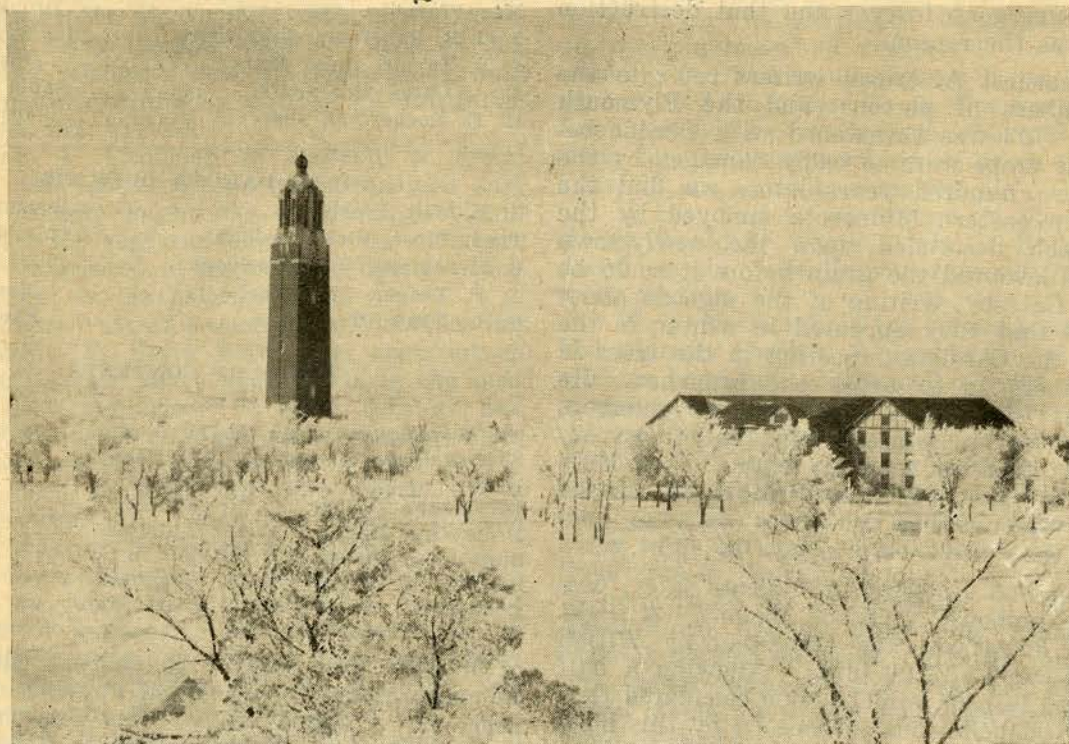


NORTH AND SOUTH DAKOTA HORTICULTURE

FEBRUARY 1937



WINTER SCENE ON THE CAMPUS OF STATE COLLEGE, BROOKINGS, S. DAK.,
SHOWING THE TOWER, FROM WHICH THE CHIMES RING OUT SO CHEERILY.

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THE PASSENGER PIGEON



O. A. Stevens

Probably no other species of bird has played so dramatic a part in the history of a country as did the Passenger Pigeon in America. The early accounts by different writers are much alike in that they tell of countless thousands of the birds. For many years this was an important source of food and revenue, but it was exploited to the extreme limit and completely destroyed. In recent years the total disappearance of the birds has been the source of much discussion. Frequent has been the suggestion that they must still exist in some little inhabited part of the country and many have been the theories to account for their disappearance. Among the best authorities there is no disagreement that the birds are gone forever and that destruction by man was the reason.

The earliest American writers refer to the large numbers of pigeons, and the Plymouth colony in 1743 was threatened with famine because their crops were so badly damaged by the birds. Two hundred years later, we find the pioneers in eastern Minnesota annoyed by the flocks which descended upon the newly-sown fields and devoured the grain before it could be covered. Catesby, writing of the pigeons about 1720, said that they appeared in winter in the region of the Carolinas, roosting in the trees in such numbers as to break the branches. He noted that they appeared in greater numbers during the severe winters and that they consumed the food to such an extent that little remained for the hogs. In Virginia he said he had seen them flying for three days so continuously that birds were always in sight.

Wilson and Audubon, 100 years later, described the immense flocks of pigeons. A flight lasting all afternoon was estimated by Wilson to include 2,230,272,000 birds. Allowing a half pint of food to each bird he then calculated that 17,424,000 bushels would be needed by this flock for each day. Perhaps his figures were not so conservative as he thought, but they would scarcely seem smaller if reduced by one-half. Another calculation of migrating flocks in the Mississippi Valley 50 years later, was 120,000,000 per hour for five hours.

The habit of the birds to nest in huge colonies, led to their ready destruction. Wilson mentioned one formerly used nesting area which was reported to be several miles wide and forty miles long. He himself traversed several miles

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of it and saw "every tree spotted with nests. In many instances, I counted upwards of ninety nests on a single tree." The fat, full-grown squabs were especially prized for the market and the birds were killed almost without restraint during the nesting season. All sorts of devices were employed to take the old birds, especially large nets over baited ground. As late as 1878 it was estimated that 5000 people were employed in the business. From the last large nesting in that year it was estimated that not less than 3,000,000 pigeons were killed.

Such tremendous aggregations of birds nec-

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NORTH DAKOTA STATE HORTICULTURAL SOCIETY NEWS LETTER



A. F. Yeager,
Secretary,
Fargo, N. D.

Among the newer varieties of potatoes the Chippewa shows greatest promise. Not only in North Dakota, but in many other sections, this variety looks to be superior.

Paid up members are reminded that it is possible to subscribe to **THE FLOWER GROWER** through the Horticultural Society at \$1.25 per year, which is 75c off the regular price.

If I could plant out only one variety of cabbage for commercial purposes it would be Penn State strain of Danish Ballhead. This is a heavy yielding desirable type of winter cabbage.

I have on my desk a small supply of several varieties of rock garden plant seeds which were sent to me by Mr. M. Truman Fossum of Bronx, New York. Any member who is a rock garden fancier and wishes a few of these seeds may have them for nothing by writing me for them. First come, first served.

Joseph A. Candrian of Regent, N. Dak., suggests that some persons in the eastern part of North Dakota might like to exchange plants with him. He suggests some of the members might be interested in native wild fruits which are abundant in his neighborhood.

Mr. John Watt of Leonard has the following to say about the Betty Bland rose sent out as a premium a few years ago: "This is the best rose we have yet tried. It came through last winter without losing a bud; is green and healthy, as well as attractive in winter; and so far has not been hurt by the rose beetle. It is far better than the much advertised Hugonis which is inferior to Harrison's Yellow."

A correspondent in a recent letter asked whether we have tried *Amygdalus nana* and a variety of *Juglans*. *Juglans* happens to be the scientific name for walnuts and *Amygdalus nana* for Dwarf Siberian Almond, which is one of our best early spring blooming shrubs.

A South Dakota correspondent commented on my statement that cheap seeds are not worth planting. He states that a friend of his in the South raises a considerable acreage of turnips of which he sells the best roots and leaves the rest go to seed. The crop is then mowed like hay and of course the seed can be sold cheaply. Any seedsman who buys seeds of that kind and distributes it to his customers, while he may make a few dollars immediately, in the long run will build up illwill rather than good-

will. Selecting the poorest for seed purposes, as this man does, most certainly gives an inferior crop. The moral is: It pays to know your seedsman, or nurseryman for that matter; and if you have one who gives you good seeds, and good nursery stock, stay with him; he is a friend indeed.

When one realizes that great variations in temperature may be found under the bark of a tree on the southwest as compared to the northeast one might more readily understand how sunscalded may come about. Studies at the New York Agricultural Experiment Station showed that with an air temperature of 20 degrees F. the under bark temperature on the southwest was 40 degrees F., on the northeast 18 degrees F. When the air temperature was 43 degrees F. the southwest side of the tree was 71 degrees F. and the northeast 32 degrees F. By darkening the trunk with tar the temperature on the southwest was 92 degrees F., on the northeast 35 degrees F.; while whitewashing resulted in 43 degrees F. on the southwest and 31 degrees F. on the northeast. It is on the basis of such work that recommendations for the whitewashing of trees to prevent sunscald are sometimes made.

A new variety of tomato in the late class which should be worth a trial is Rutgers, produced by the New Jersey Agricultural Experiment Station.

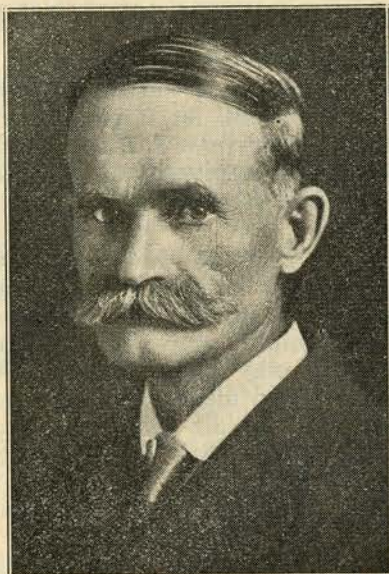
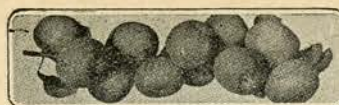
W. T. McGeorge of the Arizona Agricultural Experiment Station reports that the highly alkaline condition of the soil results in low absorption of fertilizers by plants. He recommends the use of acidulated organic matter or small amounts of finely ground sulphur with fertilizers to overcome this condition. He states that long growing crops such as fruit trees are most likely to be affected. This matches our observations here in North Dakota.

According to experiments at the Oregon Agricultural College, Regal lily bulbs planted without having the roots cut away made 23 per cent longer stems the first year and 27 per cent longer stems the second year than those with the roots removed.

The Ohio Agricultural Experiment Station summarizes visible symptoms of plant food deficiency by saying that the yellowing of foliage indicates nitrogen deficiency; yellowing of the margins of leaves and the dropping of the lower foliage, phosphorous deficiency; browning of the edges, potassium deficiency.

W. R. Leslie of Morden says that the Silver Buffalo Berry makes a satisfactory clipped

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John S. Robertson

NEW TOMATOES

We are interested in the growing of tomatoes, having these to sell along with other fruits, to customers at the place as well as delivering by our own trips. We have grown tomatoes more or less during 45 years past, so have tried out many varieties in trying to keep up with improvement. During the past few years we have been trying out various new kinds introduced by Prof. A. F. Yeager, of Fargo, North Dakota, finding most of these superior in being earlier to ripen than others originating farther east, south, and at lower levels.

This past spring of 1936, Prof. Yeager sent us a few seeds of each of two varieties of tomatoes; one called N. D. No. 215-P 2, and the other N. D. No. 216-2 B. We planted a few in each of these, at the same time and on the same ground as that of Bison, Red River, and Jumbo, that came to us from Prof. Yeager some few years ago; also the Break O'Day, that originated in the eastern part of the U. S. The resulting crop showed quite a variation, centering our attention mainly on that of N. D. No. 215-P 2 as being the best and most profitable allround kind of conditions we had last year. Both of the new kinds have the outstanding distinction of ripening evenly, so that there is no green spot around the stem as in other varieties; both are large, and of good quality, but the No. 215 bore much heavier than the other. This also has

a dark and more purplish color, similar to that of the Jumbo. The Bison is still the earliest starting to ripen, but the two new ones are not far behind. One of the principal advantages in growing these two new varieties, is that they are both similar to the Bison in that of forming a short determinate growth, and setting a full crop of fruit along this growth early. This shorter growth is a great advantage in getting better returns, especially in sections where rainfall is limited. Plant growth is the principal thing that takes moisture from the ground; so when there are too many plants, or those of too long a growth, on a given area, the supply of moisture may be all drawn from the soil in dry years before full crops are produced. In my section, Fall River County, where rainfall averages around 17 inches per year, I allow around 5 feet each way between tomato plants, then keep all weeds and other vegetation out from between. We hill the plants some with dirt dug from between, then give a light mulch straw or manure to help prevent surface evaporation. If the season happens to be a little more wet than usual, the surplus moisture that is left above the needs of plants that year is in store for tiding over some future year that has less rainfall.

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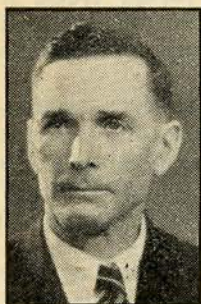
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PRESIDENT'S CORNER



F. X. Wallner
Sioux Falls, S. D.

The eyebrows are too big and too high on the cobbler and the warba potatoes and even though there is a wealth of friendly expression in the colorless eye of the cobbler and the beautiful pink eye of the warba, they are so deep set that enormous waste comes when they are peeled. These two types will be replaced soon with good types that have no eyebrows and almost invisible eyes.

Dec. 19th.: I returned at midnight from the 9th annual Peat Land Vegetable growers meeting of Northern Iowa and Southern Minnesota, held at Forest City Iowa. A delegation of more than 200 big growers of potatoes, onions cabbage and other vegetables, were in attendance. Irrigation, diseases, fertilization and new varieties, were the main subjects discussed. A new cross of warba, the earliest potato and Kahtadin, one of the good late, was thought to be the answer to Secretary Fitch's prayer, to replace the cobbler. There were fine seed potatoes from northern Wisconsin, Minnesota and North Dakota on exhibition, but the very best were from Prince Edwards Island, that cost a dollar more per hundred than ours, but all thought were worth it. Where they grow they have good sleighing 9 months of the year, while in the other 3 months, the sleighing is not so good. I saw the new, almost complete potato and onion storage cellar, that cost \$3,000.00 and the newest irrigation system, consisting of light steel pipe, put together with a clamp, and with a revolving nozzle, covering considerable distance, which was in operation on the street, both days. The banquet was an affair to my liking in that they had plenty of fruit and vegetables, and a record on the menu card telling where everything came from and who grew it.

Emily Post telegraphed permission for us to drink the tomato bouillon that was in cups, and also said it was proper to talk about the eats. 216 trials reported No. 35-26 potato to be good type, good quality and good yield, but there were some reports of late mosaic. The red warba, a sport of the warba, was a new variety, and many new seedlings were shown.

Secretary Fitch told about the poor fellows that thought they could not afford to fertilize, losing 100 bushels or more per acre, enough to buy the land and erect a small house, besides. This talk alone was more than worth the expense of the trip to me, and it inspired me to take on the agency for fertilizer, so that 1, or

any one may get it at any time, one bag, 10 bags or a ton, at reasonable prices. The growers most liberal with fertilizer grew the best potatoes, onions and other vegetables. These same growers, most all sprayed from 5 to 9 times, during the summer. Secretary Fitch could not control the speakers when he told the growers to throw away their dusters and use water sprays. The growers using dusters all wanted to speak at once and tell why they refused to throw away their machines, but Secretary Fitch is usually correct. It was shown that the potato roots and vines are most all grown the first 60 days of growth, the tubers being made and matured later.

Dec. 30th.: I got a surprise New Years present in the mail, this morning a big white ribbon and a check, third prize for judging potatoes, but I admit that my score was very low and if some of the others had not torn up their cards, perhaps I would not even won third prize. About the only ones I picked properly were Ohio's Triumphs, Russet Burbanks and Russet Rurals, but the other 8 varieties, mostly whites, I had wrong; in other words I did not know my potatoes. According to the Secretary, they are placed in the following order, in importance, cobbler, Green Mountain, russet Burbank, White Rural, Russet Rural, Triumph, McClures, Early Ohio, White Rose, Brown Beauty, Spaulding Rose and Kahtadin. I do not blame the Secretary for placing the Cobbler at the top, because it is his ideal and it is grown to perfection in the peat soils of Iowa and Minnesota, but I have studied the 17 leading markets of the United States for some time and find that Cobbler, by name, is seldom mentioned. In the Packer for January 2nd 1937, Cobblers are listed on two markets, while round whites are listed 13 times, which of course takes in Cobblers and others. The Burbank Russet is listed 25 times, Rural Russets 5 times, Triumphs, new and old, 18 times, Green Mountain 8 times, McClures 6 times, Ohio's 3 times and Cobblers only twice. The Burbank and Rural Russet together are listed 30 times on about all the 17 markets, in No. 1 and No. 2 grades. The Green Mountain, from the heavy producing section of Maine, and the McClures from the irrigated sections of the far west, with the russets also from the west, seem to me to be the leading varieties, with Triumph a close 4th, Rurals next and at present, Ohio's are at the bottom of the list.

About 38 years ago, the city of Tokio, Japan, presented to the United States 3000 seedling cherry trees and these were planted around the tidal basin in the Capitol grounds at Washington and have been a beautiful sight,

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FROM OUR MAILBAG



Victor Lundeen

Mr. Jacob J. Brosy, Wishek, reports that he has several hundred 5 to 7 foot ash trees which have been girdled by rabbits this winter. He wants to know if there is a preparation which might be used to save these trees. It is doubtful if application of plaster, tar, paint or other preparation would be of any value. Trees which have been girdled should be cut back to the ground this winter or next spring before growth starts. They will then rapidly produce second growth which will make an effective windbreak if allowed to bush out and grow naturally.

Mr. Ervan Purcell, Vashti, enquires if potato peelings could be kept from now until spring and then used for planting. In answer to this inquiry, we replied that it might be possible to successfully store these peelings if they were kept at a temperature of about 35 degrees F. in a moist atmosphere. If allowed to dry out the buds will be killed. Although it is possible to grow potatoes from peelings, sprouts coming from such stock will be weak, and ideal weather conditions are necessary if a good crop is to be received.

Mr. George Miley, Dilworth, Minnesota, asks how to kill cottonwood tree stumps without digging them out. If the second growth suckers which arise from the roots of the old stump are kept down they will soon have used up the stored food reserve from the old stump, and unless allowed to manufacture food through their leaves, they will die from starvation.

In response to a radio talk recently presented, we have received numerous calls for Bulletin 224, "Plants in the Home." Our supply of this bulletin is now exhausted and we will not be able to supply further requests for it.

The Department of Extension, University of Alberta, Edmonton, Alberta, Canada, has recently issued a very good bulletin entitled House Plants, by J. S. Shoemaker. It is possible that you may secure a copy of this bulletin by writing the Department of Extension, University of Alberta, and enclosing 10 cents in cash (not stamps) to pay for its cost of publication.

J. J. Crumley, Athens, Ohio, enquires if seeds of ungrafted forest trees will reproduce their kind when planted. While elm trees always produce elm trees, seedlings from some trees will be extremely variable and make all shapes and sizes of trees. Some of the other

seed trees produce very uniform progeny. In cross pollinated plants, such as forest trees, if two widely different parents are the ancestors of a tree then the progeny can be expected to be variable also.

Martin Lovdahl, McGregor, enquires regarding propagating boxelder and caragana by use of cuttings. We inform him that we thought a more practical, cheaper and more satisfactory method of propagating these kinds would be to grow new plants from seed.

Seed catalogs are a part of our mail at this time of year. They serve to remind us that garden planning time is here even though planting time may be two or three months away. We have noted that several of the larger seed companies are offering varieties developed in North Dakota for sale this year.

We have already received requests for information on construction of hotbeds. We have a mimeographed sheet which describes the construction of a hotbed suitable for the home gardener. We shall be glad to send you a copy of this if you address a request to the Department of Horticulture, N. D. A. C., Fargo.

NORTH DAKOTA NEWS LETTER

(Continued from page 15)

hedge but it must be trained to conical form if the lower branches are to remain alive and vigorous.

A. J. Pratt in Gardener's Chronical (American) states that 100 pounds of sand will absorb 25 pounds of water; 100 pounds of clay will absorb 50 pounds of water; 100 pounds of humus (organic matter) will absorb 190 pounds of water. Thus, we see why adding manure and plowing under green vegetation increases the water holding capacity of a soil.

A plant for the processing of Jerusalem Artichokes into food products and eventually (it is hoped) into power alcohol is being erected at Gering, Neb. Farmers and business men of the region are reported to be interested in the possibilities of this crop because of its ability to withstand drought. —Country Home.

N. O. MONSERUD

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STATE TREE PLANTING

J. L. Low

My article is to be a travelog; not a travelog in the usual sense but as a report on three years progress with our tree program.

During the summer of 1933, the South Dakota legislature established a tree act which was to promote tree planting within this state. Funds were made available and regulations were made whereby this state could go into an agreement with the United States Department of Agriculture and participate in the Cark-McNary work. The passing of the bill did not establish the work as when an attempt was made to setup the program, many difficulties were encountered. In the first place, a forester was desired but the Department of Agriculture could not maintain him alone, and other departments were requested to cooperate in employing a forester. However, at that time they did not feel that a tree program was of enough importance to warrant that aid. Eventually the tree program was established as it now is. The Department of Agriculture handled the work and furnished the part time assistant to contact farmers who have made plantings under this setup.

In the spring of 1934, the Department was ready to function as a distributor of trees. Five varieties of hardy trees were offered to the farmers at reasonable prices. During this first spring a great many difficulties had to be ironed out. In the first place county auditor's did not care to handle the application blanks as in many instances they thought it added to their own work. The county agents had released news stories in respect to the tree program and a few applications were mailed to the extension service rather than to the Department of Agriculture. The usual difficulties in a program of this type appeared for us. The best methods of packing, available packing space, and countless other things came up. These were all taken care of and a total of 83,000 trees were distributed.

1935 was a different story. The ground had been broken and the going was much easier. The available varieties of trees were increased to seven by the addition of black hills pine and red cedar which this Department figured hardy enough to warrant distribution in this state. Application blanks were again sent to county auditors and county agents who in turn did their very best to have them distributed. Many newspapers and especially the dailies, feeling that this program was one to be encouraged, gave considerable space urging the farmers to avail themselves of the opportunity to purchase the trees offered. The packing and shipping of

these trees was much easier in 1935 as we were able to profit by our experience of 1934. The splendid cooperation given us by the newspapers, county agents and auditors helped to raise the total number of trees distributed to 137,000.

1936 was still a better story. The state was tree conscious. Every newspaper had been playing up the shelterbelt for some time and the people were ready to go ahead and plant trees. The Department again offered two additional varieties of trees. We had splendid cooperation by all the newspapers, many of them printing our applications in full in their papers. The results of the program were apparent when a total of 442,000 were distributed.

During this past spring the Department was able to acquire a packing shed. Here benches and tables have been arranged so that the work of packing the trees is accomplished with a minimum of effort. Additional benches have been built this fall so that next spring the program will be handled still easier and faster.

Since the program of furnishing trees to farmers at cost has been inaugurated, we have had many requests from teachers and interested people for trees to be used for landscaping purposes for schools, churches and lakes. During the past two or three years the construction of many dams and water holes has made an increased demand for the landscaping of such places. This Department was unable to accommodate such projects. However, the nurserymen of South Dakota provided a package consisting of several varieties of trees and a few shrubs which they made available to these persons at a very favorable price. It is our hope that eventually we can expand our program to furnish trees for planting, to rural schools.

Much has been done by the Department in an attempt to educate the people as to the most efficient methods of care for their trees. Through personal contact and publications, the proper methods of care of trees has been disseminated. We know that our efforts have been successful to a fair extent. As proof I might cite the results obtained by the farmers in 1934-35 plantings.

In 1934, our tree program was new, consequently we were unable to give as much attention as is necessary to the care of seedling trees. As a result only 29 per cent of the trees planted survived during the first summer and the first winter. In 1935 considerable emphasis was placed upon tree culture. At every opportunity the individual planting trees, was urged to cultivate and water them. As a result of this, the trees planted in 1935, checked on in 1936 after they had gone through one of the worst winters in the history of South Dakota, one

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SECRETARY'S CORNER

W. A. Simmons

Here is something our President has been holding out on us for nearly a year, as it is dated Feb. 20th 1936 and mailed at Bayfield, Wis.

To All My Good South Dakota Friends

It was certainly very thoughtful of you to write me that letter from the State meeting at Aberdeen. Having worked for that Society for so many years, when horticulture in South Dakota was an experiment to find out what would grow, I feel like it was partly a child of mine.

It took many years of nursing, in the nurseries of the state, to make South Dakota the beautiful state it is today. I am proud to have had part in it. I miss all you, my old friends. We came to Wisconsin too late in life to make friends of the Pioneer quality; it takes years of labor, sorrows and joys, to make friends like you are. We always read with so much interest, everything we see about our dear old State of South Dakota and still hope to attend another meeting. I shall be 80 years old April 24th this year, but that is not so old for a man who has lived wisely and outside, near to nature, all his life. As I cannot send a "thank you" and greeting to each one of you, I send this to all of you,

Mrs. Whiting joins me in sending this greeting and an invitation to you to come and stand on our hill and look at Lake Superior. It is a beautiful sight and the drought did not even make a dent in our Lake Superior.

A welcome awaits any one of you,

With my best wishes,
Signed, Geo. H. Whiting.

In sending a very pretty Christmas card, Dr. H. C. Cooper, long time President of the N. D. State Horticultural Society wrote: "I am still hybridizing peonies and gladiolus. The way is long but the pleasure is great."

In case some of his old friends may wish to write to him, his address is 206 N. E. 31st Ave. Portland, Oregon, and incidentally, if you can get a letter out of him in reply, you have got me beat.

Gabe Caffrey thinks I am in error as to what the 4 H's of the 4 H clubs stand for. According to this authority they stand for Hogs, Horses, Heifers and Hen fruit.

In our last issue our President credits onions with building the Egyptian Pyramids and while we will agree, they are strong enough for almost any building operation, Dr. Frank Thone, in Science News Letter credits wheat with performing that near miracle and corn, with building

the much larger pyramid at Teotihuacan, Mexico. We would not presume to take sides in this dispute and will leave those scientists to fight it out and let the tears fall where they can.

In sending in her dues for 1937, Mrs. Mary E. Sandoz of near Ellsworth, Neb., widow of "Old Jules", says: "The summer of 1936 was very hot and dry; no rain for 68 days, with the mercury up to 100 to 106 for 27 days in July. The orchard suffered some this season and taught me the kinds to plant and the correct spacing of the trees. No trees should be closer than 30 feet, which gives room for cultivation. The wealthy, yellow transparent Duchess, and all of the crabs, grew to normal size. Delicious, McIntosh, and Charlamoff only attained half size. The plums were very good and produced a big crop. The old cherry orchard has been yielding less every year as the trees are 20 years old and have passed through 3 dry seasons, but the young trees have been loaded. The black walnut trees had a good crop of nuts." We hope Mrs. Sandoz will be spared for many years to tend the orchard in which every tree is an old friend whose needs she has looked after since their childhood, when she planted them.

Our friend and fellow life member Mr. Sam H. Bober, is spending the winter in southern California, in the hope that the severe winter weather of that region will bring relief from the unpleasant migraine headaches that prevented his presence at our annual meeting. At Yuletide, he sent the editor a large box of the candied products of that region, called a "Mission pak" and later, a very pretty post card, which is now preserved in the Society's scrap book. We mention this, not as a hint to other travellers, but just to show what is being done in the best circles.

Mr. B. A. Tedford of McCreary, Manitoba, Canada, a town 162 miles northwest of Winnipeg, writes as follows, under date of January 15th.: "At this time of year there always seems to be a little time for letter writing and reading all the summer issues of the magazines etc., though I usually take time to run through Horticulture the day it arrives, for there is always much of interest in it.

The past year was a hard one on some things, in this part of Manitoba. We had lots of snow last winter and I felt our plants and trees would come through nearly 100 per cent but when the snow disappeared, fruit trees (especially applies, plums, cherries and even Mountain Ash, were badly girdled by mice, for the first time, on my place. Then the gooseberries, of which I had 9 varieties, all failed

(Continued on page 22)



BEEKEEPERS' NEWS LETTER

J. A. Munro



J. A. Munro

1936 Yield Averages Up: North Dakota beekeepers harvested an average of 147 pounds of honey per hive this past year. This figure is based on reports from beekeepers over well distributed points in the state and takes into account the production of more than 25 percent of the hives of bees in North Dakota. This should contribute towards a happy new year for beekeepers, and incidentally a stronger North Dakota Beekeepers' Association.

The International Conference: More than a score of North Dakota and western Minnesota beekeepers were among the 400 or more delegates who attended the International Conference of Beekeepers at San Antonio, Texas, November 22-25. It was a very worthwhile meeting. The honey exhibit, arranged by the American Honey Producers' League, was the finest of its kind ever shown in this country. Honeys from many foreign countries were featured in the exhibits and were labeled as to their distinctive floral sources. Well, enough for the present—we'll call on some of our members who were there to report on the conference the next time the North Dakota Beekeepers' Association meets.

Save On Subscriptions: Members may obtain the leading bee journals at new special rates, provided the subscriptions are forwarded through this office. To non-members the subscription rate on any one of the journals is \$1 per year. To members of the North Dakota Beekeepers' Association the rate per year to the American Bee Journal is 50 cents, to Gleanings in Bee Culture 50 cents, and to the Beekeepers' Item 75 cents. You'll want to refer to the advertising columns of these journals when it comes time to order package bees, queens, etc. Also read some of the fine articles on beekeeping contained in these magazines. We don't know how long the above offer is going to last, so order now. Not more than one year's subscription, at this rate, is allowed for any magazine.

Membership Dues One Dollar: The price of membership in the North Dakota Beekeepers' Association remains the same as ever. As a member you will save on subscriptions to the leading bee journals, receive a year's subscription to North and South Dakota Horticulture magazine free, and have an active part in meetings and other activities of this Association.

Your Local Market: Beekeepers who have

spent years of effort in building up a local trade for their honey cannot afford to lose it because the local supply of honey may be inadequate. Buy a supply from some outside area and keep your old customers supplied with honey. We can furnish you with the names of honey producers who can supply you with honey.

Wintering Requirements: Bees that are well supplied with honey and protected from the weather need little further attention. Where colonies are cellar-wintered an occasional inspection is needed, at which time the accumulation of dead bees on the floor should be swept up and removed. Occasionally it is necessary to examine the entrances of outdoor wintered hives and make sure they are free of ice or other obstructions.

What About Bee Disease? About the only "fly in the ointment", so far as beekeeping in North Dakota is concerned, is the danger from American foulbrood. The bee inspection service of the State Department of Agriculture has been doing everything possible, with the meagre funds at its disposal, towards checking the disease, and in this respect it has had the hearty cooperation of those interested in the welfare of the industry. Yet, the percentage of diseased hives is steadily increasing from year to year. This is due to the fact that present funds do not allow a complete inspection service over the beekeeping area each year. Under these conditions, the best we've been able to do is to render inspection and supervised disease eradication work in only those areas where foulbrood is known to occur. The beekeeping industry requires the extension of this service throughout the beekeeping area, and a marked improvement can be expected only when this is made a reality.

Combining Business With Pleasure: A few of our members have developed a plan of beekeeping which enables them to dodge the winter better than the bees themselves. Early in the fall they see to it that their colonies are well stocked with honey and protected from the cold. Then with their families they go to some southern climate and, not infrequently, add materially to their incomes during their southern stay. In most instances, these beemen have established beeyards in the south which provide all the package bees which they need for restocking winter losses in their northern apiaries in the spring. Your secretary has their names, but not their addresses, except in a few cases. Here are the names of those beekeepers who will be returning from the south, along with the birds, in the spring: Beals, Daniels, Engle, Gunter, Hailey, Hausmann, Jenkins, McPherson, Seastream and Victor.

Beekeeping Conditions: From time to time, this office has inquiries about the conditions of



honey plants, over-wintering colonies, and honey marketing conditions. We will appreciate having notes on these subjects, as pertaining to your respective localities, so that we may have the most accurate information as a basis for answering these inquiries.

New Members For 1937: Messrs. Wm. Robinson, Manvel, and H. A. Schmitt, Mandan, are the first new members of the Association for 1937. Both are interested in beekeeping and have subscribed to the leading bee journals.

Help Make This A Banner Year: Now that we are off to a good start in the new year, let's try and build the membership of the Association up to a point where we can accomplish more worthwhile things for you; and don't forget, it would pay you to include a subscription to at least one of the bee journals, while you can get them at the present low rates.

Honey And Its Uses: Honey has a wide variety of uses as a sweetening and flavoring agent in cakes, cookies, salads, and many other types of food combinations. Extension Circular No. 108, entitled "Honey Cookery", prepared by Miss Constance Leebby of the North Dakota Agricultural College, contains many excellent recipes on this subject. You can obtain a free copy of Circular 108 upon written request to this Station. Other sources of honey recipes include "100 Honey Helpings" and "Half a Hundred Honey Helpings" by the American Honey Institute, Madison, Wisconsin. Prices of the latter will vary according to the quantity secured. The Institute will gladly furnish you particulars on this.

Mr. W. O. Victor, Pembina County beekeeper, who is spending the winter in Uvalde, Texas, writes under date of January 12th: "We have been having some winter here the past week, cold and wet. Its just what we need to keep bloom back until the proper time. My bees are in the best shape I have had them in for some time, so expect to have lots of bees in the spring—2700 colonies here will produce all the bees I can handle."

"Honey and Some of the Ways It May be Used" is the title of a recently issued bulletin of the Bee Division of the Dominion Experimental Farms, Ottawa, Canada. The bulletin was prepared by C. B. Gooderham and M. L. Heeny.

STATE TREE PLANTING

(Continued from page 19)

of our worst summers and a part of a second terrible summer, showed 51 per cent of all trees living.

We feel that no small part of this gain is due to observance of the practices as advocated by the Department.

We also questioned 204 farmers as to wheth-

er they cultivated and watered their trees. Of this number 176 stated that they had cultivated their trees. Of these 176, the average number of all trees living was 66 per cent, clearly showing that cultivation played no small part in the development of a small tree. 68 of the 204 questioned stated that they had watered their trees. Of these, 82 per cent of all trees survived, again showing what a little extra care will do.

While contacting the farmers, a veritable cross-picture of life has been shown. In one western town, I talked with a lady who stated that of the trees she had planted, not one was alive. Trees could not be grown in her section. As she stated, it was impossible. This lady had running water on her place but had made no attempt to water the trees. Her neighbor, three miles away, having the same type of soil and surely the same weather conditions, had managed to save 78 per cent of his trees half of which were evergreens. He had cultivated his trees and at various times had carried water to them. Here indeed we saw both sides of the picture.

The Department of Agriculture wishes to acknowledge its indebtedness to the nurserymen of South Dakota. They are a splendid group to work with and have always been more than willing to go out of their way to cooperate with us. Acknowledgement must also be made to the newspapers of the state as they have been more than willing to give the tree program publicity.

Any program which means so much to the future of our state surely should have the hearty approval of all its citizens. Also I feel that thanks should be extended to C. A. Russell, Secretary of Agriculture for his part in promoting the tree program.

SECRETARY'S CORNER

(Continued from page 20)

to leaf out, except Pixwell, Abundance and a few Spinefree.

The old Houghton we thought absolutely hardy, killed right to the ground and Smith's

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Reason for giving up, age of owner.

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improved Joselyn, Clark and others, never put out a leaf. Irises, even under 5 feet of snow, failed to come along, lost about 400, and so it went, all along, but in spite of it all and the dry season, we had a fine garden and lots of crab apples, tho plums were almost a minus quantity.

Raspberries were good, especially the Chief. I have also Latham, Newman 23, Starlight, Viking and Herbert. Have grown about 300 gooseberry seedlings and hope to get one or two out of these that will be worth while. They are mostly from Pixwell and Abundance, with some Clark and Smith's Improved. We have lots of snow drifts up here now, but lots of the land is blown bare. The parts of the garden with spruce windbreaks to the north, are well covered with several feet of snow, which will make lots of spring moisture."

Here is a supplemental list of premiums, offered by the George Gurney Nurseries of Yankton, S. D. One tree of mailing size of the following plums:

Tecumseh, Golden Queen, Russian Green Gage, Haralson No. 4, Minnesota No. 225, Minnesota No. 216, Waneta, Sapa, Cistena, Okay, Opata, Underwood, Red Wing, Triloba, Wyant, Tom Thumb, Terry and Compass.

Better give first, second and third choices, as but few of some varieties are available. Better renew your membership now and get your first choice in early.

THE PASSENGER PIGEON

(Continued from page 14)

essitated that they should fly many miles each day for food. Some say "hundreds of miles" but this seems doubtful. One estimate of 80 miles, based upon the location of the nearest rice field, since that was found in the birds crops, is probably reasonable. Thus daily flights of the great flocks were a matter of everyday occurrence in the nesting areas. Their food consisted of beechnuts, acorns, other tree seeds, berries and grain. Audubon had suggested that the the destruction of the forests would deprive pigeons of their food and nesting places and it is apparent that this must have been a considerable factor in their disappearance. In 1895 a St. Louis dealer replied to an inquiry, that they had received no pigeons for the last two years. The year 1898 seems to be the latest than any wild birds were killed, a few remaining in captivity, the last of which died in 1914.

Bradbury, traveling up the Missouri River in 1811, observed the pigeons just above the location of St. Joseph, Missouri, and gave an account of their feeding in large dense flocks on the ground in the woods, the hindermost birds

continually flying up to the front. Audubon in 1843, apparently did not meet with them ascending the Missouri, but on his return at the end of August saw a number of flocks in both North and South Dakota. Coues in 1873 saw "countless flocks" along the Red River, of the North above Pembina in late May and early June. These were migrating northward though he recorded that a few nested there. He saw a very few in the Turtle Mountains.

The nests and eggs of the passenger pigeon were similar to those of the mourning dove, but the eggs were nearly an inch and one-half long. A single egg seems to have been the usual number, but the birds nested three or four times if conditions were favorable. There have been many reports of these birds in recent years but scarcely a one since 1900 has been satisfactorily established. It is often easy to imagine a mourning dove as unusually large when startled in flight or sitting with feathers somewhat fluffed out. The pigeon did not produce the whistling sound with the wings or the prolonged cooing notes. Its usual notes were described as louder and harsher, chattering or croaking.

To us now it seems incomprehensible that

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Coral Lily, this is a beautiful rock garden Lily and can be planted any place in the border. Blooming size bulbs, \$1.00 per dozen prepaid.

Regal Lily, Henryi Lily, Umbellatum Lily, Tiger Lily, Single and Double, all large blooming size bulbs, 25c each; \$2.50 per dozen prepaid.

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12-18 inch seedlings.....	2.00
18-24 inch seedlings.....	2.75
2-3 foot seedlings.....	3.50

DYBVIG NURSERIES

COLTON, S. DAK.

steps were not taken to prevent the extinction of this species. We cannot conceive its original numbers, its apparently inexhaustible abundance. As late as 1857 a committee of the State Legislature of Ohio reported that the pigeons needed no protection, but of course legislative committees are not always well advised. It is interesting that Kalm, the noted early traveler, reported that the Indians did not allow the birds to be disturbed during the nesting season. This essential was shamefully disregarded by the white man, to the extent that the last great nesting area was literally annihilated and no attention paid to some small restrictions which had then been imposed.

PRESIDENT'S CORNER

(Continued from page 17)

at blooming time in spring, ever since. On December 28th a token of peace and friendship left the United States, in a present of 5000 plants to the Japanese government by the Garden Club of America. In the shipment were 50 pin oaks, 3000 white flowering dogwoods, 1000 pink flowering dogwoods and the balance of 950, consisting of many varieties.

Apples in cold storage on Dec. 1st in the U. S., were estimated at 26 million bushels. But during the Christmas season of two or three weeks, there moved from the state of Washington alone, 125 to 210 carloads daily. The French government has refused a boat load of Florida oranges, so the growers are asking our government to refuse all French liquors coming over; at least the growers are going to be particular about reading the labels, before imbibing.

Lawrence Elsinger was down for a short visit, bringing a New Years gift—some Beta grape juice and told me that his pullets were laying 80 eggs per day and said something about making some changes because he had lost so much from drought and freeze. As he left he added, "we get too soon oldt, und too late schmart."

An artificial glacier to store irrigation water in the Mt. Hood National forest is being built. During freezing weather high pressure pipe lines from the streams below, are turned into a huge sprinkler system, where mountains of ice are formed that will be used for water supply and irrigation during the summer.

Jan. 6th.: It is about 15 below zero this morning and I punched a hole in the lily pool, that was covered with 18 to 24 inches of snow. I put a 6 inch post in the hole, which is supposed to prevent the cracking of the walls. Charles Vitak, of Sioux Falls, has had the best success with water lilies by leaving the lilies

out in the pool all winter. The buds that were there bloomed in early June. Mine have rotted in the cellar, in the past, so the lilies and cat tails are out in the pool, this winter. Strawberries and other plants will be O. K. if covered with snow, but the trouble is that the freezing and thawing kills them unless there is some other mulch to prevent this freezing and thawing, when the snow is gone. If we do not hear from the 5 directors and officers that were absent at the last Director's Meeting at Clark, we plan to have the summer meeting in Minnehaha County.

The Dell Rapids Garden club and the Sioux Falls Garden clubs and others of the county, being hosts. A tour of the country will be made on Saturday and one of the Sioux Falls parks, Sunday. On page 16 of the American Fruit Grower for Jan. 1937, is a fine picture of Prof. Davis of State College, Brookings, lecturing to the Horticulturists at Clark, where they feed them free. Four of the members in the front row, had not finished their lunch, when the forceful lecture started. Another interesting photograph in the same issue on page 30, is the natural tree brace of a large fruit tree.

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