No single recommendation can be made to meet the needs of all growers. The following program, however, subject to modifications to meet local conditions, should give satisfactory results:

1. **Give early clean cultivation.** Turn under the dead leaves in the spring as completely as practicable well before the blossoming period of the cherry. This will destroy a very large percentage of the "winter spores" of the fungus and thus strongly reenforce the spray schedule.

2. **Spray** with Bordeaux mixture, 3-3-50 (this formula should be modified to suit local conditions) or lime-sulphur, 1-40 or 1-30: (1) when the petals fall (timing subject to slight modification: see pp. 8–10, (2) about two weeks later, and (3), if necessary, just after the fruit is picked. In each application, arsenate of lead (powder, ¾ to 1 lb.; 1½ to 2 lbs. in 50 gals.) should be added to the fungicide. This controls chewing insects and increases the effectiveness of the spray against leaf spot. The applications should be thorough and timely, especially in the case of lime-sulphur, and care should be taken to cover the under as well as the upper surfaces of the leaves. If good sanitation is practiced and the first and second applications are thorough, the third treatment may frequently be omitted. Whether or not it should be applied is a matter to be decided by the individual orchardist in the light of local conditions.

### DIGEST

**Leaf spot is the most destructive fungus disease of the cherry** in Wisconsin. Its control is necessary for profitable commercial cherry culture in this state. Page 3

**The scarcity and high price of copper sulphate and labor** make it highly important to improve control measures. Page 4

**Early clean cultivation reinforces the spraying program** by checking the development and discharge of spores of the leaf spot fungus. Pages 6–7

**Two or three applications of Bordeaux mixture or lime-sulphur, with arsenate of lead,** combined with early clean cultivation, will satisfactorily control leaf spot. Make the applications: first, soon after the petals fall; second, about 2 weeks later; and third, just after the fruit is harvested. The third application may frequently be omitted, but never the first or second. Pages 7–9

**Weaker Bordeaux mixtures may be used** where the spraying is thoroughly done. The 3-3-50 strength may be used with full confidence. With good sanitation and thorough application, even the 2-2-50 formula may be used with safety. Page 10

**Lime-sulphur, 33° B. (1.2946 sp. gr.) should be diluted at the rate of 1-40 or 1-30.** Add arsenate of lead (powder, ½ to 1 lb. in 50 gals.; paste, 1 to 2lbs.) to control chewing insects and to increase the effectiveness of the spray against leaf spot. Pages 7–11

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### Beans in Rotation.

Have raised potatoes and corn on a lot 60 by 60 ft. for eight years, —used only barnyard manure for fertilizer and want to raise beans for a change.

Q. Where can I get Navy Bean seed?

Ans. Navy beans sufficient for your 60x60 ft. lot can be had from any seedsman.

Q. Is there any particular kind you could recommend for Green County?

Ans. The common navy bean. There are no varieties.

I am of the opinion that your land is not well suited to navy beans. Beans do best on light sandy soil not very rich. Am afraid your beans would make more tops than beans on land that has been manured for 8 years even if potatoes have been grown. If you have a canning factory near would suggest tomatoes or sweet corn.

# Wisconsin Horticultnre

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**THE SNAKE AND THE BEAST.**

**There are two kinds of cowards in Wisconsin today differing only in degree. One is the cowardly Snake, by the side of which the copperhead of the civil war would appear as a mere wiggling tadpole.**

**This class is composed largely of that small portion of our German population, who for reasons known only to themselves, lost to all sense of manhood or womanhood, of justice, right and decency see fit to be disloyal, seditious or treasonable.**

**Despised alike by the Germany they seek to serve and those of their own land, they persist in being loyal to the land of the Beast. These are to be found in every county, every city and town and in nearly every community in Wisconsin.**

**In the other class are those, who, regardless of birth or descent, are true Americans and yet are AFRAID. The ones who for fear of offending someone, who for fear of losing a miserable dime in trade or business, who for fear of being involved in unpleasant consequences refrain from stepping on these Snakes.**

**The time for soft words is past. Our boys are dying "over there." Hundreds of thousands of American Soldiers are now on the battle lines of France or waiting impatiently to go forward. They are brave boys every one, not afraid to die. They are there to fight for us, for the fathers and mothers, the wives and sweethearts they have left behind and the children of our land. They have gone to fight that terrible Beast that for almost four years has ravaged all of Europe and which, if not destroyed, will fall upon us. And we must fight for them. The poison of German propaganda paralyzed Russia and weakened Italy. Shall we permit it to destroy us?**

**To all of you who have a boy wearing the uniform of our country, whether he be here or in France, I appeal. Will you longer permit these Snakes to go unmolested? Will you, through fear or indifference allow this poison to spread, or will you do something to check it? All who are not for us are against us. Will you not have the courage to fight for your boy HERE as bravely as he is fighting for you over there? Whereever this Snake of disloyalty may be found, whether on farm, in business, in office, in pulpit or even in your home, strike it! Don't be afraid, our boys over there are dying for us. Shall we permit them to be attacked from the rear? If we do we are Cowards.**

**Frederic Cranefield.**

## The War Garden Campaign.

About the middle of January the Board of Managers of this society laid before the State Council of Defense a plan for a vigorous War Garden campaign in Wisconsin this year. An outline of this plan was printed in the February number of Wisconsin Horticulture. This plan was endorsed and at a recent meeting of the Council the Horticultural Society was given control of the whole War Garden campaign in the state.

This recognition of our society by the Council is indeed gratifying. We can all work now, members as well as officers, just a little better and a little harder on this account.

The work so far has been satisfactory in every particular. President Rasmussen, Mr. W. A. Toole, member of our Board of Managers, and Prof. Geo. F. Potter, of the Horticultural Department of the College, have been very busily engaged in lecture work since Feb. 18th and will not complete their schedules until April 6th.

Before planting begins over 60 cities and towns will have been visited by these men. Seventy thousand copies of circulars 1 and 2 have been distributed. Circulars 3, 4 and 5 are now in press and will be ready for distribution by the time this is read. Number three deals with raising and handling plants, transplanting, etc., number four, soils and soil preparation, and number five, seed sowing. None of these nor the remaining two of the series will be published in Wisconsin Horticulture. Application for any of these circulars may be sent to this office or the College of Agriculture, Extension Division.

A system of inspection of war gardens is now being planned and when completed will be announced in this paper. The Gardeners' Advisory Council of last year will be the nucleus and

around this will be built a more complete and thorough system of inspection.

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### The Barberry Menace.

We have an enemy in our midst that must be eliminated, the common or tall barberry.

By one of the strange provisions of nature the black rust of wheat is spread by this plant. Plant pathologists and botanists have known this for a long time, but as Wisconsin has not been much of a wheat state of late years other pests have seemed of more importance. Now that the wheat acreage in Wisconsin has been more than doubled since 1916 the barberry comes into prominence. Dr. Ball's circular reprinted on another page, tells the why and the wherefore.

A responsibility falls on the members of this society that none may shirk. We are responsible, in a large measure for the planting of barberry now let's turn in and destroy it, root and branch. We need wheat, every kernel we can grow will be needed and even a single loaf of bread more for our boys in France will be worth more than all the barberry bushes in the state of Wisconsin. Of course we will do it, freely and willingly. When the frost is out of the ground we will go out in the front yard or wherever the tall barberry grows and dig it out and when the job is done we will turn to the East and say, "all right, boys, it's out; what next can we do?"

---

Gladiolus bulbs may be started in the house now and set out when the weather is warm.

### Growing Potatoes in Gardens and on City Lots.

By J. G. Milward
Wisconsin Experiment Station

It is not advisable to plant potatoes in gardens of less than 1000 square feet, as the space is more valuable for a succession of green crops. In larger gardens plans should be made to crowd potatoes closer together than is done in commercial planting, as in small gardens manures and fertilizers may be applied heavily and intensive working of the potatoes may be given with hand garden tools.

*Garden Soils for Potatoes.* Any well drained garden soil in Wisconsin will grow potatoes. The deep, cool, fertile, well drained, sandy loam soils are preferred.

Sod gardens, if possible, should be plowed or spaded in the fall. The sod should be well cut up and pulverized with a spade or other garden tool. It is advisable also to mix in a liberal dressing of stable manure. Course straw manure should be finely chopped up as spaded into garden. In the spring the soil should be well spaded again deeply, thoroughly pulverized and raked into a good level seed bed. The same intensive work should be given if manuring and spading is deferred until spring.

Old garden soils are more likely to grow scabby potatoes than new land. Ashes or lime in the land will increase the danger of scab. When potatoes are grown annually on the same garden, they should be shifted and rotated with other crops.

*Commercial Fertilizers.* Prepared fertilizers for potatoes may be purchased and applied at the rate of about 40 to 50 pounds for every 1,000 square feet. The fertilizer is usually spread over the rows after the potatoes are planted and then well raked in. It is also satisfactory to partially cover the potatoes with soil, spread the fertilizer in the furrow and then completely cover with soil. The fertilizer should not come in direct contact with the seed tuber.

*Varieties.* Early varieties such as Early Ohio or Trimuph are best adapted to the garden as they will ripen for use late in July and in August before the main potato crop of the state is harvested. The Irish Cobbler is a round, white, early variety about ten days later than the Triumph. For general adaptability to gardens throughout Wisconsin for late variety, the Rural New Yorker is recommended. For cool, fertile, sandy loam soils in the northern half of the state, the Green Mountain is recommended.

*Cutting Seed Pieces.* Small potatoes from good fields, planted whole are satisfactory. Potatoes, however, are commonly cut into blocky pieces with at least one good strong eye to each seed piece. Small potatoes the size of hen's eggs may be cut lengthwise in halves. The best eyes on a seed tuber are at the seed or bud end and in cutting the tuber it is advisable to divide this cluster of strong eyes. The blocky type of seed pieces is preferred to thin, irregular slices.

*Planting Directions.* On good fertile gardens potatoes may be planted in rows two feet apart and the hills one foot apart in the row. The garden hoe is commonly used in planting. The hills are made four inches deep; the seed pieces dropped one piece to each hill and promptly covered with soil.. A special furrowing hoe or

garden plow may also be used to make furrows four inches deep and the seed pieces may be dropped about every foot in this furrow and promptly covered.

*Sprouting Seed Tubers.* Gardeners who desire extra early potatoes may desire to sprout tubers before planting by spreading them out in flats or boxes and exposing to light. Strong, stubby sprouts will start. The seed tuber may be cut carefully in order to secure a good strong sprout for each hill and if planted carefully such seed pieces will start into a strong, healthy growth.

Seed potatoes are commonly cut for planting as close to the planting date as possible, but the seed pieces may be kept for several days if protected.

*Cultivation.* After planting the surface soil should be raked with garden rake or cultivator. After rains the rake or cultivator should be used as soon as a crust begins to form. The soil should be worked and kept mellow around the young plants as soon as they come above ground. For small patches the garden rake is a useful tool for this purpose Level cultivation should be given at first but as the vines begin to cover the rows the soil should be worked up around the plants. Higher hilling is practiced on the heavier soils than on the sandy soils. Care should be taken not to cut into hills with hoe or other tools.

*Control of Bugs.* On small patches gardeners will be able to collect and destroy old beetles when they appear in the spring. It is also possible on small gardens to pinch off clusters of the orange colored potato beetle eggs which are laid on the under side of the leaves.

On larger gardens, however, where spraying is necessary the young bugs may be killed by the use of one tablespoonful of Paris Green to a pail of water. Apply with the common hand sprayer or atomizer. Paris Green is also applied satisfactorily in the dry form diluted to half strength with land plaster, flour or air slacked lime.

Gardeners who desire special directions for growing large areas should secure Wisconsin Experiment Station Bulletin No. 280.

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## Why We Send Our Wheat to Europe.

No question is more frequently asked than why we send wheat to Europe and stint our own people. The first answer is that we sent wheat to furnish a foundation for the mixed cereal bread that the Allies have eaten for three years and a half ,and not to supply them with a straight wheat bread. We are now eating Victory Bread, a bread that calls for only 20 per cent wheat substitute, while Europe since the outbreak of the war has eaten a war bread which contains from 25 to 50 per cent substitute. They are asking us for wheat enough to make this war bread.

Wheat flour is the only known foundation for a bakery loaf. Corn meal and buckwheat can be used in making cornbread and batter cakes but these breads cannot be looked on as bakery products as they will not stand 24 hours handling between the oven and the table. American women who do their own baking can make good use of cornmeal, rice and oatmeal, but wherever women work in factories or long hours in the field, whether in America or Europe, bakery bread must be within their reach.

Dr. Alonzo Taylor, representative from the United States Food Administration to the recent Allied Conference in Paris, and an expert on the food needs of the world answers the question in this way:

"We receive many letters at Washington as to why we want to send so much wheat to Europe when we are told that corn, oatmeal, rice and barley and rye are just as good. They ask, 'Why don't we keep the wheat and send them the corn and rye and barley and rice?' I will answer that: We want to send wheat to Europe because you can make bread of wheat, and you can't make bread out of rice and oats and corn. And nobody bakes domestic bread in Europe. You can go to any town in France and you will find that there are no individual bakers there. There will be employed probably two or three men in one place, who will have one large hearth, who will be able to bake 2,000 loaves of bread together, with a minimum amount of coal.

"This bread is delivered to the home; and this is one-half of the diet of that home. It was in peace time and it is now. In peace times there was considerable sugar, and dairy products were plentiful. Now these things are scarce and the bread largely takes the place of these foods. So the bread becomes of added importance from every point of view. Now just visualize this peasant home. Remember that the peasantry in France live in villages, not on farms, and they subsist on the small local store and bakeshop.

"Please remember that the coal

in France today is $110 and $135 per ton, and they have a good coal supply this year.

"Just visualize an American woman saying: 'If the corn, rye, oatmeal and barley are just as good, I will accept the wheat and send the wheat substitutes to Europe.' Remember that bread is made from wheat.

How much work is it for her to prepare rice or oatmeal or make corn bread? How much of a burden does it impose upon the overtime of the American woman today, either with or without servants? Very little. But it is a burden to a French woman, who is working sixteen hours a day and taking care of a maimed soldier, or a tubercular person, to deliberately put an hour or an hour and a half on her a day at boiling rice or making cornbread. Shall we put this burden upon her? This is the concrete situation."

---

### General Planting Methods for Roses.

Planting methods for border and lawn roses apply also to practically all other roses. Stock should be planted as soon as possible after it arrives. When it is impossible to plant immediately, the plants should be placed in a trench and the roots covered. If the plant roots are dry when received soaking them in water an hour or more before this heeling-in is done is desirable. If the stems are shriveled, plumpness may be restored and growth insured by burying the whole plant for a few days. If the plants are frozen when received they should be placed where they will thaw gradually and should not be unpacked until there is no question that the frost is out.

More plants are killed by undue exposure of roots at planting time than from any other cause. No matter how short the distance to the permanent planting location, plants should be taken there with the roots thoroughly covered. The roots may be placed in a bucket of water while removing to the planting ground and until planting, or they may be puddled in a mixture of thin clay and then kept covered with wet burlap or other protection. Care should be taken that the clay does not become dry before planting. It is important to set the plants a little deeper than they were before. If planted too deep, however, the bark of the buried stems would be injured and growth would be checked until new roots form nearer the surface.

In planting dormant bushes it is desirable to trim the ends of broken roots and any that are too long just before they are put into the hole, so that there will be smooth, fresh surfaces which can callus and heal over. It is usual to have this fresh-cut surface on the under side of the root. The hole in which the bush is to be planted should be several inches larger across than the roots will extend and ample in depth, with a little loose earth on the bottom. The roots should be separated well in all directions, with the soil well worked in among them, separating them into layers, each of which should be spread out like the fingers of the hand. When the hole is partially full, the plant should be shaken up and down so as to make sure it is in close contact with the soil under the crown where the roots branch. When the roots are well covered the soil should be firmed. This is best done by tramping. If the soil is

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in proper condition tramping can not injure the plants. This will leave a depression about them, but all the roots will be covered.

When all are planted, each one may be watered, although this usually is not necessary, especially if the roots have been puddled before planting. If water is applied, permit it to soak in about the roots and then fill the hole with dry earth. Do not tramp after watering. With the soil wet it would be injurious to compact it more. If not watered the depression should be filled with loose earth the same as though it had been watered. After planting no watering should be done unless very dry weather follows, and even then care must be exercised not to overdo it till after growth starts. In watering, it is desirable to draw away some earth from about the bush, apply the water ,and after it has soaked in draw dry earth about the plant again.

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### A Mixed Lot of Questions and Answers.

Q. Is Senator Dunlap considered a good berry for shipping?

Ans. One of the very best.

Q. Would you recommend dwarf apple trees for a ½ acre orchard?

Ans. No. Dwarf apple trees are not worth growing either for home orchard or commercial use. The trees do not stand our climate as well as the standard nor last as long. After five or six years the dwarfs begin to go wrong at the roots. The stocks on which they are grafted are shallow rooted.

Q. Are Prof. Hansen's new plums superior in size and quality to our native plums like De Soto and Surprise?

A. None of the Hansen hybrids that the writer has seen equal Surprise in size or quality and surely do not excel De Soto. Extreme hardiness seems to be the main point of excellence of the Hansen hybrids.

Q. What grapes will stand Wisconsin winters without any protection?

Ans. Any of the grapes commonly grown in Wisconsin such as Concord, Moore's Early, Worden, Delaware, etc., will come through a mild or an average southern Wisconsin winter without any protection. An unusually severe winter will kill the canes if left uncovered. This is also true of raspberries and blackberries and the most successful growers practice covering all grapes and berries every year rather than risk the loss of a crop. This refers to the kinds named above and other natives. Agawam, Lindley, Wilder and other European hybrids demand winter protection every year.

Q. Is the St. Regis raspberry hardy in Wisconsin without winter protection?

Ans. There is no evidence that the St. Regis is hardier than Marlboro, Cuthbert, etc.

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### One Strawberry and Two Cabbage

What are the three best strawberries for shipping? I mean those firm enough to ship 100 miles or more?

Senator Dunlap, Gibson, Aroma.

(1) At what season shall I plant late cabbage to get best results and how store for winter?

Sow the seed from the 1st to 15th of May and set in the field from the 10th to 20th day of June, even later will do if season is favorable. Store on shelves in a cool, dry cellar. Cut cabbage in fall before real hard frosts and disturb as little as possible after placing in storage.

(2) Give distance for planting late cabbage in row and distance apart in rows?

Three feet between rows, 18 in. in the row.

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**Questions About Lime-Sulphur.**

Answers by Dr. E. D. Ball, State Entomologist.

(1) How much lime sulphur will I need to spray 12 apple trees 15 to 18 years old from 20 to 28 ft. high and have had very little pruning?

Ans. For a dormant spray 6 or 7 gallons, and for a summer spray between 1 and 2 gallons.

(5) After lime sulphur has been diluted with water will it lose strength by standing for some time exposed?

Ans. Do not know.

(1) Taking both price and results to be expected into consideration, what will be the best spray "dope" for apples this year? For cherries?

Ans. Should advise Bordeaux and lead arsenate for cherries and for the pink bud spray on apples; lime-sulphur and lead arsenate after that on apples. The price of "dope" is a very small factor in the cost of producing fruit.

(2) Is there a sprayer on the market that is well suited both for

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GAYS MILLS, WISCONSIN

potato spraying and for orchard work?

Ans. There is no geared (traction) sprayer that is suitable for orchard work, but any orchard sprayer can be attached to the four row potato rig. If it was a double acting sprayer it could easily be geared to the rig for the potato spraying, but not for the orchard work.

---

It seems to be the general opinion that cranberry vines have wintered well.



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**Paste or Powder**
**Lime Sulphur Solution**

Recognized as standard in principal fruit growing sections of the country. Convenient source of supply for Wisconsin fruit growers. Sulphate of Nicotine 40% and free Nicotine 40%. For further information write

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Divide your orchard in half, no matter how large or small. Spray one-half with "SCALECIDE", and the other with Lime-Sulfur for three years, everything else being equal. If at the end of that time, three disinterested fruit growers say that the part sprayed with "SCALECIDE" is not in every way better than that sprayed with Lime-Sulfur, we will return you the money you paid us for the "SCALECIDE".
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**Madison, Wis.**

### Taxing Orchards.

Q. How should a young apple orchard, 4 years old not yet bearing be inventoried? As the trees are doing fairly well it is no doubt worth more than when it was first set out but since it is not bringing in any returns should it be taxed any higher?

Ans. The Federal Farm Loan Board ruled that no value should be placed on an orchard when appraising property for farm loans. Fruit growers of long experience approved of this ruling. This question was brought up at the biennial meeting of the American Pomological Society in Boston, November 1917 and fully discussed. Veteran orchardists from every part of the country, apple growers, peach growers and others were unanimously of the opinion that the ruling was sound. An orchard should be considered as a growing crop and not a permanent improvement. It may not be insured against the elements. It may quite as easily prove a liability as an asset. If the orchard is not to be considered of permanent value by the Farm Loan Board it certainly should not be subject to taxation.

Q. Have any Delicious orchards in this state produced profitable crops to date? At what age did the trees begin to bear?

Ans. I know of no Delicious *orchards* in bearing in Wisconsin. Reports have reached this office of a few trees here and there in the state 8 to 10 years old, some of which have borne fair crops. Suming up the scant information at hand the Delicious in Wisconsin seems to be late in coming to bearing, 8 to 10 years, not in the first class of hardiness, a rather shy bearer and fruit about one-half the size of Northwestern Greening.

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---

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---

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---

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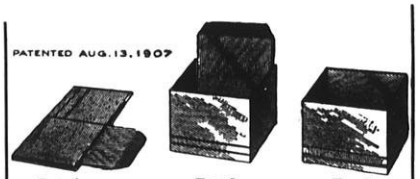


Fig. 1 Fig. 2 Fig. 3

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This rig has never been in use. Bought at horticultural convention 2 yrs. ago for demonstration. A three hundred dollar outfit to-day.

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# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

Volume VIII | Madison, Wisconsin, May, 1918 | Number 9

Children call them star flowers, a fitting name. When we say, "phlox divaricata" we display our learning,—perhaps. Somehow children always know more than grown-ups about sunshine and flowers and laughter and love of all that is beautiful.

## Winter Injury to Cherry Blossom Buds.

Prof. R. H. Roberts
College of Agriculture

In general the troubles which affect a fruit tree are of interest to the grower only when they reduce the crop below a reasonable yield. As a result it is only every few years that more than passing interest is shown in the matter of winter injury to cherry blossom buds. While this trouble is common in Wisconsin it is seldom that the injury is sufficiently severe to cause a crop failure, as was the case in the winter of 1915.

When no injury occurs there is a normal thinning of the fruit after the blossom season to such an extent that only a relatively small portion of the total number of blossoms will produce fruit. It is not unusual, as in the past summer, that trees which had as many as half of their blossom buds killed during the previous winter will produce nearly a full crop of fruit. It is desirable that this injury should be prevented as the weather is not always finely enough adjusted to do just the proper amount of thinning of the fruit buds.

In order to get a better understanding of the nature and occurrence of this trouble, detailed studies of this problem were undertaken by the Department of Horticulture of the University.

A limited survey of the conditions existing in the Sturgeon Bay district this last spring revealed several points of interest in connection with the prevalence of the injury. While these are a matter of common knowledge to the growers they will be stated again in order to get the conditions clearly in mind:

1. Montmorency trees and young Richmond trees were very free from injury.

2. The vigor of the trees, as measured by the amount of growth, seemed to be the factor determining the occurrence of the injury.

3. There was less injury in the tops of the trees than in the lower parts.

4. Trees slightly defoliated with shot-hole showed less injury than trees with normal foliage.

5. The young trees and shot-hole trees were later in blossoming than the older trees.

6. Where injury is common, the shortest and longest spurs had less injury than spurs of average length.

7. The larger buds were most injured.

After a consideration of these facts it is apparent that immaturity of the trees is not associated with the occurrence of winter killing. In fact, the more vigorous, later growing trees were much less subject to injury.

Following a detailed study of the blossom buds a condition was found which was directly associated with the appearance of the trouble. This condition was the amount or degree of development which the buds have reached when the winter season begins. We may say, then, that the more developed the buds are, the more susceptible they are to injury.

From a study of the wood growth and fruiting habit of the trees we find that the relative development of the buds is in proportion to the amount of growth which the tree makes. As the amount of growth increased less bud development was found.

The trees which make an average terminal growth of about ten inches are very largely free from injury. This might be suggested as an arbitrary ideal to aim at in regulating the vigor of the tree with the object of decreasing the winter injury of the blossom buds. At least we are able to modify the relative development of the buds, and their consequent susceptibility to injury, by maintaining a vigorous growth of the trees. This vigor depends of course upon the cultivation, the soil fertility and the pruning.

Naturally we can expect the weather conditions of some seasons to be such that no injury will occur, or in other seasons that the injury will be severe regardless of the conditions of the buds in early winter. On the other hand, the present observations would indicate that much of the injury especially common to the older, weaker growing trees could be prevented by maintaining a more vigorous tree and thus prevent the extreme development of the blossom buds to the stage at which they are found to be very subject to winter killing.

---

It doesn't matter who started this war, Uncle Sam will finish it.

---

Conservation, concentration, and consecration—for the sake of those at the front.

---

Only a slacker could stand idly on the sidewalk and criticize as the army of workers marches by.

### Our Garden.

Jennie Lindauer.

It is almost six years since our garden was first plowed. It is a little plot eighty-eight by one hundred and twenty feet commonly called a poor man's farm. Am sure any of you seeing it at that time would not have offered us much for our prospects.

To the soil already heavy with clay was added a generous amount from the basement. Three or four old rotted tree roots were dug up, all of which detracted from the appearance. But we, who were so blissfully ignorant of what all this meant, were perfectly happy, in the thought that in the spring everything could be arranged just as we wanted it. So during the winter we talked and planned much but studied seed catalogues more. When spring finally came we were ready to put in our whole garden the first fine day.

We planted pie plant roots, 3 gooseberry bushes, 10 red and 2 white currants, about 40 raspberries and 100 strawberry plants. This took about one-third of the ground allotted to garden purposes. Being very fond of vegetables of all kinds, we used over half of the remainder for that purpose. Then we must save space for nursery stock that had been purchased from agents who had camped with us at various times during the winter. This did not prove to be as **much** as as we had expected.

Of course all the flowers we had the first year were annuals and then only those which survived after the neighbors' cows, horses, ducks and chickens used them as a grazing field. However,we did have quite a showing that year in spite of all our tribulations and had made quite a start in our permanent bed.

One old gentleman who saw our vegetables in the fall told us that in the spring he would not have offered us ten cents for all we could raise on that garden. But we had all we could use during the summer and abundance to put in the cellar after giving away several baskets full.

Since then we have improved our soil very much by adding a generous amount of fertilizer and coal ashes. Nearly every year it has been dug up twice, in spring and fall, so that now it is much easier to work.

The last two years besides using all the berries we could in season we have canned about 20 quarts of strawberries, about the same of raspberries, and several quarts each of currants and gooseberries, besides making jelly. We have filled 100 quart cans, each of the last two years from our garden except about 20 cents spent for crab apples.

In spite of the fact that our strawberries were almost a failure this year, we have about 50 quarts of jam, jellies and sauce from our other berries, with a splendid prospect for late vegetables.

Perhaps many people would not consider it wise to plant so many flowers, but they have been a source of so much pleasure to us that we do not regret the space given them, are only sorry we have not room for more. Some of our friends seeing our love for flowers have made many valuable contributions until every inch is just about full.

After living in the city for so many years where we must buy all our eggs, we concluded to try keeping a few chickens. A space 30 x 40 feet was goven over to this purpose. Each year we raise from one to three dozen chicks.

Some time after we had been keeping them my mother said we paid dear for every chicken and egg we used. To make sure she was mistaken I kept a book account and found that we sold eggs enough to pay for all the feed, thus giving us our eggs and all the chickens we ate. This may seem a small item, but we feel repaid in having all the fresh eggs and chickens we want.

It may not mean so much in dollars and cents to have your own garden and chickens, but surely there is satisfaction in going to the garden for vegetables and berries and knowing they are fresh. And in these days of the high cost of living I believe it pays financially. To be sure, it means work and plenty of it, but most of us are better off for doing something.

We have had plenty of failures, some due to inexperience and some to weather conditions. From the former we have profited somewhat—but after six years of labor and some success we see just as much ahead that we want to do as we did the first year, and have come to realize that it will never come up to our expectations. But even with our failures it is home in the fullest sense of the word.

"To own a bit of ground, to scratch it with a hoe, to plant seeds and watch the renewal of life—this is the commonest delight of the race. The most satisfactory thing a man can do."

# CRANBERRY CULTURE

Edited by Mrs. S. N. Whittlesey, Cranmoor, Secretary Wisconsin Cranberry Growers Association

## Water Treatment for Blackhead Fire Worm.

Andrew Searls.

As the Blackhead Fire Worm seems to be inclined to give the cranberry grower trouble this coming season, it might be well to sound a warning and give some pointers about how to manage this troublesome pest.

The way I have doped this subject out is, there is only one way for the Wisconsin cranberry grower to combat him successfully, for if you attempt to get him with a poison or any other way by the use of a spray, you will fail to reach him in time to prevent him from getting in his work and doing your crop and vines a great deal of harm, beside the spray method being very much more expensive.

I have had several years' experience in treating this pest and and have always been successful in combating him.

I think it was twelve years ago this last fall I discovered quite a large patch of our vines had been severely injured by some pest. I had not noticed when the work was being done, but I could see if the whole bog was worked over as thoroughly as this particular patch (something like forty square rods) it wouldput us out of business for at least a couple of years. This looked serious. In walking among the vines on a fine sunny day, I noticed very many small brown flies or you might call them millers—they resembled millers—would rise and fly away a few feet and again settle down among the vines. I concluded these were the fellows responsible for the work and from their immense numbers, they would be likely to spread over the whole bog, and be laying their eggs for the coming season.

I had come in possession some time before of a bulletin on cranberry culture and among the papers sent, one on how to combat the Blackhead Fire Worm. The treatment advised, when the first crop of worms were hatched, which usually occurs in the last days of May, was to put the bog under water for a sufficient time to drown these young worms. It might take several floodings to get them, but this was the only sure method of protection. Consequently the next spring I was on the lookout for the appearance of the fellows. I think it was the 25th of May I made the discovery that the worms were getting busy. their first work seeming to be on the young growing buds and vines. We at once put our entire fields under water, covering every vine as nearly as possible. They were held submerged for thirty-six hours, the water was then drawn off and the worms examined and were found to be dead, all at least which we had been able to get under water.

We make a practice of giving our marsh each season a warm flood for safety, believing it will do no harm, and if there are any stray worms hanging around we will put them out of business.

Mr. A. E. Bennett also says the time to flood for fireworm is when the first appears in the spring—the trouble is, we do not see him—the worm generally comes out when buds begin to come out. Mr. Bennett covers entirely forty-eight hours and if water is cold can keep them under a week. **Get him first time or no good.**

On Sunday, April 7, Mrs. B. P. Clinton passed into the Great Beyond, leaving to mourn her loss a husband, three married daughters, several grand-children and a host of friends. Mrs. Clinton had been in frail health for some time and sought a more comfortable climate in the South—spending the winter with a daughter at Hydro, Oklahoma.

Funeral services were held Wednesday, April 10, at the Congregational church of Grand Rapids followed by interment at Forest Hill Cemetery. Mrs. Clinton was a christian lady of rare intelligence, refinement, and culture whose absence will be deeply felt.

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The Cranberry Lake Development Co., of Price county, have had a crew of men at work this winter re-sanding their bog. This company have a large acreage planted in the best up to date manner, just coming into bearing. President Searls—whose is the guiding hand—is at this writing on the way to inspect the work done, and lay out work for the coming season.

### The Cranberry Not a Waster

On receipt of the following protest by the Secretary of the State Cranberry Growers Association, an inquiry was sent to the U. S. Food Administration to learn if the cranberry had been placed under ban or in any way discriminated against. In a remarkably short time the following telegram was received: "Food Administration has taken no action whatever in regard to cranberry"

From this the editor must conclude, and he believes a majority of our readers will agree, that their protest is not well founded. It doubtless arose from a misunderstanding. Sugar is required in cooking apples and yet the apple growers have not protested because the Food Administration has asked us to conserve sugar.

The market gardeners of Oshkosh and other places worked whole heartedly all season in promoting the back yard garden movement knowing they were working against their own interests, but none of them ever admitted it.

The allowance of sugar in France at the present time is 1 1/10 lbs. pr. month for each person, when it can be obtained at all. We consume over ten times that amount and surely we ought to be willing to help just a little to add to this pitiful 1 1/10 pounds.

"Through your columns I want to enter a **protest** against the concerted action now being taken by Chief Hoover and the Food Conservation Commission against the Cranberry. This movement is being disseminated throughout the land by the press, and is causing incalculable injury.

The reason given is the high price of cranberries and the shortage of sugar. Cranberries are not high in comparison to other fruits and foods and sugar combined with them will give a better account of itself than any place I know of. These gentlemen are earnest and zealous in their efforts to conserve food, and are not wittingly guilty of crime in discriminating against the cranberry. It is the old time-deeply-rooted **notion** that the cranberry requires more sugar than other fruits, and they have not taken the pains to find out beyond question, how unfair, unjust, and untrue this theory is.

Why not drop the turkey and all its accessories? Why drop any of them? Turkey is said to be plentiful at 30 to 35 cents a pound. With two-thirds the price of one pound of turkey, two and one-half to three pounds of rich cranberry sauce can be made without one atom of waste. If the waste of the turkey is considered—and should be—a much larger amount of sauce could be made. Instead of conserving with beneficent results, they are depriving humanity of an economical, appetizing fruit food and will ruin the men engaged in its culture. I hope the members of the Wisconsin State Horticultural Society who were convinced by my demonstration at the last December meeting, will have, and **eat,** cranberry sauce, not only on Thanksgiving Day but many, many, other days

Mrs. S. N. Whittlesey.

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For cleaning fruit jars use steel wool numbers 0 and 00. Can be had at any paint store. Removes stains.

Mr. A. B. Roberts of Embarrass was over to Grand Rapids recently to consult with the cranberry growers of this vicinity regarding the re-building of his cranberry bog. Mr. Roberts has one of the best locations in the state for the growing of cranberries, and expects to put it in a first class, up to date condition.

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### May Restrict Importation of Nursery Stock.

The Secretary of Agriculture has called a public hearing, to be held in Washington May 28, at which will be considered the advisability of restricting the importation of nursery stock and other plants and seeds from all foreign countries. The restrictions are contemplated in order to prevent the introduction into the United States of any tree, plant or fruit diseases or of any injurious insects new to or not heretofore prevalent in this country. Many of the most important injurious insects and plant diseases have been introduced in this country through such importations. On the other hand there is a long list of similarly destructive insects and diseases which have not yet gained entrance.

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Schizanthus Wisetonenis or Butterfly Orchid is a most beautiful annual that does not seem to be widely grown by amateurs. The dainty flowers fairly cover the plants with bloom. There is a wide variety of shades and markings but all of them pretty. They soon flower from seed but do not hold in flower long. A succession may be had by sowing seeds at intervals of a couple of weeks during the spring months.

**Interesting and Valuable Information About Various Flowers.**

(Answers by James Livingstone, Milwaukee.)

The leaves of a Sansveria Zeylancia dry and lose color after they are full grown; in other words, the plant appears to thrive for a time and then goes backward. Cause and remedy?

If the plant produces new leaves that develop satisfactory, it certainly is in a good growing condition; just why those leaves should dry and lose color can only be diagnosed by inspecting from top to bottom by a practical florist.

These plants are of easy culture providing you keep them warm and a moderate supply of water at all times. Keep the soil at the top cultivated a little to insure a free circulation of air, thus preventing the soil from getting sour. Also wash off the leaves, both top and bottom occasionally so the plant can breathe better.

FERN CULTURE.

Please give directions for care of ferns,—house culture. Leaves dry at tips.

The trouble of house ferns drying at the tips is not an uncommon one, yet in most cases it is unnecessary. This watering, or rather teasing with water every day, causes the inside of the ball of soil in the pot to become so dry that in the course of time it will shed instead of absorb moisture.

The following method will prove satisfactory. Submerge the pot containing plant into a receptacle filled with water and let it remain there for 30 minutes, about twice a week, that will carry them along without any further work in this line; if in a jardiner have the pot elevated so the air has a good chance to circulate. Location partly shady during summer months.

ASPARAGUS.

Give general directions for culture of Asparagus Sprengerii as house plant.

Of all the house plants none is of such easy culture if given plenty of root room. Being a jardiniere have the pot elevated so rich soil which should be kept well supplied with water at all times. Either light or fuel gas is its greatest enemy. After all danger of frost is over it is advisable to plant out of doors in a partly shaded place. It will do well in either a warm or cool room.

AMERICAN BEAUTY.

An American Beauty rose fails to bloom. The buds form but do not open; foliage appears as if scalded. Cause and remedy?

It is not an unusual thing for buds on an American Beauty plant to come blind, as the professional grower terms it, especially during the dark winter months, when the growing vitality is at low ebb.

The above case of failure to have good foliage may be due to red spider, which generally sit on the lower side of the leaf; would suggest repotting, to insure new root action using a fairly rich fibrous loam, and sponge the leaves about twice a week for some time, with clean water; give full sunlight at all times.

ARISTOLOCHIA.

A Dutchman Pipe three years old has not bloomed. The plant appears to be healthy. What is the cause?

This is rather a hard question to answer intelligently. The plant may be healthy and yet may not have attained size or strength enough to bloom. The Dutchman's pipe is usually a hardy and vigorous growing vine and is not particular about soil. This vine should have a location in full sunshine, and in the writer's opinion needs very little care.

If the plant is growing too rapidly it might be well to cut back some of the long shoots, so that some of the vigor might be thrown in to produce flowering wood. The writer has had the care of a vine for over seven years. It is planted in very poor soil, has grown very slowly, never even been trimmed in all that time, and yet has bloomed profusely every year.

CYCLAMEN CULTURE.

Give general directions for Cyclamen culture as a house plant.

It is practically impossible to raise cyclamen from seed in the ordinary home, so it is presumed that this question relates to the case of fully grown plants as purchased from the florist. The cyclamen is one of the finest house plants after it is fully grown, all that it needs is intelligent care in watering and a sunny location in the window in the winter months, and it will bloom for a long time. When watering do not pour the water in the center of the bulb, or the flower buds and even the bulb itself are liable to rot.

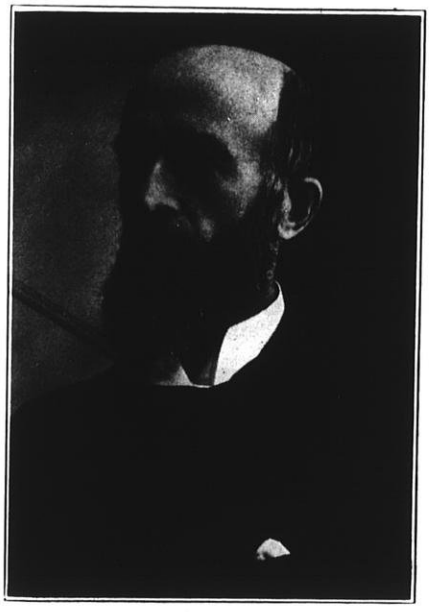
Do not try to grow old bulbs the second year, very few florists do this, as they are seldom worth the trouble even in a greenhouse.

## Matthew Crawford.

Matthew Crawford, a well-known horticulturist, for many years a resident of Cuyahoga Falls, Ohio, died at the home of his cousin, Mrs. M. J. McFarland, at Belle Center, Ohio, on April 2 after five days' illness of pneumonia. His funeral was held at Cuyahoga Falls on April 4.

Mr. Crawford was born in County Antrim, Ireland, July 5, 1839. His father died when he was very young, and, when he was about ten years old, his mother brought him and his younger brother to America. After a few months' residence in central Ohio, they moved to Cleveland. In the spring of 1854 Mr. Crawford began working for the late George H. Lodge, then a prominent market gardener of Cleveland, and from that time until his death he was a horticulturist. Though he continued to experiment with new varieties of vegetables all his life, his chief attention for many years was given to small fruits, especially the strawberry.

In 1863 Mr. Crawford married Ellen Knight, who at one time had been his teacher in school, though more than a year his junior. Two sons were born to them, William S., now an insurance newspaperman in Chicago, and Norman L., a gladiolus grower of Elyria, Ohio, who died March 16 of this year. In 1871 the family moved to Cuyahoga Falls, Ohio, where Mr. Crawford became gardener to George H. Lodge, his old employer, who had moved there. Soon afterward Mr. Lodge introduced the Sterling and Margaret strawberries, which he had purchased from Mr. Crawford, who originated them. Mr. Crawford had collected a number of new and standard varieties of strawberries and late in the Seventies he issued his first catalogue of strawberry plants and started the business in which he continuel until 1916, when he sold out. During that forty years he originated several varieties and introduced many which afterwards became popular. His plant business was never large in volume, but consisted mainly in selling new varieties to growers, amateurs and experiment stations. During that period he came to be recognized as an authority on the strawberry and its culture. He belonged to many state and county horticultural societies, wrote somewhat for the horticultural and agricultural press and published a book on strawberry culture.



MATTHEW CRAWFORD

Early in the Eighties he became interested in the gladiolus and soon made a considerable collection of varieties. These multiplied rapidly and he began selling bulbs. The demand soon outran his supply. He imported a number of varieties from Europe. He grew great numbers of seedlings, one year buying all the seed in this country and Europe available in quantity and planting fifty pounds of seed. He originated a number of the varieties now found in the choicest collections. He wrote a book on gladiolus culture, besides a number of articles for floral papers and for horticultural societies.

In his later years he disposed of most of his gladiolus bulbs and following the death of his wife in 1916 kept only a few thousand very choice bulbs. He had just shipped these to Belle Center and had gone there intending to spend the summer with his cousin when he was attacked by pneumonia.

Mr. Crawford was a horticulturist for the love of it. While he earned his livelihood by it, he was an experimenter more than a business man. He was a great reader of horticultural and agricultural literature and had a large store of knowledge of many branches aside from those on which he specialized. He was a member of the Methodist church for many years, but for over thirty years had been a Congregationalist. In young manhood he became a Mason. He helped organize the first Grange in Ohio. He was especially faithful as a member of the Summit County Horticultural Society, his home organization. He was a thorough workman, honest, strong in his convictions, kindly and generous to a fault.

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Try cakes that call for honey or sirup instead of sugar.

**Wisconsin Horticultnre**

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## Plant Flowers in the War Garden.

Flowers will help win the war. We do not live by bread alone. We can't send the flowers to the boys in France, but we can tell them about our flowers. They will be glad to know that mother and sister or even dad have geraniums in bloom and that there is a bowl of nasturtiums on the dining room table just as it used to be.

Flowers won't take up much room and surely we will find time to care for a bed or border of blooming plants. We will need the fragrance, the beauty and the cheer their presence brings. Plant flowers in the war garden and elsewhere.

## Sugar Beet Syrup.

It can't be done. A wise (?) theorist connected with the bureau of sugar investigations of the Federal Department of Agriculture wrote a pamphlet about it, the Literary Digest copied it, a lot of half-baked enthusiasts endorsed it, President Rasmussen knocked it and then the war was on.

Rasmussen was sure he was right and proved it. He made some syrup according to directions and sent the writer a sample. It tasted *sweet,* at first, but the after taste was like bed bugs. Tried it on the family cat, the cat lapped it all, and was ill, very ill.

Here is the beginning of the story. The wise sugar man at Washington advised every kid and every grown-up war gardener to plant a few sugar beets and next fall make sirup for family use.

Slice the beets in a barrel, pour boiling water over them, draw off the water and boil until proper consistency. Sounds fine but its a humbug. Here are the documents to prove it:

Mr. W. D. James,
Ft. Atkinson, Wis.

Dear Sir:—

I am sending you today a sample of sugar beet syrup made at home, strictly following directions in U. S. Government Bulletin on this subject.

From 40 pounds of beets, with 4 hours labor and 11 hours boiling we got 2¼ lbs. syrup or a trifle over a quart. As to quality—you may be the judge. As to purity—I am enclosing a copy of a letter sent to Prof. R. A. Moore by Mr. McCormick in reply to an inquiry about home manufacturing of syrup.

The raising of 40 lbs. beets.
Labor in preparing, 4 hours.
Fuel, 11 hours.
Sum Total, 2¼ lbs. syrup (Quality?)

I think this will convince Mr. Hoard and others that my statement "Do not grow sugar beets in the city garden. It is not practical," is not without foundation.

Sincerely yours,
N. A. Rasmussen.

March 7, 1918.

Prof. R. A. Moore, Agronomist,
Wisconsin College of Agriculture,
Madison, Wisconsin.

My Dear Mr. Moore:—

I have your letter of March 2, together with a copy of Mr. Andrews of Oglesby, Illinois, letter and note with some interest the statement of Mr. Andrews relating to manufacturing their own syrup from beets.

I have been engaged in the manufacture of beet sugar for 18 years, and while I have much to learn, I am obliged to say from my knowledge of the process, that it might be possible to make either sugar or syrup at home in a kettle by the same process that you would make maple sugar, but the home made product would retain all of the impurities which the plant takes from the soil; such a sugar would contain the potash and other salts which give the product the offensive odor and unpleasant taste and dark color which to a very considerable degree would make it unpalatable. The use of such syrup or sugar thus made

would most likely cause trouble with the digestive organs, because the excess of salts which the sugar or syrup would contain would have more or less of the effect of epsom salts.

In the manufacture of sugar in the regular factories, the syrups are thoroughly treated or filtered 5 or 6 different times, treated with 2 liming processes to get rid of the impurities, then treated with sulphurous gas to bleach the syrup, then boiled to grain, and then passed through centrifugals that travel at the rate of 1,200 r. p. m. which throw off the molasses and leave the granulated sugar on the inside of the screen, and while the centrifugals are thus revolving, water is sprayed on the wall so that the molasses may be thoroughly washed off the sugar grains. All of these processes are absolutely essential to the production of a pure granulated sugar from beets, and such treatment is impossible in any home-made processes.

The impurities that come in the manufacture of cane sugar is in the form of glucose, that is an impurity which prevents a certain amount of the sugar forming into grain, and is thrown off in the form of molasses, but the glucose is palatable and cane molasses are edible and really taste good.

I cannot conceive of our government advocating the home made production of sugar from sugar beets, I think it is the result of some theorist endeavoring to gain publicity in a line which he is entirely unfamiliar with.

With kindest personal regards, I remain,

Yours very truly,
G. W. McCormick,
Manager.

This is simply another case of theory without any practical foundation. The writer is not one who condemns the whole system of Federal agricultural investigations but there are so many cases like this that it makes one wonder if a general overhauling of the whole Department of Agriculture would not be a good thing. As a clearing house for investigation the department is excellent but as a source of information it is often a sad failure. Those swivel-chair farmers and horticulturists down at Washington are too far from the soil, altogether too far. They are, as a class narrow, impractical and too often visionary. The workers in the state experiment stations are nearer the soil, nearer the people and rarely make such stupid blunders as this beet sirup deal.

Don't plant sugar beets in the home garden with the idea of making sirup from them. It is impractical. Plant cabbage or rutabaga or parsnip and buy a can of Karo.

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**Arbor Day Proclamation.**

Nature, always peaceful, always beautiful, again reminds us of the approach of springtime. The trees are budding, the flowers are coming forth and the birds are straining their sweet voices in their effort to please us with their song.

Let us give expression of our gratitude for the beautiful creations by planting a tree in some place where a mighty oak has fallen or a shrub for one that has withered for want of care, to the end that beautiful trees and shrubs shall not grow less and the bird homes shall not be destroyed.

May I be permitted to recommend to you, good people of Wisconsin, that this year when our country is engaged in a great war and we must give to our sons to it, that you plant an abundance of flowers. They will aid in dispelling the gloom or feelings of lonesomeness because of the absent ones, and for each son who goes to war let all who can plant a beautiful young tree to commemorate his going.

In accordance, therefore, with established law and custom, I, Emanuel L. Philipp, Governor of the State of Wisconsin, do hereby proclaim

Friday, the third day of May, 1918, Arbor and Bird Day.

And I recommend that the day be observed by the planting of trees, the adornment of school and public grounds and by the holding of appropriate exercises in all the schools of the state, to the end that the greatest possible advancement may be attained in harmony with the spirit of this proclamation.

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Sweet peas may be planted as soon as the ground can be worked easily. It is often worth while to start a few in paper pots or boxes in the house and transplant later when weather conditions are settled.

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Omit icing from cakes and fancy breads.

### About Arsenate of Lime and Spray Pumps.

No. 1. Can arsenate of lime be used in place of arsenate of lead?

No. 2. Certain parties have hand spray pumps with long shanks for hose connections so that two or three clamps can be used. Also in the better hand pumps two vertical single-acting cylinders are used. Will such a combination enable me to penetrate farther into the tree and reach higher branches than with my $25.00 Goulds Pomona Pump?

No. 3. How many nozzles can be used with this combination and should they be single or double nozzles?

No. 4. Can I get a combined orchard and vine crop sprayer without getting a power outfit? With my Pomona pump the hose connections are always blowing off, also I do not consider we get enough pressure.

No. 5. Should trees be sprayed until they drip?

Answers by Dr. E. D. Ball, State Entomologist.

(1) Yes, arsenate of lime can be used as a substitute for arsenate of lead anywhere the latter is used. Arsenite of lime, which is more commonly used than arsenate, can also be used but about four pounds of fresh lime should be added to every 50 gallons of water, in order to prevent burning. This latter substance can be made at home.

(2) The double acting hand pumps, such as you describe, have a longer leverage than the Pomona barrel pumps and can therefore maintain a slightly higher pressure and will pump more liquid in a given time. There is no reason, however, why you should not reach the highest branch of any tree with a Pomona pump and do just as efficient spraying as with any other kind, —even a power outfit.

(3) Either a double acting or a Pomona pump should only have one lead of hose. This should be about 30 feet long and preferably ½ inch in diameter. To this should be attached one way cutoff and a 10 foot Bamboo pole, an angle, and a single Bordeaux nozzle for the driving spray, or a single "Friend" or other large whirling spray nozzle for cover sprays.

(4) The vine spraying attachment can be purchased separately and attached to the back of a wagon or cart, and the hose of an ordinary spray attached to this. Or, the outfit can be made at home with gas pipes and four Vermorel nozzles. This will make a better outfit than most of those in use, but will of course require a man to pump.

There is no reason why the hose should blow off a Pomona outfit. It may be that the hose you are using is too large for the coupling, or that your coupling has a poor shank. If so, one with sharp screw-like notches can be purchased for a few cents. A single clamp on this type of coupling should hold any amount of pressure. The most valuable feature of the Pomona pump is that it can be repacked so as to give perfect pressure at any time. If, after pumping the pressure up until the pump is tight, you find that the handle can be moved down or that the pressure goes down examine the valves and see that they are not leaking. If the valves are not leaking the pressure once pumped up should stay indefinitely and you should not be able to move the handle at all. If the handle moves, take off the collar around the cylinder, put in some new packing, which you can buy at any machine shop or hardware store, and screw the collar down tight, putting in a little oil. This should make the pump as good as new and should be done each year.

(5) When spraying for the purpose of coating the leaves with spraying compound care should be taken to have as little dripping as possible with perfect covering. By using the bamboo pole and the nozzle set on an angle, this can be done with little waste.

The spray on apple trees after the blossoms fall is largely for the purpose of driving the poison into the calyx cups. For this purpose a driving nozzle, such as the Bordeaux, should be used and the spraying should be continued until after each blossom has been covered, regardless of dripping.

### The Pass Word—"War."

"We have got to reach the place, each one of us, where we define every decision in our lives as an act of war policy.

"Everything that we do, plan, eat, wear, must be analyzed and measured from one single point of view—will it contribute to the carrying on of the war, or will it contribute to its prolongation?

"There is no other thing in the world for us but to define everything in our lives as acts of military necessity or policy."

—Dr. Alonzo Taylor.

### Treat Cucumber Seed.

Tests made during the past two years have proved that the angular leaf spot disease of cucumbers and probably anthracnose as well are introduced into new fields on the seed, says the United States Department of Agriculture. Dipping the seed in a 1/1000 mercuric chloride (corrosive sublimate) solution for five minutes renders the seed disease-free and has no injurious effect on germination. Since both diseases overwinter in the soil of diseased fields, however, it is highly important not to plant in fields which were in cucumbers the preceding season.

Treatment of cucumber seed can be done most advantageously by seedsmen and pickle companies before the seed is distributed to their growers. It is a relatively simple operation and can be easily done in the storage houses if running water is at hand.

Metal containers cannot be used for the mercuric solution. The highly poisonous nature of this substance should be kept in mind. Purchase mercuric chloride on the basis of one pound to every 500 pounds of seed to be treated. Make up a concentrated stock solution of a strength of 1/20 by dissolving one pound in two and one-half gallons of water. This stock solution is diluted to 1/1000 by adding one quart to twelve and one-quarter gallons of water. Stir thoroughly. For the treatment use a barrel, wooden tub, or large crock.

### How to Treat Seed.

Place the seed in burlap or cheesecloth bags, fifty pounds in each bag. The bags should not be over three-quarters full to allow for swelling of the seed and to facilitate stirring. Immerse the bag of seed in twelve and one-half gallons of the 1/1000 bichloride solution and agitate vigorously with a stick to secure thorough wetting of the seed. Remove the bag promptly at the end of five minutes. Immerse at once in a barrel of running water and stir thoroughly. Wash about fifteen minutes. Dry the seed as rapidly as possible. Forced drying by a centrifugal machine or an air blast is much to be desired.

The bichloride solution should be used only once since its strength is greatly decreased. Make up a fresh dilution from the stock solution for every bag of seed.

To treat seed in smaller quantities dissolve one tablet of mercuric chloride in one pint of water for each half pound of seed.

Guard against reinfection of the treated seed. Bags to be used for treated seed should be soaked in the 1/1000 bichloride solution for at least five minutes, rinsed, and dried. Solution used once for seed may be used for this purpose.

Growers should not plant cucumbers in the same fields used in 1917 for cucumbers, watermelons, or cantaloupes, or on land immediately adjacent to such fields.

As far as possible, the department will undertake to send a representative to supervise the treatment of the seed where large quantities are involved.

### Crown Gall on Young Apple Trees.

S. B. Fracker, Assistant State Entomologist.

The disease called Crown Gall may be found on apple nursery stock in the form of large lumps or knots on the crown and roots of the trees or in smaller lumps from which arise a large number of long, fine, thread-like roots. The latter form is known as "hairy root", but it is caused by the same bacteria as are responsible for the galls. This disease has long been recognized to be very injurious in the western irrigated orchards, but many nurserymen have claimed that it does little damage to trees in this part of the United States. The fact that an infected tree will survive and bear fruit, seems to be the principal basis for their claim, as it is often difficult to tell how much a tree is weakened by a disease or pest.

The writer made some observations on nursery-grown trees this fall in order to find out what effect the crown gall had on the young stock. It was found that in every nursery visited a much higher percentage of infected trees had to be thrown into the cull pile on account of small size and weak growth, than was the case with healthy trees. This was true of every variety examined. It appears from the results that the presence of galls or "hairy root" reduces the strength and size of the tree during its nursery life from 15 to 25 per cent. We are safe in drawing the conclusion therefore, that this reduction in the value and strength of the tree will be continued after the tree is transplanted into the orchard.

Buyers of nursery stock are warned to watch for infected trees, especially on material from nurseries outside the state, as it is not lawful to deliver these trees to customers. In case of doubt, send samples to the State Entomologist at the State Capitol who will appreciate any information sent in. S. B. Fracker,

Assistant State Entomologist.

### A Common Language.

A common language is the first condition of a united people. If the members of a society cannot speak to one another they cannot reach that common understanding necessary to democracy.

In the United States that common language must be English. Because not all of our citizens can can speak that language and because of efforts made to maintain a civilization based upon other languages, we now find ourselves divided in the midst of a great war. In Wisconsin a large part of our present difficulties are due to the fact that our common schools have taught German to children who never learned English.

There is no good educational reason for teaching a foreign language in the grades. German was introduced and has been maintained in Wisconsin grade schools as a part of that German propaganda which helped involve the United States in this war and now weakens our fighting power.

The law permitting the teaching of German in the grade schools must be repealed. This is not making war upon a language. It is only insisting that the national language shall be the first to be taught in our public schools.

Many towns and cities in Wisconsin have already abolished German in the grades. But while the law remains on the statute books children in certain communities will be introduced to a foreign language before they will know the language of the nation in which they must live. The law permitting this must be repealed. The first test of loyalty and Americanism of every candidate for the legislature this fall should be a pledge to vote to repeal the law that permits the German propaganda to go into our schools and to divide our people.

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### Home-Made vs. Commercial Lime-Sulphur.

Reprinted from April, 1914, Wisconsin Horticulture.

As the time for spring spraying again approaches, this much discussed question perplexes many horticulturists. Whether it is better to purchase a commercial product of good grade at a fair price, or to prepare a compound of doubtful quality at a doubtful cost of time, labor and materials, is the debatable question.

Commercial lime-sulphurs are generally prepared under the best conditions with care and accuracy as to the quality and proportions of ingredients and thorough steam boiling. Most commercial lime-sulphur is prepared from the best calcium lime (94.98% calcium) obtainable, thus securing almost complete solution and combination with the sulphur.

Homemade lime-sulphurs, on the other hand, are generally made from the most available lime, which may be of low (calcium) quality and may contain a large percentage of magnesium, an element which will not combine with sulphur by boiling. Frequently the boiling is not thorough and the straining is carelessly done so that nozzles become clogged in spraying.

Wisconsin limes (with few exceptions) contain considerable magnesium, and for this reason our horticulturists are advised to use the commercial product. In case they have an analysis of a

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**White Elm Nursery Co.**

Oconomowoc, Wisconsin

certain lime and know the percentage of calcium, they can add enough more lime to make up the required amount of calcium for the lime-sulphur formula.

The following formula leaves the least residue or sediment, and any amount may be boiled at one time using these proportions:

Lime
(Fresh)
If 95% calcium _____19 lbs.
If 90% calcium _____20 lbs.
If 85% calcium _____21 lbs.
If 80% calcium _____22 lbs.
Sulphur, good quality powdered _____40 lbs.
Water (hot preferred) ___25 gal.

Mix the powdered sulphur with water to a smooth, thin paste without lumps. Add the lime gradually to 10 gallons of hot water in the kettle (or barrel if steam for boiling is available) and pour in the sulphur paste during the slaking process, constantly stirring the mass. When the slaking is completed, add the full amount of water and boil carefully for an hour, preferably with a cover for best results, oc-

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A LARGE STOCK OF
**Apple, Cherry and Plum Trees, Grape Vines, Blackberry, Raspberry and Strawberry Plants**
Both Everbearing and common varieties.
And a general line of ORNAMENTAL TREES, SHRUBS and ROSES. All stock clean and thrifty, the bestthat can be grown in Wisconsin.
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Write for catalog and prices Baraboo, Wis.

**The Kickapoo Valley** WISCONSIN'S FAVORED FRUIT DISTRICT
Our Specialty: Planting and Developing orchards for non-residents.
A few choice tracts for sale. If interested, write us.
**KICKAPOO DEVELOPMENT COMPANY**
GAYS MILLS, WISCONSIN

casionally adding a little water to compensate for the loss in steam.

Carefully strain the hot solution to remove all sediment and store in air-tight barrels or other containers. When ready to use, test with a hydrometer and dilute according to the following table. If any sediment has formed, strain the solution before diluting.

**Are We Worthy of This Trust.**

"I wish every man in this room could go to the battelfield of France, could go to the front, not merely to see what a front looks like, with its trenches, its men and all of the paraphernalia, but to get the reaction of the French common soldier toward the Amer-


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Choice Strawberry Plants in large or small quantities. We make a specialty of Warfield and Senator Dunlap, Wisconsin's standard varieties. We also have the leading varieties of Raspberries. Write for price list.

**Rasmussen's Fruit Farm**
**Oshkosh, Wis.**

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**Established 1839**
**Main Office, Cleveland, Ohio**
**Milwaukee, Wisconsin**

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**Nursery Stock of Quality**
**for Particular Buyers**

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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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Manufacturers of the celebrated "Silver or White Birch" berry boxes, and American quart baskets, crates, climax grape and peach baskets, Jumbo baskets, till or repacking baskets, tree protectors, plant boxes, bushel and half bushel crates, box shooks and specialties.

Write for circular and price list.

**SHEBOYGAN FRUIT BOX CO.**
**Sheboygan, Wis.**


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A 50-gallon barrel of Scalecide free to any any one who will suggest a *fairer* guarantee than that given below.

**"SCALECIDE"**

As proof of our confidence and to strengthen youra, we will make the following proposition to any fruit grower of average honesty and veracity:
Divide your orchard in half, no matter how large or small. Spray one-half with "SCALECIDE", and the other with Lime-Sulfur for three years, everything else being equal. If at the end of that time, three disinterested fruit growers say that the part sprayed with "SCALECIDE" is not in every way better than that sprayed with Lime-Sulfur, we will return you the money you paid us for the "SCALECIDE".
Send for new free booklet, "Profits in Fall Spraying".

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ican visitor. These men who have faced death for three and a half years for you and me, fighting a battle in which we have just as much at stake as they have—these men salute an American civilian with an expression of respect, reverence and trust that is absolutely past description by human words.

Why do these French soldiers who have struggled with death for freedom for three and a half years salute the American? Because in that salute they express their trust in America in the war; they express the trust in our assuming our share of this struggle from every point of view, not merely by governmental participation in a military program, but also by the reconstruction of our entire lives from the point of view of saving and sacrifice, by supporting them in the same sense that the American boy who fights beside them, supports them, and is supported by them.

Now, we, gentlemen, must be worthy of this trust, and when a French soldier salutes an American civilian and he knows that that American is merely one typical of a hundred and five million, he expects us to do our duty as an ally, and he knows we will do it! The people of France know that the American people are being asked to undergo food conservation and they know that the man who asks them to undergo it is the man best qualified in the world to lay out a program—the Hoover of northern France and Belgium and now the Hoover of the United States."

Many farmers and growers are considering planting an acreage of navy beans this year because of the high prices paid for them this season. Beans have this advantage that they may be kept over a season if the price is not right for sale. They are comparatively easy to grow and will yield from eight to fifteen bushels to the acre.


**A BARGAIN**

Myers Special Power Spray Outfit consisting of:

1 Duplex, back geared, vertical cylinder, double acting, pump, brass fitted thruout, cat. No. 446.
1 Cypress 100 gallon tank.
1 I. H. C. Engine.
50 ft. hose, rods nozzles, etc.

This rig has never been in use. Bought at horticultural convention 2 yrs. ago for demonstration. A three hundred dollar outfit to-day.

Price F. O. B. Madison $180.

**International Harvester Co. of America**
**301 South Blount Street**
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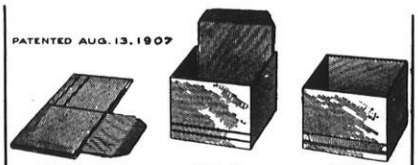


Fig. 1 Fig. 2 Fig. 3

**BERRY BOXES**

**Crates, Bushel Boxes and Climax Baskets**

**As You Like Them**

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**Cumberland Fruit Package Company**

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**Quality Limestone**

Is recognized superior to all other for

**HORTICULTURAL AND AGRICULTURAL PURPOSES**

**We Grind a Limestone for Every Soil**

We have the Limestone. You have the Land. Unless the two are connected, we both lose.

**SPECIALTY**
**No. 200 Dehydrated Limestone for Spraying.**

**WAUKESHA LIME AND STONE CO.**

**WAUKESHA, WIS.**

**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.**

# Plant Progressive Strawberry Plants

## this month and pick berries in September and October

They will go mighty good with the WAR BREAD. DUNLAP, WARFIELD and DR. BURRELL are all leaders. We have a complete assortment of Small Fruit Plants, Vines, Fruit and Ornamental Trees, Shrubs, etc. Our book Hardy Fruits and Ornamentals tells you about them and gives prices. It's free.

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Cream City Arsenate of Lead has a maximum killing power, sticks longer, no lumps, or sediment; therefore gives the highest efficiency and greatest economy.

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# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

Volume VIII | Madison, Wisconsin, June, 1918 | Number 10

"Water-lilies or Nymphaeas are among the most royal, gorgeous, diversified and universally admired plants in cultivation."—*Sturtevant.*
We have here Nymphea odorata common in Wisconsin.

## The Possibilities of Dusting

Prescott J. Mitchell

For some time past, those interested in the production of clean fruit have felt the need of something to supplement the usual spray outfit in controlling fungous diseases, such as the apple scab, which come as epidemics, often at times when the spray rig cannot get onto the wet orchard, and which usually must be controlled within a very short time, or not at all.

There have been occasional epidemics of insect pests, also, which the slow, heavy spray rig could not check, and these have also given the commercial fruit grower some concern.

Now a machine which is ideally adapted to meet such sudden demands, and one which is best fitted to apply fungicides, and insecticides rapidly and thoroughly, is the duster.

No doubt most of you have read of the duster in the farm papers, but in case you have not I will say that a duster is a very simply-constructed machine, with a rotary fan, driven at high speed by a gasoline engine, producing a strong current of air which passes through a six inch galvanized-iron tube, or in the later models, through a huge rubber hose a good deal like the familiar air-brake hose, and the finely ground material is carried by the gust of air onto the foliage in a dense cloud, which settles down over the trees, the fine particles settling in between the small hairs on fruit and foliage and adhereing.

The duster applies the materials in the form of a finely ground dry dust, and, operating without the tank of water which the spray rig must have, is about a ton lighter and hence can go on the land regardless of moisture conditions. Moreover, the dust adheres about as well when applied to damp foliage as when the trees are perfectly dry, so that a duster can operate immediately after a rain or in foggy weather when a spray-rig would be forced to wait for the trees to dry.

The time consumed in filling and refilling spray tanks is costly, and many a fruit crop has been ruined because the source of water was so far from the orchard that the spraying could not be done within the time allowed by weather conditions.

Another factor in the time required is the rate of application. We all know that it is necessary to stop at each tree in order to get a thorough application in spraying; but unless the trees are unusualy large, say over thirty feet high, the duster may be driven along at a slow walk, and yet a thorough application will be made. This is because the dust is so finely distributed, for a veritable fog envelopes each tree, and the particles sift down gradually until the entire tree is covered.

Considering these three factors then, the weight of the outfit, the time required to replenish it, and the rate of application, it is not hard to believe the statements of those who have actually done the work when they say that the duster is at least eight or ten times as fast in operation. There is another factor worthy of some consideration,—the mechanical troubles.

The duster which I used the past season is the same model as that used by the Cornell Experiment Station, and to my personal knowledge there has been almost no mechanical trouble with any of these machines. The duster which I used covered over three-hundred acres in two weeks the past season, and was driven from one farm to another over rough roads, covering, probably, about sixty miles over roads that would have left a spray rig pretty badly shaken up.

Freedom from nozzles, hose, and suction pumps which alternately leak and clog with dirt—that's what a duster means!

The materials used in dusting have undergone some radical changes in the course of the experiments, and are now ground as finely as possible. The sulphur is ground to pass a 200 mesh sieve, and the poisons are also somewhat finer than those used in spraying. The past season's work showed that the tobacco dust used was not sufficiently fine, and better control of sucking insects is hoped for with the material now being prepared.

Besides the better distribution obtained with the finer material, less actual sulphur is needed, and the cost of materials is thus somewhat reduced.

Due, probably, to the breaking up chemically of the compound serious burning is often experienced in the use of lime sulphur after the leaves have come out; this burning is unknown with the dust, and for this reason applications may be made at a later period with the dust than would be possible with the spray.

The Cornell University Experiment Station has carried on field work in dusting since 1911, and the results obtained in these experiments prove conclusively that dusting will control chewing insects; that it is probable that tobacco dust will control sucking insects, as soon as a way can be found to prepare it more finely ground; and that even San José may be controlled in time when the difficulties of preparing soluble sodium sulphur dust can be

overcome. There remains, however, apple scab to be controlled; at present it appears that heavy infections of scab cannot be controlled by the dust, although in some rare cases light infections were checked.

So it seems that before discarding the spray rig entirely, we must wait until the duster is more completely developed. But the duster has one field of missionary work where it will perform good service —that is in the home orchard.

The commercial fruit growers all over the country have long tried to get the men with a small home orchard to spray, and a good many of these men would spray if they thought the cost of machinery, the time and materials, and the upkeep on the machinery would not overbalance the slight good they would derive from spraying.

Now there is no excuse left for them, for a duster requires very little time, practically no repairs, and the materials are comparatively inexpensive. Depending on the size of the machine, the price of dusters ranges from twenty five dollars for the hand duster used on small trees and potatoes to ninety-five dollars for the large duster with a capacity of forty acres of thirty foot trees per day.

Any ordinary gasoline engine will run a duster, the large duster requiring about three horsepower, possibly less.

In conclusion, I wish to say that there is considerable difference of opinion as to the merits of dusting, and even some of those who have used the dust are inclined to be skeptical. Each season brings new developments, and not until the materials have undergone greater refinement will the dust give maximum results.

## Cutworms

The cutworm is a vicious and contemptible insect. In fact no name seems fitting to the gardener who climbs out of bed very early in the morning to hoe his tomato or cabbage plants to find that Mr. cutworm got up earlier still and attended to the plants. If cutworm injury were confined to eating a leaf or two one might forgive the beast but to completely sever the plant, cut off clean as with a razor and apparently without purpose, why that's sheer cussedness.

Prof. J. G. Sanders, formerly state entomologist, has this to say about cutworms:

"About the time that young plants are pushing through the soil they are found cut off even with the surface of the ground, the wilted top usually lying near the beheaded root stalk. Corn and other field crops suffer the same fate. As a rule, the worms themselves are nowhere to be seen; but if one removes the soil to a depth of an inch or two near a dead plant, one will likely find a dark, naked worm, lying curled up and motionless."

"There are many species. The worms differ in markings, but their work is much the same. They are the larvae of night-flying moths of the family Noctuidae. Their parents are on the wing in July and August, laying eggs in fields that are grown up to herbage of almost any kind. A field that has been allowed to run to weeds is favorite ground. The young worms that hatch from these eggs feed for a few weeks in the fall, and then hibernate in the soil. In the spring they resume activity, and after the ground has been plowed and seeded, they are ready to destroy the first green plants that show up."

"In large areas, cultivate thoroughly in late summer, keeping the ground free of weeds, and plow deeply in the fall, following this with early cultivation in the spring."

"In the garden injury may be avoided by the use of poison bran mash in the spring, scattering it over the ground before the plants are due to come up. The worms will then be killed before they have done any damage. Tomatoes, cabbages, and other large plants may be protected by fitting a collar of paper around the stem, setting it two or three inches into the ground, and letting the upper edge be three or four inches above the surface. The formula for poison bran mash is as follows:"

POISON BRAN MASH

Bran .....25 pounds
Paris green ..... ½ pound
Cheap molasses ..... 1 quart
Water as needed to moisten.

For small quantities use:

Bran .....1 quart
Paris green.....1 teaspoonful
Cheap molasses....1 tablespoonful

Water as needed to moisten.

---

The war calls for the team work of soldier son and soldier father—the hero of the trenches and the hero of the furrow.

---

This is your first chance to defend the flag—go the limit.

---

Yes, they are holding the line, but the folks back home must bring up the reserves.

---

Production and self-denial are the guns that will get the Huns.

## Cranberry Items for June Horticulture.

SPRING KILLING.

Although cranberry vines seemingly wintered well there is now on a number of marshes in Wood county quite an apparent loss by spring killing. Upon careful investigation this seems to be caused by keeping the water off too long in the cold, raw, springtime, while the peat and vines are solidly frozen. It has been the custom of our most successful growers to draw the winter flood off early in March, leaving the bog in a frozen state to keep the vines dormant. About the tenth of May a new flood is put on to take out the frost and start growth. It now develops that where the bog is frozen to the top for so long a time—moisture cannot reach, or be carried to the top roots and vines—consequently vitality ceases. Where frost was out an inch or more from the surface, the vines carried through in fine shape. It will be wise in the future to watch conditions closely, and re-flood if necessary till frost is taken out to this depth before keeping the bog so long uncovered.

MAIN WORK

Mr. C. D. Searls says "During May the two most important things to do is to get the frost out of the bogs by flooding, and then, after the water is drawn down, to look for the black head fire worm." Treatments for destruction of this pest were given in the April and May numbers of Horticulture. Most growers at this time have ample supply to use the water method as published in the May issue.

The Belle Lake Cranberry Co., report finding some very small worms on their vines at Valley Junction May 17—a very early period. This marsh we believe is one of a number that suffered heavily last year from the ravages of the fire worms.

The Bonnie View Cranberry Co., at Water Mills of which our Mr. O. G. Malde is manager, is doing quite a lot of work on their high lands as well as cultivating and re-planting their cranberry marshes. During the past winter they cleared several acres of land and put up 200 tons of ice. They now have nearly 100 acres planted to corn and other grains.

Messrs. Jacob Searls of Grand Rapids and Elmer Dano of Tomah recently attended a Directors' meeting of the American Cranberry Exchange in New York City. The reports of last year's work were very satisfactory. All the old officers and directors were re-elected except that Mr. Searls was made 2nd vice president to fill the place of H. R. Laing of Berlin, resigned.

---

## Cultivating and Fertilizing With Water.

Experiments in New Jersey have developed the fact that by the proper, judicious use of water, much labor can be saved in keeping the bogs clean, give the vines a rest and opportunity for vigorous growth, and overcome other vegetation. Where vines are weak, old, or thin, or where there is an unusual amount of grasses, weeds or foreign vegetation, it seems to have been demonstrated that by keeping the vines under water until about July 10th to 15th, taking the water off just in time to permit the vines to grow and bud for the next season's crop, has the effect of killing down other vegetation, giving the vines a rest and renewed vigorous growth, whereas the foreign vegetation dies down, giving the vines a material advantage over it and driving much of it out. One of New Jersey's successful growers is now following this plan by keeping one-fifth of his total bog area under water every year, thus practically renewing his whole bog once in five years. This has greatly increased the size of his berries, his total yield, and reduced the expense of weeding and cleaning. Where bogs are unusually grassy and weedy, it seems to have been advisable to even follow this up two years in succession, or some argue, keep the bog under water the whole season. By taking the water off in time to permit the vines to grow and bud for the following season only loses one crop. Quite a number of experiments along this line seem to have proven very successful. July 10th in New Jersey seems to be about the proper date to take the water off, but a different date might be necessary in Wisconsin. Some experiments along this line should be tried out.

---

So long as the boys are at the front, difficulties are to be subdued, impossibilities to be trampled down.

---

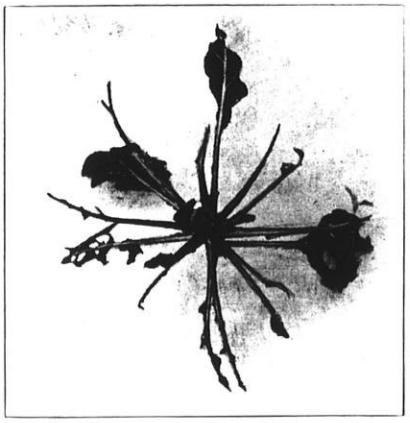
War is an ugly thing but a German peace is uglier—Russian farmers are producing German food.

## The Imported Cabbage Worm In Wisconsin

By H. F. Wilson; L. G. Gentner,

*University of Wisconsin, Madison, Wis.*

There is a general belief among Wisconsin canners and growers



Young unsprayed cabbage plant showing injury from cabbage worms. (This and following pictures by courtesy of Prof. H. L. Wilson, Agr. College.)

that it is dangerous to use cabbage that has been sprayed with poisons of any kind. Both canners and growers recognize the fact that the cabbage worm is a serious pest but the growers have not been free to use essential combative measures because they consisted of spraying with arsenicals.

Other investigators have already shown that cabbage sprayed with arsenicals may be eaten without danger to the consumer but in order to more thoroughly convince Wisconsin growers of these facts, the investigations from which the included data was secured were planned.

The life-history work of two seasons has shown that there are three distinct generations each year and sometimes a partial fourth. There is normally more or less overlapping of generations, especially toward the latter part of the season. The maximum emergence of adults from overwintering chrysalids occurs somewhere from the first to the middle of May, depending upon the season. The maximum emergence of adults of the first generation occurs during the first two weeks of July; and of the second generation during the first two weeks of August.

In the southern half of the state generally speaking, both early and late cabbage are grown while only late cabbage is grown in the northern sections. The early cabbage usually matures without much injury from the cabbage worm, but the late cabbage is often seriously injured and as many as 35 per cent to 40 per cent of the heads may be made unfit for market. In very severe cases entire fields are wiped out. In the northern half of the state the late cabbage sometimes matures in good condition without a single application of spray while at other times the losses are very serious.

In the experiments carried on at Madison during the past year

Longitudinal section of cabbage head injured early in the season by the cabbage worm.

the following insecticides were used: Paris green, lead arsenate (powder and paste), zinc arsenite, calcium arsenate (powder and paste), tobacco dust and finishing lime. When applied in the liquid form the sprays were applied at the rate of one pound of the powder or two pounds of the paste to fifty gallons of water. The following materials were used as "spreaders" or "stickers:" common yellow laundry soap (resin)

Longitudinal section of uninjured cabbage head.

at the rate of one or two pounds to fifty gallons of spray; molasses at the rate of one or two quarts; and molasses and lime at the rate of two quarts of molasses and three pounds of lime to each fifty gallons of spray used. When applied as a dust spray, the materials were diluted from three to ten times by weight with lime.

The results of the experiments showed that Paris green (this was used only in liquid form), lead arsenate and calcium arsenate gave entirely satisfactory control, while, contrary to expectations, zinc arsenite failed to give control in any of the four plats to which it was applied. In fact some of the plats sprayed with zinc arsenite were practically as severely injured as the unsprayed check plat. In comparing the liquid sprays with the dust sprays, results showed that the liquid sprays gave slightly better control

than the dust sprays due to the fact that the latter were more easily washed off by the heavy dews and rains. Tobacco dust and lime seemed to have practically no effect upon the cabbage worms.

Common laundry soap used with the liquid sprays at the rate of one pound or more to fifty gallons gave far better results than where either molasses alone or molasses and lime were used, due to the more even distribution of the poison in the case of the former.

From one to two applications of spray are generally used to combat the cabbage worm. Ordinarily one application made a week or ten days after the butterflies appear in large numbers in July and another in August will give satisfactory control.

In order to determine whether or not there is any danger of poisoning to the consumer from the use of arsenicals, one head from each of six sprayed plats and one head from the check plat were analyzed by the Agricultural Chemistry Department of the University. The plats from which these heads were taken had received five sprayings, the last spraying having been applied about a week before picking. In preparing the heads for analysis, only the outer leaves were removed as is done by the grower, then one more layer of leaves was removed to correspond to those taken off by the housewife.

Conclusions: While Paris green gives efficient control the cost is too high for economical use. Lead arsenate and calcium arsenate at the rate of one pound of the powder or two pounds of the paste to fifty gallons, with the addition of one pound or more of common laundry soap, give efficient control and are the most economical to use.

**No trace of arsenic was found to be present on sprayed heads prepared for cooking even when sprayed as late as a week before picking.** The outer leaves may carry enough arsenic to poison stock and are therefore dangerous to use for that purpose.

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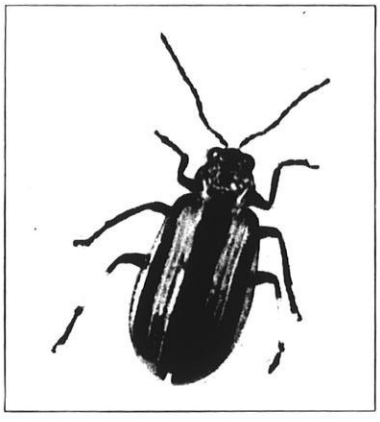
## Control of the Striped Cucumber Beetle

University of Illinois Agricultural Experiment Station, Urbana, Illinois, May, 1918.

Circular No. 220

By H. D. Brown

The striped cucumber beetle is one of the most familiar garden insects, and one of the most destructive, with which vegetable growers must contend. The injury done to cucumber, squash, pumpkins, watermelon, and muskmelon vines by this pest is often the cause of the failure of these crops. Besides the damage which the beetle and its larvæ do directly to the plants, the adult beetles are spreaders of a bacterial wilt.



The striped cucumber beetle, enlarged 5 times.

### LIFE HISTORY

The adult beetle hibernates in the fall under rubbish or boards, or in the ground. These beetles emerge in the spring several weeks before the cucurbitous, or vine crops appear. During this time they feed upon a wide range of vegetation, but congregate immediately upon any vine crop which they may find. They feed ravenously for five to ten days on the vine crops, regardless of any poison which may have been applied to the plants. After that they begin to pair and refuse to eat any portion of a plant protected by insecticides.

The eggs are laid the latter part of June and during July and hatch in about ten days. They may be laid wherever the beetle is feeding, but will not hatch unless deposited in a moist place.

The larvæ likewise require moisture, and will soon perish if forced to remain for any length of time in contact with an extremely dry soil. Consequently they are likely to be found at the base of the plant along the stem, and upon the fruit where moisture is available. They are about three-tenths of an inch long, white, with dark brown head and anal plate. The larvæ feed for about a month and then pass into the pupal or resting stage.

The adults begin to emerge about the first of August and continue until the latter part of September.

### Injury

The greatest injury is done by the adult beetles. They may either totally destroy the small plants soon after they appear above the ground, or they may eat sections from their bases, so weakening the plants that they are easily destroyed by winds. Later they congregate on the blossoms and destroy the pistils and pollen, and seriously interfere with the setting of the fruit. It is at this stage that injury by bacterial wilt is usually noticed.

Bacterial wilt is carried from plant to plant by the mouth parts of the insect; the twelve-spotted cucumber beetle also carries the infection in the same way. No other means of spreading this disease is known. A plant wilts down in a few days after infection. The wilting is presumably caused by the growth of becteria in the vascular tissues, which eventually shut off the water supply from the upper portion of the plant.

The larvæ also do considerable damage, when they exist in large numbers, by feeding at the bases of the plants, by tunneling up into the stems, and by feeding upon the fruits. An attack of the larvæ at the base of a plant may cause the plant to wilt, and the death of a plant caused by larvæ in this manner is often erroneously attributed to bacterial wilt.

### Control

The logical time to begin the fight against the beetles is in the fall several weeks before they go into winter quarters, for it is these beetles which emerge in the spring and cause all the damage to the crops.

In the control measures outlined in the following, no special remedy is suggested for bacterial wilt; there is no known remedy, except to control the beetles which spread the disease.

### Control Measures During the Fall

The control measures during the fall are based on the fact that the beetles at this time exhibit a great greed for food. After the main vine crops have been killed by the first frost, large numbers of the beetles can be poisoned by completely covering with poison a few squash vines which have been protected from the frost. Hubbard or Boston Marrow squash plants are the best to use for this purpose, as the beetles prefer these to any of the other vine crops, including other varieties of squash.

The poison may be dusted on the plants in the morning while the dew is on, or it may be applied in the form of a spray. If dusted on, it is best to use powdered arsenate of lead, for Paris green is liable to injure the foliage. If applied as a spray, the solution should be of double strength. Four pounds of the paste or 2 pounds of the powdered arsenate of lead should be used to each 50 gallons of water. Paris green when applied as a spray should be used at the rate of ½ pound to 50 gallons of water. Paris green should be added to freshly slaked lime and the mixture diluted to the proper proportion. One pound of fresh stone lime should be used with each half pound of Paris green.

Another method of killing the beetles in the fall is to leave a number of immature Hubbard squash scattered about the field. The beetles will congregate on these in great numbers after the vines have been killed by a slight frost. Early in the morning while it is still cool, many of the beetles can be collected by picking up the squash and brushing the beetles into some receptacle from which they cannot escape. They will make very little effort to fly away when they are stiff from the cold.

Large quantities of squash bugs and of the twelve-spotted cucumber beetle will also be collected in this way, as they congregate in the same manner. As the two latter insects spend the winter in the adult stage, their capture is a valuable means of control for two more destructive cucurbitous pests. The writer has collected several quarts of a mixture of these three insects on different occasions, in less than fifteen minutes. Small boys could render valuable service in this kind of work. The principal objection to hand picking is that a few of the beetles will still feed upon the partly green stems of the old plants and of course will be missed. This can be overcome to a certain extent by raking up the old vines and immature squash on piles of dry straw. After the beetles congregate, which will take a week or ten days, the vines may be burned. The straw placed under the vines hastens the burning so that few of the beetles escape. Dry straw placed over the top of the pile at the time of burning is an advantage. A few immature squash scattered over the field after the burning afford a means of collecting any beetles which have escaped.

### Control Measures During the Spring and Summer

In the spring the method of control for the first five or ten days after the beetles appear on the plants is essentially the same as the method of applying poison described for the fall treatment. Advantage is taken of their ravenous feeding habit during this period by applying poisons to the crops upon which they are feeding. If cucurbitous crops other than squash are the main crops, it will be advisable to apply the poison to a trap crop of Hubbard squash, driving the beetles from the main crop with air-slaked lime or Bordeaux mixture. The beetles naturally prefer the squash plants,

(Continued on page 153)

# Wisconsin Horticultnre

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## Pussy

Dear little pussy! Just look at the dear little creature climbing the tree, how cunning she is! Shall we permit her to climb the tree? Not on your life! Get a gun or lacking that, a rock of suitable size or a little arsenate of lead on a piece of meat. Because if we let pussy climb the tree the dear little devil will kill every robin, catbird or other song bird in the tree. If you don't believe that your own dear pet pussy will do such a thing watch her and you will be convinced.

## WHY WE FIGHT

It has been forced on the attention of the writer from time to time that there are some men, some who should be leaders, who are saying in an apologetic way that now *since we are in the war* we must see it through. One is impressed with the idea that if these persons were to express themselves fully it would run like this: "I never was in favor of this war; there would not have been any war if I had been in charge of things, but we are now in it and we cannot help ourselves; we must fight or be ignominously licked."

Such patriotism lacks the ringing note of whole-heartedness; it is apologetic and weak-kneed. A man or woman of mature judgment who cannot see that this war was for us unavoidable, is letting his emotions or his sympathies rule him instead of his reason. This nation had to go to war, if it was to preserve its self-respect among the nations; not to go to war in view of the circumstances would have caused every true American to hang his head in shame. Not only is this nation fighting to preserve its rights on the high seas, but it is also fighting—and this should never be forgotten—the battle for rights of small nations to an independent existence and far the perpetuity of free democratic institutions. We are indeed fighting for the very existence of our own country as a free and independent nation. It is a necessary, a righteous war.

Prussian militarism has gone mad, and it is now plain to every thinking man and woman, no matter what his nationality, that liberty-loving nations the world over must fight for liberty or, failing in this, autocracy will for generations to come rule the world. Let us have an end of this milk-and-water support of our government in this hour when we are put to the supreme test. We are not in this war for conquest of territoy or for any other sordid motive. We are in it for the preservation of human rights as against militarism. Those who are not for us are against us; we have no apologies to offer.

C. P. CARY.

## A Phenomenon in Horticulture

We once taught Botany. May the Lord forgive us. It was in the day when Botany consisted of chasing a floral specimen through a key to find its name, and when found, or when we believed it was found, to preserve a nicely ticketed and pressed specimen suitably mounted in a neat book called a herbarium. That was a truly interesting feat. On one occasion it was dangerous. Here is the reason. Our class came across a little bush that was covered with a very pretty flower. The species being unknown to us, it was decided forthwith to make its beauty the subject of analysis and trace it through "Bergen's" key to the flowering plants. At great cost of pains we accomplished the task in the class and finally agreed that the bloom was that of Amarillidae

Americana. That sounded quite scientific and intensely botanic and it satisfied. But the next year the confounded plant bore peaches and rather impeached either Bergen himself or the users of his key, and you, Mr. Reader, probably have your own opinion as to which was to blame.

All this is simply prelude. Now comes the application.

Kaiser Bill is flaunting a little branch around that he is fondly calling an olive branch. He too may have traced it through Bergen's Key. The world is watching the bush from which it was cut. We suspicion that the Kaiser made the same mistake we made with the Amarillidae Americana. The slightest mistake will throw the observer off the track. Bill is just as liable to find the switch thrown as we. If the world watches carefully they will possible observe another horticultural phenomenon. In this case instead of peaches on Amarillidae plants it may be olives on a lemon. Nature does queer things sometimes indeed. What say you reader, will the Kaiser's olive tree produce sour lemons?—*Edgerton Eagle.*

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### Control of the Striped Cucumber Beetle

(Continued from page 151)

but a sufficient number should be started throughout the patch so that they will have no difficulty in finding them. If the beetles appear in excessive numbers on the trap squash vines ,they may be killed with a strong contact insecticide, such as pure kerosene. Of course the vines so sprayed will be killed.

After the beetles begin to pair it is useless to apply poison to the plants, for the beetles refuse to eat on the protected parts of the plants. Consequently, the best method of control is to keep the main vine crop covered with Bordeaux mixture (4-2-50) and plant a succession of squash seed for a trap crop upon which the beetles may feed. The Bordeaux mixture is a strong repellent and also acts as a preventive of certain diseases which are likely to occur at any time.

In small home gardens where it is not feasible to spray with Bordeaux mixture, air-slaked lime and turpentine may be dusted on the plants. One tablespoonful of turpentine added to each quart of lime will give an odor very disagreeable to the beetles. A tin can with perforated bottom distributes the lime and turpentine satisfactorily. ffl

The following methods may fit the needs of special cases, or they may be used in combination with some of the above control measures.

(There is no one method which will entirely exterminate the pest; consequently it is necessary to use several remedies, and to apply them diligently at the proper times. Since the beetles have considerable power of flight, it is important that growers located within one-quarter mile of each other cooperate in their methods of control.)

If the seeds are sown thickly, enough plants may survive the attack of the beetles to insure a good stand.

Coverings of cheese cloth or wire screen will give protection to young plants, but are rather expensive for large areas. The cloth must not be so thick as to shade the plants, yet it must be woven closely enough to prevent the beetles from entering it. The covering must not be left on too long or the plants will be stunted. In the eastern states a manufactured wire covering is used very successfully.

Plants started early in a hotbed, in dirt bands, or on inverted sods, will have made a good growth before they are transferred to the field, and will therefore have a better chance against the beetles.

Dry pyrethrum, dusted over the plants while the dew is on, will kill some of the insects.

Such materials as road dust, black death, moth balls, ashes, charcoal, soot, and many other preparations are of no value except to scare the beetles away at the time of application.ffl

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**LEST WE FORGET TO DO OUR PART**

**"They say, who have come back from Over There, that at night the troubled earth between the lines is carpeted with pain. They say that Death rides whistling in every wind and that the very mists are charged with awful torment. * * * ***

**"In this renaissance of our country's valor, we, who will edge the wedge of her assault, make calm acceptance of its hazards. For us, the steel-swept trench, the stiffening cold—weariness, hardship, worse. For you, for whom we go, you millions safe at home—what for you? * * * ***

**"We shall need food. We shall need care. We shall need clothes for our bodies and weapons for our hands. We shall need terribly and without failure supplies and equipment in a stream that is constant and never-ending. From you, who are our resource and reliance, who are the heart and hope of that humanity for which we smite and strive, must come these things.**

**(Signed)**
**"Citizen Soldier No. 258,**
**"—th District, National Draft Army."**

## PROTECT YOUR GARDEN

No. 7 WAR GARDEN SERIES

L. G. Gentner

If it is worth while to plant a garden, it is worth while to protect it. Insects cause heavy losses to garden crops where no effort is made to control them, while a few simple measures applied at the right time will usually entirely prevent such losses.

One of the first things to do in the spring is to get the garden and fence corners free from weeds. At all times of the season gather up and destroy all old vines, stalks and refuse as soon as the crops are harvested. Refuse and weeds furnish food for insects and shelter them for the winter if left in the garden.

Do not let insects get a start. After they once become numerous on the plants it does not take long for them to do a large amount of injury, especially on young plants. Every insect that you let live through the spring season will produce many more later.

Where insects are few in number and are easily seen, they may be controlled by hand picking and destroying. But in most cases it is much more practical to spray the plants.

Liquid sprays may be applied with a small hand sprayer which can be bought at a small cost. Dust sprays may be dusted through a cloth sack, or perforated tin can or by means of a dust gun.

### Use Poisons on These

Poison sprays, poison mashes, or contact sprays may be used to eradicate certain garden pests. Here are some of the most common insects, together with the poisons to use on each of them.

**Chewing Insects.** Insects that eat the leaves and tender parts of the plants may be controlled by spraying plants with lead arsenate at the rate of 1 ounce (15 **level** teaspoons) to each gallon of water. When applied to plants with smooth foliage, such as cabbage, it is necessary to add about ½ ounce of common laundry soap to every gallon of spray to make it spread and stick better. Instead of using it as a spray, lead arsenate may be dusted on the plants early in the morning while they are still wet with dew. When used in this way it may be diluted with 3 to 5 times its weight of air-slaked lime or fine dust. Lead arsenate is preferable to Paris green because it remains on the foliage longer, is not so likely to burn the leaves, and is cheaper, especially since the war has greatly increased the price of Paris green.

**Cutworms** cut off young plants near the surface of the soil and eat the foliage of older plants, feeding at night and hiding in 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 should be taken to keep poultry and livestock away from it.**

### Be Careful of Poisons

**Lead arsenate, white arsenic, and Paris green, recommended in this circular, 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 stock.**

To make up the poison bran mash mix 2 ounces of white arsenic or 4 ounces of arsenate of lead with 3 pounds of bran. Dissolve 1 ounce of salt and 2 ounces of cheap syrup or molasses in a small quantity of water. Then mix all together, adding enough water to make a crumbly mash.

**Grasshoppers** may be controlled by poison bran mash made up as for cutworms, except that ½ teaspoon of lemon extract or the pulp of ½ orange or lemon should be used instead of the molasses. The mash should be applied in the early morning so that it will not dry out before the insects feed on it. If the grasshoppers keep coming in from neighboring grass fields scatter the mash along the edge of the garden toward the field and renew from time to time.

**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 nicotine sulfate, 1 teaspoon to 1 gallon of water with the addition of a little soap. The spray must actually cover the insects and should be forced well into curled leaves. If all are not killed by the first application, the spray should be repeated.

### Kill These Directly

Some common garden insects cannot be reached or controlled by sprays, and must be removed by gatherng the insects and destroying them, or by destroying their eggs.

**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 underside of the leaves and may be gathered and destroyed.

### Repellants Keep These Out

Many insects which cannot be easily poisoned or killed directly may be kept out of the garden to a greater or less extent by the use of repellants—which keep the insects away, even though they do not kill them.

**Root Maggots.** The cabbage maggot may be controlled on cabbage and cauliflower plants by placing tarred felt dices about the stems of the plant at the surface of the soil, just as they are being set out. After the maggots have begun to work on the roots there is no practical remedy.

For maggots attacking onions, radish and turnips no satisfactory remedy has as yet been found. Infested plants should be pulled up and destroyed.

**Tarnished plant bugs,** dull grayish to brownish pests about ¼ inch long, fly readily when disturbed and cannot be controlled with sprays. They may be driven from the garden by dusting the rows with wood ashes, working from one side to the other.

**Flea Beetles.** These little black jumping beetles are quite often serious on potatoes, tomatoes, cabbages, beans, and similar plants. Arsenates of lead seem to have little effect on them, but they can be kept away from the plants with Bordeaux mixture. In preparing this spray slake 1 pound of lime in 5 gallons of water and dissolve 1 pound of blue vitriol in a separate 5 gallons of water. In separate solutions these materials will keep indefinitely. For application, stir both thoroughly and pour equal amounts of each into a spray can. Mix the two by stirring, and apply as well as possible to both the upper and lower leaf surfaces.

**Cucumber Beetles.** These yellow and black striped or spotted beetles are also not easily affected by poison, but their food plants, such as cucumbers, squash, and melons, can be made unattractive to them by dusting with a mixture of powdered lime and tobacco dust. Mix 1 pound of tobacco dust in 2 pounds of well-pulverized lime and dust the mixture onto the plants, using a gunny sack or a tin can with small holes in the bottom.

## Household Insects Injurious to Fabrics

PROF. J. G. SANDERS

Several insect pests injurious to various fabrics in the household and in storage, particularly to woolens, furs and feathers, are very destructive if allowed to continue their work uninterrupted by treatment. Three of these are commonly found in Wisconsin and are briefly discussed.

The "Buffalo Moth," a dark brown, bristly or hairy larva which is often found infesting carpets and rugs along the cracks and floors or near baseboards, in spite of its common name, is in no way related to the moths but is really a larval stage of a tiny, black and red checkered beetle which must not be confused with the larger spotted, beneficial "ladybird beetle." Two species are common—the true "Buffalo Carpet Beetle," and the "Black Carpet Beetle," the larva of which can be distinguished from the former by the longer brown bristles at the posterior end of the body. The destructive habits of both are similar and the control measures are identical. The presence of these pests need cause no great alarm, but constant vigilance is necessary to hold them in check.

CONTROL: Apply a half and half mixture of kerosene and gasoline with a small spring-bottom oil-can to the cracks and crevices of the floor and around baseboards and shelving in closets. Fumigation methods discussed later are effective controls.

CLOTHES MOTHS: The two species of genuine clothes moths found in this state show preference for woolen goods, furs and feathers; and, like most other household pests, prefer to breed in dark rooms;—sunlight being obnoxious to them.

Before storing away winter woolen clothing, furs or feathers, such materials should be thoroughly brushed and hung out in the sun for three or four hours and then turned inside out and allowed to remain the rest of the day, so that all parts of the clothing will be exposed. If the clothing is freed from eggs and larvae it can then be safely wrapped in two or three thicknesses of newspaper, tied up tightly and laid away for the summer without fear of damage. Exposed woolen clothing should be frequently brushed and aired during summer months, or if kept in steam heated apartments during winter.

Moth balls, red cedar chests, etc., are worthless for controlling clothes moths in infested clothing, although they may act as a deterrent but will not drive away or kill larvae in the clothing.

FUMIGATION: The safest and most effective way to store fabrics is by fumigation treatment in boxes or trunks made air-tight at the bottom by pasting strips of paper over all the cracks. Place materials for storage within and evaporate an ounce of carbon bisulfide in a flat dish set in the trunk, closing the lid as tightly as possible for forty-eight hours. This treatment kills moths or other insects in all stages and no further danger need be feared.

CAUTION: Keep all lights from the gas of the carbon bisulfide which is a colorless, heavy, inflammable and explosive liquid. Air rooms when applying gasoline-kerosene mixtures.

## Spray Irrigation

Spray irrigation, one of the most recent methods of applying water to crops to be adopted in the United States, has come into use over a wide area, especially in the Atlantic Coast States, within the past ten years, according to a recent publication of the Office of Public Roads and Rural Engineering of the U. S. Department of Agriculture, Bulletin No. 495. The bulletin discusses the conditions under which spray irrigation may be undertaken profitably, water supplies, and the various distribution systems. It includes instructions for the installation of a typical spray system, and tables from which the farmer, orchardist, or truck grower can compute sizes of pipe, capacity of pumps, and approximate costs.

Among the advantages of spray irrigation are the facts that it can be practiced satisfactorily on both light and heavy soils, and on hillsides as well as on level ground. By this system water may be applied, very lightly to delicate crops and plant seedlings, or when weather conditions require only a slight supplemental supply of moisture; and, on the other hand, it may be applied heavily during protracted dry periods.

Where economic conditions are favorable to the adoption of spray irrigation, the most important question then becomes the possibility of securing an adequate water supply. Since the system is in use chiefly in the humid or semi-humid regions, practically all installations are made by individuals and do not involve the development and transportation of distant supplies, as is common for community irrigation in the arid regions. The sources of water supply for spray

systems may be streams, springs, stored run-offs, sumps for catching drainage water, and wells. In some sections of the East, the storage of water falling on the roof of a building during the summer months is sufficient to irrigate a garden which is three times the area of the building. The reservoir in this case would need to hold about two months' rainfall, or the equivalent of six inches falling on the roof.

### TYPES OF SPRAY SYSTEMS

Three types of spray irrigation construction have been adopted more or less widely for field irrigation. The hose and movable nozzle, or movable lines, fed from an underground pipe system and hydrant was one of the earliest systems to be developed and is still in rather extensive use for the irrigation of cold-frame and hot-bed crops, garden setting and seed beds, small gardens, etc. Though the first cost of such a system is lower than that of the other types, it is the least efficient, the bulletin states.

Stationary nozzles on vertical equidistant standards, varying from 4 to 6 feet for truck to a height greater than the trees in orchards, constitute a second type of spray irrigation system. The nozzles are set from 30 to 50 feet apart. The advantages of this system are rapidity of application, where this is desirable, comparative freedom from clogging, and satisfactory operation at low pressures. Disadvantages are uneven distribution of water due to uneven spread of nozzles and the overlapping of the circular sprayed areas, and lack of adaptability to more delicate crops. The cost of installation is more than that of the movable hose system and sometimes less and sometimes more than that of the stationary overhead system. The cost of operation is about the same as that of the latter.

The stationary overhead system, the third type of spray irrigation, consists of raised parallel lines of pipe in which nozzles are set every few feet. The pipe lines may be rotated so that the spray will be directed at any desired angle between the vertical and 45 degrees on either side of the line. In this way areas about 50 feet wide can be watered by each line. The pipe lines of such a system may be set on wood, metal, or concrete posts ranging in height from a few feet above ground to a height sufficient to permit the passage of horses under them. The lines also may be suspended from cables attached to poles of the size used in telephone construction. The advantages of this type of spray system are adaptability to varying needs and evenness of distribution.

### COST OF SPRAY SYSTEMS

Assuming that a stationary plant for a small acreage will cost $250 an acre, the bulletin estimates that the farmer must secure, because of the system, added annual returns in excess of $51 per acre if the installation is to be a profitable enterprise. Other types of spray irrigation plants may be installed at less than $250 per acre, however, and in such cases smaller additional returns will be necessary to make the system profitable. The $51 annual cost per acre figured for the $250 an acre system includes interest, depreciation on equipment, maintenance, repairs, and cost of fuel and labor. In order that the added costs may be met adequately, good markets,

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**White Elm Nursery Co.**

Oconomowoc, Wisconsin

labor and fertilizer facilities are essential, it is pointed out.

### How to Cut Roses

There is a right and a wrong way to cut roses. The choice of the latter may seriously injure the blossom-producing properties of the plants, it is pointed out by specialists of the U. S. Department of Agriculture. This applies particularly, of course, to rose plants chosen and grown especially for cut-flower production. Such roses will be largely of the perpetual blooming sort.

When a rose is cut from such plants—tea roses or other perpetual bloomers—only two or three eyes of the current season's growth of that branch should be left on the plant. This should give the roses very long stems. Succeeding blossoms should be cut close to the ground. It will seem like destroying the bush to take so much off it, but if the object is the production of roses, the cutting away of the surplus wood will attain the desired end.

If the spring pruning has not

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The best varieties for Wisconsin conditions, carefully grown and carefully packed. Write for prices

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And a general line of ORNAMENTAL TREES, SHRUBS and ROSES. All stock clean and thrifty, the best that can be grown in Wisconsin.

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Our Specialty: Planting and Developing orchards for non-residents. A few choice tracts for sale. If interested, write us.

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been sufficiently severe the plant is likely to have long, naked stalks and short stems to the flowers. With this character of growth only one or two strong leaf buds should be left on the branch when the flower is cut, so as to stimulate as much growth as possible from the base of the plant.

The greatest temptation to leave wood is where there are two or more buds on one branch, some being small when the terminal one is open. This temptation to follow a bad practice can be avoided by pinching off all side shoots after a bud has formed on the end of a branch. This prevents the formation of two or more buds on one stalk. This summer pruning will encourage additional blooms on varieties which bloom more than once a year.

---

**Loyalty.**

The food situation is today tragically serious and hunger may imperil a conclusive victory for the Allied armies if the people of America do not exert their utmost effort. Persistent and methodical propaganda has been used against the work of the U. S. Food Administration and other undertakings to increase the country's effectiveness. Untruths have been fostered which have done more harm than battalions of German soldiers, because they have prevented this country bringing all its resources to bear against the enemy.

*Loyal citizens have served the purpose of this insidious German Menace by repeating silly stories and grossly untrue rumors* and by belittling the Food-Pledge. Any attempt to burlesque the "eat less" of the foods urgently needed for shipment overseas to the soldiers, and "eat more" of foods not so suitable for export assists the enemy and discredits what is being done in the interests of our men in khaki and the women and children of the allied nations.

The American whose heart is with the flag will back the efforts of the Government not only by deeds but by every word he utters. There is abundant reason to warn the people of this country against propaganda that lends assistance to the enemy and retards the organization and unification of the people.

This little "story" sent to editors of farm journals by the U. S.



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**Paste or Powder**

**Lime Sulphur Solution**

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Write for circular and price list.

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Food Administration is worthy of serious attention by every reader of this paper. The food situation, especially since the defection of Russia *is* tragically serious. Loyal citizens, people who are either thoughtless or ignorant or both *do* repeat "silly stories and grossly untrue rumors." Be careful what you say! Your loyalty may be unquestionable, you may be at heart a true American but if you repeat these mysterious rumors or permit them to go unquestioned you are playing into the hands of our enemies which means that you are helping to kill our soldier boys. Do you want to do that?—Editor.

### On Keeping Bordeaux Mixture

"Bordeaux mixture may be kept indefinitely, physically and chemically as when first made, by the addition either of a little cane sugar or glucose."

So says Prof. B. F. Lutman of the Vermont Agricultural Experiment Station in Bulletin 196.

### The Cabbage Worm

Particular attention is invited to the article in this number on the use of poison to combat the cabbage worm.

Institute speakers on horticulture always go prepared to answer this question, "What can we do to kill cabbage worms.". Sometimes at institutes they make a little bet on the side that that will be the first question asked. No other worm seems to be as popular as the cabbage worm and none causes more damage in the home garden.

This is because most people are afraid to use poison on cabbage. Prof. Wilson tells us that there is no danger in using arsenate of lead or Paris green on cabbage plants and every market gardener in the state will endorse the statement. Use a heaping teaspoonful of dry arsenate of lead to 2½ or 3 gallons of water or 1½ times this quantity of paste arsenate. Paris green is quite as effective and at the present writing is not more expensive than arsenate of lead, at least when bought in small quantities.

A heaping teaspoonful of Paris green or powdered arsenate of lead to one quart of flour or air-slaked lime, sprinkled on cabbage when it is moist, will get the cabbage worm.

Cucumbers require warm, rich soil and plenty of moisture. Keep them growing rapidly from seed to harvest.

Thorough cultivation in the garden is of much greater value than artificial watering.

It is not too early to think about exhibiting fruits, vegetables or flowers at the state and county fairs this fall. Grow something well and show it.

If you believe in peace you will fight to get it.

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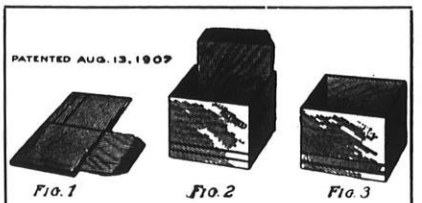

Fig. 1 Fig. 2 Fig. 3

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Dept. D, Cumberland, Wis.

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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.**

**Planting Lawn and Border Roses**

The chief consideration in the planting plan for roses for landscape effects is that the plants should be so spaced that when they reach maturity they will come together without overcrowding. The habits of growth of the particular varieties chosen will be the determining factor. The spacing should in general range from 2 to 6 feet. Early spring planting is best in the extreme northern part of the United States and on the western plains where there are strong drying winds in the winter. In other regions fall planting is advantageous but not sufficiently so to warrant postponing planting from spring until autumn. When possible, however, it is well enough to push planting in the fall rather than to wait until spring. Spring planting should be done as soon as the ground is dry enough to work or when it springs apart after being squeezed in the hand. Fall planting is best done as soon as the leaves have fallen from the trees and bushes.

---

Keep the aphids or plant lice off the flowers and garden crops by frequent spraying with some tobacco preparation.

---

All roads of "service" lead to France.

---

Stand behind the boys at the front—but not too far behind.

Do not let the vegetables remain too thick in the row. Too many beets to the foot in the row is just as bad as weeds. Get the maximum results from your ground by thinning and good care.

---

Head lettuce requires cool, moist conditions for growth. Consequently it can be grown best in early summer and late fall.

---

Late celery should be transplanted from seed box to cold frame. Two or three transplantings before the plants go into the field make stockier and better rooted plants.


*Order Your Spray Materials now.*

Cream City Arsenate of Lead has a maximum killing power, sticks longer, no lumps, or sediment; therefore gives the highest efficiency and greatest economy.

Cream City Lime Sulphur
33° Beaume.

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# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

Volume VIII | Madison, Wisconsin, July, 1918 | Number 11

Sweet William: One of the oldest garden flowers and formerly found only in old fashioned gardens. The newer types have larger flowers and more brilliant coloring than the old fashioned kinds. A biennial easily grown from seed.

**Practical Hints for the Amateur Gardener**

July is a critical month in amateur gardening. In normal seasons we can count on a dry spell and if long continued, two weeks or more, it may spell disaster and possible failure of many crops, *unless,*—the garden was properly tilled in June. The wise gardener took heed in May and June and never permitted any weeds to grow in his garden. He killed all of them on sight, or sooner, by frequent hoeing. Frequent hoeing and raking also conserved the water supply in the soil so that his plants can stand a week or two without rain. How did hoeing hold the water in the soil? Simply by keeping a layer (blanket) of loose soil on the surface preventing the escape of the soil water.

---

By the middle of July the garden will be pretty well "made" but it must not be wholly neglected. Frequent shallow cultivation is important even in dry weather. Much walking between rows packs the soil and destroys the blanket mulch.

---

Cultivation in the home garden should always be shallow, not to exceed two inches. Deeper hoeing will sever roots that the plant needs.

Hilling or drawing earth toward the plants seems to be the favorite pastime of many gardeners. Some gardeners "hill" or mound most everything, drawing the earth up to the roots of the plants leaving a deep furrow between the rows. Nobody seems to know *why.* There is no "why." Potatoes, if planted shallow, may need a little hilling, just enough to cover any tubers that may push out of the ground and thus become sunburned but to do more than this is a useless expenditure of labor. Hilling such vegetables as beets, carrots, cabbage, etc., is even worse, its a positive detriment to the crops. Level, shallow cultivation is best.

---

Two insect pests make life a burden for the amateur gardener in July, the potato beetle and the cabbage worm. Both are so easily controlled that the "ol' timer" is never worried for a minute about them. Just simply poison them and quit worrying. Anyone who aspires to be a real gardener should be ashamed to be found collecting potato beetles by the old-time method of batting them into a pan. That's old stuff, entirely out of date, not good form in gardening circles. It simply isn't done. Anyway it's an expensive and inefficient plan of disposing of potato bugs and there is a better plan.

Firstly don't worry about the mature beetles, the egg layers. They eat but little of the potato vines but keep busy laying eggs on the under side of the leaves. Let them keep on if it's any satisfaction to them, but lay in a supply of arsenate of lead and attend to any other business you may have *until these eggs begin to hatch.*

As soon as the first dirty red larvae appear, and not two minutes later, spray the vines with an arsenate of lead solution, about two heaping tablespoonfuls of the dry arsenate to 2½ to 3 gallons of water. If you have no spray pump use a sprinkling can; if no can don't buy one, borrow one or use a whisk broom. To make the dope stick add a little soap, a piece as big as my thumb, dissolved in hot water and added to the poison mixture. This dose should not need to be repeated as new leaves form as not all the eggs are laid at one time. Paris green may be used in place of arsenate of lead if preferred.

---

Use arsenate of lead or Paris green for the cabbage worm. "Oh, very well, you don't need to do it if you don't want to!" "They are your worms not mine and I wish you much joy with them. Pick them off with your fingers if you want to, I should worry."

That's what the experienced gardener feels like saying when his neighbor asks him how to kill cabbage worms and friend neighbor comes back, "use POISON on cabbage, why we *eat* the cabbage."

Surely we eat cabbage, but not the part that is poisoned. The cabbage grows from *inside* and the newly formed leaves are always in the very heart of the plant.

Prof. Wilson's experiments prove conclusively that there is no danger whatever in using cabbage sprayed with poison even one week before maturity. Don't pick cabbage worms, poison them.

---

While the striped cucumber beetle usually disappears with the end of June the squash bug, a much larger beetle and equally dangerous, may happen along in July. This pest simply cannot be poisoned as it feeds by sucking the sap of the plant. About the only defense is to protect the plants with screen, if practical, or, trapping by laying boards or stones around the plants which furnish a shelter attractive to the bugs.

Arsenate of lead is mentioned in Wisconsin Horticulture oftener than Paris green because it is a

more satisfactory poison and safer to use. Unless lime is added to Paris green solution burning of the foliage is apt to result. With arsenate there is no danger. The arsenate does not settle as quickly as Paris green and sticks better to the foliage. Arsenate of lead may be had at any drug store.

## The Wisconsin Apple Grading Law.

By Dr. E. D. Ball.

Let us start out with the statement that the apple grading law was made by and designed for the producer. The enforcement of the law has been put into the hands of the Department of Agriculture. Its work has been and is going to be in the interests of the grower, and if we do not enforce this law to your satisfaction, it is going to be your fault, because we expect to be your agents in the carrying out of its provisions.

The enforcement of the apple grading law is with the idea of developing more orchards and better orchards, and of producing a standard to which each man can work. I am going to ask this society to appoint a committee to fix the standard, and if with your assistance, we can produce a certain standard product for the state of Wisconsin, every single man in the state that produces that standard will be able to get more money for it than you are getting for those same apples not standardized.

In travelling around in the state I find one man packing No. 1 and 2, another packing A. and B. and a third packing X and XX, and all kinds and variations of these labels, but they mean absolutely nothing to anybody except to the man that packs, because there is no standard. One man may be packing an entirely different thing for No. 1 from the man right across the street. So the law as I understand it is designed to provide a definite, written and published standard, and then provide an inspector to see that the classed package is designated with the proper standard and the name of the man that packed it.

To illustrate the working out of the law let us divide all apples into two classes on quality. Apples that are really fit for human food and have keeping quality; such apples do not have worm holes, they do not have bad scab blotches, they are not deformed by scab or curculio or by puncture of any insect. Those are the essentials of quality, it does not make any difference how much color they have nor how much size they have. A ripe apple regardless of its size is a food product. In fact, a medium small apple if often times a better food product than an over grown big one.

In apple grading we must learn three grades: Wisconsin standard fancy apples, Wisconsin standard A, Wisconsin standard B. All those three grades presuppose quality, practically the same quality as far as food value is concerned. Eliminated from them are wormy apples, badly scabbed apples, deformed apples, bruised apples, apples that are not fit for food. In these grades we only put apples that are good for human food and have power enough to keep, so that they will be fit for food when they reach the consumer.

We devide these apples of quality into fancy, if they have high color, standard A if they have one-half that much color and standard B if they have less than half color. The division is not on quality but on attractiveness. The extra fancy apple with the high color must not have anything that detracts from its attractiveness. It must not even have a worm sting that has been healed over and that has practically nothing to do with the keeping quality or food value of the apple, but it does detract from its showiness. Standard A is an apple that does not have quite that extraordinary excellence of finish, it may not have as high a color, it may have a little bit of a mark in the way of scab, it may have a little mar in the way of a sting, if that sting does not interfere with its quality. Standard B may have a little larger defect, not enough to interfere with the quality materially, but just a little with the appearance. This grading differs from the former in taking what you have put into two grades under the old grading system and made three grades of it.

Size makes little difference in the value of an apple. That has been recognized in the western box apples, but it is equally well recognized that uniformity of size is of great value. If you take a large apple and a small apple and put them in the same package, they will sell on the size of the small apple and in comparison they will look inferior and you will get a small price. If you separate them out and put them into separate packages of uniform size, it increases their attractiveness and sale price immediately.

Grading for color must be done by hand. The law provides that in fancy grades you must sort for color. A fancy grade must be sized so that there will be no more

*(Continued on page 165)*

# Wisconsin Horticulture

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"Lafayette, we are here!"
—Pershing.

"America is God's last chance to save the world."
—Emerson.

"Extravagance costs blood, the blood of heroes."—Lloyd George.

Hit hard and quickly for all we have and are and hope to be!

## The Summer Meeting.

The Summer meeting of the State Horticultural Society will be held in Baraboo Wednesday and Thursday, August 21st and 22nd.

One day, the first, will be devoted to papers and talks on subjects of present day interest and one to visiting gardens and orchards in the vicinity, including the Toole pansy farm and our trial orchard on the Ski-Hi fruit farm.

The summer meeting is well worth while. Our sessions in years past were not all that could be desired either from point of attendance or interest but that sort of thing has passed. The summer meetings of late years have been very profitable and interesting and the attendance excellent.

It will be so this year or even better for the horticulturists realize their responsibilities in the war and want to face them.

Baraboo is called the Gem City and is well named.

Baraboo people make no claim that their city is a metropolis, nor desire that it should be such. It is truly a little gem, set among the hills with wide, shady streets, a clean and comfortable looking city.

The people of Baraboo are not boastful nor filled with false pride but there is always a warm welcome to strangers.

There is a calm dignity about Baraboo that attracts. The program will follow closely the lines of that of last year as it is fitting it should. It will be a war program with emphasis on conservation of fruit and vegetables.

The following topics will be discussed:

Harvesting and Storing Vegetables, Storing Apples, Cider Making, Drying and Canning Apples; Homemade Syrups and other topics pertaining to the saving the fruit crop. The beauty of our home surroundings will not be overlooked nor forgotten. The raising of flowers is now more important than ever and we will talk about that, too.

The evening session will be announced later.

The complete program will appear in the August number but do not wait for that. Decide now to attend.

## State Protects War Gardens.

The supreme judicial court of Massachusetts held, in the case of Commonwealth vs. Gallata, that where a landlord terminated a tenancy at will of city lots, the tenant was entitled to growing crops as against the landlord and a subsequent lessee with knowledge of the first tenancy.

The court said: "The general principle is that where a person is in possession of land under a title that may be determined by an uncertain event not within his control, it is essential to the interest of agriculture that such a termination of his lease shall not prevent him reaping what he has sown and we see no reason why a tenant should be denied the right to emblements by the act of the landlord where the crop is raised on a city lot rather than on a farm." *Emblements:* The growing crop or vegetable growth, or profits of a crop, which has been sown or planted. (Definition.)

Prune spiraea bushes as soon as they are through flowering. Remove all old wood and thin the new growth. Spade around the plants and fertilize them well. Better flowers will result next year.

# CRANBERRY CULTURE

Edited by Mrs. S. N. Whittlesey, Cranmoor, Secretary Wisconsin Cranberry Growers Association

## Blight Problems

In sending out inquiries as to causes, prevention, and treatment of blight and false blossoms, President Searls says, "we have asked a mighty hard pair of questions."

We know this is true. It is because there is a general lack of, and need of knowledge that we sought information. Whether from indifference, or inability, the responses have failed to appear except from Mr. Searls who sends us the following:

"I have looked upon the question of cranberry blight in a little different way from what the growers usually term blight. I look upon this troble as rather a manifestation of weakness, or of injury, which may have been received a long time before the bloom has taken place. The vine may have been weakened by overflooding, which may be done by being put under water too early in the fall—or continued too late in the spring, or the bloom on very young berries injured by cold nights. Blight may be caused by snow storms at a critical season in the bloom, also, blight may be caused by drying winds where the root system is not well protected.

I believe we should not expect every blossom to mature fruit. Most plants produce a greater amount of bloom than they can possibly carry to maturity. I believe the wise grower will look well to provide the best possible conditions for his plants, that they may be strong, healthy, and well fed. In order to do this, we plant on well sanded ground. Where this has not been done at the time of planting, we give the plants several applications of sand, of say, ½-inch at a time, until we have a bed on which any cranberry plants can be assured congenial living quarters. The sand will greatly help in maintaining a proper temperature on cool nights, it also protects the root system from the drying winds, and greatly aiding in keeping a proper amount of moisture for the plants.

H. J. Gebhardt, of Black River Falls, reports some spring killing, caused, he thinks, by pruning and other work among the vines during the month of April. Twenty to twenty-five per cent, he thinks, would be a fair estimate of damage done, but is pleased to add that prospects are for a fair crop with yield about same as last year. His first blossom appeared June 11th, which was ten days earlier than last year and six days earlier than the previous year.

Mr. Gebhardt planted a two-acre piece this spring and considers growing conditions have been very good.

Edward Hableman, of Beacon, is meeting with good success in the use of fertilizers. Tankage has been used for four years and some of the pieces have given a yield of three bushels to the square rod. Injury was done some pieces by over sanding two years ago. The prospect this year is best he has ever seen. The fertilizer is applied in the spring about 500 pounds to the acre. Vines also show up well where hardwood ashes was used at the rate of four barrels to the acre. The yield has doubled where these were used.

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## The Apple Grading Law.

(*Continued from page* 163)

variation in packing than a half inch in diameter, so if you are intending next year to label an apple fancy, you must grade it to size as well as color. There is no size requirement in standard A and standard B, except that you must label on the package the smallest size in the package. It will pay you to sort sizes and label different sizes, but do not sell small sizes for much less than you do the big ones. That is what you are doing under your old grading system.

Under the grading law you are going to handle apples more carefully, sort them on cloth tables padded so that they will not bruise. You are going to do more spraying and more thinning. You are going to do more pruning, because pruning and thinning will raise the size of your apple and you will not have so many small ones. I believe the result of our grading law will be to increase the production of standard apples in the state of Wisconsin materially. I believe it will result in increasing the price that Wisconsin apples will bring. I believe it will result in taking off the stigma, "Oh, those are Wisconsin apples," and changing it to an exclamation "Oh, those Wisconsin apples!"

**They Need No Amusement.**

Every evening, in a million American homes, a well-fed, amiable family group rises from cheerful dinner tables to vote on the questions, "Where shall we spend the evening? What shall we do for amusement?" The day's work is done and we need relaxation. So many things beckon—movies, theater, a war-lecture, a motor-ride, cards, dancing, or a peaceful loaf with papers and pipe and knitting. Which shall we choose? Life for us is so rich with interest, so full of comfort and beauty that daily we make many choices between pleasures, between one comfort and another.

An American Y. M. C. A. secretary is back from France bringing a different picture. In a forest just back of Verdun is a French camp of 30,000 soldiers. They have been there three years, under constant fire, living interminable days in cold rain and in mud that sucks and clings and filthies them over like some vile beast that cannot be thrown off.

In recent months, the French Red Cross has built a crude hut in the camp and the American Y. M. C. A. has loaned two secretaries for work there. The hut is rather bare of furniture. There are lights and a stove, chairs, tables and writing materials, and that is about all, no graphaphones, no piano, no books. A visitor inquired pityingly, "But what do you do to keep these men entertained?"

Silence a minute and then the reply ringing across the world to us by our fires and at the movies, and the restaurant tables:

"The French soldier this fourth winter of war does not need entertainment. All he wants is a place a little dry, a place a little warm, a place with a little light so he can just rest, rest, rest."

What shall we do for amusement this evening? Well, for one thing let's write a check for the Red Cross, and another for the Y. M. C. A.—and gather up some of our books and write some letters to soldiers. And then let us go on our knees to ask forgiveness if we forget in our amusements those who give their souls and bodies for us, asking—no, not even asking in return an hour a day in "a place a little warm, and dry, and bright."

*Editorial Wisconsin State Journal.*


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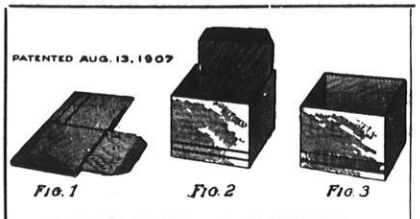



*Fig. 1* *Fig. 2* *Fig. 3*

**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**

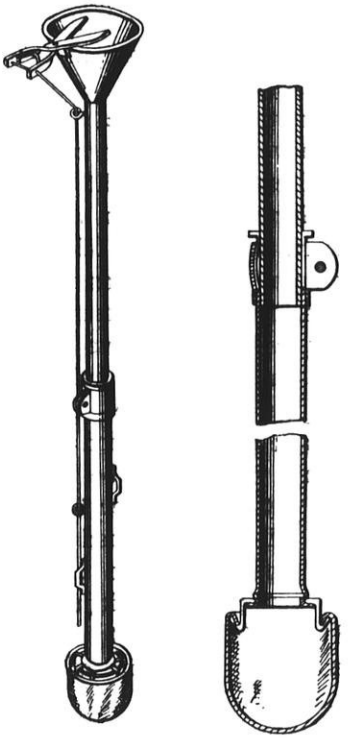
Dept. D, Cumberland, Wis.

**Sanitary Fruit Picker**

**PICKS**

**Fruit of all Kinds**

**QUICKLY, CLEANLY AND EFFICIENTLY**



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Native Plum Small Fruits
Apple
WISCONSIN GROWN
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**Indiana's Best Apple and Citrus Fruit Picking Sack**

This new type is very short consequently no injury to the fruit.
The Side Ribs hold top always in place.

Sack fits body and will not slip.
No Sack like it yet it embraces all the best features of commercial Sacks.
Fits high and therefore furnishes free use of the body.
Only Sack made with the proper balance — used now by the largest commercial orchards in the United States and Canada.

**Price each $2.25. One dozen lots $24.**
The Kingston Orchard
F. O. B. Seymour, Indiana
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## Apple, Cherry and Plum Trees, Grape Vines, Blackberry, Raspberry and Strawberry Plants

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And a general line of ORNAMENTAL TREES, SHRUBS and ROSES. All stock clean and thrifty, the best that can be grown in Wisconsin.

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Cream City Arsenate of Lead has a maximum killing power, sticks longer, no lumps, or sediment; therefore gives the highest efficiency and greatest economy.

Cream City Lime Sulphur
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Cream City Sodium Nitrate
used for fertilizer.

Gives plant an early start and supplies necessary nitrogen.

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**Cream City Chemical Works**

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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.**

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Complete assortment of Fruit and Ornamental stock in all varieties suited to northern culture. A specialty of Hardy Shade Trees, Windbreak Stock, Evergreens (Coniferous), Deciduous Shrubs, Apples and Native Plums.

AGENTS WANTED

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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.

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# WISCONSIN HORTICULTURE

OFFICIAL ORGAN OF THE WISCONSIN STATE HORTICULTURAL SOCIETY

Volume VIII | Madison, Wisconsin, August, 1918 | Number 12

"The past and the present are in deadly grapple and the peoples of the world are being done to death between them."

"There can be but one issue. The settlement must be final. There can be no compromise. No half-way decision would be tolerable. No half-way decision is conceivable."

"What we seek is the reign of law, based upon the consent of the governed and sustained by the organized opinion of mankind."

"The blinded rulers of Prussia have roused forces they knew little of—forces which, once roused, can never be crushed to earth again, for they have at their heart an inspiration and a purpose which are deathless and of the very stuff of triumph."

—From President Wilson's Address, Mount Vernon, July 4th, 1918.

## Farm and Home Drying of Fruits and Vegetables

### POSSIBILITIES AND LIMITATIONS OF DRYING

For preserving perishable foodstuffs, one of two general methods may be pursued. One of these consists of heating to destroy decay-producing organisms, and sealing. This is what we do in canning. The other removes so much moisture from the material that organisms are not able to grow and multiply in it. This is evaporation or dehydration. In the case of any particular material, judgment must be exercised in determining whether it shall be dried or canned.

Drying has the very great advantages that the product has a weight only one-fourth to one-ninth that of the fresh material; that there is a very considerable reduction in bulk, due both to actual shrinkage and to the fact that all portions not actually fit for food are removed; and that the dry material may be stored almost indefinitely without danger of deterioration and without the use of expensive special containers. At the same time it must be understood that evaporation has very definite limitations and that it is not applicable by any means to all fruits and vegetables. There are a considerable number of fruits and vegetables which it is not advisable to attempt to dry, either because they undergo changes in drying which render them unpalatable or because they deteriorate rapidly after drying; also there are a considerable number of vegetables which are so readily kept for long periods in storage, either in out-of-door storage pits or in an ordinary cellar, that any labor expended in drying them under any ordinary conditions would be wasted.

### FUNDAMENTAL PRINCIPLES OF DRYING

Most failures in drying are due not so much to imperfections in the equipment used as to the failure of the operator to understand a few fundamental principles which must be kept clearly in mind if the work is to be successful. The purpose in view in drying any food material is not merely the removal of sufficient water to insure good keeping; it is equally important to preserve all the food value of the product with as much as possible of the natural flavor and cooking quality characteristic of the raw material. This double purpose cannot be successfully accomplished unless certain guiding principles are kept in mind.

The air at the earth's surface is capable of taking up and holding as water vapor considerably larger quantities of moisture than are ever present in it; that is to say, the free atmospheric air never becomes completely saturated. Consequently, any wet material exposed freely to the air will ultimately become dry, since the liquid water covering its surface will be converted into water vapor and taken up by the air. The rate at which this will occur will depend upon the temperature of the air and upon the percentage of moisture already present in it when brought into contact with the material. If the air remains at constant temperature and is undisturbed by currents, the loss of water from the material will go on very slowly, as the air nearest the wet surface will soon become almost saturated and can take up more water vapor only as that which it already holds is lost by diffusion outward and upward into layers of drier air. If the air be kept constantly in motion, however, the drying will be greatly hastened, as the moving air current will displace the blanket of moist air surrounding the material as rapidly as it is formed and bring in drier air to replace it. If the temperature and moisture content of the air used are both constant, the rate of drying will increase proportionally as the rate of movement of the air is increased, until a point is reached at which water can not pass from the interior to the surface of the material as rapidly as the air is able to take it up, when the surface will become dry even though the interior is still nearly saturated. The effect of a brisk breeze in hastening the drying of the surfaces of muddy fields after a rain is a familiar illustration of this principle.

Drying is also hastened by raising the temperature of the air. The amount of water vapor which a given volume of air can absorb before reaching saturation depends upon the temperature and is practically doubled by every increase of 27 degrees in temperature. In other words, if a quantity of air be warmed from 60° to 87° F., its moisture-carrying capacity is doubled; if the heating be continued until a temperature of 114° is reached the moisture-carrying capacity is again doubled, becoming four times what it was at 60° F. Further heating produces further increases in the same proportion, until a point is again reached at which water is vaporized at the surface more rapidly than it is replaced by movement outward from

the interior of the material, when the process will, of course, be slowed and stopped by the drying out of an outside layer, which will then retard the escape of moisture from the tissues beneath it.

There are therefore two ways in which the rate of drying can be increased; namely, by increasing the temperature of the air or by quickening its rate of movement over the material to be dried. Economical drying is secured by combining the two and forcing currents of heated air over the material at such temperature and rate of movement as will remove moisture from the surface as rapidly as it can move outward from the interior of the fruit or vegetable being dried. When this point has been reached, any expenditure of heat in further warming the air or of force in driving it is, of course, wasted.

Generally speaking, flavor and cooking quality are best preserved by rapid drying. Fruits and vegetables are living things; when their flesh is opened up to the air, as occurs in peeling and slicing, a number of chemical changes in the tissues immediately begin. If the material is to retain its natural appearance, color, and flavor, these must be checked. Some of these changes produce darkening and discoloration of the tissues; others break down the pigments present, causing the fading of the characteristic colors of the material; and still others affect the flavoring substances present, producing decrease or loss of the constituents which give the fruit or vegetable its characteristic flavor. Other accompanying but slower changes result in the partial destruction of the sugars and proteins of the material, sometimes accompanied by the production of new and undesirable flavors and odors. While these changes are in parts spontaneous, many lower organisms, universally present in the air and upon foodstuffs—bacteria, yeasts, and molds—which produce similar but much more rapid decomposition, are certain to begin growth in the material as soon as the removal of the protecting peel gives them access to its interior. Consequently, processes of decomposition begin as soon as the fruit or vegetable is opened to the air and will continue until the greater part of the moisture present is removed unless special means are employed to arrest them. This decomposition would be immediately stopped by raising the temperature of the material to 175° or 185° F., but it is not possible to do this without causing injury. The rapid heating to this temperature in dry air of freshly cut slices of a succulent fruit or vegetable causes bursting of the cell membranes by expansion of their contents and permits the escape of water which carries with it dissolved sugars, salts, and flavoring substances, thus reducing both the palatability and the food value of the product. Consequently, only moderate temperatures can be employed, and unfortunately all, or practically all, the changes under discussion are not only allowed to continue but are actually hastened when the temperature of the fresh water-filled material is raised to the limit beyond which bursting and dripping will occur. To arrest these changes and to preserve the natural colors and flavors of the material it is necessary to resort either to blanching or sulphuring, both of which are discussed elsewhere.

It follows from the foregoing statement that rapid drying can not be secured by the employment of high temperatures with fresh water-filled material. Nor can material already partially dry be subjected to high temperatures, as scorching and charring will then occur. The best temperature for drying is therefore the highest which can be employed without danger of injury in either of these ways, since the drying will thus be made most rapid. What this highest possible temperature may be is determined in the case of any particular fruit or vegetable by its physical structure, chemical composition, and water content. As the different fruits and vegetables show very wide variations in these respects, there is no single best temperature for general use with the various products; heat treatment which would be perfectly safe with potatoes or carrots would be utterly ruinous if applied to such fruits as raspberries and peaches. For this reason it has been necessary to determine experimentally for each of the different materials the range of temperatures which may be employed without injury. These are given on subsequent pages. The operator of a drier should be provided with a dependable, accurate thermometer which should be placed in the drier and kept under frequent observations, as any attempt to trust to inexperienced judgment as to temperatures in the drier is likely to result in damage to the material.

In drying any food material it is absolutely indispensable that provision be made for the prompt

Continued on page 176

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**Postage stamps not accepted.**

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## SUMMER MEETING

### A discussion of the program

The meeting at Baraboo ought to be a success. It will be a success. The program as you read it on this page is rather a cold looking affair, so we will discuss it a moment. The big idea is to learn how to care for the second and third grade apples, the apples that sometimes rot on the ground in farmers' orchards because they are not quite good enough for barreling, and for other reasons. Nothing should go to waste this year, not even scabby apples.

# PROGRAM

# SUMMER MEETING

## State Horticultural Society

**Al. Ringling Theater, Baraboo, August 21st and 22nd, 1918**

**Warren Hotel—Headquarters for Officers**

### Wednesday 9:30 A. M.

You are Welcome .....The Mayor of Baraboo
How to Can Apples, Tomatoes and Corn, Mabel J. McBain, Supervisor Domestic Science, Houston, Texas.
Drying Fruits and Vegetables, Mr. J. H. Prost, International Harvester Co., Dept. of Agriculture.
How to Make Apple Butter ..... C. R. Tuttle

### Wednesday 2:00 P. M.

Cider Making ..... C. R. Tuttle
Madison Gardens ..... D. H. Ried
Milwaukee Gardens and Gardeners ..... Joseph Barr
(Representatives from other cities expected)
Why has the Growing of Raspberries Declined in Wisconsin?
Answers by:
..... D. E. Bingham, Grower
.....M. S. Kellogg, Nurseryman
Winter Storage of Fruits and Vegetables.....General Discussion
An Insect ..... Dr. S. B. Fracker
Other Bugs ..... Prof. R. E. Vaughn

Unfinished Business

### Wednesday 8:00 P. M.

A Patriotic Meeting at the Ringling Theater, preceded by a musical program. Arrangements are now under way for a speaker of prominence but until written acceptance has been received the editor can "name no names."

War conditions seriously affect the making of a program such as this. Prof. J. G. Moore, who expected to attend, is in service at a reserve officers' training camp until September. Members of the Home Economic department have been called for war work and so on down the line. As it looks at this writing an entirely new list of names may appear on the program August 21st, but the *subjects* will be left and competent persons to lead in the discussion of them.

### Thursday

The program for Thursday is in the hands of the local committee and will be announced on Wednesday, Aug. 21st. From scraps of information picked up by the secretary it appears that Thursday's program will be as profitable and entertaining as any we have had in former years.

### PREMIUM LIST

The following premiums are offered for exhibits of flowers and vegetables, at the Summer Meeting, Baraboo, August 21 and 22.

**Class I**

| | 1st prize | 2d | 3d |
|---|---|---|---|
| 10 vases of Asters, 1 doz. each | $3.00 | $2.00 | $1.00 |
| 5 vases of Asters, 1 doz. each | 2.00 | 1.00 | .50 |
| Vase Asters, one color, 1 doz. | 1.00 | .50 | .25 |
| Display Dahlias, not less than 5 varieties | 5.00 | 3.00 | 2.00 |
| Display Pansies | 3.00 | 2.00 | 1.00 |
| Display Perennial Phlox, not less than 5 varieties | 3.00 | 2.00 | 1.00 |
| Display of Gladioli, not less than 25 blooms | 3.00 | 2.00 | 1.00 |
| Display of Annual Garden Flowers | 5.00 | 3.00 | 2.00 |
| Display Herbaceous perennials correctly named | 5.00 | 3.00 | 2.00 |
| For best specimen Fuchsia, Rex Begonia, Begonia of any other variety, Sword Fern, Asparagus Sprengerii, for each | 2.00 | 1.00 | .50 |
| Best collection native flowers in arrangement and variety; varieties to be shown separately, each with card attached giving both common and botanical names | 5.00 | 3.00 | 2.00 |

**Class II**

| | | | |
|---|---|---|---|
| Snap Beans, 1 lb. | 2.00 | 1.00 | .50 |
| Lima Beans, 1 lb. | 2.00 | 1.00 | .50 |
| Cranberry Beans | 2.00 | 1.00 | .50 |
| Two Heads Cabbage | 2.00 | 1.00 | .50 |
| 6 Onions | 2.00 | 1.00 | .50 |
| Six Ears Sweet Corn | 2.00 | 1.00 | .50 |
| Three Cucumbers | 2.00 | 1.00 | .50 |
| Three Muskmelons | 2.00 | 1.00 | .50 |
| Six Tomatoes | 2.00 | 1.00 | .50 |
| Six Beets | 2.00 | 1.00 | .50 |
| Six Carrots | 2.00 | 1.00 | .50 |
| Two Egg Plant | 2.00 | 1.00 | .50 |

**Class III**

For War Gardeners

*For Boys and Girls Under Sixteen*

Best display vegetables grown by boy or girl under 16, in home or school garden. Twenty dollars divided pro rata.

Best display vegetables from "home" garden by person over 16. Twenty dollars divided pro rata.

Exhibitors in Class III may also show in Class II.

---

Sweet corn and tomatoes are about the only perishable vegetables remaining after August 21st and the surplus must be saved.

Therefore: experts will tell us how to can and dry these for winter use.

Mr. Tuttle who has been very successful in making and selling apple butter and cider will tell how to do it.

Cellar storage of vegetables is also of great importance. No one in particular has been chosen for this topic but the presiding officer will squeeze out every bit of information to be had. Its the little hints that count here. Everybody who has had success or met with failures must speak up in meeting.

War Gardens in Madison and in Milwaukee will be discussed by Mr. Reid and Mr. Barr. This will merely open the subject, giving everybody an opportunity to talk. This is to be a survey of the year's work and a look ahead for next year.

Never were raspberries so scarce in Wisconsin as this year. Many fields have been plowed out and others to follow. What is the reason? Berries both black and red are selling today, July 20th, at 44 cents a quart retail. Surely that's a good price. What's the reason for the shortage. Shall we plant more berries next year? These and other questions will be answered by Mr. Bingham and Mr. Kellogg, at least to their own satisfaction. If others do not agree with them, there will be chance for a good discussion. Perhaps we will learn something.

From a casual, hasty reading of the program it might be inferred that Dr. Fracker is referred to as an "insect." Such is not the case. Dr. Fracker who is assistant State Entomologist, knows about an insect and will tell us. The same with Prof. Vaughn; "bugs" is a term common among scientists to indicate disease organisms. We need these men. They can tell us in plain manner the things we ought to know.

It is a good plan to leave a place open on the program for Unfinished Business. We have it. What will YOU have to offer?

After we have finished the unfinished business, the Women's Auxiliary will meet to complete the organization begun at the annual convention. The men are expected to go about their business, if they have any.

---

Try saving seed of some of the vegetables and flowers in the garden this year. Seed may be harder to get next year than this.

---

America's glorious privilege is to feed the world while it fights its way to freedom.

# CRANBERRY CULTURE

Edited by Mrs. S. N. Whittlesey, Cranmoor, Secretary Wisconsin Cranberry Growers Association

It is considered something of a feat to be a successful grower of cranberries. Man's wisdom, strength, and unerring judgment are usually thought necessary. We have a few rare instances, however, where woman has proven her ability to conduct this enterprise and are submitting this month an article by one of them—Miss Lydia M. Huyck—a Chicago lady who some years ago assumed the responsible position of manager of the Lewis Cranberry Company's marsh at Minong, Wis., and whose skillful efforts are producing fine results.

### Value of Sanding

I have been trying for some time to write about methods and costs of sanding. The more I think about it the more useless my information seems to the others needs unless all of the conditions equal ours. Sanding and re-sanding are most essential to proper cranberry culture. It builds and strengthens the foundation for good healthy growth. In many instances it is a most effective weapon against weeds. The wonderful advantage is evidenced on the bog at Cranwood.

We have sanded in the winter with sleds and teams, we have sanded in the spring with wheel barrows, both methods met the needs at the time. We sanded in the winter where the hauls were long and the ice was necessary for teams. This spring we sanded a few bogs which were close to the sand pits and wheel barrows could be run out on planks. All sand must be put on from shovels and scattered well.

Labor conditions here as well as with all of us are such as would hardly warrant a proper cost basis. Whatever the cost the benefit proves the desirability. We did considerable weeding while we were sanding this spring.

The positive thing I can say is to *sand* and *re-sand*. If the hauls are long do it in the winter when sleds can be used, but under any conditions scatter the sand well and do not put on too much.

The sanding is done to help the new growth and it must not be buried; it must be given an opportunity for a good foundation.

Lydia M. Huyck.

### Bees and Cranberries

In a 1918 issue of Green's American Fruit Grower in Gleanings in Bee Culture, conducted by E. R. Root, we find the following, and wonder if any of our Wisconsin growers have had any experience with "Bees and Cranberries."

"In the vicinity of Boston, the Cape Cod Cranberry Company are growing cranberries in a large way. When the cultivated bogs were small it was observed that good yields of the berries could be secured; but when the acreage had been increased the crop kept getting smaller and smaller per acre. It was finally discovered that there were too few bees in the vicinity. When enough bees were put around the bogs the yield of cranberries became normal again. More testimony of well known orchardists and many other instances like this given, could be produced to show what the bees are able to accomplish when the varieties are sterile, or partly sterile by their own pollen.

It would be too much to say that all varieties would receive the same amount of benefit from the bees. Some kinds of fruit are fertile to their own pollen; that is to say, the wind and rain cause pollen from the blossoms of the upper limbs to drop down on blossoms below and so pollinate them. But even then results have shown that a cross-pollination makes large and better fruit."

### About People

Mr. and Mrs. S. N. Whittlesey with their granddaughter, Katherinne Whittlesey of Fargo, N. D., and Miss B. E. Weeks of Oconto, Wis., recently drove to the Mather district for a friendly call on the growers in that locality. It was rather an untimely visit as so many they wished to see were out blueberrying. Mrs. F. J. Hoffman and daughter, Mrs. Phil. Bennett, Mr. and Mrs. E. K. Tuttle and brother, H. B. Tuttle, and B. R. Mitchell were the only ones found at home. The cordial reception by these friends was heart warming. Health and happiness seemed to prevail. The good crop prospects in view were very gratifying. May their hopes be realized in the carrying through, gathering in, and profitable disposition of the berries now in evidence.

---

A. Searls and Son are enlarging their water facilities with a 10,000 gallon a minute pump. They believe that anything that is worth doing, is worth doing well.

## THE GARDEN IN AUGUST

After August 1st there is not much that can be done in the garden except to reap the fruits of our labor. Something will depend on the season. In southern Wisconsin we may feel quite sure of a light frost any time between September 10th and 20th.

A heavy frost before September 1st is unusual. Crops that escape the early September freeze or are protected may keep on growing until November 1st, some seasons.

There is, therefore, not much use in planting with the expectation of getting a crop. Early maturing varieties of snap beans *might* pull through, but it would be only luck. Some kinds are called "six-weeks" and will make a crop in that time, in the spring, but not after August 1st. Plants don't grow as fast in August as in April or May. Peas are out of the question, as mildew is sure to get them.

There is a chance to get another crop of spinach from seed sown August 1st to 10th if there is plenty of moisture in the ground at the time of sowing. Lettuce and beets for greens may come through all right. Flat turnips will usually mature if sown in August and sometimes rutabagas reach a fair size.

A little cultivation will still be needed and only a little. Lightly stirring the surface soil after a heavy rain or during a dry spell will help, but deep cultivation should be avoided.

Mulching is much better than cultivation. Nothing is better than lawn clippings for mulching garden crops. In lieu of this use anything that will hold moisture. Telephone and other varieties of late peas are particularly benefited by mulching.

Don't be afraid to use poison on the cabbage for the cabbage worm even if heads are partly formed. Remember that late cabbage will never form a satisfactory, solid head if the plants are riddled when young by the cabbage worm.

Early potatoes from your own garden are very nice, but its just a bit wasteful to dig them while the tops are still green and vigorous.

Green lice on cucumber or other plants can be controlled by spraying with a nicotine compound or kerosene emulsion. The emulsion is a trifle cheaper, but the nicotine is usually more effective and no bother boiling soap, shaking, etc. Try "Black Leaf 40," one part to 800 parts water.

There are two ways to raise tomatoes, the stake method which consists of tying one or two plants to a pole or stake 6 feet or more in height and training to a single stem, removing all side shoots as fast as they appear. The other plan is no plan at all, simply allowing the plants to grow as they will. The stake plan is best for the gardeners who are short on room and long on time. If you have plenty of room the other way is best. The one point to remember is this, there is no half way measure. It is worse than a waste of time to trim or prune tomato vines that are not staked. Every time you cut back a shoot, a dozen more appear, increasing the amount of vine growth at the expense of fruit production.

---

High temperature and humid atmosphere are the two frequent reasons for weak, diseased plants in hotbeds and greenhouses.

## MINNESOTA NO. 4 RASPBERRY

This raspberry originated at the Minnesota plant breeding station and is a cross of King and the Columbian. Out of many thousands of seedlings a few of the best were saved and sent out for trial—some of these were very promising but all have been discarded except the No. 4. This has succeeded so well that the planting has only been limited by inability to get plants. A short description would be to say that it is a Red Columbian sucker variety. It is dark red in color, unusually large, a strong grower, iron clad, hardy and free from anthracnose. The quality is mild, much like the Columbian and popular with the public because of its mildness even though it is not as rich in flavor as some other varieties. The writer counted one hundred and six berries on a single cane not over eighteen inches high. If it continues to exhibit Columbian size of berry and bush with Columbian productiveness and the King ironclad hardiness it will displace most varieties of raspberries as a commercial berry.

G. H. Townsend.

---

## DRY!

Everybody knows the old saw, "we eat what we can and what we can't eat we can," but this year we must go that one better: "We will eat what we can, what we can't eat we will can and what we can't can we can dry, if we can."

Canning is first best, drying is second best but not to be despised. This is a subject that will be discussed at the Summer meeting, Baraboo, August 21st.

## GARDEN SNAILS CAUSE SERIOUS INJURY TO GARDEN CROPS

Garden snails, slimy, soft-bodied creatures, are doing serious damage in many parts of the state especially in gardens, to bean, corn, lettuce, tomato and potato. They feed at night on the leaves and tender parts of the stem, hiding under rubbish or clods or going into the ground during the day.

Arsenicals are of no value for controlling this pest as the slugs feed freely on poisoned baits without being killed. Dusting air-slaked lime around the plants will give fair success. Bordeaux mixture sprayed on the plants seems to repel them. The slugs may also be trapped underneath pieces of board or burlap placed in the garden and may be collected from underneath these early in the morning and destroyed.

L. G. Gentner.

## CAN!

Can surplus fruit and vegetables up to the needs of home consumption and no more. The selling of home canned products may prove disappointing and an expensive experience.

There are, however, perfectly good reasons why every housewife should can fruit and perishable vegetables sufficient for the needs of her family.

First because it means food conservation; secondly, canned goods will be scarce and high-priced. According to present estimates government requirements are expected to include about 25 per cent of the total output of canned corn and snap beans, about one-third the output of canned tomatoes and one-half the output of canned cherries.

These figures come to this office weekly from the Bureau of Markets and the "expectations" of government requirements grow from week to week. Also the government requirements at the cantonments absorb enormous quantities of fruits and vegetables.

While no figures are at hand for perishables the fact that the requirements for August, for cantonments are estimated at 251,570 cwt. of potatoes and 17,310 cwt. of onions will give an idea of the drain on the vegetable supply.

It is therefore plainly the duty of war gardeners and every one else who has corn, tomatoes or any other surplus vegetables suitable for canning to can.

## PRESIDENT WILSON'S WARNING

**"This war is one of nations—not one of armies—and all our hundred million people must be economically and industrially adjusted to war conditions if this nation is to play its full part in the conflict. The problem before us is not, primarily, a financial problem, but rather a problem of increased production of war essentials and the saving of the materials and the labor necessary for the support and equipment of our army and our navy. Thoughtless expenditures of money for non-essentials uses up the labor of men, the products of the farms, the mines and factories, and overburdens transportation, all of which must be used to the utmost and at their best for war purposes."**

## Farm and Home Drying of Fruits and Vegetables

Continued from page 171

removal of moisture from the apparatus by a constant inflow of air. The reason is obvious; if the material be placed in a closed box and heated the confined air will very quickly become saturated and no more water can escape from the material. If the heating is continued, the material will literally be cooked in its own juices, since the water content of the products which we dry ranges from seven-tenths to more than nine-tenths of their total weight. Therefore, a drier can be efficient only in the degree that its construction provides for constant removal of the moisture given off by its contents.

Success in drying, therefore, depends upon the stopping by suitable means of the series of changes which begin as soon as the material is cut into pieces and exposed to the air, the employment of a temperature sufficiently high to prevent the growth of organisms—yet not so high as to produce the bursting of cells and loss of juices in fresh material or the scorching of that which has lost most of its water—and the provision of an adequate circulation of air for the prompt removal of the water vapor given off. Simple as these principles are, they have been discussed at length for the reason that most failures or poor results are due to the neglect of one or more of them.—From Farmers Bulletin 984 U. S. Dept. of Agriculture. Free on application.

If it seems necessary to water the garden or lawn plants, do a thorough job. Be sure the soil is moist clear to the root tips.

## Selling Apples Direct to the Consumer.

A. K. Bassett, Baraboo.

Several years ago I read a paper before this society about my first attempt at selling my apple crop without handing the commission man the biggest slice of the pie.

Since that time, I have often been reminded, by remarks here and elsewhere, about my "air castle" of eliminating the broker.

That was seven years ago, and I am still at the game. With the present high prices and scarcity of some food products buying directly from producer is a very popular fad, and if present conditions continue for a number of years, the commission man will be out of a job, unles he enlists against the Kaiser.

During the past season I sold about 900 bbls .of apples, of which 40 per cent went directly to the consumer, and the balance went to small retailers mostly in the northwestern part of the state. Of course the small retailer is a middleman in a certain sense, but by selling direct to him, it cuts down freight and cartage, also commission man's fees, and fruit gets to the consumer as nearly direct as we can hope to get in some cases.

With the varieties at hand which were planted and propagated by our forefathers I find it necessary to sell some to the retailers, as I will bring out later on.

After selling in this manner for a number of years, I find we have *two* classes of apples. One kind suitable for selling direct to consumer and retailer; the other kind suitable for retailers only.

Wealthy, Utter, McIntosh, Snow and all the good winter varieties are suitable for selling direct to the consumer as any family can dispose of a barrel easily before they spoil. Retailers, too, can handle these varieties profitably and prefer them to any others.

On the other hand there is the big list of early apples and a good many worthless fall varieties of which Wisconsin seems blessed with a goodly share, which no one can handle as well as the retailer. About the first on this list is the good old Duchess of Oldenburg. A store keeper can sell out a number of barrels in a very short time, but not many families could use a barrel of Duchess before they spoiled. However, I was much surprised last fall at the numerous orders I received from consumers for Duchess. Some even ordering the second and third barrel. Evidently, they canned or dried them, which is a wise plan now-a-days when the early apples can be bought for half the price of winter apples.

Whitney crabs, for which one cannot get a song when shipping to commission house went like hot cakes at the same price as Duchess last fall. These need to be handled rather hastily and a retailer can do it best. I sold all of my own and bought all eight farmers near me had, and could easily have sold 100 bbls. more, if I had had the time and help to harvest them.

Next on the list I wish to mention the less desirable varieties, such as Haas, Fall Orange, Plumb Cider, Longfield, Anisim and others not worth mentioning, of which there seem to be such a quantity around the country. I think the nurserymen more than the fruit growers are responsible for this big population. A consumer never comes back for the second order for any on this list, one taste is usually enough. One fall when apples were rather scarce, I seemed to have a good supply of Haas and Utter. In order to work off the Haas, I quoted prices on mixed barrels of the two varieties. In every case the second orders ran, "Don't send the Haas, send the other apples." "Don't send the red apples, send the white apples." "Send *so many* barrels apples, but don't send any *Haas*," but there are apples infinitely worse than our good old friend, the Haas. There is the Longfield tribe which ought never to have left the boundary of Russia. I hold my breath even to ship a stray barrel to a storekeeper. I never expect to sell this class of apples even of No. 1 or fancy grade, for as much as I get for Wealthy, Utter and Snow, yet it costs exactly as much to produce them, and no one has a good word for them. Why not strike them off the premium list now and forever? You would soon see the trees get the axe and better kinds growing in their places. Consumers can tell the difference no matter how little they may know of apples. One time a couple of good old Dutch farmers came after apples. I had quite an assortment on hand and asked $1.50 per bbl., for No. 1 Haas, Longfield, Fall Orange and that class of apples, and $4.00 per barrel for the Fameuse. In my own mind I was sure they would invest in the cheap varieties, but after sampling apples one man remarked to the other, "Yaw, Felix, you tak vat you lik, but for mine own part I prefer de Fameuse." Each took three barrels of Fameuse and came back later and got some more for their Sunday school and Chirstmas tree. You can't fool them on the "these are just as good" plan.

Financially, selling apples directly is a great relief and consolation. Checks come with the or-

der from consumers, and there are very few retailers left in the business today who are not reliable. The grower makes his own price instead of taking what the buyer offers. Sometimes in case of early apples where I wish to hasten sales I give a free barrel with a club order. This works like magic.

A traveling man, a perfect stranger to me who saw my apples at a store in Hayward, sent me orders from reliable firms, of his own accord. I placed several hundred barrels through him. As I wished to thank him in some substantial way I wrote him to see if he had a home and family somewhere and could use a barrel of apples. This is the answer I received:

Oct. 22, '17.

Mr. A. K. Bassett,
Baraboo, Wis.

Dear Mr. Bassett:—

I have your favor of the 18th inst., and I wish to thank you for your kind offer to send me a barrel of apples.

I have rather enjoyed sending you the orders I have picked up, and my customers have all praised your nice fruit, and good packing. Also wish to mention the fact that they appreciate the way you call their attention to second grade fruit, and the reduction you always make in cases of this kind, in the price.

Enclosed please find my check for $8.50 for two extra barrels of apples. I want one cooking and one eating apples, and will let you pick the kind you think will suit best at $4.00 and $4.50 per barrel.

Trusting I can be of service to you another season, and thanking you for your very kind present, I remain

Very truly yours,

Chetek, Wis. R. F. H.

**HARDY OLD FASHIONED PLANTS**
**OUR SPECIALTY**
**The best varieties for Wisconsin conditions, carefully grown and carefully packed. Write for prices**
**WILLIAM TOOLE & SON**
**Hardy Plant and Pansy Farm** **Baraboo, Wis.**

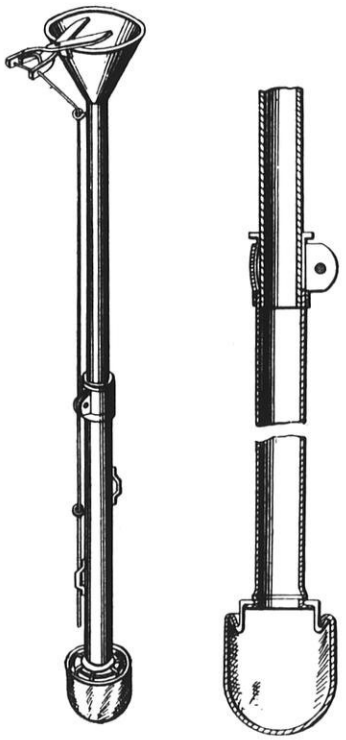
This letter brings out another point, THE PACKING. Unfortunately the person who packs the barrels very seldom opens the same. I am of the opinion that many apples are packed too tight, causing them to be badly bruised. I prefer to pack the good grades with cushions at the heading.

By selling direct one can economize on barrels to a large extent, especially now when barrels are high and we are urged to be saving in every respect. Late years I have been using some sugar barrels. This season I used over 300 of them, which I purchased at the stores and canning factories for 10c apiece.

Sometimes I have had a good chance to sell all my apples to one man for good money, but I have never done this because I wish to keep up my trade. The greatest hindrance is the lack of a sufficient supply of the right varieties. Last fall I tried to buy apples to help out but was unable to do so, notwithstanding the fact that hundreds of bushels of Wealthy went to waste in my own vicinity. But these apples, not being sprayed, were so scabby and wormy I could not place my stamp on them.

I am in hopes that this coming year, in view of the shortage of food products, every farmer and fruit grower who has an apple tree on his premises will get busy and prune and spray, so that every ap-

**Sanitary Fruit Picker**
**PICKS**
**Fruit of all Kinds**
**QUICKLY, CLEANLY AND EFFICIENTLY**



Don't buy a Step Ladder. Buy one of these FRUIT PICKERS and get all the fruit from the tops of your trees.
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Patented 1916

**Indiana's Best Apple and Citrus Fruit Picking Sack**

This new type is very short consequently no injury to the fruit.
The Side Ribs hold top always in place.
Sack fits and will not slip.
No Sack like it yet it embraces all the best features of commercial Sacks.
Fits right and therefore furnishes free use of the body.
Only Sack made with the proper balance—used now by the largest commercial orchards in the United State and canada.

**Price each $2.25 One dozen lots $24**

The Kingston Orchard
F. O. B. Seymour, Indiana
Prices subject to change

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**Box 77, Janesville, Wis.**

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**Secretary**
**701 Gay Building, Madison, Wis.**

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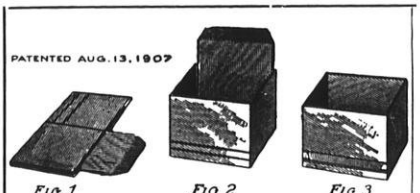

Fig. 1 Fig. 2 Fig. 3

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Dept. D, Cumberland, Wis.


ple tree in Wisconsin will yield beautiful fruit which no one will be ashamed to put upon the market where it will gladden the eyes, tempt the mouths and satisfy the stomachs of the thousands who had to go without apples this year.

---

War is **Our Business**; we can't win by carrying it as a side line.

**Malcontent American Residents.**

When Mrs. Rose Pastor Stokes was sentenced to prison she said "she didn't mean it, the judge said:

I believe this is part of a systematic program to create discontent with the war, loss of confidence in the good faith and sincerity underlying the conduct of the war, and its ultimate aims, thereby to cause withdrawal of support at home and a relaxation of effort and effect in the field."

Of this the Milwaukee Sentinel says:

"Malcontent American residents (who cannot properly be called citizens at this time) and ill disposed aliens must come to understand, at their peril, that the nation being at war and perhaps fighting for its existence will, if pushed to it, use the penalities of the law against its enemies at home as readily as it uses the machine gun and the bayonet against its enemies abroad.

All of which being said in general, a good many of us might be glad if such morally extenuating circumstances could be found in the case of Mrs. Stokes as to warrant some exercise of executive clemency or mitigation.

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