

THE NORTHWEST MONTHLY

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Nos. 9 & 10

DEAN CURTIS SAYS "KEEP UP ATTENDANCE AT AGRICULTURAL SCHOOLS."

"In Canada it is everywhere admitted that a mistake was made in letting the agricultural colleges stand almost empty," says Dean C. F. Curtis, who visited the country recently. "Canada realizes that it needs leaders in agriculture more than ever now and in the years to come, on farms, in schools and in experiment stations, and that it can train them best in the agricultural colleges. It is bending every energy to refill its agricultural colleges and is succeeding. These are distinctly the days of science in agriculture. We cannot hope to get what we need to get from our soil and our animal industry without applying science to our work. The farmer of the future cannot meet the nation's need unless he is thoroughly trained to do so."

Whether or not your son or daughter will attend the Agricultural School this fall is a vital question in a great many Northwestern Minnesota homes at the present time. The foregoing statement by Dean Curtis is to the point in this matter. It must be learned that the nation has a future as well as a present with future needs that must be heeded as well as the pressing demands of the present. The agriculture of the future will be a more highly technical work than it has been in the past especially if the movement to use every means to provide food is to be successfully carried on. The training that the young men and young women will receive at the Northwest School will be a distinct service to the people at home and to the state and nation at large. Every effort should be made to provide this training to all of the young people who can possibly attend the school.

The population is increasing and farm areas stand still. The problem of supplying food becomes a larger one each year, and as a result the business of farming is gradually becoming a better business as well as a more complicated business.

The farm has a future as well as a present, and that must be considered in connection with attendance at the Agricultural Schools this year. Unless the farms secure well trained leaders, we may not expect that there will be the progress in the country that is necessary.

Aside from the considerations of the nation and of the farm the most vital thing to be considered is the future of the young man himself. Young men and young women need training, they need development, they need social contact, they need to get

the broader view point which comes from increased opportunities and associations. These the school gives.

If the money that a young man may earn now looms large, it is well to consider the facts gathered by an Ohio man, Arthur Powell, in his study of the earning power of thousands of men in all vocations. In 40 working years, the average uneducated worker earns \$18,000. In his 40 working years, the average educated man, considering those with public school training only as well as college men, earns \$40,000. That is a difference of \$22,000 in favor of education, or \$10 per day for each day an uneducated boy spends in school from the primary grade up.

To save a hired man's wages now and to cut down the possibility of large success and larger earning power in ten years from now is short sightedness. It is forgetting that the nation and the job and the boy, all three, have a future as well as a present.

The school term at the Northwest School of Agriculture has been delayed in order to allow the young man and woman to assist at home until the busiest season is over. We may reasonably expect that by October 23rd the most pressing work will be done. The school is ready to welcome a large enrollment at that time and preliminary registrations indicate that there will be a large number in attendance.

FOOD CONSERVATION WORK IN THE RED RIVER VALLEY COUNTIES.

Much interest is being taken in the program of food conservation work that is being carried on in this section of the state. This work was organized by the Minnesota Public Safety Commission under the direction of Mrs. T. G. Winter, of Minneapolis, who is chairman of the Women's Auxiliary. In the ninth congressional district Mrs. C. G. Selvig, of Crookston, was appointed chairman with authority to select chairmen in each of the counties. This work was done during July and early in August a very active campaign was begun. Miss Hazel Rockwood, the newly appointed director of home economics at the Northwest School of Agriculture, has assisted in this work through holding demonstrations in Polk, Norman, Mahanomen, Marshall and Roseau counties, with other appointments in other parts to be filled later. The principal lines of work include the demonstration of the war bread recipes and also demonstration in the cold pack canning and in evaporation. The problem is to conserve the supply of wheat and to use

to the fullest extent our surplus of vegetables.

Miss Rockwood reports enthusiastic responses in the various communities where she has given her demonstrations and lectures. It goes without saying that in this as in other movements the communities of the Red River Valley will continue to keep a leading part. Our patriotism is of the right sort which embraces every opportunity to help our country and to succor our valiant Allies.

SCHOLARSHIPS FOR STUDENTS.

The annual list of scholarships to be offered to students of the University of Minnesota, Northwest School of Agriculture, located at Crookston, has been announced by Superintendent C. G. Selvig. These scholarships were secured as the result of the interest taken by a committee of prominent Crookston citizens who organized a year ago and secured the scholarships that were awarded for the school year that closed last April. The great interest taken last year in the competition for which these scholarships were offered encouraged this committee to continue its efforts with a very satisfactory result for the year 1917-1918. Last year's successful recipients lived in various parts of Northwestern Minnesota from Roseau to Detroit. The keenest interest was taken by the students with the result that the competition was very close.

The list for the ensuing school year of 1917-1918 includes the following:

Northwest School Scholarship I—\$100.00—For Greatest Diligence and Most Progress in Debate and Public Speaking. \$60.00, first, and \$40.00, second.

Northwest School Scholarship II—\$100.00—For Greatest Diligence and Most Progress in Horticultural Courses. \$60.00, first, and \$40.00, second.

University of Minnesota Alumni of Crookston—\$100.00—For Greatest Diligence and Most Progress in Normal Training Courses. \$60.00, first, and \$40.00, second.

Scandia American Bank of Crookston—\$125.00—For General Diligence and Greatest Progress. \$75.00, first, and \$50.00, second.

Crookston Water Works, Power and Light Company of Crookston—\$125.00—For leading place in Investigating and Growing Hemp and Fiber Flax. \$75.00, first, and \$50.00, second.

Mr. W. T. Carlisle of Crookston—\$125.00—For Greatest Diligence and Most Progress in Home Economics Courses. \$75.00, first, and \$50.00, second.

A Well Wisher of the School and Stud-

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NORTHWEST SCHOOL OF
AGRICULTURE

C. G. SELVIG, Superintendent

OFFICE

Northwest Experiment Station,
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A monthly publication in the interest of agricultural education and home training for Northwestern Minnesota.

ents—\$125.00—For Greatest Diligence and Most Progress in Live Stock Courses. \$75.00, first, and \$50.00, second.

These will be awarded on Commencement Day, March 28, 1918.

In addition there are four scholarships to be offered next month to successful boys' and girls' club contestants in the counties of Northwestern Minnesota. Of these the Crookston State Bank offers \$125 for the leading contestant in the 1917 Boys' Acre Corn Growing Contest, \$75.00, first, and \$50.00, second; The Crookston Milling Company offers \$125.00 for the leading contestant in the 1917 Girls' Bread Making Contest, \$75.00, first, and \$50.00, second; Mr. Charles E. Kiewel of Crookston offers \$125.00 for the leading contestant in the 1917 Boys' Pig Raising Contest, \$75.00, first, and \$50.00, second; and Mr. J. W. Wheeler, of St. Paul, offers \$125.00 for the leading contestant in the 1917 Boys' Potato Growing Contest, \$75.00, first, and \$50.00, second.

The Boys' and Girls' club contestants are working under the general direction of the Extension Division of the Agricultural College of which Mr. T. A. Erickson is the leader. Announcements regarding these scholarships were made to the eighty hundred and fifty-seven boys and girls who are enrolled in these contests in Northwestern Minnesota. There will be a very interesting finish in this competition, as the boys and girls have taken great interest in their various projects.

ANNUAL SUMMER VISITING DAY.

Visiting Day on July 24th was a notable success. Large numbers of farmers and their families left home during a busy season, many coming great distances, to spend the day at the school and station. The threatening look of the weather during the forenoon kept many delegations from the distant counties away that had planned on coming. Those attending expressed themselves enthusiastically as to the value of such a day and showed an interest which determined that Visiting Day will be an annual event in the future.

A number of the alumni, who were present, were enthusiastic about the idea of making the day in the future a great reunion day also for former students and graduates of the school. It affords a peculiar opportunity for education, inspiration and recreation which will attract a large number.

The forenoon was spent in reviewing the station herd and visiting the poul-

try plant under the guidance of Professors Wm. Dietrich and C. E. Brown. Prof. H. H. Kildee gave a very practical and instructive demonstration in judging dairy cattle.

At noon the crowd broke up into smaller family groups to have lunch. Lemonade and coffee were served by students of the summer school. During the noon hour a very enjoyable band concert was rendered by the Juvenile Band of Crookston.

At two o'clock the visitors assembled in the auditorium for short talks by various members of the station staff and visiting members of the central station staff. The talks were a sort of preface or introduction explanatory of the field excursions that followed.

N. W. S. A. DELEGATION AT THE STATE FAIR.

The Northwest School of Agriculture is again well represented at the State Fair.

J. P. Bengtson, T. M. McCall, and C. E. Brown are assisting with the educational work at the Farm Boys' Camp. The following students with Mrs. Bengtson in charge as matron, are assisting in the culinary department of the camp: Josie and Verma Imsdahl, Oslo; Olga Tunheim, Newfolden; Lettie Rubert, Orleans; Anna Johnson, Fisher; Florence and Cora Lindfors, Fosston; Adelia Westphalen, Crookston; Florence Haenke, Eveleth; Johanna Monson, Drayton, North Dakota; Hilda Nyquist, Fertile; Gerda Kulle, Alvarado; Ruth Cawelti and Ruth Hillmer of Crookston.

This is a fine opportunity for the students. Only a part of the day is taken up with the duties at the Camp. The rest of the day is spent in studying the various exhibits and other features of the fair under the supervision of the people in charge. Sight-seeing excursions are also made to the most interesting places in the Twin Cities.

EXTENSION ACTIVITIES OF THE SCHOOL.

At no time since its organization has the Northwest Experiment Station and Agricultural School had the number of requests for extension work that have come and have been filled during the past few months. Mr. O. M. Kiser has been out on extension work all the time. Miss Hazel Rockwood has spent a very busy month in conducting food demonstrations. During the months of June and July, Prof. Wm. Dietrich attended a great many meetings and fairs. Superintendent Selvig attended various farmers' club picnics and gatherings in different parts of the valley. Professors Kennard, McCall, Bengtson and Brown as well as Mrs. T. R. Sewall were in frequent demand.

NINE MONTHS' COURSES OPEN SEPTEMBER 18.

The opening of the nine months courses has been postponed another week. The term will begin September 18th. Prospective students should plan to be present at the opening of the term in order not to be handicapped from the start by having back work to make up.

NATIONAL HIGHWAY TRAVERSES MINNESOTA RED RIVER VALLEY.

Judge W. W. Brown, Parsons, Kansas, president of the King of Trails Highway Association, recently made the trip from Winnipeg to the southern boundary of Minnesota with the view of inspecting the different routes proposed for the King of Trails Highway through Minnesota and also to make a run over the suggested routing in South Dakota. Speaking of the Minnesota Red River Valley, Judge Brown was enthusiastic over the roads already established and future of the great highway as it passes through that rich section of the state, he said, "What impresses me most is the wonderful spirit of the people who live here, the great interest they take in all public movements, and the wonderful resources of the Red River Valley soil." He commented also on the wealth of good road material that he saw on his trip from Winnipeg to Crookston. Gravel pits located conveniently only need to be uncovered and the material hauled to provide hard surface for every mile of road. The grading has already been done so that the north end of this great international highway extending through Minnesota, Iowa, Nebraska, Kansas, Oklahoma to San Antonio, Texas, and eventually into Mexico City may be in the best possible condition.

King of Trails Highway County organizations have already been perfected in Wilkin, Clay, Polk, Norman, Marshall and Kittson counties. The establishment of this highway traversing the entire length of the Red River Valley is of more than usual interest to the readers of the Northwest Monthly, as it will be used by thousands of our residents and by visitors who come to see us.

CLOSING DAY OF SUMMER SESSION AT NORTHWEST SCHOOL OF AGRICULTURE.

The last assembly exercises were a fitting close of a very successful summer session at the Northwest School of Agriculture. The speeches in retrospect reviewed the fine spirit of enthusiasm and earnestness of effort that has prevailed and in prospect pointed out, that as a result of the hard work put in by the teachers during the summer days, Northwestern Minnesota will profit in having happier and more efficient schools, and the teachers themselves will go to their work with greater confidence through being well prepared and greater enthusiasm on account of the inspiration received from contact with earnest fellow teachers.

Mrs. T. R. Sewall spoke a feeling valedictory, as it was the occasion of her severing her connections with the school as an instructor. She emphasized the value of hard work.

Supt. J. H. Hay, of Thief River Falls, who has served in the faculty as assistant conductor, in his characteristically forceful and positive manner, painted a fine word picture of the success that is sure to come to the teachers who carry with them into their school the inspiration gained from the summer session.

Supt. C. G. Selvig stirred the assembly by his patriotic appeal to the teachers that they be not mere listeners to the nation's call for true citizenship in this crisis, as it has come almost daily in the strong addresses that have been given before the school. He urged them to look upon their work primarily as a task to prepare true, democratic American citizens. He urged them to be hopeful for our final victory in the conflict and to inspire their people with this confidence. He urged that a combined and organized effort be made this year to promote the movement to have a county visiting nurse working with the children of the country schools in each county.

Delightful music also added to the pleasure of the occasion. The summer school chorus, which has been under the efficient direction of Miss Mildred Coe, sang two songs, and Miss Coe and Mrs. A. F. Haig rendered several piano duets.

In the evening, the faculty met at the home of Supt. and Mrs. Selvig and partook of a farewell dinner in the honor of Mr. and Mrs. T. R. Sewall, both of whom have been members of the Northwest School faculty for a number of years.

TWO NEW FACULTY MEMBERS AT NORTHWEST SCHOOL.

The Northwest School of Agriculture opens its nine months course, its teachers' training course and its advanced work on September 18th. The regular agricultural and home training courses will open on October 23rd which is later this year than usual on account of the labor supply on farms. Professor A. M. Foker, of Alexandria, has been appointed head of the Farm Engineering Department to succeed Mr. T. R. Sewall who resigned to go into private business, and Miss Hazel Rockwood, of Madelia, has been appointed head of the Home Economics Department. Both of these instructors are at the school at the present time, having begun their work in August. There are no other changes in the faculty which is a source of satisfaction to the school administration and students alike. The prospects are very promising for a large enrollment, as the consensus of opinion is that agriculture is of the prime importance during war times.

KEEP SCHOOLS FULL DESPITE THE WAR"

Chief of Federal Bureau of Education Urges Increased Facilities.

President Wilson says:

"I see no necessity whatever for suspending the sessions of the colleges and universities and think such a suspension would be very much against the public interest."

"Don't stop your children's education during the war," says Dr. P. P. Claxton, chief of the federal bureau of education.

"In order to give the boys and girls, small and large, a fair chance Dr. Claxton has issued an "Educational Program for the War."

Parents should be encouraged to

make all possible efforts to keep their children in school," he says.

Increased Attendance Urged.

"Attendance in schools should be increased, and more boys and girls should be induced to remain until their course is completed.

"All laboratories and manual training shops in schools should be run at their full capacity. In many of the shops work should be done which will have immediate value for the national defense.

"In all schools in which domestic science (sewing, cooking, sanitation, etc.), is taught, large units of time should be given in the summer and fall to sewing for the Red Cross and for local charities.

"Classes for grownup women should be formed in which practical instruction can be given largely by lecture and demonstration in the conservation and economic use of food."

For Services Later On.

On the subjects of the work of colleges and universities he says:

"The numbers of students in colleges, universities, and technical schools, should increase rather than diminish. Many of the older and upper classmen will volunteer for some branch of the military service, but all young men below the age of liability to selective draft and those not recommended for special service should be urged to remain and take full advantage of the opportunities offered by the colleges, universities, and technical schools, to the end that they may be able to render the most effective service in the later years of the war and the time of need that will follow.

SEASONABLE SUGGESTIONS BY STATION STAFF.

Select and Store Seed Corn.

Begin now to prepare for a big crop in 1918. Select and store seed very carefully. F. L. Kennard, station agronomist, has the following to say about corn: "Every farmer should select his own seed, when possible, from ears which show a tendency to earliness. In any cornfield a certain percentage of ears mature ten days or two weeks earlier than the rest. Other things being equal, these ears should be selected for seed. This selection must be made before frost occurs, and before the crop is harvested.

Curing corn is a matter of importance. Corn for seed must be dried. Any dry, well-ventilated room where freezing will not occur, will do for this process. After the corn is dry, it may be stored in any place where moisture will not accumulate. Low temperature will not injure dry corn, but almost any temperature below freezing will injure moist or damp corn."

PACK EGGS FOR WINTER.

Now is the time to pack eggs for winter. C. E. Brown, the station poultryman in his Extension Bulletin No. 21, has the following to say on the subject:

"We have tried a number of different methods of packing eggs, and so far have found nothing which gives such good results as water glass. The following different methods were tried:

1. A mixture of one part of water

glass and twenty parts of water gave good results where the eggs were not kept in the solution more than six months. After that they were somewhat lacking in favor.

2. A mixture of one part water glass and twelve parts water gave excellent results; even with eggs kept 18 months.

3. We have had very good results from packing eggs in dry salt. Great care should be taken to cover them well. These were all good after being packed for seven months, though they had separated considerably.

4. Two pounds of fresh lime were slacked in a pail, and a pint of salt was added. After mixing, the contents of the pail were put into a tub containing four gallons of water. This was well stirred and left to settle. Then it was stirred a second time and again left to settle. After that the clear liquid was poured over the eggs in a tub. The eggs in this solution kept very well, but were not so good in flavor and in cooking quality as those in the solution of one part water glass and twelve parts of water.

A solution of one part of water glass to ten of water gave the best results.

We find that, to get the very best results with packed eggs, they must be from birds having no males running with them. It is also very important, especially with the water glass solution, to have the eggs stored in a cool cellar. Earthenware jars make the best receptacles for packing the eggs, although good, clean butter kegs or lard pails, if not made of spruce wood, give good satisfaction."

HARVESTING AND THRESHING THE BEAN CROP.

T. M. McCall.

The field bean is a comparatively new crop for the Red River Valley, yet several hundred acres have been planted by farmers and townspeople this year in "doing their bit" to increase the world's food supply. The crop prospects for beans to date are good, hence a new problem is before the farmers at the present time to harvest and conserve the crop that has been produced. The bean crop has been planted and cared for with the ordinary farm implements. Beans, however, require special machinery for harvesting and threshing, especially when grown on a large scale.

The beans, if not injured by frost, should not be harvested until about one-half of the foliage is dead. It is best to harvest the beans when the dew is on the plants or on cloudy days for the pods are tough then and do not shatter readily. It is not advisable, however, to shock the beans when the plants are wet with rain or dew. When beans are grown on small garden plots, they can be harvested by hand-pulling, but when fields of several acres are grown, they can be harvested most economically with a regular bean harvester. The bean harvester is a wheeled implement equipped with blades which cuts the bean vines just below the surface and piles them in windrows as it goes down the field. Such harvesters cut two rows at one time.

The blade surface cultivator may be used when the rows are planted

twenty-eight inches or less apart. The chief difficulty with this implement is that the gangs are too flexible for consistent work. The mowing machine is not a satisfactory implement for bean harvesting for the loose earth is hard on both the sickle and cutter bar, and the friction of cutting shatters considerable seed. If the mowing machine is used, the windrowing attachment should be used on the cutter-bar.

The beans, after harvesting, should be piled in small shocks for curing and drying and when thoroughly dry can be threshed at once or placed in some dry barn or shed and held for threshing later. If beans get wet in the shock, it is advisable to turn or spread the piles. If large shocks are made a false bottom of straw is recommended for each shock. The straw in such cases keeps the beans from the soil and allows them to cure evenly.

The crop should be threshed, if possible, when thoroughly dry. There are many types of small bean threshers for the small grower and large types for the large growers and communities. The small outfits are about the size of a large fanning mill, and can be operated with small gasoleum engines. Such machines have a capacity of 12 to 14 bushels per hour, and are quite inexpensive. The ordinary threshing machine can be adjusted to thresh beans. The speed of the threshing machine cylinder should be materially reduced which can be accomplished by increasing the size of the cylinder pulley. The rest of the machine should be operated at its normal speed. In addition, the number of concave teeth should be reduced. From none to six rows may be used depending on the speed. An ordinary threshing machine without these adjustments will split from 30% to 40% of the beans, a loss greater than the higher initial cost of hand threshing.

The bean straw and split beans should be saved and fed to stock, taking the place of some of the other protein feeds. The sound beans should be cleaned, graded and hand picked before being sold on the market.

The bean is a staple crop and keeps well in dry storage, hence no undue hurry should be made in the disposition of the crop if the price is not right.

MARKETING AND STORING THE POTATO CROP.

T. M. McCall.

Farmers and townspeople have responded loyally to the government's call to grow potatoes, and as a result many will have potatoes to sell who, in the past, have been consumers also. The small growers with small surplus lots often demoralize local markets at harvesting time in a hurried attempt to dispose of the crop before freezing weather begins. The larger potato growers seldom depend much on local markets in that they can load and ship in carload lots, but still expect to sell at harvest time and make no provision for storing more than they need for seed. A man going into the potato growing business ordinarily should not figure on disposing of more than half his crop at harvest time. The balance

should be stored until later unless phenomenal market conditions exist. Growers should this year guard against the flooding of the market, for this has a tendency to make the prices lower than the conditions of the world's food supply would warrant. The grower in such cases is the loser, and the dealer or speculator is the one that gets the profit and the consumer pays the bill.

A large potato crop has been predicted, and some growers fearing that prices would be abnormally low, failed to destroy the second brood of potato bugs. Such neglect is unwarranted, for with the high prices of feeding stuffs, potatoes can be grown with profit as feed for stock. There is no question but that the per capita consumption of potatoes will increase in this country this year if the crop estimates are reliable and the price to the consumer is reasonable, for potato substitutes can hardly be lowered in price.

The one big problem before the potato growers this year then is to provide adequate storage for the fall surplus. Warehouses are inadequate to store all of this year's crop, hence every farmer should have a cellar of his own. With a good cellar, potatoes can be stored more economically at home than they can elsewhere, for the grower has time during the winter or before shipping to grade and sort the potatoes before selling. Warehouse storage is the ideal storage for winter shipping, but generally there are warm spells of weather in late winter and early spring when potatoes can be hauled in with safety. A permanent cellar of concrete or hollow tile is recommended for the regular potato farmer. Plans and specifications for such cellars generally are furnished free by the companies making the products. Various combinations of concrete hollow tile, brick, and rock can be made with frame construction in the building of durable potato cellars. Many house cellars in the villages and small towns can be made frost proof and brought into use for potatoes.

Potatoes can be pitted successfully in this climate. Pits cannot be opened, however, with safety until early spring, unless all of the potatoes are taken out at one time on a warm winter day. The ground for a pit should be well drained and in a sheltered location. The excavation may be made any depth desired if drainage is assured, but one to two feet generally suffices. The potatoes may then be placed in an inverted V shape pile four to five feet in width and piled to any length desired. A layer of dry straw eight inches thick when packed should then be placed over the potatoes. Temporary four or six inch box ventilators should be placed along at intervals. Earth can then be thrown up to the edge of the pile with the walking plow and a layer of earth sufficient to hold the straw should be thrown on at once. Six inches of earth should be put on for the first soil cover. Then by the last of October a second coating of straw and earth should be put on, and before freezing weather begins, the vents should be pulled out, and the openings sealed up for the straw cover provides sufficient ventilation for mid-winter. A later emergency cover of manure may be placed on the pit if the weather is unusually severe. Mangels

and other roots have been successfully pitted by this method at the Northwest Experiment Station, and while it furnishes a good temporary storage, yet it is costly as compared with permanent accessible cellar storage.

WINTER STORAGE AND CONSERVATION OF VEGETABLE CROPS.

T. M. McCall.

The ideal method of storage for the majority of vegetable crops is canning in either tin or glass cans. In the ordinary farm garden, however, there is a surplus of root and vegetable crops of value which can be saved with great profit when proper storage facilities are provided. The prices of such crops as onions, cabbage, carrots, parsnips, rutabagas, etc., during the winter months are generally high; hence even small quantities of these crops in good condition are welcome in the diet or may be sold for cash in the stores.

The national watchword of conservation applies to the farm garden the same as to all other productive enterprises, and when we think back and realize that fully 50% of the produce grown in the farm gardens is practically wasted, we can see another means by which a great economic loss can be avoided.

All kinds of garden crops should not be stored in the same storage room for different types of crops require different storage conditions. Nothing but sound specimens should be saved. Storage space is too valuable to waste; hence the small and worthless specimens should be sorted out and utilized in the fall if possible. Vegetables diseased when put in storage serve as a breeding ground for moulds and decay producing organisms.

The two general classes of storage for vegetable crops are namely: the dry and the moist or humid air storage. The former is best for bulb crops such as onions and vine crops such as squash, pumpkin. Good ventilation with a temperature above freezing are the chief requirements. The same is true for dry seeds, but freezing is not injurious to dry seeds if they are thoroughly mature. The moist or humid air storage is best for root crops such as rutabagas, beets, carrots, potatoes, etc. Such crops, however, require good ventilation and a temperature slightly above freezing. Earthen cellars or caves walled up and floored with concrete are most permanent and give best all around satisfaction. Pots and temporary cellars serve a useful purpose when made frost proof; yet for land owners the permanent frost proof potato and root cellar is the most economical through a period of years. The temperature of storage cellars can be lowered in early fall by keeping the doors and windows open at night and closed during the day.

The fall and winter storage space should be put in condition now before harvest becomes too far advanced. Fall frosts and freezes wait for no man, and if space has not been provided for the crops that have been brought to maturity, then the grower not only loses his time and labor, but the nation is cheated out of just that much food stuffs.