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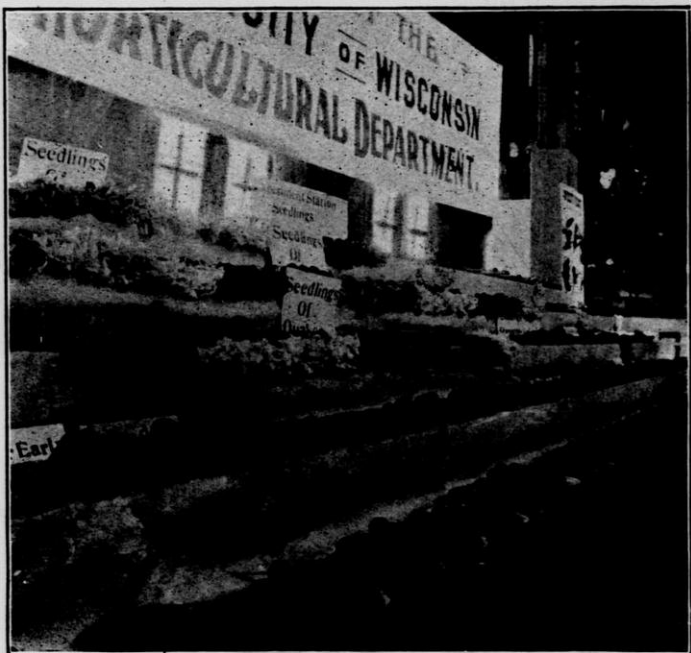
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WISCONSIN EXPERIMENT STATION PLUMS, AT STATE FAIR.

# The Wisconsin Horticulturist.

VOL. VII.

OCTOBER, 1902.

No. 8.

## APPLE BLIGHT.

Numerous inquiries have recently been received at the station regarding injury to apple and pear trees. Affected twigs have usually been enclosed which were black and shriveled, the attached leaves being browned as if by fire. The injury in every case was caused by "blight."

What is blight? The disease known as "blight," "pear blight" and "fire blight," is a contagious bacterial disease attacking the apple, pear, quince and allied fruits. It frequently attacks the wild crab and is occasionally found on the mountain ash.

What it does: Blight assumes two different modes of attack known as twig blight and blossom blight, the cause of the two being the same. In the former the new shoots, growth of the current season, are affected; in the latter the blossoms and fruit spurs are destroyed and commonly a portion of the adjoining main branches.

The conditions that favor blight: A wet season favors blight; a dry season hinders it; a very dry season entirely checks it. The blight microbe soon perishes when exposed to drying conditions. Unfortunately, conditions that favor the growth of the tree favor blight. Heavy pruning during the dormant period induces a strong growth of new wood and favors the development of the blight germ. Trees heavily manured with barn yard manure are apt to be more affected than those not so well fed. Trees that are well cultivated often blight more than those growing in sod.

How distributed: Blossom blight is undoubtedly distributed by bees and other insects that collect honey and pollen. The blight germs find lodgment in the nectary where they multiply rapidly and are carried from tree to tree at blossoming time. The blight microbes are held together by a sticky substance and are not therefore readily disseminated by the wind. In the case of twig blight they presumably remain within the affected tissues until set free by some agency that ruptures the bark. The mode of infection in this form of the disease is not well understood but presumably occurs through the agency of insects. Several species of minute insects inhabit the terminal buds of growing shoots.

Remedies: As the blight organism works wholly in the inner tissues of the plant, it is not possible to control it by spraying. The only remedy, at present known, is to remove and destroy, by burning, the affected twigs. As the blight does not, presumably, live over winter in the ground, it may be checked if not eradicated by this method. Usually the blight progresses most rapidly during the period of most rapid growth of the trees and generally stops at the end of the growing season. At this time there is usually a distinct line of separation between the live and the dead wood. All parts below this line are healthy and may be preserved. In some cases, however, especially those that appear late in the season, the line of demarcation is not distinct and the field of injury blends gradually with that of uninjured bark. It is probable that the blight is carried over winter by these cases as the germs are not susceptible to cold and receive sufficient moisture for their maintenance from the sap of the tree. It is essential then to exercise great care in cutting to remove these cases of "hold-over" blight. In removing blighted twigs it is advisable to cut far enough of all affected tissues. The removal of six inches of sound wood below the line of separation is not too much. This work is best done in the fall before the leaves have fallen as the blighted twigs may then be more readily observed. The shears or other cutting instruments should be dipped frequently in an antiseptic solution to guard against transferring the disease to uninfected branches. A five per cent. solution of formalin will answer the purpose. A cloth moistened with this may be carried and used to wipe the

shears. In the case of blossom blight on old trees nothing of value can be done as the disease extends through the fruit spurs to the main branches. It does not follow that such trees will be killed as the disease may not progress far enough to girdle the main branches only affecting the portion adjoining the spurs, in which case recovery may be expected with no further damage than the loss of the fruit spurs.

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#### REPORT OF D. E. PEASE ON BLIGHT.

In compliance with request for information in regard to apple tree blight have to report, as to my young orchard of some four acres on a hill side, west north and north west pitch, setting first fifty trees in ninety-four, replacing the dead and setting a few each year since. I lost more last winter than any other. I mulch with hay, when cutting, four to six feet across, as the orchard is mostly in June grass now. Have cut it once each year and twice including this year. Cut last week and whitewashed the trees with blue vitrol and sulphur in wash. Have practiced this since first setting and have lost no trees from borers at or near the roots nor seen any signs of them there. A few trees they have worked in upper part of body and limbs and to prevent appearances these parts when relieved of bark which is dead and wash, well beaten in, see no further signs of them. Have had but three or four killed with mice, I suppose they were girdled at the root. Rabbits have molested only to take one or two nips from three or four trees in all this time. Trees set two rods each way, and one way, the intervening space between is set a cherry or plum on parts of the orchard. I give this by way of explanation. As to my treatment I have not pastured or sprayed yet not sufficient quantity of apples to take time to do it. They bore some twenty to twenty-five bushels this year mostly on the ninety-four or ninety-five settings. As to the blight there has been a little for about four years. Have practiced cutting it off and burning, been over the orchard this year four times getting a willow clothes basket full each time of

twigs and branches. The Yellow Transparent stand first in prominence of bud and branch blight, King and Windsor Chief branch blight next, Longfield branch and bud, Maiden Blush and Early Harvest then Fameuse branch. Those with branch blight only, have not borne—trees of same kind side by side one has blighted and the other not. In the Wisconsin State Agricultural society report for 1879 and 1880. Mr. Jordan gives a formula on pages 88 and 89 for its treatment, successful with him for eight years. Would be glad to know of its success since.

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### THE INGRAM APPLE.

One of the leading commercial apples of Missouri and neighboring states is the Ingram. It originated near the city of Springfield, Mo., about 1855. This variety gradually became better known because of its productiveness and long keeping qualities, and in later years became so popular that it was largely planted for commercial purposes. One orchard of 240 acres is set entirely to this variety in Missouri.

The tree is an upright grower, hardy and bearing regularly. It has a tendency to overbear, and thus if fruit is not thinned will be small. The fruit in form is roundish, conical and of medium size, surface smooth, pale yellow, washed with red, splashed and striped with crimson and over spread with gray toward the base; stem is rather short; flesh yellowish, fine grained, hard until fully ripe, then tender and juicy; flavor subacid; quality good to very good.

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### M'INTOSH APPLE.

A winter apple of northern origin but little grown as yet for commercial purposes. It was originated by the late John McIntosh, who discovered it on his farm in Canada. The old original tree is still standing being over 100 years old. It seems to adapt itself to most all climates and conditions of soil and it is well thought of by all who have planted it. It is gradually pushing itself ahead and bids fair to become one of the leading sorts. Most all the leading nurserymen have it catalogued. It is a strong vigorous grower and very hardy. The fruit of good size, beautiful color and fine quality.

It is round, sometimes a trifle oblate; size medium to large; color yellow, washed over most of the surface with light crimson, dashed with broken stripes of dark crimson and covered with a heavy bloom; flesh white, often slightly stained with light red, tender, juicy; flavor subacid.

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#### WAUGH PLUM.

This variety was produced by J. W. Kerr, of Denton, Md. Rural New Yorker says "it is a new combination of the Japan and American types of plums, by hybridizing Chabot with Wayland. Chabot is in many respects, notably comparative, freedom from rot. One of the best tested Japans and Wayland is a distinct and excellent southern plum of the Horterlana group. The color is a dark reddish-purple, flesh firm and meaty, deep yellow, clinging slightly to a small pit. Mr. Kerr claims many excellent qualities for this new plum and has named it in honor of Prof. F. A. Waugh, the author of Plums and Plum Culture."

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#### RED JUNE PLUM.

A Japanese plum introduced from Japan about 1887, under the name of "Shiro Smomo" and "Hytankayo." Stark Brothers obtained it under the name of Shiro Smoma and began propagating it and introduced it as Red June, in 1893. It is a strongly marked variety, ripening in advance of Abundance, and being a good shipper. It cooks well and makes an excellent variety for canning purposes. It is conical in shape and distinctly pointed; size medium or slightly above medium; surface smooth, glossy, carmine, deepening to dark wine red when fully ripe, and covered with a bluish-white bloom, stem of medium length and rather stout; skin thick, tenacious, slightly bitter. It is rather meaty, though tender and juicy; flavor subacid, pleasant; quality good.

The tree is an upright grower, vigorous and hardy, producing well in most plum growing sections. It should be planted with other varieties such as Burbank and Abundance to insure pollinization. It is very hardy and is said to be very promising where earliness and resistance to rot are important.

### WICKSON PLUM.

A Japanese type originating in this country, by Luther Burbank. It was introduced in 1893 by Mr. Burbank and has been widely distributed since that time. The variety is one of much promise and worthy of experimenting with.

In form it is oblong conical, sometimes distinctly pointed; size large to very large; color yellow, splashed with dark brownish red, giving it a very rich appearance; stem rather stout; skin thick, tenacious, rather acid; flesh firm and meaty when ready for market, but when fully ripe very juicy; flavor sweet aromatic; quality very good.

The tree is upright and leaves long and narrow. It is hardy and blooms abundantly. It is one of the early sorts and should be planted with such varieties as Red June, Burbank and Abundance to insure pollinization.

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### APPLES IN WISCONSIN.

Every Wisconsin farm should have an apple bearing orchard, sufficient at least to provide fruit in abundance for the family.

The remark sometimes heard, "I have tried to grow an orchard, but apples are a failure," is simply bosh. Wisconsin is an apple state and there is scarcely a farm in the state whereon apples enough for home use cannot be produced. Thousands of good bearing orchards in the state testify to this and if further proof is wanted a visit to any of the annual county fairs in the state will be sufficient.

When one man says apples cannot be grown and another in the same vicinity produces good fruit in abundance, is it not time to cease harping about failure and give some thought to right methods?

Good care is just as necessary with an orchard as with any other crop, and will pay just as well, and it is not much work to properly set out a small orchard of adapted varieties, and then to properly keep out June grass and live stock, and wind the trees in the fall as protection against rabbits and mice, and to occasionally fertilize, prune and spray.



It is a short job to go through an orchard of one or two hundred trees in the spring and cut out a line here and there to keep the tree well balanced and from overbearing. A day or two will suffice for such work, whereas if neglected for a number of years it will require much labor to properly prune, and will tax the tree severely and in the meantime the fruit will be small and inferior on account of overbearing and lack of sunshine, and, too, a heavy top makes a good lodging place for vermin, insects and fungus. A little pruning yearly is far better than occasional or no pruning.

Thousands of trees may be seen this year loaded with fruit that have never received any attention. Great brushy tops full of dead limbs, evidence of more top than the roots can sustain, trees standing in old tough sod, no fertilizing, cultivation or care, and yet nature has overcome this neglect and unfavorable conditions because of a favorable season, and Wisconsin climate and soil again bears evidence of an apple country.

Now is the time to begin to think and make preparations for setting out a small orchard next spring, and to give it decent care annually. Trees will die now and then in any orchard and in any country, and all such should be replaced without delay. Choose good stock from some reliable grower near home, and carefully set in a well pulverized and fertile soil, and cultivate the trees shallow the same as corn, to hold moisture and keep down weeds; grow some hoed crop between the rows, but be very particular about plowing, or cultivating deep near the trees.

If trees are mulched in the spring be sure to remove it after the hot dry weather is over, and loosen the soil about the trees with a hoe. Continual mulching will draw the roots too near the surface, endangering the life of the tree later on.

Cultivation about the trees with a hoe occasionally is better than mulching. It keeps the roots of the trees down in the soil, obviates danger from mice and moles working under the mulch, and from fire, and makes a more hardy, long lived tree.

When the trees are set, carefully cut off all bruised and broken roots with a sharp knife, and cut back the main branches of the top to correspond. Make the hole large and deep enough so that the roots may be spread in all directions and the tree planted fully as deep as it grew in the nursery. Work fine dirt all around the roots and moisten thoroughly, being careful that no air spaces are left about the roots.

It is not difficult to grow apple trees; in fact, it is easy and simple when right methods are pursued. But neglect will prove disastrous, as it will in any undertaking.—Wisconsin Agriculturist.

## REVIEW OF RUSSIAN APPLES.

Probably no other man has devoted so much time and given care and attention to Russian varieties of apples than A. G. Tuttle, of Baraboo, one of the pioneer horticulturists of our State Horticultural Society. Nearly four score years and ten he still takes pride in showing and exhibiting the Russians. Those in attendance at the recent State Fair could not help but admiring his display of over fifty different varieties. The following is a list of varieties grown and exhibited by him: Anisim-Alexander, Antonovka, Autumn Pear, Anisette, Arabskoe, Boiken, Beautiful Arcade, Barlof, Borsdof, Charlemof. Curly Spiced, Cross, Charlotten, thaler, Czar's Thorn, Duchess, Enormous, Glass Green, Golden White, Green Streaked, Getman, Heidorn's Sweet, Imperial Citron, Juicy White, Long Arcade, Lowland Raspberry, Lubsk's Queen, Longfield, Pokrov, Red Anis, Ratling, Red Wine, Raspberry, Revel, Red Cheeked, Romna, Rosy Little Turnip, Rosey, Switzer, Skrout, Turnipy Juicy, Titovka, Vochens Crimean, Vaslis Largest, White Cut, Winter Oporto, Yellow Anis, Yellow Transparent, Yellow Lowland, Yellow Lemon, Zolatorf and Zusoff's Winter.

In looking over the list of thirty-nine varieties of Apples recommended by our own State Horticultural Society, we find ten Russians recommended for planting in Wisconsin.

In Minnesota, in their recommended list of twenty for first and second degree of hardiness and for trial, we find nine Russians mentioned.

The Russians were imported into this country as early as 1835. Other importations followed at different times by Massachusetts Horticultural Society, the United States Department of Agricultural and the Iowa Agricultural College.

Those Russian varieties being mentioned the severe or "test" winter of 1835-6, 1872-3, 1885-6 and 1898-9 while other varieties were severely injured, soon became the standard of hardiness in the colder parts of the United States. In August, 1898, a commission from the states of Minnesota, Iowa, Wisconsin and South Dakota, met at La Crosse, Wisconsin, to simplify by the nomenclature of Russians, as they had become badly mixed by importations. In the cyclopedia of American Horticulture, by L. H. Bailey, John Craig has this to say of this meeting: "Fruit growers of the west, realizing that Americans should have a uniform system, at least in the nomenclature of these varieties, called the above meeting. They decided that it would be wise to attempt a grouping to be based upon family resemblance. In accordance with this the following statement was adopted: 'The varieties here grouped as members of the same family, while in a few cases differing somewhat in characteristic of tree, are so nearly identical in fruit, that for exhibition purposes and commercially they are practically the same and should be so considered.' It is to be regretted that a commission on nomenclature should take such a

radical stand as this, because the characteristics of a variety cannot be changed by voting to call it by the same name as the other member of the group which it most resembles, and almost, though not quite, duplicates. The trend of modern pomology is to preserve small differences; to differentiate rather than blend. The work of the future will consist in large part in studying small differences with a view of finding closer adaptations. The propriety of ignoring Russian nomenclature and the rule of priority is questionable, but in a measure is defensible on the grounds of a confused Russian nomenclature and the unpronounceableness of Russian names. The findings of the committee have on the whole met with approval of those interested in Russian apples."

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#### NOTES ON NATIVE PLUMS.

We are constantly in receipt of inquiries at the station from all parts of the United States, except possibly the Pacific coast region, concerning culture, varieties, etc., of the native plum. As most of the writers ask for lists of varieties, the following notes are offered. The largest native plum we have fruited is Brittlewood. This is as large or larger than Lombard. Quality good. Originated and disseminated by Theo. Williams, of Benson, Neb. The earliest variety that we have, at least of commercial importance, is the Aitkin; medium to large when properly thinned; remarkably thin skinned, for a native, and fair in quality. A very poor keeper, and very sure to be attacked by curculio and gougers. We have even considered the advisability of planting the Aitkin as "curculio traps." The Cheney resembles the Aitkin in most respects but is several days later. The bulk of the varieties that are grown here are mid-season, ripening from September 5th to October 10th, and here we find most of the good plums.

One of the best for market is Wyant. Medium to large; quality good; flesh firm, meaty, prolific and a reliable bearer; and attractive and always sells well. Surprise is a trifle larger than Wyant, a few

days earlier, and better in quality. With us it has not proved as productive as Wyant. Quaker is an old stand-by. Large and attractive and of high quality; very productive. Forest Rose is of the same type. Hawkeye, Stoddard, Wolf and New Ulm are all large and showy, all are coarse of flesh and sour. Hawkeye is largely planted in the west on account of its size and prolificacy, but is nevertheless a poor plum; Wyant will bear as well and in the long run outsell the Hawkeye. De Soto is too well known to need description, but is rarely included in our list of "best" plums, as there are so many better varieties. Rollingstone is medium to large and very productive. With us it is not high in quality. Beatty, Etta, Nellie Blanche, Silas Wilson, Smith, Kieth and North Star, are all excellent plums; of good size and high in quality. The sooner growers plant this class of plums, the sooner will native plums become popular. With the exception of Smith, the plums of the last named list are light in color, greenish yellow ground, splashed with bright red. A light colored skin seems to be associated with high quality, tender flesh and lack of astringency in the native plum. The least desirable color is the dark purplish red so dominant in the whole American species.

All of the varieties so far named belong to the American species, with the possible exception of Surprise and North Star, which bear marks of hybridity. This species is best adapted to the northwest. The flower buds of the Chicasa varieties, such as Pottawattamie and others are not reliably hardy here. Even if hardy it is doubtful whether they would ever be grown to any extent where the Americans succeed. The flesh of these varieties is soft and watery, with no decided flavor; in fact, an indifferent combination of sugar and water. This somewhat rambling account of varieties is gleaned wholly from observation in southern Wisconsin. It is probable that in other regions farther south or east the recommendations would need revision. If I were to plant an extensive orchard of native plums in this state next spring, I probably would plant largely of Brittlewood, Wyant, Quaker, Hammer, North Star, Beatty, Etta and Kieth, with a few Aitkin for early. That is, if I could obtain trees of all of these, which is somewhat doubtful, as most of them are

new varieties. In case of failure to get trees of the newer ones. I would plant extensively Wyant, Quaker, Surprise and Aitkin, and grow potatoes or some other crop until such time as the trees of the others were available, rather than attempt to build up a market on such "Ben Davis" varieties as Hawkeye and Stoddard.

FREDERIC CRANEFIELD,  
Wisconsin Exp. Station.

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### ROSES: THEIR SUCCESSFUL CULTIVATION AND VARIETIES.

1st. Sunlight.—The first requisite is plenty of sunlight. It will not do to plant them in a shaded place, for the sun is needed to warm the soil and stimulate the root system; it is needed to ripen the wood for the long sleep of winter, and in blossoming time to furnish the warmth that distils the delicate perfume and to impart the beauty of coloring that places the rose on its thorn as the queen of flowers.

2nd. Moisture.—The next most important requirement is moisture. This can only be made certain by some provision for irrigating the ground during the dry periods. It can be taken from the water system of the town, or a good and cheap plan is to have a tank or reservoir filled from a well by a windmill. Water should be applied by thoroughly soaking the ground so that it is full of moisture, much as a hard rain of several hours would do it. When in bloom the blossoms should not be showered too much, but the water should run on the ground in little ditches from one bush to another until it has taken up all that it will. The time to irrigate is before the ground is dry and suffering from thirst. Do not spray the surface of the ground and imagine that the roots have had enough. Be liberal when you do water them and then let them go until they need more. Usually the ground is wet enough early in the spring; but it is sometimes dry at that season, and the roots need a wetting the first thing after they are uncovered. During the month of October do not water the ground, but allow the growth to stop and the wood to ripen for winter.

3rd. Soil.—The ideal soil for roses is a good rich clay loam. They will do well in sandy soil if a little clay and plenty of rich

manure is mixed with it, and it is then generously watered. They will not do well in hard clay that is impervious to water or in gravel that drains it all away.

4th. Cultivation.—This is very important, for it helps to stimulate the action of the roots by quickly imparting to them the food and drink that is applied to the ground. After fertilizers are applied they should be cultivated in; and when the ground is irrigated it should be allowed to dry a little on the surface and then stirred to make it fine and loose so as to prevent evaporation and drying out. Surface cultivation should be given the ground at least once a week, from the time the bushes are uncovered until October.

5th. Protection.—In late fall, before severe freezing weather sets in, choose a dry time to cover the bushes. See that the ground is thoroughly wet so that the roots will not dry out during the winter, for it will be a long time before they will have another chance to take a drink.

In wintering roses the main thing is to keep the bushes dry. I have found the best way to do this is to first make a bed of dry straw or leaves for the bushes to lie on. It should be six or more inches deep. Bend the bushes over and lay them gently on the bed and cover them with two feet of dry straw, making it highest in the middle, much like the roof of a house. Then cover the straw with boards. Short pieces can be nailed to a ridge pole and to a strip at the lower end, making it quite steep so as to shed water easily; or, boards can be used horizontally, by commencing at the base of the straw on each side, lapping the boards an inch and using enough nails to hold them in place. A narrow board at the top can hold the two sides together. Put boards at the end to keep out the wet and to hold the straw in place. Leaves or hay can be used in place of straw. Do not uncover in the spring until freezing weather is over, but uncover before they start their growth. Where there is danger from mice, place poisoned grain where they will get it.

6th. Planting.—The best time to plant is in early spring, before the bushes have started to grow. If they are on their own roots, they should be set two to three inches deeper than they grew in the nursery; if they are budded roses, they should be set four to six inches deeper. Mud the roots in thick mud before planting and set them very firmly.

7th. Pruning.—Keep all old or dead branches cut out; and with budded roses be sure to keep all sprouts from the roots cut back deep in the ground, or they will take all growth from the top and cause it to dwarf and die. In the spring, prune the tops back to about four feet and cut off all the tops that look black or dry back to the fresh buds.

8th. What to Plant.—If one is careful to keep back the suckers, a budded rose will make the best growth and prove the best to blossom; and some roses are such poor growers that they can be grown successfully only by budding them on Manetti stock. Roses on their own roots are usually preferred, for if they live there will be no doubt as to their quality. They are produced by taking cuttings from the new growth and rooting them in sand. It is necessary to do this in a greenhouse.

9th. Disease and Insects.—As in everything else the old saying "An ounce of prevention is worth a pound of cure," holds good in this case. The best way to prevent disease in rose bushes is to give them good cultivation and do all that is necessary to secure a strong, vigorous growth. Disease always attacks the weak more quickly than the strong; and this fact must be carefully borne in mind, thorough cultivation is absolutely necessary in combating the ravages caused by disease and insects.

Sudden changes of temperature may cause mildew, and it cannot be prevented as it can in the greenhouse. Dusting the bushes with sulphur will assist in preventing it. Keep up the cultivation, furnish moisture, and as the weather grows warm again the plants will revive and outgrow the disease.

The Red Spider—Is most likely to attack the bushes when it is dry and warm. They are very small and are not discovered until they have become numerous. The bushes begin to look unhealthy, and the leaves have a sickly appearance and will begin to drop off unless the insects are killed before they have reached the last stages of disease. They can be controlled by spraying with cold water and keeping the bushes quite damp. Morning is the best time in which to do it, and the under part of the leaves require special attention.

The Aphis—Can be controlled by spraying with tobacco water.

The Rose-Thrip—A very small white fly or midge that is found on the under side of the leaves; can be destroyed by spraying with tobacco water. This also acts as a preventative of this pest.

The Rose Bug—Is a beetle which attacks the buds before they have had time to develop, and eats out the center. A poison to destroy these would need to be so strong that it would necessarily injure the plant; so the only alternative is to pick them off and destroy them as potato bugs are destroyed. Fortunately but few localities are troubled with the pest and persistent effort will abate the nuisance.

The Rose Slug—Is the most troublesome of all the pests that molest our outdoor roses, but a knowledge of the habits of its progenitor will enable the grower to eradicate it quickly. It is the larva of the saw-fly. This fly comes from the ground during the latter part of May when the rose foliage is reaching good form. The female deposits its eggs in incisions made in the leaves on the under side. These eggs hatch in from 12 to 15 days, and the little grub emerging therefrom at once begins to eat the leave. They are light green in color. An early application of white hellebore sprinkled on the bushes in the early morning while the foliage is damp is a good remedy. For all of these pests it is best to be ready and give them their medicine before they have had time to do much damage or increase in numbers. "The early bird catches the worm."

10th. Varieties.—In our climate Tea Roses are not hardy, but they will furnish beautiful flowers to those who are willing to undertake the necessary work and light expense requisite to grow them successfully. Some of the June and Moss roses are desirable and the Hybrid Perpetuals are very fine. The following list will be found reliable and desirable:

*Cinnamon Rose*: An old time favorite. Coming at a season when outdoor roses are scarce, its irregularity of form is willingly overlooked, and its appearance is greeted with kindly spirit.

*Old Blush*: Double, and a delicate blush pink. Very fragrant. It is so old that it is quite a novelty nowadays.

*The Wild Roses*: There is quite as great a variety in the shades of red among these as in the cultivated double varieties. In habit of growth they appear as low trailers, medium bushes and as climb-



ers. The flowers should never be cut, but left to mature fruit, as the bright colored haws are very ornamental, remaining on all winter.

*Scotch Roses*: Natives of England and Scotland; mainly desirable for their hardiness, Stanwell's being one of the best. Stanwell's Perpetual: Blush, medium size, double, delicately scented, foliage very small, nine to eleven leaflets; dark reddish brown wood, numerous small spines. A hybrid which blooms in the autumn.

### JUNE ROSES.

*Magna Charta*: Pink suffused with carmine; full globular; foliage and wood light green with numerous dark spines. A fragrant, excellent rose.

*Madam Plantier*: Pure white, above medium size, full. Produced in great abundance early in the season. Foliage rather small. Seven leaflets. One of the best white roses for hedges and for massing in groups.

*Harrison's Yellow*: Golden yellow; medium size, semi-double; generally has nine leaflets; a freer bloomer than Persian Yellow.

*Persian Yellow*: Bright yellow; small, nearly full, well formed, small foliage; faintly scented like the Sweet Brier; seven leaflets. The wood is chocolate brown in color, armed with numerous brown thorns. It is the finest of all hardy yellow roses.

### RUGOSA ROSES.

*Rugosa Alba*: Single, pure white flowers of five petals; highly scented; a splendid shrub.

*Rugosa Rubra*: Flowers single and of a most beautiful bright rosy crimson, succeeded by large berries of a rich rosy red color and a great addition to the ornamental character of the plant.

*Madam G. Bruant*: One of the finest of the new race of hybrids. In the bud state the flowers are long and pointed; when open, semi-double, pure white and fragrant, and produced freely in clusters at intervals throughout the summer. Exceptionally hardy and vigorous.

### MOSS ROSES.

*Salet Moss*: Light Rose, medium size, flat form, fairly good buds, very free bloomer.

*Crested Moss*: Deep pink colored buds, surrounded with a mossy fringe and crest. A fragrant and very beautiful rose.

*Countesse de Murinais* : White, tinged with flesh. Vigorous grower.

*Princess Adelaide* : Pale rose, medium size, not very mossy, but good in bud and flower; dark foliage which is often variegated. Foliage strong and vigorous.

*Glory of Mosses* : Pale rose, very large, full flat forms, not attractive in the bud. The foliage is very large.

#### CLIMBING ROSES.

*Prairie Queen* : Rosy-red, frequently with white stripes, medium or large size, double, foliage large, five leaflets, quite deeply serrated.

*Crimson Rambler* : Flowers are a bright, cheerful shade of crimson, and the great size of the clusters make it especially attractive. The flowers are double, about the size of a cherry blossom. A beautiful sight for about a month. A rapid grower. White, pink and yellow ramblers are very pretty, but not quite so hardy as above.

*Baltimore Belle* : Pale blush, changing to white; strong grower.

*Gem of the Prairie* : Rosy-red, occasionally blotched with white; large flat flowers, slightly fragrant.

*Seven Sisters* : Blush, tinged and striped with various shades; small or medium sized.

#### HYBRID PERPETUAL ROSES.

*General Jacqueminot* : Brilliant crimson, not full, but large and effective; fragrant and of excellent hardy habit.

*Paul Neyron* : Deep rose color, good tough foliage, wood rather smooth; by far the largest variety in cultivation. A free bloomer; very desirable as a garden rose.

*Alfred Colomb* : Carmine-crimson; large or very large, full; of fine globular form, extremely fragrant; green wood with occasional pale green thorns. Foliage large and handsome; A grand rose; the most useful in its class for general cultivation.

*Clio* : Flowers large of fine globular form, flesh color, shaded in the center with rosy pink; growth vigorous, handsome foliage, one of the best roses.

*Ulrich Brunner* : Brilliant cherry red, a very effective color; flowers of fine form and finish, carry well upon the plant. Petals of great substance; plant vigorous, hardy, and resists mildew.

*Baroness Rothschild*: Light pink, sometimes shaded with rose, large or very large, cupped form, very symmetrical, without fragrance. The wood is short jointed, thick, light green, armed with occasional light green thorns. One of the hardiest, but does not propagate from cuttings. A very distinct, beautiful rose, free blooming, and greatly valued both as an exhibition and a garden sort.

*Anne de Diasbach*: In color the most lovely shade of carmine; very large double flowers, fragrant. One of the hardiest. A very desirable garden rose.

*John Hopper*: Bright Rose with carmine center; large and full, semi-globular; light green thorns; stout, bushy growth. A free blooming standard sort.

*Margaret Dickson*: Of magnificent form; white with pale flesh; petals very large, shell shaped and of great substance; fragrant. A fine variety; foliage very large dark green.

*Marshal P. Wilder*: It is of vigorous growth, with healthy foliage; flowers large, semi-globular, full, well formed; color, cherry carmine, and very fragrant. It continues to bloom profusely long after the other remontants are out of flower. It is undoubtedly the finest in color.

*Mabel Morrison*: Flesh white, changing to pure white. In the autumn it is sometimes tinged with pink; semi-double, cup-shaped flowers. A useful garden rose.

*Marchioness of Londonderry*: Flowers of great size, measuring seven inches across; perfectly formed and carried on stout stems. Color, ivory white, petals of great substance, shell shaped and reflexed; free flowering; highly perfumed; growth vigorous and foliage very handsome. One of the finest roses.

*Baron de Bonstetten*: Velvety maroon shaded with deep crimson; very dark and rich in coloring. A grand rose in every respect.

*American Beauty*: Large, globular, deep pink, shaded with carmine; delicious odor; has proved to be a most desirable variety for forcing,

*Fisher Holmes*: May be briefly described as an improved General Jacqueminot; the flowers are fuller and more freely produced. A very valuable sort.

*Mme. Gabriel Luizet*: Pink, somewhat fragrant, large foliage; a promising kind, worthy of attention.

*General Washington*: Red, shaded with crimson, large, very full flat form; the flowers are often malformed, greatly lessening its

value. A very profuse bloomer, and when in perfection a very fine sort.

*Jean Liaband*: Crimson maroon illuminated with scarlet, large, full. A lovely rose, but shy in the autumn.

*Mrs. John Laing*: Soft Pink, large and of fine form produced on strong stems; exceedingly fragrant; flowers continuously in the open ground.

*Prince Camille de Rohan*: Deep velvety crimson; large, moderately full. A splendid rose.

*La France*: Delicate silver rose, changing to silvery pink; very large, full, of fine globular form; a most constant bloomer. The sweetest and most useful of all roses. None can surpass the delicacy of its coloring.

*Coquette des Blanches*: Pure white, sometimes faintly tinged with pink; flowers of medium size, somewhat flat, but full and very pretty; growth more bushy and symmetrical than any of the others, Later than the rest in coming into flower.

*Coquette des Alps*: White, slightly shaded with carmine; medium size; form semi-cupped; wood, long jointed. This and *Coquette des Blanches* the best white Hybrid Perpetuals.—Minnesota Horticulturist.

J. M. UNDERWOOD,  
Lake City

### SUGGESTIONS FROM FRUITMEN.

Let all the decayed fruit with old limbs, dead wood and other rubbish in orchard, be gathered and burned. They harbor disease germs and insects.

Fall plowing of the garden is advisable. Eggs of the cut worm moth are destroyed by exposure.

Owing to the heavy growth of weeds and grass there is unusual danger of fires doing damage in orchard and fruit field. Be prepared if dry weather should come to thoroughly protect your place.

There is so much rotting in potatoes that it is wise to store them for a few weeks in barn or granary. Then at the coming of heavy frosts they may have final sorting as they are removed to the cellar.

This is a good time to apply the manure to the raspberry patch,

A shovel full of well rotted fertilizer is not too much for every hill. The fall and spring rains will carry the strength to the roots where needed.

There is no danger of giving the currant and gooseberry too much top dressing. Weeds and grass kept out, and plenty of manure makes fine fruit.

If blue grass and clover are starting up in vineyard or small fruits better find time to remove them now. Of course you are busy, but you will be more so in the spring.

Squash and pumpkin for home use should be kept in a dry and cool place. Don't remove to cellar until extreme weather comes.

It is time now to pick the last of the late apples. They are injured if the heavy freezes soon to come find them on the tree. If you have plenty of cellar room wrap each apple in soft paper and lay them singly upon hanging shelves.

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### FRUIT CROP REPORTS.

The Houser, Onalaska : The apple crop in my vicinity was not very satisfactory the past season. Trees blighted badly except the Northwestern Greening, Wealthy and Utters, which bore a fair crop. All others more or less deformed and wormy.

A. L. Hatch, Sturgeon Bay : The leading varieties of apples in this vicinity are Yellow Transparent, Red Astrachan, Duchess, Wealthy, Pewaukee, Ben Davis, Snow, Tallman Sweet, Gideon, Hyslop, Whitney, Mann, and Eng. Golden Russett. I think one thousand kinds of apples can be successfully grown here on the peninsula. More than one hundred kinds are now fruited. The leading varieties of plums grown here are Lombard, Green, Monarch, Hudson, Rio, Purple Egg, Yellow Egg, Abundance, Burbank, Green Gage. The Abundance is proving very successful here and is very attractive as a market plum. In strawberries, Warfield, Wood, and Clyde take the lead. Strawberry culture will be much enlarged next season. The strawberry crop was the most profitable the past season, followed by cherries and next to these raspberries. Cherries are proving very successful where cared for properly and the output will be

steadily increased for several years. Early Richmond and Montmorency are the favorite kinds but sweet cherries can be grown here as is shown by the Biggarreaus now grown in many places. Altogether thirty carloads of small fruit were shipped from here the past season.

D. E. Pease, Richland Center : The leading varieties of apples in my vicinity are Duchess, McMahan, Wealthy, Orange Winter, Fameuse, McIntosh, Hibernial, Ben Davis and Longfield. In plums, De Soto, Abundance and Forest Garden. In cherries, Early Richmond, Eng. Morrello, and Montmorency. In strawberries, Clyde, Warfield, Wood, Jessie and Crescent. The past season has been a success with us in fruit excepting raspberries and blackberries.

H. H. Harris, Warrens : All fruit trees blossomed profusely, but most varieties were badly blighted by a snow storm while in bloom. Duchess, a fair crop. Wealthy, heavy crop in some orchards and Longfields the same. Haas and Golden Russet well loaded. Transcendent, Whitney and Briar Sweet a small crop. Plums scarce. Most varieties of apples that blossomed are badly blighted. Strawberries an average crop. Warfield and Splendid raised more than any other varieties. Sample, Ridgeway and Dunlap were profitable varieties. Enhance is getting to be a second cropper. There being uninjured blossoms and ripe fruit on the rows at this date (Oct. 23) and has been for more than a month. Raspberries a medium crop. Kansas more generally grown than any other black. Of the reds there are more Marlboros than other kinds. Not as hardy as London, but seems a healthier cane. All varieties have good canes for next season's crop. Blackberries a bountiful crop where vines were protected. Ancient Briton the most popular variety. Prices have been remunerative for all fruit. Most fields of strawberry plants set last spring look rather open and uneven. Will be crowded with late rooted runners. More apple trees set out last spring than any previous year and are looking well. Grapes a good crop on the few vines growing near hear.

A. J. Green, Black River Falls : Strawberries was rather a short crop but there was some very good yields in some localities of a good quality in general with good prices. The Warfield and the

Lovette seem to be the most favorable varieties although the Haverland and the Bubach as pistillates and the Brandywine does very well with me. There are lots of other varieties grown up here.

Raspberries was not a large crop as the canes were hurt a good deal in some localities by the dry spell we had last year and this year's growth is not as large as usual. The quality was good and brought good prices. The varieties are not very numerous with us the Malboro, I think takes the lead as to quality, quantity, and an all-around berry. There is some good yields of Londons, but they don't seem to be as favorable with most growers as the Marlboro, as for black the Gregg is the favorite.

Blackberries was a good crop, quality good, and brought good prices. The Britons seems to be what most growers favor. Currants and gooseberries, not many raised for shipping, but was a good quality.

There are not a great many grapes raised up here for the market but what I saw was fine except some was hurt by frost. Moores Early, I think, is as good as any, if not a little better.

There are not any large orchards with us. The Duchess was nice, also the Wolf River and several other varieties of winter apples. There is a good many young trees, lately set out, which have not commenced to bear yet, but all that I have seen looks promising. Taking this year yields with the prices we have had it has been a prosperous year I think.

W. S. Hagar, Hickory, Wis: Apples heavy crop and hung on the tree well. Quality in this county good and prices fair. Selling now from \$1.25 to \$2.00 per barrel, according to quality and variety. A few orchards sold to dealers on the trees, at good prices. Trees set last spring have made good growth and ripened the new wood well. About ninety-five per cent. of those set grew. Most profitable varieties are winter apples, as the markets are not close. About all varieties are grown here that are known I think. Having been sold by eastern nurseries.

Crops of small fruit were good and growth of new wood well ripened.

Strawberries have made a good stand of new plants. Even fall setting has done well. An unusual thing in northern Wisconsin.

Grapes ripened slowly and were not as good in flavor as usual. Black Cap tips did not root at the proper time but continued to grow.

This report is made for Oconto county as I am best informed in regard to fruit prospects here, but think that the same remarks will apply to Brown county. My young orchards in this county have made an excellent growth. Shoots from trees set this season making from one and one-half to two and one-half feet of new growth.

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### SHORT SAYINGS.

Cover the strawberry bed early with straw, marsh hay or any coarse litter.

Place protectors around the young fruit trees to ward off rabbits and mice.

See that all implements used are put under cover for the winter.

Look over your list of fruit crops and see which has been the most profitable one. Plant more of this.

Discard any and all unprofitable plants, and replace with some more profitable.

Roses should be laid down and covered with dirt. Better use dirt, and mice will not be apt to harbor in this as with straw and leaves.

Prune the grape vines. Don't be afraid to cut out too much. Severe pruning will never injure the grape vine.

Tulips and tube roses can be planted this fall before the ground freezes. After planting cover the bed with a heavy dressing of well rotted manure.

Start slips of the geranium, fuschia and begonia, for the winter, window garden.

The Alice grape is a late variety. Very productive and medium size, but only fair quality.

The apple crop in Illinois is about fifty per cent. Stock is fair quality. Mostly Ben Davis, Jonathan and Grimes Golden.

In selecting grape vines for planting, the first class yearlings are



preferred. Cut back to three buds. A vine of this sort generally has two set of roots and the upper set should be planted six inches below the surface of the soil.

The Long Jointer, Sixteen to One and Mary E. are three new strawberry seedlings originating at Iowa Falls, Iowa.

Geo. J. Kellogg thinks the Dunlap strawberry is the best he has struck for ten years. He ought to know. He has struck a good many.

It is said a good treatment for black knot is to wrap it up tightly with paper so as to exclude the light and air.

Spiraea Van Houtter is probably the best and finest of the spring blooming hardy Spiraeas. This seems to be the concise opinion of most gardeners. It is a handsome shrub and very hardy. Give it a sunny place not to close to other shrubs. A good mulch of manure late in the fall or early spring will be very beneficial. Occasionally thin out the old and weak branches.

H. E. Van Deman is president of the Tonoloway Orchard company located at Hancock, Maryland. The main object will be to raise apples for commercial purposes although pears, peaches, grapes and berries will be grown.

Mr. H. A. Terry, of Crescent, Iowa, says: "This year's fruiting of the Hawkeye plum on its own roots adds further proof that it is one of the most profitable varieties in cultivation."

A prominent grower of strawberries says that after eight years of trial the Bisel is equal to Crescent or Warfield.

Quite a number of the strawberry growers about Sparta, Wis., have been picking ripe strawberries this fall and selling from 20 cents to 30 cents a quart. A goodly number of beds were nearly white with blossoms. Whether this will effect the bearing of the fruit bed next season is to be seen.

#### STATE HORTICULTURAL MEETINGS, 1902 AND 1903.

Wisconsin State Horticultural Society—Madison, Wis.....	Feb. 2—5
J. L. Herbst, Secretary.	
Minnesota State Horticultural Society—Minneapolis, Minn.....	Dec. 2—5
A. W. Latham, Secretary.	
Iowa State Horticultural Society—Des Moines, Iowa.....	Dec. 9—12
Wesley Green, Secretary.	

Illinois State Horticultural Society—Champaign, Ill.....	Dec. 17—19
L. R. Bryant, Secretary.	
Michigan State Horticultural Society.....	Dec. 2—4
C. E. Bassett, Secretary.	
Northern Illinois Horticultural Society—Sterling.....	Dec. 2—3
Southern Illinois Horticultural Society—Anna.....	Nov. 25—27
Central Illinois Horticultural Society—Decatur.....	Dec. 10—11
Omro Horticultural Society—Omro, Wis.....	Nov. 19—21
American Apple Growers' Congress—St. Louis, Mo.....	Nov. 18—19

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