

SOUTH DAKOTA HORTICULTURIST

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THIS BOOK DOES
NOT CIRCULATE

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GRAFTING EXPERIENCES IN NEBRASKA

C. Bolles, McCook, Nebraska

(Editor's Note: Mr. C. Bolles tells us that he has sixty to seventy varieties of plums, fifty of apples, fifteen of pears, twelve of grapes and other plants from experiment stations growing in his orchard. He is located farther south but his trees are subjected to some severe tests in the way of hot winds and drouth).

At the outset let me say this trial station is well located. In some ways conditions are harder than farther West or North. We are blessed with much wind both hot and dry, long droughts and severe winters. This is a dry farmed affair patterned after John Robertson's idea.

It is in place to say practically all the trees and small fruits are home made so after these seven years a few things have cropped out. Now there has been much written along this line but it doesn't always fit prairie conditions. We don't bench graft, but do set seedlings in place as soon as frost is out of the ground and let stay two weeks before grafting. By storing scions in the chicken coop cellar floor they can be kept dormant much longer than if buried outdoors. Experience tells me to use only the whip graft, it refuses to break out. If the stock is too large to whip at crown then try the branches. In case these are too big and over a year old, bud. Unless you wish to graft in another cherry cross don't fool with the plum cherries, they're too brittle.

So far we have used melted grafting wax for a covering in grafting and paraffin in budding. Since we have to bud late to make them stick the string is left on all winter and wax undisturbed. Contrary to many the string should not be cut for two weeks, if taken off at all. But budding is an art and very uncertain with us.

Now after the grafting is done protect it with a tin can armour. After the string is cut we enclose with a double can-screen wire affair about twelve inches high. This will give them a chance against cut worms, grasshoppers, wind and hail. When the grafts outgrow such a protection then replace with a stake to which the graft is tied.

Later we'll tell you how to layer even if it never rains.

Let me say that our time is worth more in the corn field than growing nursery stuff. The common person can buy stock much cheaper than he could grow it himself. John Robertson cast his lot in the Black Hills and ours is down here. There is a good local market but conditions are hard. Other orchards have started up and failed. Climatic cycles remain the same, but new varieties are cropping out every year. Only through the trial of these newer things and using the best adapted can we hope to compete with foreign shipments. Thus many releases come to us each year in the form of scions or bud wood and these have to be worked in. Again some of the most promising things we have, for here, will not be nursery grown for years, if at all. This will explain why grafting, layering and budding is done.

How can one get rutabagas to produce seed? First, dig the roots up carefully and do not cut the top of the rutabaga off, as is usually done for storing for table use, simply cut the leaves off short and leave the crown on.—North Dakota Horticulture.

NEWER APPLES TRIED IN SOUTH DAKOTA

John Robertson, Hot Springs

Part of the work in conducting our orchard practices is the trying out of many of the most promising new varieties of fruits as these are offered from time to time. In this way we get first hand knowledge as to how they will do in this section, that cannot be had in any other way. Then, too, as we have many varieties bearing on the place, the new ones are measured up with many others of the same family and each one must show some outstanding feature of superior merit before being recognized.



Mr. Robertson Harvesting His Crop

Many highly recommended new fruits have proven inferior with us, while some few having very modest claims in connection have surprised us by showing up as leaders. Our initial methods for trying new sorts is by top grafting into bearing trees, and by root grafting seedlings and planting in nursery. In this way we have samples of the fruit in from two to three years from the top grafts, while at the same time we are getting a very good idea as to comparative hardiness through noting behavior of the root grafts in the nursery. Most any variety of apple, pear or plum may be fruited when top worked onto hardy varieties that have reached the bearing size, but the same sorts may prove very tender when started as small trees. When a nursery tree kills to the snowline, or ground level each winter, it is hopelessly tender for general planting. We might add, too, that our findings for this section may not prove uniformly correct for all sections of South Dakota. Our principal object in writing about new fruits is to call the attention of nurserymen to certain varieties as being worthy of propagation and trial. We are not in the nursery business to the extent of supplying many customers. Our main attention is given to fruit growing for market, and we have enough doing in this line. While we grow a small quantity of nursery stock, of sorts that have proved leaders in the orchard, this is not our special work. We simply try out some new fruits; are unbiased in our findings; have nothing to sell at a high price, but wish nurserymen to take notice of some items we have found meritorious. In our correspondence we are

quite often asked to advise as to best varieties for planting, and we do not like to include sorts that the customer cannot find as nursery trees. Certain new sorts such as Anoka and Haralson apples were taken up and propagated by nurserymen directly after introduction, but there has been several others in which merit was not so plainly evident.

The Sasha is a sweet apple originating through Professor Hansen. The tree is hardy and an early bearer of good medium sized fruit that keeps well along toward spring. Color green, turning yellow in storage, seed cells rather coarse, some blight, but not as bad as some other sweet sorts.

The Lobo is an apple of the McIntosh type, originating at Ottawa, Canada. The tree is not as hardy as the Wealthy, but slightly more hardy than McIntosh. The fruit is of a distinct bright red color all over, quality similar to that of McIntosh, larger, is fit for eating earlier and keeps about as long. Valuable on account of early bearing, good size, fine quality and attractive color.

The Folwell was introduced through the Minnesota Experiment Station. This is an apple of about same season and degree of hardiness as Wealthy and of as good quality. This has not shown tendency of early bearing, but is a very dependable annual producer. Its main value as a companion to Wealthy lies in its uniform large size, being a paying sort for market. The tree has not blighted badly with us so far.

The Goodhue is one of the famous Perkins seedlings that originated in Minnesota. Tree is not equal to Wealthy in hardiness, but not too tender for most sections. Fruit is not of high quality and does not keep longer than Wealthy. This is one of the most uniformly large, and prettiest apples we have in the orchard, sells easily and pleases.

The Earlham is one that issued from the Iowa Experiment Station. The tree is just a little harder than McIntosh and may be grown in favorable locations. This is a green apple with some blush, turning yellowish in storage; is of very high quality and keeps well towards spring. Valuable on account of uniform good size, fine quality and keeping.

Just a word now about new crabs. The Dolgo has been taken up and found a place, but there is the Amur, Olga, Ivan and Sugar, each having some separate and worthy features, that are deserving of trial.

GARDEN NOTES

F. X. Wallner, Sioux Falls

March 17, St. Patrick's Day, is the day of our first sowing. About an acre of onions, twenty rows each of extra early Bartletta, Portugal and extra early red, also some radishes.

We will have another acre ready to sow the 19th, St. Joseph's Day. If Good Friday is a good day to plant potatoes, the above two days ought to be good days for sowing vegetables.

We are hoping that our three big ricks of onions which we have out under the straw will come out sound and good.

"Horticulture of the Dakotas" is our choice for the name of the new magazine.

The National Gladiolas Show will be held in connection with the Iowa State Fair, Des Moines, August 22-23-24, 1930.

You get more for your \$1.00 membership in the Iowa Vegetables Growers Association than any association I know of. A big annual report, spray calendar, wholesale price list of spraying material, spray machines, dusters, rodent traps, fumigants, formaldehyde, accessories and pruning tools. All the reports of the Iowa Horticultural Society, the Market Growers Journal and the Midwest Fruit Manual, all for \$1.00 is surely a big bargain.

The Midwest Horticultural Exposition is to be held at Shenandoah, Iowa, November 11-16, 1930. Some South Dakota fruit and vegetable growers should exhibit their best.

EXTRACTS FROM THE DIARY OF A TRAVELING MAN

W. A. Simmons

February 10. There ought to be a law about this: Saw a Model A woman driving a Model T car.

Henry should be notified at once.

The Department of Agriculture has released a statement relative to alleged useless insecticides, disinfectants and fungicides. The part relating to horticulture follows:

"Liquids, powders and capsules to be placed in a hole in the tree, under the bark or in the soil, and paints to be applied to the trunk of the tree, have been examined for their alleged powers to control fungus diseases and to kill insects when, according to the advertising literature, the substances are taken up by the sap and carried to all parts of the tree."

Not only is the value of these "remedies" very questionable, the administration reports, but many of them actually harm the trees. They may cause serious damage to shade and orchard trees, and in case of the latter endanger the crop through failure to control insects and diseases."

February 17. Was at Mitchell today and had a pleasant visit with Mr. W. C. Webb, park superintendent, and our efficient local representative there. He took me out to his greenhouse, where he is rooting many cuttings of a privet that has proved hardy for several years and which seems very promising.

He also took me out for a drive around their fine new artificial lake, and I appreciated it more after seeing it from the park drive on the west side than I ever had from only seeing it from the highway which skirts it on the east.

Mr. Webb is landscaping it and is planning extensive plantings there this year. Most lakes have a rather smooth shore line, but this lake, being artificial and occupying a stream bed, is deeply indented with pretty little capes, bays, indentations and peninsulas and offers unusual landscaping possibilities which are being fully taken advantage of.

With plantings of the fast growing Chinese elm, this lake will soon be one of the state's choicest beauty spots.

The park on the west side includes three old Indian mounds, and inclusion in this park insures their preservation. In grading one of the roads it was necessary to cut into the side of one of these mounds slightly and many bones were exposed. But from the condition of the bones the Indians reposing therein were patently very dead, so the mound was disturbed as little as possible.

Mitchell has no use for dead ones.

Honor to whom honor is due:

"Professor A. F. Yeager of North Dakota has made a real contribution to vegetable gardening in originating the Golden Gem sweet corn, introduced as Gold Nugget. It ranks high in earliness, quality and productiveness."

Was very glad to see this appreciation of Professor Yeager in a recent issue of the Market Growers Journal.

In the March number of Country Home, F. F. Rockwell, who lives and gardens at Cape May, N. J., in an article entitled "The Vogue in Vegetables," says, "Several other excellent sweet corns have been put out in the last few years. Golden Sunshine, developed by Dr. Yeager of North Dakota, and the Burpee, both larger and decidedly earlier than the ever popular Golden Bantam, and just as edible, both bear prolifically, often two ears to a stalk."

February 19. Wonderful February weather. If the ground hog has not overcome his supposed fear of his shadow he has missed several weeks of delightful weather.

Passed a bird refuge west of Crocker, S. D., today and saw a small lake full of ducks.

Presumably they could not read the signs that warn hunters to respect this refuge, but had just happened to select this safe spot for a rest from their long journey north.

The establishment of these reserves is a fine thing and I hope the idea will grow. Personally, I have long been able to obtain my pleasure in a way that does not bring death to our little brethren of fur or feathers.

The Rugosa Hybrids are our most desirable hardy roses but, strange to say, are still rather hard to obtain.

One large nursery firm who I have importuned to list and stock this class of roses, says there is no demand for them and the few sorts they list are unsalable.

This seems strange to me, and I can only account for it as showing that the general public needs to be educated on this subject. When one can have beautiful monthly blooming roses of ironclad hardiness, it would seem they should prefer them to tender varieties that require a lot of work each autumn to keep them alive over winter.

Few eastern nurserymen list them at all, or only a few, if any.

The nurserymen that grow and sell them should, I think, be considered our friends. Mr. Hillborn of Valley City is one of the few that seem awake to the importance of this class of roses, and we owe much to him, for calling our attention to the lovely and hardy Amelia Gravereau rose.

He is constantly enlarging his list of Rugosa Hybrids and in a few years will have about all of the more desirable varieties. Mr. Dybvig of Colton is also going in strong for the Rugosa Hybrids and he tells me he has now obtained a start in Pink Grootendorst and the lovely Agnes rose.

The latter is a cross of Persian yellow with Rugosa and is the only yellow Rugosa Hybrid we have.

Originated at Ottawa, Canada, in 1900, it attracted little attention till Miss Isabella Preston came to the station a few years ago. We owe to her the dissemination of this rose and as it became known it attracted much attention, and was awarded the Van Fleet Gold Medal by the American Rose Society as being the most distinct rose of a new type originated in America.

It is to be hoped that other of our northwestern nurserymen will take up this class of roses, as when they sell roses that will endure for many years they are doing an important work in beautifying the state.

It would seem that self-interest would make them discontinue pushing tender roses that only an expert can carry over trying winters.

William Atherton Du Puy in a Science Service feature article says the origin of the grapefruit is one of the unsolved mysteries of the vegetable world.

It came to Florida from the West Indies, but was not native to them. Continuing, he says:

"As its popularity increased, the interest in grapefruit grew. Men of science attempted to establish its origin. They traced it variously through the islands to the South and finally to Barbados. It seemed that the original American grapefruit tree grew there. There was even a record of its planting.

"In the year 1696, according to this record, a certain Captain Shaddock came to port in the Barbados. He was on his way home after many wanderings in the Orient. Among other things he had collected seeds of various plants he had found growing around the world. Some of these he gave to the people of the islands to plant.

"These seeds yielded among other things the original grapefruit trees. From them have been propagated all the grapefruit trees of the western world. When, in the United States, this product became popular, the botanists attempted to classify it. They gave it its proper place in the rue family, to which all the citrus fruits belong. Then they began inquiring for other specimens of it. But they failed to produce a single one. If Captain Chaddock found it in the East, he did more than the moderns have succeeded in doing. It may exist there, but has evaded search. It may have become extinct."

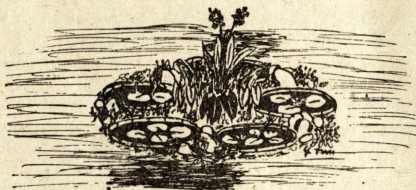
Appropriate verse seen on a baker's calendar:

"As you ramble on through life, brother,
Whatever be your goal,
Keep your eye upon the doughnut,
And not upon the hole."

CRATER POOLS

Thos. W. Hobart

The Crater lily pools differ from all other types of pools in that they are built entirely on top of the ground, no excavation whatever being made. In fact, the one we built last summer was built upon ground that we had filled or built up some eight or ten inches above the original surface. This is a small pool about four by five feet in size and eighteen inches deep.



Pool of Half Barrels



Crater Pool



Ground Level Pool

We first with a hoe pulled out enough earth from the center to around the edges to form a rough outline of the proposed pool, this depression made the form for the base or bottom, which was filled with concrete to some six inches in depth, first filling in about three inches then laying the reinforcing, which may be old wire, chicken netting, etc. In this case it was an old woven wire bed spring cut down to shape.

Before going further, a word about the concrete mixture. First we find that four bags of our own South Dakota cement will make as much strong grout as will five bags of any other brand on the market. We use what our sand dealers here call gravel for the base of our mix. This gravel consists mostly of good sharp sand to about eighty parts and small stones or gravel the size of peas to the size of bird eggs for the other twenty per cent. This we mix without sifting, using from five to seven measures to one measure of cement. We also had on hand what is called "rock" consisting of small stones from the size of birds' eggs to as large as a goose egg, this we wash clean and keep damp but not wet while using.

For reinforcing in building this type of pool we find old discarded woven wire springs or mattress ideal. These are easily separated into ribbons of four or five strands each about one and one-half inches wide by getting hold of the one, two or three wires that form the strand of a single coil with a pair of pliers at one end where they are clamped to the frame, then stretch out straight (they will stretch out some six or eight feet), then break these strands at the other end and finish pulling them out. You will have a woven wire ribbon just right. Note, when you get the hang of doing this you can separate a whole mattress into ribbons in the time it takes you to read this. Now get three or four pounds of twenty penny spikes and some nice large boulders or rock, the odder the forms and coloring the better, about twenty to forty will be needed as this "crater" pool includes a rock garden as well as a lily pool.

The tools we use are a garden hoe, a shovel, an ordinary garden trowel and a trowel made of a piece of board four inches wide by twelve inches long, with a one by two inch cleat six inches long nailed to the

center of the back for a hand hold, the front edges of this are rounded slightly, this will resemble a plasterer's flat trowel and is used to keep the inside of the pool fairly smooth and in shape as you build.

We fill a mortar box with cement and gravel proportioned as above and thoroughly stir and mix until every particle of the gravel shows a coating of cement. This is important. For best results depend upon this mix. Only such portions of this are wet at one time as will form a complete ring around the outside of the pool to a depth of about three or four inches and a width at the base of some seven or eight inches.

This base or first layer is troweled down roughly (don't try to be too neat) to an even height of about two inches, and smoothed around the inside also, all this with the garden trowel after the troweling allow this layer to set some ten to twenty minutes, then peg down in the center of this layer. Use reinforcing spring ribbons with the twenty penny spikes, setting these every eight or ten inches apart through the spring ribbon, outside this reinforcing a thin layer of the damp stone or rock are thinly distributed, and outside of the cement ring some of the large boulders are set up about a foot apart arranged with others in front of the openings so as to with the cement wall form pockets for earth in which plants will be grown.

Layers of wall are built up in succession as described above, troweling down and reinforcing each, though gradually narrowing so that the top when eighteen to twenty-four inches high will be but four inches or so wide. The slanting is best and easiest done if all on the inside. The outside is never troweled but left rough. As you fill in the earth pockets with soil, this will help act as a form on the outside.

A second tier of plant pockets are built upon the first though narrower so as not to cover the lower tier. Small boulders or fancy shaped or colored rock may be set in the cement on top before it sets if desired.

Note: The mix should only be wet enough to handle, like thick mush so that it will barely slide from the shovel and will hold its form and not squash down at is will if too wet.

After the third layer of the outside rim is poured, the wooden trowel is used on the inside to keep the sides smoother than is possible with the garden trowel. This wooden trowel is used after the pool is finished and has set eight to ten hours to apply a water proofing coating of cement and sifted sand about equal parts wet to a thick batter, and troweled on to a depth or thickness of about one-fourth inch. Cover the whole with wet burlap for twenty-four hours, then fill pool with water and allow to set ten days before planting.

I have gone into the process in detail as we build all pools in this way without using forms of any kind and find it very much easier, quicker and less costly than any other method where forms are used.

In the garden where this crater pool was built there are two other pools of different types and though much larger than the "crater" pool, its unique beauty with many varieties of rock plants growing in the pockets on its sides call for much more comment and attention than the other pools.

The plants in this pool grow much faster and bloom more freely than in the pools sunken in the ground, as the water in it keeps several degrees warmer than in the ground surface pools. As far as I can make out being above the surface, the water becomes warmer during the day and the exposed stone and cement also absorbs a great deal of heat that they retain and give off during the night this keeps this pool always warmer than the others and is conducive to rapid growth and profuse blooming. Heat is the most important thing in our water lily gardens.

The pictures are a crater pool, a ground level pool and a pool made up of half barrels. I hope in another article to show actual photographs of all the pools in the above and other gardens.

My father, who lives in central Kansas, suggests that tanglefoot, painted around tree trunks, to prevent worm damage to foliage, will also prevent cat damage to birds.—North Dakota Horticulture.

VARIETIES OF STRAWBERRIES

E. A. Gates, Rapid City

In a previous paper on "Strawberry Culture in Western South Dakota" I described briefly the methods we use in the growing of strawberries but I did not take up varieties.

In this article I will discuss briefly the varieties we have tried out and the ones that have proved most profitable and most successful in this locality.

Under recommended everbearing varieties I would list the following Progressive and Mastadon. Recommended June bearing varieties, Sen. Dunlap, Jumbo and Ashley.

Under varieties worthy of trial I would list the Superb and Champion Everbearing. And the Premier, Cooper, Dr. Burrell June bearing varieties.

Under discarded varieties that have not proved at all successful with us are 999 Everbearing, June bearing varieties we have discarded are Aroma, Big Wonder, Big Late.

Recommended varieties:

Progressive Everbearing

I list this first because I believe that it is still the leading variety for the home garden, although the Mastadon is rapidly becoming a leader. It is hard to beat the Progressive for this section because of its hardiness and high production of fine sweet berries. The chief faults are the small berries, especially in the older patches and they are so soft that they will not stand much handling. To produce large berries the patch should be renewed every second year and to get good berries for the market they should be picked often.

Mastadon Everbearing

I place this variety second among the everbearing strawberries because of its distinct qualities that distinguish it from the other varieties. The Mastadon is a big thrifty, heavy rooted plant that produces extremely large high quality berries. They are a better market berry than the Progressive because of the large size and better keeping qualities. The chief fault that we find with it here is its slowness coming into bearing in the summer and slowness in berries ripening. Fruit rots easily in wet weather, being down next to the ground and under the leaves. The Mastadon has not proven to be quite as hardy as the Progressive.

Senator Dunlap

I place this variety of June bearing varieties first because of its hardiness, productiveness and high market qualities. We have found many varieties superior in quality but for dependability in producing a crop of berries it is hard to beat.

Jumbo

This variety is somewhat similar to the Senator Dunlap in general characteristics, but the plant runs more, seems to be a little more hardy. The berries are a little sweeter but are not so firm. Because of this latter fault they are not quite as good a market berry. Because of its easy rooting habits the Jumbo will do better than the average strawberry under dry conditions.

Ashley

This name is given to a plant of which we do not know the origin. We received the original plants from a relative in Iowa. It has done exceptionally well with us. The berry ripens ten days to two weeks later than the Senator Dunlap. The berries are extremely large and are of medium quality. It takes from forty to sixty berries to fill a quart basket. Plants seem to be rather subject to attacks from insects and plant diseases common to strawberry plants. This may be more noticeable because of lateness that the plant comes into bearing. The Ashley throws out extremely long runners, often two feet from plant to plant.

SEND IN YOUR MEMBERSHIP DUES

GROWING GLADIOLUS IN THE BLACK HILLS

L. S. Hamm, Rapid City

For several years we have been experimenting with the various members of the flower bulb family for the purpose of ascertaining which will best adapt themselves to our climatic conditions. As time will not permit a review of the growing of all kinds of bulbous flowers, I shall touch only upon the culture and care of gladiolus.

In presenting this subject will say that the gladiolus may be successfully grown most anywhere and by even the most inexperienced, as it requires only good garden soil and ordinary handling and it seems that most all varieties do well wherever planted. Where the growing season is short, as it is in the Hills, there is, however, one phase of Glad growing which must be understood if the most is to be accomplished. I refer to the care of bulblets at planting time. These, as many of you know, are rather hard headed little fellows and refuse to awaken in the spring unless coaxed. We do this by soaking in wet sawdust for a week or so before planting. Some then show sprouts and those that do not are getting in the proper mood and will soon come along when put in the ground. Plant them early that they may take full advantage of the short growing season so as to produce the largest sized bulbs possible. Every week or so after planting rake the ground over with a garden rake to keep weeds from starting and to conserve moisture until the plants are large enough to hoe or otherwise cultivate. With this method a majority of our bulblets produced blubs three-fourths inches and up, with but very little watering, notwithstanding the fact that last fall we had the longest season of drought since the year 1911. If bulblets are given the proper start in the spring many of them will produce flowers, possibly thirty per cent. Of course it is not necessary to mention the popularity of the gladiolus which is due to the fact that it is the easiest of all bulbous flowers to handle, and the surest to produce perfect blooms under all conditions.

HOW TO BUILD A COLONY UP FOR THE HARVEST

G. B. Gooderham, Dominion Apiarist

To gather a maximum crop of honey the colony must be exceedingly strong in bees at the same time as the major honey plants commence to secrete nectar. Furthermore, the majority of these bees must be of the right age to become gatherers at this particular time and to be of the right age they must be produced during the eight weeks just prior to the honey harvest, which means during the spring and early summer. The spring is the most critical period of the year for the beekeeper because it is during this period that his colonies are usually at their weakest in bees, the bees lowest in vitality, short of stores and at the same time are required to produce the largest amount of brood. Young bees cannot be produced in large numbers without (1) a good prolific queen to produce the eggs; (2) a plentiful supply of food to feed the oncoming generation; (3) sufficient room for the queen to reach her maximum egg production; (4) adequate protection, especially from cold winds, and (5) a force of bees strong enough to care for all the brood the queen can produce. It is up to the beekeeper then to see that these essentials are supplied. As soon as possible in the spring look over the colonies and replace all old and useless queens, supply each colony with enough food either in the form of honey or sugar syrup and see that there is sufficient room for the normal expansion of the brood nest. Bees wintered outside will have protection enough but those wintered in cellars should have at least protection from the wind when they are moved to their summer stands. All colonies that are weak in bees should be united or have a two pound package of bees added to them. Remember that every check in the spring brood rearing will mean less bees for the harvest.

For further particulars write for Experimental Farms Bulletin No. 33, New Series.

EVERGREENS

Dr. H. M. Freeburg, Watertown

A meeting of the State Horticultural Society would not be complete without a paper on evergreen.

I am aware that everything has been said that should be said before this society and in a much more scholarly way than I can present it. However, the fact still remains that there are comparatively few evergreens planted and a large percentage of those that are planted are not the varieties that may be expected to do well in this climate, and again there is so much known about evergreen that "ain't so" that the subject can not be too often brought before the society with the idea of presenting the known facts to the public to the end that more and better evergreens will be planted in South Dakota. I have grown evergreens successfully for the last thirty-five years—have grown them in South Dakota for nearly a quarter of a century and possibly that is a reason for my appearing on your program. I claim to have raised as many and possibly more evergreens; from seedlings to planting size in Codington County, than any other man. A large proportion of the ornamental evergreens in Watertown and immediate vicinity have grown from seedlings purchased from the Sherman Nursery Company of Charles City, Iowa, and raised to planting size by myself. I am aware that W. D. Walrath, John B. Hanten and many others have successfully grown a larger number of varieties and possibly better specimen trees, but for quantity production, I claim first place. I have planted evergreens every spring for the last twenty years. I have two stock farms just across the Codington County line, to the North and East in Grant County, with effectual evergreen wind brakes of my own planting. One of these, a section farm, is officially recorded in the office of the Register of Deeds, in the courthouse in Milbank, as "The Evergreen Stock Farm." The quarter section on which the buildings and evergreens are located was purchased by me as wild prairie sod, in the spring of 1913, and I now have plenty of Black Hills Spruce and pine fifteen feet high or more to make an effectual wind and snow break for the stock and buildings. On one occasion, a few years ago, when I was playing hookie with my patients, and spending a day at the farm, a middle aged man from a distant part of the county came to the Evergreen Stock Farm to see some stock that he was interested in and he expressed great surprise at the number and growth of the evergreens. He told me he was born and raised in Grant County and that in all his life he had never seen as many evergreens in the whole county as he saw that day on Evergreen Stock Farm. For fear that this audience might think I am exaggerating, I will state that I can and will be glad to prove my statements to any doubting Thomas—seeing is believing. I make no claim to being scientific or professional in my work with evergreens. Practicing medicine and surgery is my profession and vocation—raising evergreens my pastime and avocation. I have not raised evergreens primarily for profit but rather for the fun of growing them. Raising evergreens is one of my hobbies and in the observing of their habits and by working with them I have accumulated some theories and possibly facts about evergreens which I would like to "holler" about. I would like to yell so loud that every owner of a farm or of a home and living within the limits of South Dakota would hear my noise and stop to listen.

When I get too old and feeble to practice my profession I should still like to be well enough to ride up and down the highways and byways of South Dakota and do two things—one, to teach the farmer how to grow evergreens, the other to show him how to catch the pocket gopher that is digging up his alfalfa.

When I came to Watertown twenty-five years ago the 12th day of next June, having come from the eastern forested sections of Iowa and Minnesota, I was not prepared for the shock I received when first I viewed the barren treeless prairies of South Dakota, and a little later when my doctor brother from Minneapolis visited me and referred to our beautiful Lake Kampeska as a hole in the ground, there was nothing left

for me to do but plant trees and evergreens. I have been termed a crank on evergreens—I plead guilty. I have raised evergreens in season and talked evergreens out of season. Have raised evergreens in the city and out of the city, at the lake and around the lake—in Mount Hope Cemetery and around the cemetery, at the farms and around the farms. I just can't raise enough evergreens. I want everybody to start growing evergreens until we shall have evergreens growing everywhere.

I request and beseech every member of this South Dakota Horticultural Society to join my crusade and help educate the good people of this state to the desirability of a larger planting of the right kind of evergreens.

And now for the serious part of my exhortation on evergreens. I will begin my effort by declaring that my intentions are to speak loud enough so that every person in this room shall hear what I have to say about evergreens. In my further presentation of the subject my greatest desire is to stimulate a free for all discussion on evergreens. I want to stir you up, to talk about the evergreens I love so much to talk about, and if you will only speak out of your experience, I care not whether you agree with me or not. I am willing to be thought a fool if only my evergreens are made to stand out on the horizon of your thoughts.

There are only three evergreens for routine planting in South Dakota. The Black Hills Pine, the Black Hills Spruce and the Colorado Blue Spruce. If there is another it is the exception that "proves the rule," and the are only these three, the Black Hills Pine, the Black Hills Spruce and the Colorado Blue Spruce. You will note the order in which I have named these evergreens—I mean for it to be significant for I have written Black Hills Pine in big black letters. I like that name for our best native pine. It tells us at once where the tree may be seen in all its beauty and grandeur, in its native habitat and of God's own planting. For those who have visited the Black Hills I have already painted a picture on your imagination and there is but one other thing left for me to say, it is this, that these same beautiful pine trees can be successfully transplanted every where in the whole state of South Dakota, and it will grow anywhere any time and all the time with as little care and attention as any evergreen you may choose to plant. It will grow on every kind of soil that isn't covered with water, and it will grow better and many years longer than the Box Elder and the Willow tree. You don't have to coddle this common Bull Pine for it is as sturdy as its common name implies. It is best planted on the outside of your grove or so called wind break. After it is once planted you cannot kill it. It will not die for a century and God himself only knows how much longer it will stand a monument to the name of the man who planted it. One row of these wonderful trees, planted eight feet apart, make a wind break fifteen feet high and for the lower ten of this fifteen feet your wind break is about as effectual as a ten foot tight board fence, and you won't have to worry about the snow for this row of trees will keep it all back where it belongs, out of the yards and away from the buildings. We will now call this evergreen *Pinus Ponderosa*, for it is such a magnificent tree that it is entitled to be called by a beautiful name.

There is no tree more beautiful for planting on the hillsides or in the back ground of your landscaping, and of course that is where you have located these trees when you have planted a wind break on the outside of your lawn, garden, orchard and stock yards. How easy, how natural and how beautiful, yes you may now, though it sounds a bit foreign, call this evergreen *Miss Ponderosa*.

I should make an honest endeavor now to change the subject and forget my pine, that I might have something left to say about the two spruce trees I have previously mentioned, but I can't do that for I have not yet begun to do the tree full justice, and besides this may be my last chance to tell you about my pine tree. Do you all know and do you believe that one row, closely planted of these wonderful pines will make more wind break and a better protection than a dozen rows of willow, ash or cottonwood? Do you know, beyond every doubt, that you can

grow garden, berries or field crops right up to the very branches of the Black Hills Pine? Pardon the rudeness of the comparison, but do you recollect that for forty feet on either side of the row of tall cottonwoods, you were only able to raise a sickly crop of weeds? I hesitate about calling your attention to the monetary value possessed by this pine tree. The Black Hills Pine does pay dividends, accumulative in nature, for when it has grown so long and so large that you don't need it any more for a wind break you may cut it down, if you have the heart, and the lumber attained from its trunk will build your buildings and all the tree (there is no waste) may be cut into wood and kindling to keep you warm and happy. You ask, aren't there any other trees of this nature to be recommended? Yes there are many other pines that can be grown in South Dakota. We might mention the Jack Pine, which have been brought from the sand regions of Minnesota, or the Scotch Pine, which has been removed from its natural habitat and recommended for trial and experimental purposes in South Dakota. Yes, we may mention these and others, but please do not compare them to my beautiful *Pinus Ponderosa*.

The Black Hills Spruce is a native evergreen, fully acclimated, withstands drought almost as well as our Black Hills Pine, grows in height a little faster, but will not, in my judgment, make a quicker wind break. Its dark color blends with the beautiful rich velvety green of the *Ponderosa* to give it a place on our program of evergreen wind break planting, but it is of course on the inside of the pines—but not too close—for there must be space between the rows for the snow to bank up, which in turn, will melt in the spring to fill the ground with moisture, which will force our beloved evergreens to grow more beautiful as the warmer days of summer stimulate every bud and branch to do its very best. The shapely tops of the spruce, reaching upward, as if vainly trying to outdo the sturdy pine, making above a fringe of ornamental trimming, which I should say at least does not detract from the grandeur of our outside row of pines.

In front of the buildings and along the road there may be a row of Black Hills Spruce or better yet we will again pull the Black Hills Spruce back to second place and plant them on the inside, putting first by the roadside a specimen row of Colorado Blue Spruce, that most beautiful of all evergreens for ornamental planting.

The Black Hills Spruce is supposed to grow a little faster than the Colorado Blue Spruce and possibly will make a quicker wind break, but if we were to be denied one of these three wonderful evergreens I should say we should discard and try to forget the Black Hills Spruce.

Last but not least, I will speak briefly concerning some of the beauties and virtues of the Colorado Blue Spruce. We, who love evergreens simply could not live without this tree of trees, and the pier of all evergreens.

If, when I die, I have so lived as to merit the honor, and my loved ones, left behind, desire to erect a true and lasting monument to mark the spot where "dust has returned to dust," please let them plant for me an evergreen. An evergreen of the perfect Colorado Blue specie, and my soul shall be happy, if per chance I may be permitted to come again to earth in spirit and know that my life is still green and living in the evergreens and in the lives of those with whom I have lived and worked.

From Iowa comes the question as to whether it is possible to hasten the development of melons by starting them inside. It is possible to plant melon seed in pots, sods or strawberry boxes two or three weeks before they could be planted out of doors. When the danger of frost is past the whole lump of earth is set in the field without disturbing the roots—Wisconsin Horticulture.

If you want a red Glad which is something extraordinary, I suggest you get a bulb or two of Pfitzer's Triumph. This is the most showy thing we saw last year and its price is not exorbitant to any one who is a Glad lover.—North Dakota Horticulture.

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