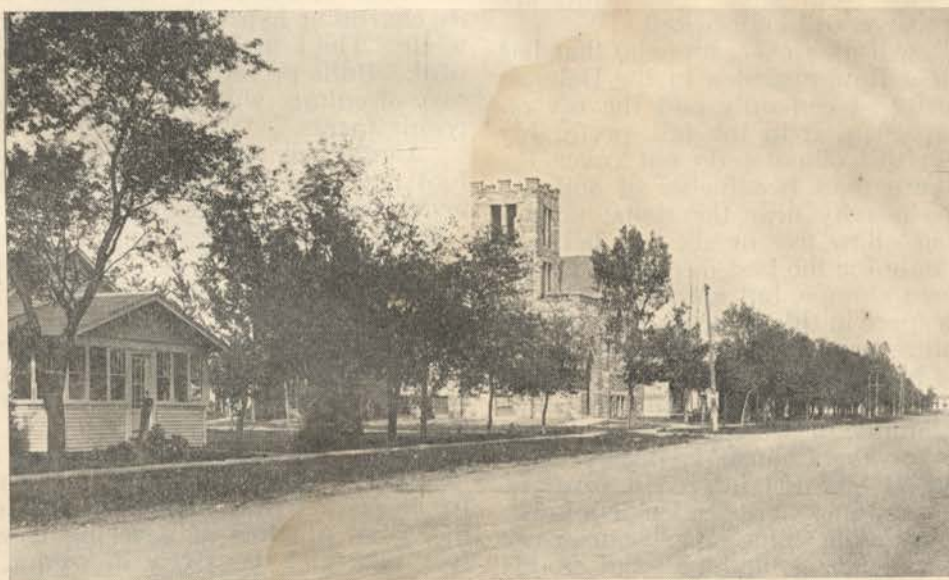


L. N. E. Hansen

# NORTH AND SOUTH DAKOTA HORTICULTURE

MARCH, 1932

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An Ipswich street well lined with trees. The Church is built of native stone.

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## MORE PERENNIALS IN THE DAKOTAS

A. L. Truax, Crosby, N. D.

Aquilegia

### The Crowfoot Family

The great natural order of Ranunculacea, more familiarly known as the "Crowfoot Family," is distributed widely throughout the earth, and contains some of the hardiest and most adaptable flowering plants for Dakota gardens. To this family belong the Peony, the Delphinium, the Monkshood and the Columbine, all of iron-clad hardiness and flourishing in our heavy, limy, prairie soil. The plants of this family also cover a wide range of season, from our first native Prairie Buttercup (*Ranunculus ovalis*), which vies in earliness with the Pasque Flower, to the last Monkshood of Autumn.

The first of the Crowfoot family to appear in my garden is *Adonis Vernalis* or Spring Adonis. This is a charming little plant for edging, with fine cut-leaved foliage and comparatively large bright yellow flowers which cover the four to six inch high plants in April and May and lend a touch of sunshine to the spring garden. I grow mine along a cement walk on the south side of the house, where it seems perfectly at home, but like the Peony it grows and increases slowly and is difficult to grow from seed. The plants are also somewhat scarce and high priced.

The Peony I will pass over, for who that has any pretence of a flower garden in the Dakotas does not grow it? I can only add the oft repeated maxims: Plant it in the fall, preferably in September in this climate; do not cover the crowns with more than two inches of soil; do not manure too heavily near the roots; do not crowd them, but allow five or six feet between the plants, not only for the best display of bloom on the full grown clumps, but also because they need that much space in this dry climate in which to gather moisture enough to mature and carry their enormous heads of bloom.

Then a little after the Peonies come the Larkspurs or Delphiniums, of which there are many varieties. I prefer the Chinese Larkspur (*Delphinium chinensis*) and the improved form of *Delphinium elatum*, known as the English Larkspur or Delphinium. The Chinese Larkspur grows two to three feet high and the blue form of this flower is the most brilliant and intense blue of anything I have ever seen—bluer even than the sky or the sea. There is a white variety also which is quite charming. Most of the English Delphiniums which I have seen in Dakota gardens have been somewhat disappointing to me, growing only three or four feet high and throwing rather short spikes of bloom. I have had them seven feet high with spikes two feet long. My advice is, buy the best varieties, plant them four feet apart in rich and deeply dug, well manured soil and give them lots and lots of water. They will then not disappoint you. Both the Chinese

and the English Delphiniums are of iron-clad hardiness. I do not go to the trouble of covering mine even in the most severe winters.

The Columbine is so well known and loved that I will pass it over with only a few remarks. There are many varieties and improved forms, both single and double. They hybridize and mix in such a way and scatter themselves in such a manner throughout my garden that I have long since abandoned trying to keep the varieties separate. Some have complained to me that they cannot grow Columbines successfully but I do not know why, for they are almost a pest in my garden, if indeed such a charming thing can be called a pest. The only causes for failure that I know are: planting it in too hot and dry a situation; and some kind of borer attacking the stems. Columbines prefer partial shade and will stand a lot of it, like the east or north side of a house or a row of trees. The only remedy for the borer that I know of is to cut and burn the stems as soon as it appears. It has never appeared in my garden.

In July and August appear the tall stems of the Blue Monkshood (*Aconitum napellus*) and its charming hybrid variety *bicolor* in blue and white. The latter blooms first and is most beautiful. Both prefer shade and rich soil and are easy of culture with me when given these simple requirements.

Another charming member of the great Crowfoot family is the Globe Flower (*Trollius europaeus*). I have never seen this growing in any Dakota garden except my own and I am so pleased with it that I pass it on to you as worthy of trial. It blooms here in June and July and its lemon-yellow blossoms surpass in artistic effect anything that I have in my garden. It grows two to three feet high and there are deep yellow and orange forms for those who wish them, though I prefer the pale yellow of *T. europaeus*. The Globe flower likes partial shade and rich soil, together with an abundance of water. Do not try to grow it in a hot, dry situation. I follow the usual practice of covering it with three or four inches of dry straw in winter, though I do not know that this is necessary.

The rabbits seem to regard the Chinese Elm as of foremost importance. However, not in the same way as we human beings. They eat the bark from them in preference to practically all other trees and shrubs. The sulphate oil preparation failed to prevent them girdling the trees in some instances. The oil was not properly made up or our rabbits are less particular about their diets.

It is better to grow a garden than it is to go hungry.





## THE ORGANIZATION OF A GARDEN CLUB



Purley L. Keene

missionary work in the community, you find that there are half a dozen or a dozen individuals who seem to be interested enough to join such a club and give it their support, a meeting may be called at one of your homes.

In forming a Garden Club it is quite desirable to have a limited number to begin with. Their interests in gardening should be more or less along common lines so as to bind them more closely together. The club should be more than a social club if it is to benefit the members. It should go further and realize that it owes something to the community as a whole as well as to the individual members of the club. In order to keep any club functioning successfully the cooperation of each member is most important. Every member should participate in the club's activities at least once during the year if not oftener.

Usually the first meeting of the small group is taken up with a discussion of the Garden Club Movement, the activities which such a club might undertake, and a discussion of the kind or type of club which the individual members feel they would most like to have. After these have been pretty well threshed over and agreed upon, a committee may be appointed to take these ideas and mold them into some sort of systematic shape and present them at the next meeting. It is quite important that at this first meeting each prospective future member of the club express him or herself freely with an open mind in order that there may be no misunderstanding after the club has fully organized and adopted its set of rules, its constitution and by-laws, under which it proposes to operate.

If the club is to accomplish any lasting benefits to the community it must organize itself on such basis that it will grow and become more influential in civic affairs. Some clubs in the selection of additional members and even of its members at the time of starting, use a great deal of discretion. Every charter member and every new member should fully realize not only the

benefits that she may derive from belonging to this club but also the good she may be able to do for the community by supporting the club's activities and programs. It is also quite essential that all of the members of a small club be agreeable. If there is any social discord within the club it materially handicaps the effectiveness of the club's program.

In some cases it may be thought best to have a Garden Club in which membership is open to all, in which the fees are rather nominal. Such Garden Clubs usually aim to secure large enrollments and transact their business through an executive board and standing committees. In this type of club many individuals may belong whose interest in garden activities is not very great. The object of such a club is to, if possible, stir up greater interest in gardening work by getting a great number of people to join the club. A large club of this sort becomes frequently a vital element in the community. Some of our oldest garden clubs are organized on this basis. Their programs are far reaching and often made to cooperate with local commercial clubs, park boards and city officers. General meetings of clubs of this type are held less frequently and are usually open to the public. The success of the large club such as this rests quite largely with its officers.

Before adjourning your first meeting it would be well to set the time and place for your second meeting so that all present may make an effort to keep that evening open for it is quite essential that all of the members if possible be present at the second meeting when the constitution and by-laws are adopted and the charter membership roll established. A number of our magazines have published from time to time suggested forms of constitutions and by-laws. The average club's needs in this respect are not extensive. The constitution and by-laws should include the following articles: the name of the organization, the object of the organization, the officers (at least president, vice president, secretary and treasurer), the board of directors consisting perhaps of the elected officers and one or two members elected at large (in some cases the chairmen of the standing committees are also placed on the board of directors), the qualifications for membership which is frequently stated "as those who have an active interest in gardening," the method of securing members and the limit as to number, the time and place of holding the regular meetings and a provision for special meetings, the amount of the annual dues and when payable, the standing committees (these usually consist of a program committee, a flower show committee, a yard and garden contest committee, a plant exchange committee and such other committees as the club may feel that it needs), the time and





place of holding the annual meeting with the election of officers, annual reports, etc. In many cases the vice president is made chairman of one of the committees, frequently of the program committee while the secretary-treasurer may be made chairman of the finance committee. There may be from time to time a number of amendments made and a provision for amending the constitution should be provided for.

After adopting the constitution and by-laws at your second meeting it may be desirable to elect your officers for the first year, or it may seem more desirable to delay that until the next meeting so that more thought can be given to it. Mrs. Edith R. Fisher in her Garden Club Manual, published by the Mac Millan Company, suggests that there are a few points to keep in mind which, if definitely followed, will bring desired results. She suggests that a person who has the happy faculty of getting on with people, one with vision and ability, one who is not too sensitive to criticism, be elected president. She feels that this office is by far the most important one of the club and that if you can find one who fills the requirements you should give her your whole-hearted support, be faithful and loyal to her and to the club's program. It would be wise perhaps to retain such a person in office for two years.

Another matter which the club must give careful consideration to is the finance side of the club's activities. No Garden Club is formed for the purpose of making money, of course. Its primary object is to promote interest in garden activities, to beautify the grounds about the individual homes of the city as well as to promote the development of parks and other landscape improvements. Yet every club sooner or later finds itself in need of funds. In order to carry out civic enterprises it must have a little money to draw upon. So when the club is organized, the organizers should give consideration to the activities of a public nature which the club anticipates undertaking and what effect these may have on the club's funds. A club which is organized especially as a study group or quite largely for the betterment of the individual members need not cost much money. On the other hand a club which is organized with the ideas of staging flower shows and holding yard and garden contests and other similar undertakings which will benefit the community must be able to raise a little money. The club with a large membership solves this problem to a certain extent, for a nominal fee of 50c to \$1.00 with a large membership will give a workable fund. On the other hand with the small club of about twenty-five members, your 50c or \$1.00 dues will not enable the club to do a great deal of community work. It may be wise to hold the annual dues down and attempt to secure money to promote these enterprises in other

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ways. The annual dues should not be high for they should not be a burden on any individual member. No member should feel that for financial reasons she can not belong to a Garden Club. For this reason it is usually desirable to keep the dues reasonably low and to attempt to raise money to supplement the annual dues by other means. Mrs. Fisher in her book outlines a number of ways in which a Garden Club may secure funds. No club should undertake any civic undertaking such as the improvement of the park or staging of a show unless it is able to secure sufficient funds to carry the project to a successful end. A project well started and then neglected due to insufficient funds to complete the project is very detrimental to the club and materially lessens the club's effectiveness in doing good in the community.

Another matter which must be given consideration at the time of organization is the matter of naming the club. It should be rather short and suggestive. Frequently where only one club in a community is established the name of that community is used but where several clubs are

(Continued on page 35)



## NORTH DAKOTA HORTICULTURAL SOCIETY NEWS LETTER *for* MARCH, 1932



A. F. Yeager  
Secretary

Any of you who intend to grow Bison tomato during this coming season should be sure not to prune them. Bison does not grow a single strong central stem which is essential for a staked tomato. Simply plant them and let them run as they will. Under reasonably good conditions I feel sure you will be surprised at the quantity of tomatoes produced for the size of the area used by the plant.

Now and then we are called upon to reverse our judgment. The case in point is in reference to Spirea Douglas. This spirea, after being in our test plots for several years, was suggested as being the most satisfactory of all the large blossomed, summer blooming spireas. Then came the dry season of 1930, followed by a dry open winter. Last spring Spirea Douglas was found to be killed out root, stem and branch. It looks like it was not so good at resisting dry weather even though it has the ability to resist cold if there is moisture present.

A few comments from correspondents regarding recommendations for the starting of tomato plants would indicate that it might be interesting for you to know how our tomato plants at the college are grown. We sow our tomato seed in seed boxes about the first of April. This is about five or six days later than we used to sow it. When these seedlings reach a size where they are starting their first real leaf between the two seed leaves, we transplant them to individual pots, using a 3½" clay pot. I believe this is the smallest sized pot in which one can grow a really husky plant when it has to be held until near the first of June for field setting. We try to maintain a temperature of 65° to 70° where the plants are being grown, and we give them all the light possible. There plants are grown with the pots touching each other until the tops begin to shade one another. Then we separate the pots so that there is twice as much light space as there is space occupied by pots. Plants grown in this way will have reached blooming size by the time they are set. We never prune our plants in any way but leave all the blossoms on and all the side branches as they naturally develop. In setting them the plants are removed from the pot without disturbing their roots and set in the field with the general soil level about one inch over the top of the ball of dirt put out with the plant. The soil is packed down very tightly and if the ground is dry we give each plant a good soaking after it has been set. We always space our plants not closer than

4x5 feet apart and do not prune them during the summer. Pot grown plants carefully set in the field should not be shaded and do not require any cover. Our experience has been that one of the biggest troubles with plants people grow is that they do not have enough space for them to grow normally. The deficiency is more often in the amount of light each plant gets than it is in the amount of soil and moisture it gets.

Mr. Shoemaker, of the Ohio Experiment Station, states that Howard Supreme strawberry, New Logan black raspberry and Chief red raspberry have made records in Ohio which indicate their possible superiority over older varieties. Chief is the raspberry introduced by the Minnesota Experiment Station as Minnesota No. 223. While it has shown greater hardiness than Latham with us, up to the present our production records have not shown any great superiority here.

The University of Tennessee recommends in place of cutting out fire blight cankers to paint well beyond the visible diseased spot with a 53% solution of zinc chloride. They recommend inspecting the tree trunk every three or four weeks and if necessary repeating the painting process. To make a solution for painting they recommend adding three ounces concentrated hydrochloric acid to one quart of hot water in an enamel kettle. To this mixture add nine pounds of dry zinc chloride powder. The solution may be heated to boiling if necessary to dissolve all the zinc chloride powder. After cooling, it should be poured into seven pints of denatured alcohol and thoroughly mixed. Store in bottles until you are ready to use it.

Arkansas requires an inspection certificate showing freedom from insects and disease before they will allow shipment into that state of onions, cabbage, tomato, or sweet potato plants. If the growing of plants in the South for planting in the North is to become a real large industry something of this kind will have to be applied in all the northern states where plants are used. The shipping in of diseased plants is one of the biggest objections to the use of plants from the South right now.

The Minnesota Extension Entomologist states that groundcherry worms may be controlled by spraying the plants in the early blossom stage, using 4-4-50 Bordeaux mixture to which has been added two pounds arsenate of lead to fifty gallons of Bordeaux. The spray should be repeated two or three times at weekly intervals.

By maintaining a continuous day length of less than twelve hours, Garner and Allard, of the Bureau of Plant Industry, found that Sedum spectabile might be grown indefinitely without





ever producing blossoms. It was grown for nine years in this way. When longer day lengths were provided the plant blossomed normally. Undoubtedly the great length of day in midsummer in North Dakota has much to do with the kinds of plants which prosper here. It is quite likely that some of our varieties bred for this climate differ from those not acclimatized in their ability to utilize a greater number of hours of sunshine.

The Kentucky Experiment Station reports that an acid soil condition, designated as pH 5.3 to 5.5, gives the most favorable conditions for strawberries. What we term neutral soil in pH 7. They also report that strawberries need large amounts of phosphorous and that an acid reaction in the soil favors the utilization of the phosphorus that may be present.

In setting out raspberries for a large patch the plants should be set five feet apart each way or else with the rows six to eight feet apart and the plants four feet apart in the row. In the home garden with red raspberries the distance apart in the row is determined by the number of plants you have. If you put them in two feet apart you will quickly get a full stand of the solid row system. In any event, keep the rows narrowed down to not to exceed two feet in width. Keep the plants in this space thinned out so that each cane gets a chance for development.

Mr. Lumry, of Bismarck, states that the yards at Bismarck have improved 100% since their Garden Club was started.

In times past, the suggestion has been made that vinegar—that is, acetic acid—might be applied to the soil to make it acid so that plants requiring acid soil might thrive. Recent experiments at the Massachusetts Agricultural Experiment Station show that soil treated in this way is affected only temporarily, and that within a few days, or at the most a few weeks, the soil is no longer acid.

"Propagation of Flowers by Cuttings and Seeds," is the title of bulletin No. 387 of the Ohio Experiment Station, Wooster, Ohio.

At various times advertising comes out for some new mechanical potato bug picker. Very often these machines are quite efficient in removing the potato bugs from the vines. However, any of you who have had experience in your youth in knocking potato bugs into a can of kerosene know that the potato bugs have a way of re-appearing very shortly again so that the job must be repeated again and again, and the final result is none too satisfactory. Applications of poison which remain on the plant and kill any newcomers when they arrive are much more satisfactory.

Farmers Bulletin No. 1634, by the U. S. D. A., is entitled "Growing Sweet Corn for the Can-  
nery."

People who attempt to grow peanuts for the first time are often worried about how to get the growing peanuts into the ground. Fortunately the peanut plant takes care of that itself. If the ground is kept loose close to the plant the nuts will be pushed down into the ground without any aid from the planter. In the South, peanuts are planted in large acreages as hog feed, which indicates that they do not require any special petting.

G. F. Weber, of the University of Florida, reports that bottom rot of cabbage heads, wire stem, and what we often call damping-off of cabbage seedlings are all due to the same organism that causes black scurf or rhizoctonia disease in potatoes.

Bulletin No. 279 of the Iowa Experiment Station, Ames, Iowa, deals with various kinds of pots for growing vegetable plants. Their results indicate that clay pots are superior, as a general rule, to other kinds.

It might be well to say something about the new varieties of tomatoes now being offered, particularly the new ones from the U. S. Department of Agriculture, Break o' Day and Scarlet Topper, also known as Pritchard. In our trials last year Break o' Day showed up reasonably early and had fine large tomatoes on it but the crop was very light compared to other earlies. They produced about a third as much ripe tomatoes as Red River and about a quarter as much as Bison. Scarlet Topper was not in the extra early class. The fruit was similar to John Baer, which means that it was of nice shape and size but inclined to crack at the butts. In production of ripe fruit Scarlet Topper produced about one fifth as much as Red River and about one seventh as much as Bison. A new variety introduced from Montana under the name "Speed" showed up well last year, ranking next to Bison in production of ripe tomatoes for the season. I offer there results for what they are, that is, one season's test, and as such they are subject to revision because another year or perhaps under other soil conditions the results might be very different.

A correspondent writes that the fertility of a piece of ground had been entirely exhausted by continuously growing potatoes for many years on this piece and asks for fertilizer recommendations. It is very improbable that the fertility is exhausted. I would expect most other crops might do well on this piece of ground. It is always safe to rotate your crops. It has been our experience that it is very difficult to plant such a thing as a plum tree in the same place where an old plum tree has been removed. I remember a plum thicket which by suckering gradually spread outward. The old trees on the inside died. New plum trees did not come up in this open space, though other plants grew well there.





## EXTRACTS FROM THE DIARY OF A TRAVELING MAN

*Lilium speciosum* W. A. Simmons

January 12th: The handsome lily—this is the common name suggested by J. Horace McFarland for the speciosum lily, which strangely enough has never previously had a common pet name. Whether or not this name sticks and becomes popular remains to be seen, but it certainly is deserved, as we have no more beautiful lily than this "handsome" lily. And best of all it is quite hardy and may be planted either spring or fall. It appreciates good drainage and should be planted with some sand surrounding the bulb and with the top of the bulb twelve inches below the surface. A little mulch in winter is appreciated, though perhaps not entirely necessary, and a few low-growing annuals in summer will help in keeping its feet cool and comfortable. Mine have been very faithful in making increase of flowers each year for the past four years.

It has been announced by the Pennsylvania Board of Game Commissioners that investigations have shown the English Sparrow and Starling to be very beneficial in the destruction of Japanese beetles, Mexican bean beetles, striped cucumber beetles, grasshoppers, and the imported willow leaf beetle, some of the worst insect pests we have. Examination of the stomachs of these birds, slain for investigation, showed these insects to have constituted almost their exclusive diet. The report adds that "hitherto these birds have been destroyed because people are ignorant of their value in the fight against pests." Even the Department of Agriculture at Washington has shown its ignorance by sending out a bulletin telling of ways to kill and trap the little sparrow. It has seemed to me that the people who were most enthusiastic about the song birds, being very generous in overlooking the damage they did to the other fellow's fruit crop, were the most bitter in their enmity to the brave little sparrow. This Game Commission probably has correctly stated the reason.

January 15th: The annual meeting at Beresford was one of the most enjoyable we have ever attended. The hall furnished us was of the right size, well-lighted, and very comfortable, and the people of this great little city laid themselves out to be nice to us. Our program was enriched by the offerings of several old members who had not been with us for several years and by many fine papers from the members of the Beresford Garden Club. Mr. Robertson presided as only he can and gave us much of his delightful philosophy. Dr. Hansen was unable to attend but sent in a fine President's address, together with his resignation and the recommendation that Mr. Robertson be made President, which was done.

Mr. Wallner, who has been a tireless worker for the society, was present with a fine vegetable display and on the strength of his onions, which

he certainly knows, was elected Vice-President. Mr. George W. Gurney was re-elected to the executive board and Mr. Martelle of Beresford was elected to the board to fill out the unexpired term of Mr. Wallner. The Secretary's report showed a comfortable balance in the treasury as a result of his careful husbanding of the society's funds.

As St. Patrick's agreed on birthday is approaching, the following from Haskin's questions and answers may be of interest:

"Q. How are carnations dyed green?"

"A. Placing the stem of white carnations in a weak solution of iron sulphate or copper sulphate will turn the blossoms green. An aniline dye which is soluble in cold water may be used instead. For different shades try different proportions."

In this connection the manner of the arriving at of the date of the Frenchman, St. Patrick's birth may be of interest. Some contended that the date was March 8th, while other asserted the real date was March 9th. To harmonize the two factions the two numbers were added and so March 17th is celebrated. Had the dates involved been along toward the last of the month, this plan would not have worked so well.

February 1st: Here is a new use for our friend the tree. About 1100 miles west of Honolulu there is a tiny, low-lying island called Lisianski, whose highest point is but twenty feet above the ocean. It could not be seen for more than a mile and consequently constituted a dangerous hazard. This little isle is to receive a planting of fifty ironwood trees and if they thrive the isle will be visible before ships are in danger of crashing on its reefs.

February 7th: Under the head of roadside tree-planting the Agricultural Yearbook has this to say: "With the increasing interest in the appearance of the roadsides the laws governing the operations of the State Highway Departments are gradually being amended to authorize expenditures for roadside planting as well as road construction. The departments have always been cognizant of the economic as well as esthetic value of such planting, but the demand of automobile owners for highways of smooth, easy-riding and dustless surfaces has engaged their whole attention and revenue."

With these pioneer requirements now largely met, many eastern states and also California now employ landscape architects to supervise the beautifying of their highways. Some of their planting, such as hedges, etc., is not for us on account of the deep snow we usually have in winter and its passion for travel. The way it drifts into the roads tempts one to think it ap-

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## NORTH DAKOTA BEEKEEPERS MEET

*J. A. Munro, Fargo, Secretary North Dakota Beekeepers Association*

The annual meeting of the North Dakota Beekeepers' Association and short course in beekeeping, held at the Agricultural College, Fargo, was, from the standpoint of subjects discussed and interest shown, probably the most successful in the history of the organization. A total of 61 registered for the meeting. So many excellent talks and discussions on beekeeping made up the program of the annual meeting that it is out of the question here to give a fair account.

Charles S. Engle, president, urged beekeepers to consider the work being done by the American Honey Institute and to give it their hearty support. "Any beekeeper who is able to give support to the Institute but holds back for some excuse or other is making a serious mistake," he said. Members of the North Dakota Beekeepers' Association have already contributed about \$150.00 but we are far short of our goal.

Mrs. Winefred B. Loggans of the Home Economics Division, Kellogg Company, Battle Creek, Michigan, discussed the use of honey with cereals and mentioned the fact that the late A. I. Root many years ago interested this company in the use of honey. During the afternoon the delegates were treated to honey-krisp cookies furnished by the Kellogg Company. The cookies were so good that we take pleasure in quoting the recipe.

$\frac{1}{3}$ cup shortening	$\frac{1}{4}$ teaspoon salt
$\frac{1}{2}$ cup honey	$\frac{1}{2}$ teaspoon soda
2 eggs	$\frac{1}{2}$ cup nutmeats (black walnuts are delicious)
$\frac{1}{2}$ cup sour cream	$\frac{1}{2}$ cup chopped dates
$1\frac{1}{2}$ cups flour	1 teaspoon bkg. powd.
1 cup Rice Krispies	Nutmeg or vanilla flavoring

Cream shortening and honey. Add well-beaten eggs and sour cream. Sift the flour with baking powder, salt, soda, and add to first mixture. Stir in dates, nuts and Rice Krispies. Add flavoring. Drop with dessert spoon on buttered pan and bake in moderate oven. Yield: 2 dozen cookies.

Dr. H. L. Walster, dean of the school of agriculture, discussed the history of sweet clover in this country, stating that it has been known in America for the past 200 years, but that it is the only important agricultural crop that has recently been captured from the weeds.

Professor H. L. Bolley, who recently returned to the North Dakota Agricultural College after a year spent in studying agricultural conditions in South America, favored the beekeepers at the annual banquet with a talk on his experiences.

Miss Constance Leebby of the home economics division, in commenting on the use of honey in cookery, pointed out that honey lends itself beautifully in combining with many forms of cookery, salads, and desserts.

Mr. Paul S. Johnson, Callaway, Minnesota, gave a very interesting talk on the marketing of honey and also discussed the construction of his honey clarifying tank. It answers the requirements for successfully clarifying honey.

Mr. Bruce L. Morehouse, Morris, Minnesota, outlined the factors to be considered in production of extracted honey, and, in the course of his remarks, pointed out profitable side lines which might be worth while for a beekeeper to consider. He discussed the use of honey as a glaze for doughnuts and as an ingredient of mayonnaise and other articles of food.

Dr. C. I. Nelson, professor of bacteriology, in discussing honey from the medical standpoint, spoke of the healthful sugars contained in honey and indicated that honey should be more widely recommended by the medical profession as a sweet for young and old.

"Cutting Down Overhead Costs in Beekeeping" was discussed by J. W. Beatty, Fargo. Mr. Beatty brought out the fact that a study made by the U. S. Department of Agriculture, in cooperation with beekeepers of several honey producing states, indicated that 300 to 400 colonies of bees were about the most satisfactory number for a beekeeper to operate when economy of outside labor and other important items of overhead were taken into consideration. He stressed the importance of putting equipment into good condition during the winter months so that it will be in readiness for the summer work with the bees.

Professor O. A. Stevens of the Agricultural College gave a very instructive talk on wild bees. He supplemented this with a number of lantern slides showing the various species in natural color.

Miss Clara A. Richards, librarian at the Masonic Temple, Fargo, whom many of the beekeepers will remember meeting at the summer convention held at Aneta, discussed "Beekeeping in Antiquity."

L. S. Thom of the North Dakota Bee Supply Company, Moorhead, Minnesota, gave a demonstration of packaging sections of comb honey with cellophane. Needless to say, he surprised many with the speed he showed in handling the wrappers. He used the plain sheets of cellophane and, after wrapping each section, moistened it with water. This caused the cellophane to seal itself and result in perfect protection for the honey.

Officers for 1932 include Charles S. Engle, president, Fargo; J. D. Beals, vice president, Dwight; J. A. Munro, secretary-treasurer, Fargo; and for directors Charles Hausmann, Hillsboro; Paul S. Johnson, Callaway, Minnesota; and Jack King, Buffalo.





## HOW TO SUCCEED WITH EVERGREENS

*L. O. Peterson, Hankinson, N. D.*

The Pines, or *Pinus*, are first on my list, and in North Dakota we may plant the Ponderosa Pine, commonly referred to as Bull Pine; *Pinus Sylvestris*, known as Scotch Pine; *Pinus Banksiana* or Jack Pine; and *Pinus Mughus*, or Prostrate mountain pine.

In general, the Pines may be described as evergreen trees of the largest and most important class of the evergreens. In addition to their primary importance commercially as ornamental trees, they grow in beauty and picturesqueness rather than deteriorate with age as do the Firs and some of the Spruces.

Of the Ponderosa Pine, A. Norby, before the South Dakota State Horticultural Society in 1904, stated: "To test the drouth resisting power of the Ponderosa Pine, small trees were stuck out in the prairie eight years ago and left to fight their own way as best they could. Of the nineteen trees put out, eighteen are alive today and are apparently looking well and satisfied with their situation. The Ponderosa Pine transplants very satisfactorily as raised on our fine mellow soil, frequently transplanted or root pruned, but wild plants generally fail. It is of value for ornament—the very long leaves keep their silvery green colors all the year 'round." I might add that of the four varieties we shall discuss, the leaves of the Ponderosa are the longest, ranging from three to six inches. Also, the difficulty in transplanting this variety is due to the fact that it develops a long tap-root, with a very small amount of fibrous roots near the surface. In digging such a specimen most of the root system is left in the ground, with consequent disaster to the transplanting operation. The condition is reduced to a minimum when trees which have been frequently transplanted and root pruned in the nursery are used. Such trees have a root system sufficiently devel-



Black Hills Spruce

oped to sustain the tree during its period of re-establishment. Ponderosa Pine is of value in wood lots, shelterbelts, and as beautifully rugged specimens in ornamental planting.

With the Scotch Pine, we find the leaves are from 1½ to 3 inches long, and of bluish green color. Scotch Pine is apparently less hardy and drouth-resistant than the Ponderosa. The source of seed is important in this variety, as that obtained from more temperate regions gives very poor results. This tree is very attractive as an ornamental when young but its branches become less dense as it grows older, and in exposed, dry situations the tree reaches its limit of thrifty growth in 25 to 30 years. It is rapid growing when young and as a garden specimen frequently attains a picturesque head and bark in old age.

The Jack Pine is, in my opinion, the poorest variety of these first three for this country. It has had many champions and in many instances has undoubtedly accomplished its purpose. In sections favorable to its growth it is of value for fuel, fence posts, etc. With its sparse

branches and yellowish-brown color in winter it is a poor ornament. It is hardy and drouth-resistant, with leaves about one inch long. I should say that in North Dakota its chief value is in wood-lots.

The Mugho pine is essentially an ornamental. The type grown by nurseries is prostrate, with leaves of bright green color from three-fourths to two inches in length. The desirable type is mound-like in form, eventually attaining a height of three to four feet and a spread up to five or six feet in width. It is used in ornamental groups at entrances, in foundation plantings, etc. It is perfectly hardy and I consider it probably the most valuable of the dwarf evergreens in this state.

In discussing the next group, the Spruces, or *Picea*, we may distinguish them from the Pines as having each leaf appear alone and all four sides of the branches radially, whereas the leaves of the Pines spring in groups of two to five from a sheath. The spruces are conical in form and as a rule very symmetrical. The leaves, or needles, are relatively shorter than those of the pines, and their growth is much slower. In view of the perfect symmetry of the Spruces, it is important that in event the leader is broken or injured, the next most promising of the top side branches be tied up to form a new leader or central trunk.

First among the Spruces I shall discuss the Black Hills Spruce, or *Picea Albertiana*. This is the type of White Spruce found native in the Black Hills of South Dakota. It is a very compact tree, of slow growth, with leaves ¾ to ¾ inch long, ranging in color from green to bluish green. Some individuals of this species are a distinct silvery blue color. The Black Hills Spruce is one of the best in our experience for this state and it is used extensively in the planting of home grounds and wind-





breaks. It produces an excellent root system and transplants easily; is pyramidal in form and thickly branched from the ground up. I might mention in connection with this variety that considerable confusion has arisen, particularly in the eastern half of North Dakota, from the planting of trees known as the Black Spruce, or *Picea Nigra*, also known as *Picea Mariana*. They are annually brought in from Minnesota and peddled for whatever buyers will pay. The leaves of this variety are similar in length and color to those of the Black Hills Spruce, but the bark of the young shoots is a reddish color. These trees are dug, or pulled, from the swamps; have a negligible root system and a very poor chance for success on dry land. Should they survive the ordeal of transplanting, they soon start to lose their lower branches and it is not uncommon to observe a specimen of this type six or seven feet tall with four or five feet of bare trunk surmounted by a little evergreen head. They are short lived and the branch-shedding habit together with the unsightly black cones which hang on for years makes the variety anything but desirable as an ornament. This Black Spruce and the Balsam Fir are the varieties most generally used in this country as Christmas trees.

The finest of the Spruces is the Colorado, or *Picea Pungens*. The leaves range in color from deep green to a frosty blue-white. To specimens of the latter color has been given the name of *Picea Pungens Glauca* or *Picea Argentea*, Colorado Blue Spruce. The fact that so few blue specimens are obtained in planting seed even from the bluest trees accounts for the relatively higher price of this variety. Those of green and blue-green color of the same form are beautiful specimens but command a comparatively lower price. The Colorado Spruce is absolutely hardy and attains a large size. The leaves are very sharp and from  $\frac{3}{4}$  to  $1\frac{1}{8}$  inches

in length. The tree is pyramidal in shape and thickly branched from the ground up. The Engelmann Spruce, which we have not found to be particularly desirable here, may, at first sight be confused with the Colorado, but if one takes hold of the branches of the two varieties he will find the Colorado giving his flesh a good sticking, while the Engelmann leaves are comparatively soft. Two varieties of Grafted Blue Spruce, known as the Koster and the Moerheim, are in commercial production in this country. In this process the scions from the most select blue trees are grafted on a suitable spruce root. Uniformity of color and form is readily obtained by this process but the expense of the operation brings the cost of the trees even higher than on the Colorado Blues.

We may consider next the Norway Spruce, or *Picea Excelsa*. Of the spruce we use here, this is the most rapid grower and as considerable value in windbreaks. The leaves are  $\frac{1}{2}$  to  $\frac{7}{8}$  inch long and of dark green color. It is fairly hardy, although it is much less desirable on our dry prairies than in the East with higher humidity. The seed is readily obtainable, which, combined with its more rapid growth, makes it a cheaper tree to produce than the other spruces. The deep green color is attractive and I consider it a pretty fair tree to have on the place. The roots of the Norway Spruce are commonly used in grafting the higher priced blue varieties.

The last variety on my list of Spruces, is the White Spruce, or *Picea Canadensis*. This is the main species from which the Black Hills Spruce has developed. The leaves are  $\frac{1}{3}$  to  $\frac{3}{4}$  inch in length, of bluish green color, and emitting a disagreeable odor when crushed. It is, in our experience, less hardy than the Black Hills type, and about as slow in growth. It is worthy of planting where variety is desired; develops a good root system and transplants well.

The next general class of evergreens is that of the Junipers, which Bailey describes as "Evergreen trees or shrubs with branchlets spreading in all directions; leaves either all needle shaped and in three's or, needle shaped and scale-like and usually opposite; both kinds found on the same plant, the needle shaped leaves prevailing on younger plants and vigorous branches; the scale-like ones on older plants. The seed is borne in fleshy, berry-like cones which enclose from one to six, rarely twelve, seeds."

The principal type we shall discuss is the *Juniperus Virginiana* or Red Cedar. It is a valuable tree for ornamental and hedge purposes and can be trimmed to any desired shape. It is highly important that trees from northern seed be obtained as this variety is native in most parts of the United States. It is drought resistant and stands exposure well. The Red Cedar, through its cedar apples, is a menace to apple trees, particularly the Wealthy, and should not be planted in close proximity to apple orchards. Red Cedar makes a dense windbreak and an impenetrable hedge. The wood is much used in lead pencils. Along with this species we have the Silver Red Cedar, or *Juniperus Virg. Glauca*, which is essentially an ornamental tree, and the *Juniperus Scopulorum*. This latter variety is the most desirable here in my opinion and may be distinguished by its somewhat larger fruit which does not ripen until the second year; and the fact that it forms a broad head with stout spreading branches, often dividing into several stems near the base, and by its shredding bark. A type of these which I have observed is a bluish green color during spring and summer, turning to a plum color with silver sheen during fall and winter. Some difficulty has been experienced in transplanting the Red Cedar but this is minimized with trees which have been properly transplanted and root pruned. (Concluded in April)





(Continued from page 31)

preciates good roads and knows their purpose. There would be no objection to the sodding of the shoulders or the planting of wild flowers and vines like the creeping juniper to hide the scars of cut banks, however, and, where the width of the right of way permits, a native, hardy tree set every fifty feet would add a lot to the landscape and would not constitute a snow trap.

Continuing, Mr. B. M. Joyce, author of the article quoted above, says: "On the part of the Federal Government, Congress in 1928 recognized the planting of shade trees as a part of the improvement of the Federal Aid Highway System and specifically authorized the expenditure of Federal funds for that purpose whenever such aid is requested by the State Highway Departments. The fact that no state has yet applied for aid is due to no lack of interest in roadside planting but rather to the fact that the states that are ready to start planting have no need to request financial assistance."

Probably we are not ready as yet for this final state of highway building, but some day our thoughts will turn to beauty as well as utility in our road system and a landscape architect will plan each project.

The Wisconsin Tree Fruit Testing Committee recommend the following tree fruits for trial for 1932:

**Early Apples**

- |                    |                   |
|--------------------|-------------------|
| 1. Melba           | 2. Early McIntosh |
| 3. Milton McIntosh |                   |

**Late Apples**

- |           |           |            |
|-----------|-----------|------------|
| 1. Macoun | 2. Medina | 3. Orleans |
|-----------|-----------|------------|

**Plums—Minnesota Hybrids**

- |              |             |
|--------------|-------------|
| 1. Monitor   | 3. Tonka    |
| 2. Underwood | 4. Red Wing |

**Cherries**  
Jordan

**Pears**

- |                 |           |
|-----------------|-----------|
| 1. Beierschmidt | 2. Patten |
|-----------------|-----------|

**Grapes**  
Fredonia

The Committee on the selection of small fruit varieties for trial for 1932 chose the following varieties:

- |             |                  |            |
|-------------|------------------|------------|
| 1. Aberdeen | 2. Clermont      | 3. Bellmar |
| 1. Chief    | 2. June          | 3. Viking  |
| 1. Satisfy  | 2. Honey Sweet   | 3. Quillan |
|             | Gooseberries     |            |
|             | Fredonia         |            |
|             | Currants         |            |
|             | Minnesota No. 24 |            |

(Continued from page 28)

established in a community it becomes necessary to use other names. The individual members of the club will probably be able to suggest a large number of names from which a desirable one may be chosen.

The matter of programs is another item that should be given careful consideration at the time of organization and a definite policy established in regard to the types of programs which are to be held. It is usually desirable to have each member take part in these programs discussing subjects which she has had personal experience in rather than which she has studied from some references or library texts. If any one is interested in securing a list of suggested names or suggested programs for the year or any other suggestions pertaining to the organization of a Garden Club we will be very glad to have you write in for them. If you have a library in your community they might be induced to purchase Mrs. Fisher's Garden Club Manual which will give you a great deal of information pertaining to the organization and management of Garden Clubs.

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