Apple Growing in Sauk County

W. V. Toole, Baraboo.

Apples were grown in Sauk County in a commercial way among the first places in the state. Those who have followed apple culture intelligently and persistently have found it profitable. The premiums won at many fairs and fruit shows have demonstrated the quality of the fruit, and the records of the Railway Company at the various shipping points prove the productiveness of the trees. Probably few persons in the state realize the extent of apple growing in the county, as there has never been any boom or special effort to advertise the region for the purpose of selling cheap lands at a high price for orcharding purposes.

According to the figures of the assessors of the various towns who collect statistics for a crop report at the time of taking the assessment, there were in Sauk County in the spring of 1911, over twelve hundred acres of bearing apple trees. During the last few years there has been a great deal of planting of orchards which are not yet bearing and a conservative estimate would place these at four hundred acres more, which would make a total of over sixteen hundred acres of apple orchards in the county.

There is a great variation in the soil in Sauk County, from the poorest of sand to rich prairie and limestone soils. The eastern part of the County is glaciated, while the rest of northern Wisconsin, Minnesota and the Dakotas. This wide range of markets gives the best of opportunity to the intelligent grower to dispose of his fruit to the best advantage.

There are quite a number of growers in the county who are growing apples on a commercial scale. I will mention a few of those I am most familiar with as an index to the state of the industry in the county.

A. D. Brown, proprietor of I. X. L. Fruit Farm, has about twelve acres of orchard about two miles southwest of Baraboo, on a good macadam road. The orchard is planted on glacial clay soil, with principally a northern and eastern exposure. Mr. Brown is an enthusiast in hunting out and testing seedling varieties of apples in an attempt to find the ideal apple for Wisconsin. Several of those tested out give promise of value.

In the past, Mr. Brown has been a strong friend of the Longfield and the Anisim as commercial varieties.

Especially his older plantings contain quite a number of these varieties. Later plantings contain a good percentage of Wealthy, as well as a great many Gem City. The latter variety is a winter apple of the Pippin type which Mr. Brown was largely instrumental in introducing.

Much of the fruit is marked locally direct to the consumer, while the balance is sold to retailers in different towns, and some sent to commission houses.
A point of interest on Mr. Brown's place is his storage cellar, built into the bank and made of concrete. Here fall apples may be stored safely for several weeks till a glut may be off the market and winter apples may be kept in the best of condition until spring.

A. K. Bassett of Ski-Hi Fruit Farm is about five miles south of Baraboo. His orchards are on the north side of the south range of quartzite bluffs. The soil is rich unglaciated clay well mixed with quartzite boulders. When Mr. Bassett bought his place a few years ago there was an old orchard covering about ten acres which had been neglected for many years. This he has trimmed up, sprayed, cultivated as much as possible, drained wet spots, and placed on a profitable basis. Bassett is the heaviest planter of young stock in this section, having set about forty acres in the last half dozen years, and his plan is to continue planting until at least one hundred acres are in orchard. More Fameuse have been planted than any other single variety, as these bear well and sell readily. He will also plant quite a number of Ben Davis, as these and other winter varieties sell at a good price and appear to bear a profitable amount of fruit. Besides those mentioned, many other varieties standard for Wisconsin have been planted as well as kinds not generally proven to be suited to this section.

Most of the fruit is marketed either direct to the consumer locally or through mail orders from other points, or else direct to the retailer in various smaller towns. The commission man is to be avoided in the future. A Buick auto truck is used to carry the fruit to market. Mr. Bassett is not a capitalist, but a young man who has earned by hard work of head and hands every cent he owns. He has a well defined plan and the courage of his convictions to carry out these plans.

J. Palmer has some fifty or more acres of orchard ranging from new planted trees to old orchards. His orchard is on the north side of the north range of quartzite bluffs over-looking the valley of the Baraboo river near where it joins the Wisconsin. Wealthy, Fameuse, McMahon and Northwestern Greenings are planted heavily, as well as other standard varieties. Mr. Palmer puts his whole attention to orcharding and has been very successful. The most of the fruit is marketed through commission men, and in addition to handling his own fruit, he markets the fruit of many of the other growers about Baraboo.

These are by no means all the important growers of apples in the county, but are given merely to show the commercial extent of apple growing in the section.

The greatest need around Baraboo at present is a co-operative organization for the marketing of apples, and other fruit and the purchase of supplies. Farmer's warehouses which handle apples, as well as potatoes and other farm produce exist at Reedsburg and La Vale, and have proved a good venture for the farmer.

About all of the co-operative fruit marketing associations in the state have started as a means of disposing of the strawberry crops when the crop was heavy and the price low. Strawberries are not grown so heavily about Baraboo now as formerly, so that this crop has not forced a co-operative association.

With the heavy plantings of apples throughout the country, and the great difference between the price paid by the consumer and the price received by the producer will make organization necessary here as elsewhere in the near future.

Land suitable for orcharding may be had in Sauk County at from fifty to one hundred and fifty dollars per acre for improved land, depending on the distance from railroad, quality of the land and extent of improvements.

---

The Home Orchard

Each year about this time, we preach our regular winter sermon about the home orchard.

It may not amount to much, but there is always a chance that a seed or two will fall on fertile ground.

Now to begin. Here is the text:

Every home owner, city or country, should have all the fruit his family can consume throughout the year. He is not a good citizen unless he plants trees and vines and makes an honest effort to care for them.

Twenty-four two-year-old apple trees, allowing twelve to die, twenty-four feet apart, three each of Duchess, Martha (crab), Wealthy, Fameuse, Plum Cider, Northwestern Greening, Windsor and Tolman.

Of course, this is not a perfect list and will not suit the nursery agent who calls on you, because he may have something much better than any of these, something just out budding or grafted in some new or novel fashion and very cheap at a dollar a tree—but, tell him the old fashioned kinds named in the State Horticultural Society fruit lists are good
enough for you and that these ought to sell at 25 to 35 cents a tree f. o. b. without any guarantee to replace or other nonsense. If you buy only half a dozen trees and place the expense of packing and delivery at your door on the firm you ought to pay more.

For plums order six trees, two each of Surprise, Rockford and De Soto or any others that suit your fancy. With the exception of a few counties in the north central part of the state a few cherries may go in the list, say three each of Early Richmond and Montmorency. Let the other fellow buy the pears and peaches, dwarf apples, novelties and “whole root” fakes.

The small fruit plantation is a simple matter. If you already have good thrifty plants of bush fruits and berries free from disease, stock for the new plantations may be had from these. Strong sucker plants from the blackberry and red raspberry patch may generally be had in abundance, but do not split old clumps, as these will not make good stock for the new bed. For blackcaps you will have to depend on chance sets unless plenty of tips were buried last August, as advised in Horticulture.

Sometimes good plants may be had from the old strawberry bed on the farm, but not always. If, perchance, a new bed was set out last spring the “sets” or runner plants from these are the ones to take, as this is the kind of stock the nurseryman uses. If the bed is more than a year old, matted and weedy, it will pay to buy a hundred plants.

Putronize Wisconsin nurseries. We have plenty of good, reliable firms in the state; many of them advertise in this paper. It’s quite likely that there are some good firms that don’t advertise in Wisconsin Horticulture, but as a consequence these don’t do much business.

Buy standard sorts and leave high priced novelties for the fellow who has money to burn. If you want information as to reliable varieties or reliable firms—ask questions. Not all “tree peddlers” or agents for nursery firms are dishonest, only a part of them. It is a business that lends itself readily to fraudulent practices, but Wisconsin is not now quite as comfortable for the fake nursery agent as it was ten years ago. Just apply a little of the same good judgment that you use in other business transactions and you may safely buy from nursery agents. If in doubt—ask questions. Then again, there are many good nursery firms that employ no agents, but sell by catalog or correspondence. Take your pick and—ask questions. Anyway, plant fruit trees and berry plants.

Hardy Roots

Should nurserymen use only hardy roots in grafting, or is cider mill stock equally good?

Prof. J. G. Moore takes the stand that buyers should demand trees on hardy roots. In a recent special bulletin Prof. Moore says:

"The past winter has taught many lessons to the Wisconsin fruit grower. Since the beginning of fruit growing in this state the paramount question relative to any variety has been, “Is it hardy?” and upon the answer to this question has depended whether or not the variety has been extensively planted in this state. Although this question has been the one of prime importance for the past forty years, the degree of advancement made in securing hardy trees has been markedly slow. Hardy varieties have been produced by the score, when these are grafted on non-hardy roots, they fail to live up to their reputation.

That the fruit grower and nurseryman must give more attention to the kind of stock upon which he buds or grafts his variety was clearly indicated by the amount of winter root killing which resulted last year. In Door county hundreds of trees of known hardy varieties were killed because the root system upon which they were growing was not hardy and therefore was killed by unfavorable climatic conditions, while the same varieties under identical conditions and on hardy roots were uninjured. The greatest loss to the grower by winter root killing is not merely the loss of his tree, but the loss of time which it has taken to grow the tree. If the tree is but one year planted, then the loss is comparatively small, but if it has been planted five or ten years, it is evident that the loss is very great.

To prevent this loss more attention is necessary to the kinds of roots upon which the tree is propagated. It becomes necessary, therefore, that the fruit grower demand of the nurseryman that he graft his plants upon roots which are known to be hardy, and while the cost to the fruit grower of a tree so grafted will be somewhat greater, in the long run the diminished loss will more than repay him for the additional cost. Whether or not the nurseryman propagates his stock in this way will depend entirely upon the fruit grower, for until the fruit grower demands stock so propagated the nurseryman will continue to use miscellaneous seedling roots of which nothing is known as to their parentage or hardiness."

As this seemed to be a matter of more than passing importance, the editor pricked Moore gently between the ribs, with a pen, and got the following:

"As to the matter of killing due to tender root system I would refer you to the Bingham and Lawrence Dudley orchard. An examination of this orchard in June showed that there had been very extensive root injury. Upon the statement of Messrs. Bingham and Lawrence these trees had started a growth in the spring, the worst ones making little growth, the others growing along for some time, but later both succumbed to the attack. Other trees were injured, but not entirely killed, while still others showed no injury whatever. Now, taking into consideration that these trees were the same variety, secured from the same nursery, planted on the same kind of soil, exposed to the same climatic conditions, and with other conditions similar, and so far as could be determined, the trees healthy last spring, there is but one cause to which we could attribute the fact that one tree in the row was killed outright, while the other next to it appeared at that time uninjured and making normal growth, and that is that one was on a hardy root and the other was not. Your contention that after the second year piece root
grafted apples have established a system on the cion is to an extent correct. In some instances this is true and it is doubtless true in all cases where cions of the piece root graft has been kept long and planted deeply in the nursery. However, this practice is not always followed and so we find that it is not always true that a piece root grafted tree is on its own root from the cion after the second year. As for budded trees which are secured from the east and south it is evident that the trees are on the original seedling root and has no roots from the cion.

In the first case supposing the tree to have thrown out roots from the the downward flow of sap tends towards increased fruitfulness as well as early fruiting in young trees. The union of the stock and cion acts as an obstruction to the ready flow of sap in the young tree and it would seem to have been an influence towards early fruit production. It is doubtless true that within a few years time the trees would outgrow the effects of this union. On the other hand in the case of the tree “on its own roots” there would be a minimizing if not an elimination of the effects of the obstruction of the flow of sap which it is evident would have a counter effect. Considering then the points that unless trees are on hardly roots, that the root system will be reduced, and thus cause a weakening of the tree if not its death, and granting that there would be some effect on the early fruiting by the obstruction of the flow of sap to the root system in those trees upon seedling roots it would seem to me that these are sufficient reasons for claiming that in buying nursery stock you should secure it on roots which are known to be hardy. It is clearly evident that the former of these two reasons is by far the more important, and if the latter be considered a negligible factor, the importance of the former would still seem to make it advisable that such precautions be taken.

I trust that I have made my position in this matter clear and I thoroughly believe that we will find it of great importance in this state as well as in other states in which trees are subject to winter killing to pay more attention to the character of the roots upon which our trees are propagated.”

JAMES G. MOORE.

Just to make more trouble, the matter was referred to President Bingham, who says:

“The trees that winter killed and those that did not were identical in hardiness of root system and the killing was entirely due to exposure. No cover crop and on knolls, etc., and some on budded stock, like our Dudleys; all budded and only one-third died, while all were same in propagation.

The grafted trees do not always root from cion in two years; they may or may not, but even some of them were killed. Grafted trees stood no better perhaps, than budded trees, and there were no trees half killed; all that were affected were killed outright in almost every instance, and all injury occurred where snow blew off or the wind had a good sweep to drive frost into the ground very deep. I had Dudley budded and I did not lose a tree. I protected with a few forks full of coarse manure in the fall. Had clean culture and light covering of snow. Still I lost no trees except a few body injured but roots were O. K. and produced strong roots.

All the injured cherry we had were the same, on knolls and exposed slopes where frost entered very deep and all cherry were propagated the same.”

D. E. BINGHAM.

Now Prof. Moore is digging up a wagon load of cold, hard, steely facts and will present same with his compliments at the Convention. However, Hansen of South Dakota also believes in hardy roots. Pyrus Baccata or something of that kind and says we are lying to ourselves when we say common seedling stock is good enough, and—well, never mind the rest, come to the Convention and trip Prof. Moore—if you can.

Western Apples

It’s quite a spell since we have said anything about Western apples and wouldn’t now, except that a copy of a Yakima daily paper has drifted this way that contains some mighty interesting reading.

A writer in the Yakima Daily Republican, November 11th, argues that the Western growers should use barrels instead of boxes for apples and gives as a reason the necessity of competing with the Eastern growers. He says in part:

“The reason they (the Eastern growers) have an advantage is not only because of cheaper freight rates to their markets but because they grow their apples on cheaper land and prepare them for market at much less cost.

“The C grade of apples produced here this year found a ready sale be
January, 1913

WISCONSIN HORTICULTURE

cause they were sold at a low price, the higher grades have been a constant drag on the market and so continue to this day.

"There are hundreds of cars of this stock now tramping the market for which market are sought in vain. If they are sold at all they go at a sacrifice."

This is a noble confession and ought to be good for the soul, but there is more to follow, this from the editor:

"A Fruitvale orchardist who has just placed 5,000 boxes of extra fancy stock in cold storage with a hope of encountering a better market after the holidays, who has been in the business five years and has made a success of it, while discussing the problem of cheap production recently gave a good illustration of the high cost of preparing fruit for market here. He said he had first separated his fancy stocks from the lower grades and packed it. Recently he began sorting his fancy from the C grades and culls. He kept an accurate account of the cost and found that for grading and packing the labor alone cost him eighteen cents a box, and his help was good efficient help that had been with him all the season. He said that after adding the cost of picking, boxes and paper, the cost of preparing these apples for market was not less than forty cents per box, and such fruit is now bringing in the local market but sixty to seventy-five cents per box."

We would add some comment, but we don't like to hurt the feelings of the people who are investing in these Western orchard enterprises.

Who Pays?

The rabbits were a great damage to me. As I had enough stock to fill my orders last spring, that I had set in nursery row, I did not order any new stock, and as I was sick I did not get out until warm weather to see it was all destroyed and too late to order. If I started after the rabbits they would hop through the fence on the next man's land before I got near them. I was liable to a fine if I shot them, so I think by good rights the state owes me seventy-five to one hundred dollars, as much as one farmer owes another for damage his stock does. As the state protects rabbits, I think they ought to pay me for the damage their pets done me. They destroyed twenty-twó three and four year old apple trees and eight apple trees that had from one to three bushels of apples the year before and cut off to the ground about fifty dollars' worth of choice shrubbery that I was carrying over for spring delivery. One hundred dollars would not pay me for the damage these pets, rabbits, destroyed for me. They did not leave a single tree; took all the bark clear to the ground." - H. F. Marsh.

Let's Hire Him by the Year

Racine, Wis., Dec. 6.—Frank Hinse ate a barrel of apples in ten days, thereby winning a wager of $50 and a free membership in the Windpoint Gun club, and gaining seventeen pounds in weight.—News Item.

A Dynamite Experiment

RENEWING AN OLD ORCHARD

After several years of unsuccessful attempts to renew my old orchard where trees had died out, having read considerable literature on planting trees with dynamite, I resolved to try my luck and this last season I had thirty vacant spaces where old trees had died out and new ones planted had made a feebie growth. I first made a hole with a crowbar where the tree was to be planted, to a depth of about twenty-four to thirty inches and inserted about one-half stick of 40 per cent dynamite and exploded with a fuse. I then took a bar and punched down the soil so as to leave no crevices in the earth loosened by the explosive.

Before planting, I threw in several shovelfuls of fresh soil taken some distance away from the tree. The trees planted in the dynamited holes were carefully compared with those planted in spaded holes previous seasons in regard to vigor and amount of growth, and it was found that the trees planted with dynamite made more growth in one season than those in the spaded holes in two. I believe I have solved the problem of resetting an old orchard. If any of the readers of HORTICULTURE have had any experience in replanting an old orchard I would be pleased to hear from them through the columns of WISCONSIN HORTICULTURE.

Everett G. Tullidge.
Oakfield, Wis.

Note.—This experience is valuable and answers, in part, many questions that have come to the editor's desk of late, but it does not wholly settle the question; in order to do that, trees should be selected as nearly alike as possible, planted on soil and conditions as nearly uniform as possible, except as to method of opening the holes; one-half to be dynamited and one-half spaded. Most important of all, the trees should all be planted the same day and not a year later.

See the Power Sprayers

For the first time in the history of the Society there will be an exhibit of Spray pumps, spray materials, fruit packages, tools, etc. The large store building, corner of Carroll and Millin Streets, one block from the Free Library, the Findlay Store, has been rented for Convention week and according to present prospects will be completely filled.

Five firms will exhibit both power and hand sprayers, as follows:

Hayes Pump & Planter Co.,
Galva, Ill.

Field Force Pump Co.,
Elmira, N. Y.

Fuller & Johnson Co.,
Madison, Wis.

F. E. Myers & Bro.,
Ashland, Ohio.

"Friend" Mfg. Co.,
Gasport, N. Y.

This will be the time and the place to buy a spray pump to suit your needs.

The box makers will also be on hand with a full line of samples as well as the "poison squad" and "dope fiends." Pruning tools of all kinds and various horticultural sundries will be side lines. Come and take a look.
One Thought: What will Wisconsin Do?

One of the fundamental requirements of any science is a stable nomenclature. That American Pomology is getting upon a sound footing in this respect is quite evident from the noticeable changes that have been taking place in the catalogs of the nursery trade during the past few years.

With the exception of a few firms the general sentiment appears to be in line with the recommendations of the American Pomological Society in this matter of properly naming fruits. If every user of pomological names, every cataloger, every writer and every talker about fruits would take a little time and use a little effort to familiarize himself with the recommendations of the A. P. S. on this subject we should soon have a very simple, definite and same fruit nomenclature.

In connection with this thought I may say that the U. S. Department of Agriculture is conducting extensive research work in this subject. It is endeavoring to establish complete records of the history, parentage, synonymy, description, distribution and behavior of all named varieties of our cultivated fruits. In this work the department relies very largely upon the originators, introducers and distributors of new varieties for data upon the points covered in its investigation as above indicated.

In fact, in recent years the office of pomology has become a registration bureau for the names, descriptions and history of new varieties. Its suggestions as to naming in many instances have prevented serious and annoying duplication and unintentional loss to both dealer and planter. It would be of inestimable benefit to the fruit growing industry of the nation if this office could be made a clearing house for the registration of all new varieties as it is now for all problems of nomenclature, descriptions and varietal history.

Wisconsin may have no serious problems in these matters but unless active measures are taken to minimize the confusion, duplication and misrepresentation, often unconsciously, a time will come when planters will suffer seriously from the use of misapplied or wrong names.

One of the ways to avoid continuing to make errors in this matter is to put into practice the rules adopted by the American Pomological Society; record all new varieties with the office of pomology in Washington, and in case of doubt of names of old or little known varieties to send specimens of the fruit to the same office for identification.

The recent step taken by Congress in the passage of the Sulzer bill standardizing the size of the apple barrel and its contents, is a long move in the direction of the governmental standardization of fruits and fruit packages. Now that we have one standard package, three standard sizes, and regulations governing the character of the contents it is but a short step to the designation of other packages and other requirements.

It is but reasonable to expect that later legislation will add to these requirements by explicitly defining the characters which are now merely indicated in broad general terms.

How will the apple grower, who is uninformed as to varieties know what product is well grown, of good color, and normal shape for the variety? These characters sooner or later must be defined in such terms as may be understood by the average grower and even then he must be made acquainted with varieties. Laws in time will cover the subject of branding with variety names as well as size, color, form and condition.

It is none too early to begin getting ready for this condition. There is a tremendous amount of work to be done in the education of both growers and consumers before either will be able to cope intelligently with such laws in this matter as certain must come at no distant date.

There can be no question that the development of the parcels post will result in the marketing of large quantities of fruits in small closed packages, direct from the grower or small packer. It appears certain that there is to be a largely increased quantity in small closed packages distributed from the market place, store and salesroom.

The population of our cities is increasing at an astonishing pace. Hundreds of thousands of these city dwellers are housed in apartments of from three to five small rooms with little if any provisions for storage, and especially the storage of fruit or other perishable products. These people, with their sedentary lives and brick-wall-ashphalt-pavement environment are large consumers of fruit.

Their systems must have a food of this character to balance the shortage that they endure in other directions. If they cannot have the ozone, sunshine and wholesome open-air exercise of the country, then they must have a food that embodies the essentials of these things—fruits. Fruits do their best service to the system when they are fully mature and fresh. Many of these city folks scarcely ever have an opportunity to taste fruit at its best.

From data gathered from the “push carts” of our cities it seems safe to assert that over eighty per cent of the fruit sold to clerks and wage earners for luncheon or other repast are of poor quality either as a result of long storage, exposure, or too early harvesting.

If these people could purchase good fruit in prime condition delivered at their own door in small quantities they would become vastly larger consumers of this product. Over nine tenths of these fruit-hungry people would be absolutely lost if they had to rely upon their own knowledge of what varieties of fruit to order for dessert or cooking purposes.
At the fruit-stands and most stores they buy apples, rarely Wealthy, Jonathan, Winesap—always just apples.

The eye is relied upon to determine which one of the three or four kinds or varieties offered shall be purchased. Red apples; yellow pears; blue plums! Does not such a condition appeal to the fruit grower, the man who must have Grimes Golden, Seckel, Bavay, or some other equally good variety that does not conform to popular ideas as to color?

Are Wisconsin growers aware of the great work to be done along these lines? If so, what are they doing to help the situation? Would it not be well for the State Society at its next meeting to appoint a special committee to consider what may be done by the fruit growers of the state to further a more exact knowledge of varieties; advance the work of purifying fruit nomenclature; promote standardization of fruit packages and their contents; and to aid the public to obtain a more exact and discriminating knowledge of varieties and their respective merits for consumption?

E. R. Lake.


Climate and Fruit in Wisconsin

The production of fruit is influenced by the character of the climate in several ways. Among the desirable climatic conditions for tree fruits are the following:

Freedom from late frost, with cool weather in the spring to retard bud development until the danger is past.

Clear and not too warm summer weather, making possible the development of good color and quality.

Prolonged, cool falls, permitting the ripening of the wood.

Sufficient humidity in the atmosphere during winter, and freedom from abnormally low temperatures, thus protecting the moisture of the tree.

These conditions are usually found in the vicinity of large bodies of water, especially on the windward side. The large lakes retard the advance of warm weather in the spring and cold weather in the fall, modify cold waves, and increase the humidity. In addition to these beneficial influences of large bodies of water, locations on hill slopes from which cold air readily drains are also desirable, since local frosts frequently occur on bottom lands into which the cold air has flowed and accumulated.

These climatic conditions are possibly best met in Wisconsin in the Door Peninsula, projecting into Lake Michigan, and the Bayfield Peninsula, together with the Apostle Islands, which project into Lake Superior. Both of these regions exhibit cool, retarded springs, mild and clear summers, prolonged autumns, and clear, steady winters with abundant snow, not so dry as to kill the fruit buds. A lake slope, protected from the wind, is preferable in these sections.

Both of these regions are now experiencing rapid horticultural development, the Door Peninsula being somewhat in advance owing to its longer settlement. The hardy varieties of apples, such as the Wealthy and Duchess, tho of slower growth than further south, color well, and possess remarkable keeping qualities; the Wealthy and similar varieties remaining in good condition until January, and sometimes until March in the Bayfield region. Crab apples also do well. The sour cherries, such as the Early Richmond and Montmorency, strawberies, and the bush fruits appear peculiarly adapted to the climatic conditions of these regions, possessing in common with all northern grown crops unusual flavor and keeping qualities.

Owing to the lateness of the season on the Bayfield Peninsula and the adjacent islands, fruit is much later in ripening, than further south and inland. The growing of small fruits for the late market is already becoming an important industry, and it can undoubtedly be very greatly extended. Strawberries of the finest color, and keeping qualities are available for shipment from two to three weeks after the crop from other districts has been exhausted. Wisconsin Bulletin No. 223.

A dollar in time saves nine—letters from the secretary. Renew your membership today.

The Cooking School

Miss Abby Marlett, head of the Home Economics Department of the University, begs to announce to all out-of-town ladies attending the Convention, a series of demonstrations in cooking fruit.

These lessons have been arranged especially for the Horticultural Society and will be given free of charge to our members. The school will be held at Lathrop Hall.

The ladies of the Madison Horticultural Society will see to all details and take visitors in charge, the same as last year. In addition to the cooking school, Miss Marlett will speak at the Thursday evening session on First Aid to the Housewife.

Luther Burbank

Luther Burbank, who produced the Burbank potato, who made the spineless cactus profitable, and has toyed with Nature in thousands of other successful experiments, is about to publish his first books.

The potato he produced adds $17,000,000 annually to America's agriculture, according to the United States Department of Agriculture; his spineless cactus has produced $1,200 worth of denatured alcohol per acre; his walnut tree grew eighty feet high and six feet around in seventeen years. He has improved the prune until California now produces 200,000,000 pounds annually, enabling the United States to export 50,000,000 net pounds annually, though twenty years ago we imported nearly that many. His thornless and white blackberries and cobleslorn show his mastery of the secrets of plant breeding. One of his apple trees has borne a thousand varieties and a cherry tree has borne two hundred varieties. The Burbank rose and the Shasta daisy are results of patient crossing and selection of ordinary plants.

Notes have been carefully made throughout his forty years of experience, but he has heretofore published no books. Now he is to tell in a popular but scientifically accurate way, what he has accomplished, the details of his methods, and the problems yet unsolved.
The exhibit of spray pumps will be worth the expense of the trip.

Some class to that new heading on page one! Miss Jennie Pitman, of Madison, is the artist.

The secretary requests members to send to this office statements of damage to nursery stock, fruit trees or gardens by deer, rabbits or any other protected game. Do not overestimate damage and give date and other particulars of loss.

Hier Wird Deutsch Gesprochen

Leser dieser Zeitung welche lieber Deutsch als Englisch schreiben, mögen dem Sekretär in Deutsch schreiben. Briefe werden in Deutsch oder Englisch beantwortet, wie verlangt. Wenn der Verfasser es wünscht, werden Deutsche Artikel für die Zeitung überetzt.

F. Cranefield

Ask the Law Makers

To fix the weight of a bushel of apples at 44 pounds.

Make the rabbit an outlaw.

Provide that owners of orchards and gardens shall receive compensation in full for damage done by protected game.

No closed season for deer in Bayfield, Sauk and Door counties.

Premiums

The premium list has been extended this year to include a fourth premium on plates and a third premium on pecks as well as a substantial increase in sweepstakes and peck premiums. In all $177 is offered. Under the new rule laid down by the Board of Managers this year, all fruit entered for premiums becomes the property of the Society. Some objections have been raised to this and the suggestion offered that the rule should apply only to the prize winning fruit. The executive committee will be in session Wednesday morning of Convention week, when protests and suggestions may be heard. If you have good fruit and cannot come, send it. Charges prepaid, to the secretary, who will enter and stage it properly.

The Convention

The program in full appears elsewhere. It is well worth careful study. One of the most encouraging features is the increasing attendance at both annual and summer meetings.

There was a time, many moons ago, when the attendance at the Convention was limited to the officers, executive committee and speakers, but now we have a full house.

It's hardly worth while going over the program in detail; it's all worth while. Come and get the benefits.

Another Chestnut

Editor of Wisconsin Horticulture:

An article in Horticulture of December that I just received inquires about the sweet Chestnut.

Ten years ago I stopped with a friend of mine in Waupaca County, near Fremont, in September, and he had two sweet Chestnut trees. If I remember right they were about eight inches through and were loaded with as many chestnuts as you could find in some state where they grow natural, and the trees were loaded as full of as many nuts as I saw in Pennsylvania on trees that were in all sizes from small trees to four feet through. There is one here in Langlade County, right here in the city of Antigo, near the south part of the city. It stands near the street and all the protection it gets in the winter is the west and northwest wind and it has stood there I think about nine or ten years and has never killed back a single bud, and this year it made a better growth than in any previous year. It has no care; it stands in the sod near the street. As this is well north in the state, I think it is very well adapted to northern Wisconsin soil.

H. F. Marsh

Wrapping Apples

It is said that apples may be kept two years by wrapping them in newspaper so as to exclude the air. The newspaper must, however, be on which the subscription is paid in full or the dampness resulting from the "due" will cause the fruit to spoil.

Poynette Press.
Israel, 1913

WISCONSIN HORTICULTURE

Wisconsin State Horticultural Society
ANNUAL CONVENTION
TO BE HELD AT
Madison, January 8, 9 and 10, 1913

We will meet at the Madison Free Library, corner of Dayton and Carroll Sts. The Capitol Hotel, King St., will be headquarters for officers, members and visiting delegates. Rates $2.50 to $3.50 per day. American plan.

First Session, Wednesday afternoon, January 8.

PROGRAM

Wednesday afternoon, 2:00 o'clock.

Address.................Hon. C. P. Cary, State Supt. of Public Instruction
Introduction of Delegates from Minnesota, Iowa, Illinois, Northern Illinois, and Northeastern Iowa Societies

Cider Making ..................C. E. Tuttle, Baraboo
A By-product of the Apple Orchard—Evaporated Apples ..............
..............................E. W. Catchpole, North Rose, N. Y.
Hardy Stocks .....................Prof. J. G. Moore

Wednesday evening, 7:30 o'clock.

Burrill on Birds, an illustrated lecture

Thursday forenoon.

President's Address Report of Secretary Report of Treasurer
Report of Chairman Trial Orchard Committee
Report of Special Committees
Election of Officers and Executive Committee

Exhibiting and Scoring Vegetables ..............N. A. Rasmussen, Oshkosh
Asparagus and Rhubarb .....................C. Philipson, Oshkosh
Succession of Crops in the Garden .............H. O. Cooper, Oshkosh

Thursday afternoon.

Assemble in Lecture Room, Horticulture Building, U. of W., 2:00 o'clock

Welcome.........................Prof. J. G. Moore
The Economical Construction of Spray Pumps...............Prof. C. A. Ocock

"The Truth About Lime Sulphur as a Summer Spray"
Discussion Led by D. E. Bingham; testimony by A. W. Lawrence, J. G. Milward, L. R. Jones, and others

Students' Contest

The State Horticultural Society offers Forty Dollars in Prizes for the five best five-minute talks by students in the Horticultural Department of the University.

Inspection of Building

Thursday evening, at the Madison Free Library

Ladies' Session, Mrs. L. H. Palmer, presiding
Papers by Miss Abby Marlatt; Miss Flora Rich, Baraboo; Miss Ruth Burrell, Eau Claire; Miss Bernice Hatch, Sturgeon Bay; Mrs. E. Roloff, Madison; Mrs. L. H. Palmer, Baraboo.

A special program for this session will be distributed Thursday afternoon.

GRAPES VINES
Gooseberries and Currants. Best varieties and finest grade of stock. Guaranteed true. Prepared to meet the demands of large and small growers and country estates. Largest growers of grape vines and small fruit in the country.

Send for Free Book
T. S. HUBBARD
FREDONIA, N. Y.

McKay Nursery Company
PARDEEVILLE, WIS.

Offer a Complete line of

HARDY NURSERY STOCK
FOR SPRING 1913

If interested in planting FRUIT TREES, SMALL FRUITS or ORNAMENTALS, write us for CATALOGUE and PRICES. You will find our prices consistent with quality of stock offered.

NURSERIES AT
WATERLOO, WISCONSIN

Kellogg's Nursery

Oldest Nursery in Wisconsin

Our stock is grown right, dug right, packed right, and by no means least, the

PRICES ARE RIGHT

Our Specialties are Small Fruits and Fruit Trees

Apples singly or by the 1000
Currants by the doz. or 25,000
Strawberries by doz. or 500,000

FIFTY-EIGHTH YEAR

Get our price list before you place your order and save money.

Address Box 77
KELLOGG'S NURSERY
Janesville, Wisconsin
Friday forenoon.

Co-Operative Marketing


Friday afternoon.

Our Ideals........................................ Wm. Toole, Baraboo Mushroom Culture................................ A. Martinii, Lake Geneva All the Herbaceous Perennials Worth Growing....... Wm. Toole, Baraboo

Some Lantern Views

Students’ Contest

Don’t miss it. Some of the boys have been working two months on their essays. Any student in the Agricultural College who has taken horticulture and is above the first year in the long and middle courses can enter.

The manuscripts must be over five hundred words in length and must be submitted to Prof. J. G. Moore before January 7th. Ten of these manuscripts will be chosen for the final competition.

The prizes are $8 for the first; $6 for the second; $4 for the third, and $2 for the fourth place.

Apples Wrapped and Labeled

All apples shipped by the Yakima Valley Fruit Growers’ Association are graded according to printed rules, wrapped in paper, and labeled with size, grade, variety, grower’s name, and packer’s number. Association labels are used on Extra Fancy and Fancy apples only. Each member enters into a contract appointing the association as his agent to sell all fruit shipped by him. He turns over all of his fruit to be packed by the association or under supervision of its representative. When fruit is sold, a commission is retained for running expenses, and also a fixed amount per package of fruit to make a surplus fund for the financing of the association. In lieu of this fixed amount, negotiable notes payable in three years are issued to the growers; thus providing an ever renewing, ever liquidating surplus fund with which to carry on the business without borr-
PREMIUM LIST
of the
Wisconsin State Horticultural Society

The Following Premiums are Offered for Exhibits of Fruit at the Annual Convention

Madison, January 8, 9, 10, 1913

1. Best collection of apples, not less than 15 varieties $20.00 $10.00 $6.00 $4.00
2. Best 5 plates (5 varieties) commercial apples for Wisconsin 5.00 3.00 2.00 1.00
3. Best Plate Avista 1.00 75 50 25
4. Best Plate Baldwin 1.00 75 50 25
5. Best Plate Ben Davis 1.00 75 50 25
6. Best Plate Dudley 1.00 75 50 25
7. Best Plate Eureka 1.00 75 50 25
8. Best Plate Fall Orange 1.00 75 50 25
9. Best Plate Fameuse 1.00 75 50 25
10. Best Plate Gano 1.00 75 50 25
11. Best Plate Gem 1.00 75 50 25
12. Best Plate Gideon 1.00 75 50 25
13. Best Plate Golden Russet 1.00 75 50 25
14. Best Plate Hibernal 1.00 75 50 25
15. Best Plate Jonathan 1.00 75 50 25
16. Best Plate Longfield 1.00 75 50 25
17. Best Plate Malinda 1.00 75 50 25
18. Best Plate Mann 1.00 75 50 25
19. Best Plate McIntosh 1.00 75 50 25
20. Best Plate McMahon 1.00 75 50 25
21. Best Plate Milwaukee 1.00 75 50 25
22. Best Plate Newell 1.00 75 50 25
23. Best Plate Northern Spy 1.00 75 50 25
24. Best Plate Northwestern Greening 1.00 75 50 25
25. Best Plate Patten 1.00 75 50 25
26. Best Plate Pewaukee 1.00 75 50 25
27. Best Plate Plumb Cider 1.00 75 50 25
28. Best Plate Seek-no-Furthe 1.00 75 50 25
29. Best Plate Scott Winter 1.00 75 50 25
30. Best Plate Fall Spitzenberg 1.00 75 50 25
31. Best Plate Tolman 1.00 75 50 25
32. Best Plate Twenty Ounce 1.00 75 50 25
33. Best Plate Utter 1.00 75 50 25
34. Best Plate Wagener 1.00 75 50 25
35. Best Plate Walbridge 1.00 75 50 25
36. Best Plate Wealthy 1.00 75 50 25
37. Best Plate Winesap 1.00 75 50 25
38. Best Plate Windsor 1.00 75 50 25

THE HAWKS NURSERY CO.
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, WISCONSIN

Vincennes Nurseries
Vincennes, Indiana

W. C. REED, PROPRIETOR

Cherry Trees by the 100 or 100000

The Growing of Cherry Trees has been our Specialty for Years. Our soil and method of growing produces a Tree that is not excelled by any one. Splendid blocks of twoyear 5 to 7 foot trees and oneyear 4 to 5 foot trees. Early Richmond, Montmorency and other leading varieties by the 100 or car load. We also grow a general line of other Nursery stock. Personal inspection invited. Correspondence solicited.
39. Best Plate Wolf River ................................ $1.00  
40. Best peck of each of the following varieties: Dudley, Fameuse, Gano, Gem, Golden Russet, Jonathan, McIntosh, McMahah, N. W. Greeneing, Tolman, Wealthy, Windsor and Wolf River ........................................ 3.00  
41. Best Exhibit Pears .............................................. 1.00  
42. Best Exhibit Crabs .............................................. 1.00  
43. Best Exhibit Grapes ............................................. 1.00  
44. Best Plate Seedling Apples .................................... 2.00  

VEGETABLES.
1st 2d 3d


Best collection, not less than 10 entries .................... $5.00  
1. Best 6 Blood Turnip Beets ................................ 1.00  
2. Best 3 Round Turnips ........................................ 1.00  
3. Best 3 Rutabagas ............................................ 1.00  
4. Best 6 Chantenay Carrots ................................ 1.00  
5. Best 6 Short Horn Carrots ................................ 1.00  
6. Best 6 Salsify ................................................ 1.00  
7. Best 3 Winter Cabbage .................................... 1.00  
8. Best 3 Red Cabbage ....................................... 1.00  
9. Best 6 Ears Pop Corn ..................................... 1.00  
10. Best 6 Red Onions ........................................ 1.00  
11. Best 6 Yellow Danvers Onion ............................ 1.00  
12. Best 6 White Onions ....................................... 1.00  
13. Best 6 Gibraltar Onions ................................ 1.00  
14. Best 6 Winter Radishes ................................ 1.00  
15. Best 6 Parsnips ............................................ 1.00  
16. Best 6 Peppers ............................................ 1.00  

RULES OF ENTRY.

1. All entries must be filed with the secretary before 5 P. M., Wednesday, January 8.
2. Fruit must be arranged ready for judges by 9 A. M., Thursday, January 9.
3. Four apples constitute a plate, no more, no less.
4. Separate samples must be furnished for each entry, except for No. 1, which may include all entries.
5. Competition open to all residents of Wisconsin, but premiums paid only to members. Successful exhibitors, if not members, must forward fee for membership before receiving check for premium; fee for annual membership, one dollar.

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.

All fruit entered for premiums becomes the property of the Society.

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

STUDENTS' JUDGING CONTEST.

Forty dollars in prizes will be awarded to students in the long and middle courses, Horticultural Department, College of Agriculture, for the best scores in identifying and judging varieties of fruit on exhibit.

Under rules prepared by Prof. J. G. Moore.

Final awards to be decided by a judge appointed by the president.

FRUIT FARM FOR SALE

Seventy acres, 30 cleared: 1 ½ miles from postoffice Washburn; ½ mile from Bay: 10 acres orchard planted spring of 1912; 500 apple, every tree alive and thrifty, 250 McIntosh, rest McMahah, Dudley and other standard kinds: 300 cherry, Richmond and Montmorency: 200 European plums. Soil clay loam, land well fenced with woven wire. Beautiful building site overlooking Bay and city of Washburn. Price exactly same per acre as asked for adjoining unimproved land. Further information write Box 555, Madison, Wis.

FREE AN 84-PAGE BOOK ON

"How to Plant and Improve the Home and Orchard"

will be mailed free on request to all contemplating planting fruit trees and ornamentals in the spring of 1915, together with our complete catalogue of

CHASE'S

HARDY TREES and SHRUBS

backed by fifty-six years of horticultural experience. Be sure and get this valuable book. A request brings it.

CHASE BROTHERS COMPANY

The Rochester Nurseries, Rochester, N. Y.

Door County Fruit Lands FOR SALE

Also Cottages and Bay Shore Lots

BARGAINS

Write to C. R. Sewquist & Son, Sister Bay, Wis.

KNOX NURSERIES

(Established in 1861)

Make a specialty of Cherry Trees. They strongly recommend One Year Cherry Trees because they are stocky, well headed, well rooted thrifty and vigorous. Plenty of Two Year for those who prefer the larger trees. They also have a nice lot of Apple in northern sorts.

A trial order will convince any one of their quality.

H. M. SIMPSON & SONS

Vincennes, Indiana.
Cranberry Growing in Wisconsin.

Wisconsin has grown 12 per cent of the cranberries of the United States during the past decade. Wisconsin offers rare natural resources for cranberry production and it is due to the lack of proper methods of growing and culture which has kept more capital out of the business and prevented Wisconsin from taking a more important place as a cranberry state. There are thousands of acres of marsh land in the northern part of the state admirably suited to cranberry culture which are not being put to any use at all. Wisconsin growers will have to change their methods of culture and follow the clean culture as they do in the eastern marshes and only when they do this will they be sure of good crops and safe returns on the capital invested.

Potash from Kelp.

A couple years ago the U. S. government sent out several men to look up potash deposits and in the search it was found that the beds of sea weed or kelp along the Pacific coast contained a high percentage of potassium. Work is being done in extracting the potash and it is estimated that the yearly supply will amount to millions of dollars to the country making it unnecessary to send to Germany for potash as has been done in the past. Potash is important as a fertilizer for all kinds of fruit and it is hoped other deposits will be discovered before long thus lowering the price of this valuable element.

Cabbage Diseases.

Wisconsin's great cabbage industry is threatened by the introduction of several destructive cabbage diseases. One of these the Club Root is fast gaining a foothold in the cabbage growing sections of the state and is one of the most insidious in its attack on the roots of young cabbage plants. It causes large galls or enlargements on the roots and greatly weakens the plant, often causing death or very small runty growth. The cause of the disease is a slime mold, a very low form of life which gains entrance to the roots of the young seedlings in the seed bed, or field and after gaining entrance to the soft tissues and root cells causes the peculiar clubbed enlargement. The prevention of this dis-

Both of these are called “complete” fertilizers, but they are very different.

If you prefer ready-mixed fertilizers, insist on having enough Potash in them to raise the crop as well as to raise the price. Crops contain more than three times as much Potash as phosphoric acid.

It was found years ago that the composition of the crop is not a sure guide to the most profitable fertilizer, but it does not take a very smart man to figure out that a well-balanced fertilizer should contain at least as much Potash as Phosphoric Acid. Insist on having it so. If you do not find the brand you want, make one by adding enough Potash to make it right. To increase the Potash 4.5 per cent (for cotton and grain), add one bag Muriate of Potash per ton of fertilizer; to increase it 9 per cent (truck, potatoes, tobacco, corn etc.), add two bags Sulphate or Muriate per ton.

Talk to your dealer and ask him to carry Potash in stock or order it for you. It will pay you both, for particulars and prices write to

GERMAN KALI WORKS, Inc., 42 Broadway, New York

I Can Save Half Your Tree Money, Even if You Spend Only $5 or $10, and Give You the Best Trees

I HAVE 500,000 fruit trees for sale—apple, peach, pear, plum, quince and cherry trees. 160,000 of these are luscious apple trees. I offer you these trees at less than half what you pay agents. You save half even on $5 and $10 lots! How I can afford to do this: I have no solicitors or canvassers—you order through my catalog and deal with me direct. That cuts out the agent's big profit and this dollars-and-cents saving stays right in your pocket, if you take advantage of these low prices.

Green's Trees 500,000 FOR SALE

are sure growers. Clean, hardy, healthy and tree from scale. Northern grown, big bearers. Read Green's guarantee—trees true to name. Green's is the largest and best stocked nursery in the country.

Green's 1913 Catalog FREE! My new catalog illustrates and describes trees, vines and plants of almost every variety. A valuable book for every farmer: contains advice and hints on planting and growing. It contains a few of my interesting booklets, "How I Made the Old Farm Pay" or "Thirty Years with Fruits and Flowers." State which you want.

GREEN'S NURSERY CO. 36 Wall Street, Rochester, N. Y.
ease is to apply lime to the soil for the disease thrives best in an acid soil. Rotation of crops goes along way toward preventing its gaining possession of the soil and good clean seed from healthy plants should be used. Another disease affecting the cabbage is the Soft Rot, a bacterial disease causing the soft, brownish, stinking rot so often seen in every garden. Black rot is another disease of considerable importance to cabbage growers and is distinguished by a yellowing of the leaves and on cutting the stem or leaves a black streak is seen on the interior. At present the large cabbage growers in Racine county and other parts of southern Wisconsin are battling with these diseases and work is being done in breeding resistant types of cabbage for Wisconsin conditions.

ORCHARD CULTIVATION.

Wisconsin fruit growers annually lose thousands of dollars because of the cultural methods used in the orchards. No orchard which is neglected and allowed to grow up to grass and briars can be expected to yield a profit to the owner and yet this seems to be the condition of many of the orchards throughout the state. There are many systems of orchard operation and arguments for or against each. For Wisconsin conditions the best system is the so-called "clean—culture cover crop system" which has many points of merit. By this system the orchard is plowed every spring rather shallow and clean culture practised until the middle of July or August when a cover crop is sown. The cover crop is allowed to grow all fall and to remain over winter and is plowed under the following spring. The kind of a cover crop to use depends on the conditions of climate and location. A good cover crop is oats sown at the rate of one and one half to two and a half bushels per acre. Oats make a rapid growth and is easy to get a catch so is proving a general favorite. The advantages of this system of orchard operation are:

1. Keeps the soil in good condition.
2. Prevents the harboring of insects and plant diseases.
3. Retain the moisture in the soil.
4. Removal of the surplus moisture in fall causes the trees to ripen better and there is less winter killing.
5. Retains snow in winter preventing deep freezing.
6. Adds humus and plant food to the soil, in readily available form when the cover crop is plowed under.

WILT OF CUCUMBERS AND MELONS.

The melon and cucumbers are subject to a very destructive disease known as wilt. It also may affect the pumpkin and squash or other plants of the same family. The affected plants wilt badly and appear unhealthy. If the stem is cut there exudes a whitish, milky sticky fluid in which the organism causing the disease is found. The disease is caused by bacteria which are carried from one plant to another by insects and an entire field may become infected in a short time from a single diseased plant. The surest means of protection or prevention is to get rid of the insects working on the melons and cucumbers. Rotation of crops also aids greatly by preventing the bacteria from getting a foothold in the soil.

PROTECT THE BIRDS.

The orchardist or gardener has no better friends than the birds, and they save thousands of dollars annually by keeping down the injurious insects. Often have I seen harmless birds shot by some thoughtless boy or man apparently out of mere sport. The birds are not only beautiful and full of song but are constantly feeding on insects and bugs in garden or orchard. The immense number of insects eaten in a day by a bird is little appreciated by anyone who has not made it a study. Aphids are the chief food of the little chickadee while over fifty-one locusts were found in the stomach of a single Yellow Headed Blackbird. The Indigo bird delights in feeding on army worms and caterpillars and the Robins, Meadow Larks, and Quail feed largely on insects. Respect for the

Orchard Land in Dunn County, Wis.

Surface rolling; soil, rich clay loam underlaid with limestone. The orchards of adjoining farms show the adaptability of this part of Wisconsin to apple growing. Near railroads and markets. Prices reasonable. Write for particulars.

William J. Starr
Eau Claire, Wis.

GET THE BEST

A good Spray Pump earns big profits and lasts for years.

THE ECLIPSE

is a good pump. As practical fruit growers we were using common sprayers in our own orchards—found their defects and invented the Eclipse. Its success forced us to manufacturing on a large scale. You take no chances. We have done all the experimenting! Large, fully illustrated catalog and advice on spraying Free.

birds and their protection should be fostered in the hearts and minds of every boy and girl. A strict national law restricting the wholesale slaughter of our harmless song birds would be a good thing to help out the inefficient state laws.

GOLDEN BANTAM SWEET CORN.

Did you ever grow Golden Bantam sweet corn? A couple years ago an old market gardener told us of this corn and advised us to get some seed and try it. We did so and found it the sweetest, tenderest and best quality of sweet corn we ever ate. It is very early, yellow in color and never gets tough. A succession of crops can be planted at intervals of two weeks and thus providing a supply in prime condition throughout the summer.

RENOVATING THE LAWN.

Many lawns grown for years suffer from lack of fertilizer and will be greatly benefited if some well rotted manure is spread on the top as a dressing in the winter. In the spring the rains will wash in the manure and the grass will come up strong with a darker green color and much thicker than before. The manure should not be too coarse or strawy. Bone meal can be applied in the spring after the snow is off and will give the same results but will probably be more expensive.

PRUNING.

In making pruning wounds great care must be used. When a branch is cut off it should be cut close up to the tree or branch making a long smooth wound which will heal readily. Never leave a stub of a branch sticking out for it will die and provide an ideal place for fungus and bacterial diseases to gain entrance to the plant tissues. If a large branch is removed it is advisable to cover the wound with paint to keep out water, fungus and insects.

USE FRESH SEED.

Do not use old seed when planting the garden next year for you can never tell whether it will grow or not and valuable time lost in finding out. It is true some seeds are better when two years old but one never knows the age of the seeds when bought so it does not pay to take risks. Good crops depend as much on good strong, virile seeds as upon the soil and weather and vigorous growing plants cannot be grown from weak, old seeds.

Get your neighbors to join with you to get a large order of fruit packages. This will save on the price and also on the freight besides being a valuable lesson in cooperation.

A glorious bed of narcissus, tulips, crocuses and jonquils annually bursts forth in the lawn at the Wisconsin College of Agriculture before the last snowbanks are gone. These are hardly bulbs planted in the fall or early winter, requiring but little care; and the thrill of their beauty at the end of the cold winter gives life a new and fuller meaning.

The Great Northern Nursery Co.

Sells First-Class Wisconsin Grown Trees

Our Trees Live. We had an opportunity to compare 500 of our Wisconsin grown trees with a similar lot of Eastern Nursery. At the end of the season only 82 per cent of the eastern grown stock was alive, while 95 per cent of ours lived and grew. Moral: buy home grown stock and avoid loss. Our trees are HARDY, and our stock is HEALTHY. A comparison will prove that our stock has not the willowy and watery soft growth of southern or eastern grown stock.

Every tree and shrub is packed entirely under cover, free from exposure to sun and wind.

Great Northern Nursery Company, Baraboo, Wis.

Write for Catalogue and Price List.

ARSENATE OF LEAD, LIME-SULPHUR SOLUTION

Fully Comply With Most Rigid Requirements of Insecticide Act of 1910

Grasselli Arsenate of Lead is being successfully used to destroy all leaf-eating insects, such as Codling Moth, Potato Beetle, Curculio, etc.

The Grand Sweepstake prize of $1000 for the best carload of apples shown at the National Apple Show, Spokane, Washington, has been won by users of Grasselli Arsenate of Lead for the last three years.

Grasselli Lime Sulphur Solution is the standard remedy for San Jose Scale. It has also come into prominence as a summer spray to replace Bordeaux Mixture.

For Further Information Write

The Grasselli Chemical Company,
The Grasselli Chemical Company, Established 1839

Milwaukee, Wis.
Main Office, Cleveland, Ohio
William P. Stark’s Newest and Best Tree Book

I have put into this book the net results of my 30 years of knowledge and experience as a successful fruit grower and nurseryman. It contains 100 pages, beautifully illustrated, brimming with facts that every tree-planter should have; tells how to make money out of your trees, kinds best adapted to various soils, full description and lowest prices of all standard varieties of fruits and ornamentals.

I Am Now Offering My Choicest Stock

In 25 years of propagating trees for Wisconsin orchardists I have sold many thousands of trees. These trees today make up some of Wisconsin’s largest profit-producing orchards. Yet I never shipped a tree into this state that was the equal in roots, vigor and general tree qualities, of the trees I offer today. I guarantee everyone true to name.

Save 50% — Buy Direct From Nurseries

I employ no agents. All trees are sold and shipped to you direct from our great nurseries. You save 30% to 50% and get better trees. You deal with reliable people whose guarantee is worth something.

Wm. P. Stark Nurseries, Sta. G1, Stark City, Mo.

Mail This Coupon for Your Copy

Wm. P. Stark Nurseries, Sta. G1, Stark City, Mo.
Please send me FREE copy of the book, "Wm. P. Stark Trees and Their Fruits.”

Name
Town
R. F. D. State

Hardy, Productive Trees For Wisconsin Planting

I am familiar with Wisconsin’s orchard conditions, and through long experience recommend such trees as Wealthy, Duchessa, McIntosh, Yellow Transparent, Liveland Raspberry, Wagner, etc., in apples, cherries, Montmorency, Early Richmond and Sweet Cherries, of which I can supply a most complete assortment. My new book fully describes and prices these. Sent only on request.

Game

The State of Wisconsin owns all of the wild deer within the state. The state protects these deer and it is an offense punishable by heavy fine or imprisonment to kill or molest one except in certain counties and during a certain limited season, twenty days. This is known as the “open season.”

The Game Laws of Wisconsin provide that there shall be no open season for the killing of deer in Sauk county.

Mr. A. K. Bassett of Baraboo, a young man of limited means, has a large orchard on the hills just back of Devils Lake, and adjoining the state park. The deer, owned by the state, during the past two years have injured and destroyed apple trees to the extent of at least one thousand dollars. Mr. Bassett is prevented by law from shooting the deer and he cannot sue the state.

What’s the answer?

Even the very doubtful argument of “sport” is lacking here, because no one is allowed, at any time of the year, to shoot deer in Sauk county.

Verily, the game laws of Wisconsin are fearfully and wonderfully made.

If your village church yard is ragged and unkempt, begin now working up a sentiment and definite plans for beautification. Take out the old fences, plant evergreen hedges in place of them, make a lawn in front and at the sides of the building with trees massed irregularly around its edges and behind the church so that in time you will have the dear old church framed in its green setting of trees, and the hatching shed will be out of sight. Shrubbery and flower beds around the building and the edges of the lawn will make the place artistic and the care of them will give definite work for younger members who need such activity to give them a lively interest in the church.

Now is the time to buy your fruit packages for next year. Buy boxes knocked down and use the days of bad weather to set them up. You will then be ready for the crop.

WANTED—

Statements of injury to orchards and gardens by deer or rabbits.

F. CRANEFIELD, Secy., Madison, Wis.

STRAWBERRY PLANTS

100,000 choice Strawberry Plants. Also Red and Black Raspberry, Asparagus and Rhubarb roots.

These plants will not be dug more than twenty-four hours before shipping. All stock guaranteed. Hot bed plants in season. Write for prices.

RASMUSSEN’S FRUIT FARM

OSHKOSH WISCONSIN
Applying the Test of Time

The following from Commercial West, a weekly Bankers' journal published in Minneapolis, is good reading. The editor, Mr. Rollin F. Smith, is an active member of this Society:

The true test of most things is time. Anything that will stand this test may be declared substantial. And it is usually a good plan to be very enthusiastic over new ventures, but to wait until time has had a chance at the proposition. For example, had any southern Minnesota farmer thirty years ago ventured heavily in growing corn, it would have been a ten-to-one chance that he lost. Yet the Minnesota corn crop of last summer is estimated at 85,000,000 bushels, with probably 80,000,000 of it grown in the southern half of the state. Perhaps, thirty years ago, there were men who were confident that good yields of first-class corn could be produced in Minnesota. But if so, while their confidence was not altogether misplaced, it required time to develop suitable varieties of corn to produce the desired results.

Now confidence is all well enough, but confidence alone will not grow vegetables, grain nor fruit. Neither will it sustain life through several years of experimentation or poor markets. To illustrate, we quote from an article on Florida published in this paper of November 23, by Asa Paine, of Minneapolis; and it may be said, parenthetically, that no one who knows Mr. Paine will raise the question of prejudice as to any statement he might make. In the article referred to Mr. Paine wrote:

“From an agricultural standpoint Florida should not be taken too seriously. While in many instances profits are to be made from citrus groves and vegetables, still, in my twenty-
two years' experience in Florida, I have known many more people who have lost money than who have made a profit. The land boom of the last few years was a mistake, and many will regret it. Not a few people gave up their northern farms and took all their worldly goods to Florida, because of the real estate fairy-tales,

WANTED

Members to write for Wisconsin Horticulture, short articles, not over five hundred words, something from your own experience. Five hundred words or even one hundred may be worth a dollar a word to some one.

We want to know what you know.

“We have a Fine Lot of Plants for the Garden.”

SEND FOR LIST

J. E. MATHEWSON
Sheboygan, Wisconsin

CLARK’S ORCHARD
AND FARM HARROWS

Nurserymen’s Tools, Thomas Baler and Box Clamp, Fodder Baler, Barrel Headers, etc., etc., Elastic Pruning Paint

For damaged fruit and shade trees. Save those already damaged by rabbits, borers, pruning or other causes.

E. G. Mendenhall, Gen’l Dist. Agt. "Clark’s Tools"
Also Fruit Growers’ Supply Depot
Box K Kinmundy, Illinois
and some of them now are eking out a miserable existence there, in some instances having become so poor as not to be able to return to the North. They are now what the old Floridians call good crackers, meaning the unfortunate who have not enough money to get out of that country, even in the summer time.

We are willing to concede that the foregoing condition is more the result of misplaced, or mistimed, confidence than of actual misrepresentation on the part of the land companies. But, no matter if they were perfectly honest in their representations, they were wrong in "booming" a proposition untried by time. It is true that one can easily become very enthusiastic over the "Sunny South," particularly at this season, when a long winter is just beginning throughout the North. Now is the time when pictures of men picking fruit in January, of women gathering roses, and beautiful girls swinging in hammocks under palm trees—also in January, is all very illuming. And then when northern farmers are told that great crops of vegetables and fruits are assured and that the greatest markets of the country are only a few hours away, the proposition is doubly fascinating. The nine months of hot weather, the twelve months of insects, and the possibility that the crops cannot be produced, or if produced that the markets may be over-supplied—these things are too often overlooked, as the statement by Mr. Paine indicates. If any agricultural or fruit district, and all the conditions that must be present to make success, have not been tried out by time, the proposition, whatever it may be, is a gamble, pure and simple.

In our own great Northwest, or, more precisely, the Pacific Northwest, the test of time is exploding some theories and assertions regarding that great industry, apple growing. One of the chief arguments advanced as to why there was no possibility of overproduction of apples, was that the total annual yield in the United States some twenty years ago was vastly greater than in the last half dozen years. The actual crop figures have several times been published in this paper; and, also, the Commercial

---

**FOREST NURSERY & SEED CO.**  
McMINNVILLE, TENN.  
Am. White Elm, 6 x 12 in., 1000 $1.60, 10,000 $14.00.  
Am. White Elm, 1 to 2 ft., 1000 $3.00, 10,000 $25.00.  
Box Elder, Black Locust, Tulip Poplar, Russian Mulberry, Carolina and Lombard Poplar, Soft Maple and Black Walnut in lots of 100 to 100,000.  
**NURSERY GROWN STOCK**  
Feed the birds on Russian Mulberry. One thousand 2 to 3 ft. trees, $4.00. Special prices on Cal. privet in car lots.

---

**TOMATO SEED**  
A limited amount of the famous  
"EARLY BUCKSTAFF"  
Earliest and Best  
Per Package 25c. Per Ounce 75c.  
Rasmussen's Fruit Farm  
Oshkosh, Wisconsin

---

**CATALPA SPECIOSA**  
FROM HIGH GRADE NORTHERN SEED  
NURSERY GROWN STOCK  
6 to 12 in., 100 25c. 1000 $1.25.  
10,000 $11.00.  
1 to 2 ft., 100 40c. 1000 $3.00.  
10,000 $25.00.

---

**FOREST NURSERY & SEED CO.**  
J. H. H. Boyd, Prop.  
R. F. D. 6  
McMinville, Tenn.

---

**Wisconsin Horticulture**  
The Only Magazine  
DEVOTED TO HORTICULTURE  
IN WISCONSIN  
WE ANSWER QUESTIONS  
PRICE $1.00 A YEAR  
SUBSCRIBE NOW  
Includes Membership in W. S. H. S.
Likewise, the time has passed when apple growers can expect big profits per box for their product. Very big margins of profit, whether per bushel of apples or wheat, per barrel of flour or per ton of steel or per day of labor, are abnormal and are based on some shortage of supply that will soon be rectified. It is commercial and economic history that big margins of profit, no matter in what line of activity,—with the single exception of those protected by patents,—will soon be shaved down by competition.

For a few years the Pacific Northwest apple industry flourished abnormally. Why? Because of short crops east of the Mississippi river and good crops of well packed apples, but a limited total yield, in the Pacific Northwest. To quote from an article in the Commercial West of last week, "In 1910 the East had an abnormally small crop, while the Pacific Northwest had the largest in its history up to that time, amounting to 10,000 cars."

The foregoing quotation is from an address by Waldo G. Paine of Spokane, vice-president and traffic manager of the Spokane & Inland Empire railroad and chairman of the publicity committee of the Spokane Chamber of Commerce.

The test of time is being applied. The Pacific Northwest apple industry is passing through a severe trying-out process. It is contending with economic laws and the laws of nature; that is, distance from the great markets and correspondingly high freight rates, and the competition of eastern orchards. Yet cooperation in marketing the crop, development of new markets particularly in foreign countries, and maintaining the product of the orchard at the present high standard, will undoubtedly demonstrate that apple growing on a commercial scale in favorable districts in the Pacific Northwest is a permanent and profitable industry. But the romantic and visionary thousand-dollar-an-acre profit feature of the industry has been dissipated by the cruel hand of commerce.

Say that you saw the ad in Wisconsin Horticulture.
STARK TREES—GOOD TREES

With Stark Trees growing, you have a vigorous foundation for your orchard—the best money can buy. The Stark Trees are good—grown right, dug right, packed right; and we deliver them to you in good condition. Stark Trees are grown by an exact system embodying every good method known to nursery science—the result of careful experimenting by four generations during a nursery life of nearly one hundred years.

WHY STARK TREES ARE BEST FOR YOU

If you expect your orchard to pay good returns, can you, as a business proposition, afford to take chances when buying trees? Stark Trees are an insurance against weak, puny, stunted, short-lived orchards—and this insurance costs you not one cent, for Stark Trees cost no more than the other kind. Don't experiment with "just as good" trees. If you want trees known to be good—if you decide to let the other fellow do the experimenting—then come to headquarters. Plant the acknowledged standard—Stark Trees.

WHERE HARDINESS IS NECESSARY

We grow especially for the Wisconsin trade all leading hardy varieties, such as Liveland, Charlamof, Patten's Greening, Duchess, McManus, Senator, Peerless, Wealthy, Hibernial, Longfield, Fameuse, Eastman, McIntosh, Scarlet Pippin, Wisner, Estelle, Stark, Delicious, etc. The fact that our Wisconsin sales were doubled last year shows what Wisconsin orchardists think of our Ozark Mountain grown trees. The very best trees you can plant—hardy, thrifty and vigorous.

ONE-YEAR APPLE

Great, handsome blocks of one-year apple—strong, clean, thrifty—just the kind that have made Stark Trees the standard all over the United States. We offer these, knowing they will do just what is expected of them. We want to talk to you about trees for your orchard. Our Special Service Department will assist you in any possible way. Perhaps some lesson learned during their many years of experience will help you. This service is free.

STARK DELICIOUS

With each season the popularity of this wonderful apple grows. On the market—the final test—Stark Delicious stands in a class by itself as a money-maker. On July 15 of this year they were still selling on the fancy fruitstands of Chicago, and were bringing four times as much as any other apple. As a keeper, it had no superior; as an orchard tree, as a bearer, as a shipper, there is none better. You can grow Delicious just as easily as any other variety. Plant them, and watch your bank account grow. Be sure, however, that you get the genuine Delicious (trade-mark), a STARK DELICIOUS. Has stood forty degrees below zero without injury. Succeeded in Canada, Minnesota, Wisconsin, Iowa, Maine and all northern states.

GENERAL STOCK

We have in good supply all best and hardest varieties of apple, peach, pear, plum, cherry, quince, apricot, grapevines by the millions, bush fruits of all kinds, shade trees, shrubs and climbers, ornamentals, roses, etc. No order too large for our capacity, none too small to receive careful attention.

TRADE-MARKS

We use them as a protection to those who buy trees. They do not cost customers anything, but are a guarantee of genuineness. Delicious, Gold, King David, Senator and other trade-mark names we have re-registered under the last trade-mark law, and they are our property. At Stark headquarters—Louisiana, Missouri—you are sure to get the genuine.

ANOTHER NEW STARK BOOK

Stark Orchard Book is now ready for mailing. The author is a man who knows his subject, and has written in a plain, clear, understandable way a book that is brimful of good, sound, practical, exact, trustworthy orchard information. It will be sent free to you. Fill out this coupon, mail it to us today.

STARK BROS', NURSERIES & ORCHARDS CO.

LOUISIANA, MISSOURI. Desk 2.

Please send me promptly a copy of 1913 Stark Orchard Book.

Name: ______________________________

Address: ____________________________

I may plant _______________ trees this season.