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## ORCHARD AND GARDEN NOTES

December 15-22

Go through the plum orchard and cut out all branches affected with black knot.

Remember Farmers' and Home-Makers' Week, at University Farm, St. Paul, January 3-8, 1916.

Tramp the snow about the fruit trees. This may disturb the winter quarters of mice and protect your trees.

Branches of oaks that hold their leaves all winter make good protection for tender evergreens if stood around them.

Flowering plants make good Christmas presents. Cyclamen, flowering bulbs, poinsettia pans, ferns, primulas, and azaleas may all be used.

Some excellent dahlia and gladiolus shows were held in the East this fall. Strong societies have been formed to encourage the growing of these plants.

Cyclamen is one of the most useful Christmas plants. It comes in various colors and if kept in a room that is not too dry or warm will bloom several weeks.

Cut cions of apple trees and make hard-wood cuttings of willow, dogwood, etc., for next year's planting. Store in sawdust or sand in such a way that they may not get wet or dry out.

An oak or hard maple cannot be replaced except through long years of growth. It therefore behooves us to think twice before we needlessly remove one. We should, however, look over our trees often and give whatever pruning or other care, is needed.

Were rhubarb roots dug to force this winter? A good plan is to put them in boxes, cover with ashes, sand, or dirt about one inch thick, and water thoroughly, placing in a warm, dark place.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minnesota.

## ORCHARD AND GARDEN NOTES

December 22-29

Strawberries may still be mulched, even though there is snow on the ground.

Remember Farmers' and Home-Makers' Week, at University Farm, St. Paul, January 3-8, 1916.

Bulletin 85, Department of Agriculture, Ottawa, Ontario, is a splendid pamphlet on hardy-rose culture.

How many of the trees and shrubs in your own neighborhood do you know? This is a good time to study them.

The paper-white narcissus should be coming into bloom. It may be grown in jars containing rocks and water. The bulb should just touch the water.

Wreaths of spruce and red ruscus may be made at home. If the evergreen carries cones the arrangement may be prettier. Tie the green to an apple barrel hoop.

We need more thickets and dense tree growths to protect our birds, both in summer and winter. These should be planted with fruit-bearing shrubs and may be both useful and ornamental.

If you were unfortunate enough to miss the meeting of the State Horticultural Society early in December, make a special effort to attend the Farmers' Short Course at University Farm, January 3-8. The week's expenses, including board, etc., at the farm, need not exceed six dollars. You can't very often put in a week so filled with good things at that price.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minnesota.

## NEW BIRD-CHART RULE

State Entomologist Will Limit Gifts Unless Intended for School Use

All requests by teachers or pupils for charts of insects and birds and for illustrated circulars on birds, issued by the state entomologist, will in the future have to be endorsed by the county superintendent, and be accompanied by an assurance that the charts or circulars will be carefully preserved.

This rule has been made by F. L. Washburn, state entomologist, because, though quantities of the charts and circulars large enough to supply all the schools of the state have been sent out, a large demand continues, and the inference is that they have not been carefully handled.

## VACCINATION BY A SAFER METHOD

Vaccination by a new and very advantageous method has been fully investigated and reported upon favorably by Dr. H. W. Hill. These experiments were begun by Dr. Hill several years ago while he was epidemiologist of the state board of health, and have just been finished at London, Ontario. The method is known as acupuncture. A drop of vaccine is placed on the cleansed arm; then a sterile needle is introduced through the vaccine into the upper layer of the skin only, in several places. It does not go deep enough to draw blood.

This method eliminates sore arms and the possibility of developing tetanus. With this convenient and safe manner of protection no one should hesitate to become protected against small pox.—Dr. I. J. Murphy, Secretary, Minnesota Public Health Association.

## 2,000 NEEDLESS DEATHS A YEAR

"Only one county, Winona, has both infant mortality (deaths under one) and mortality among those under five lower than the average for the state," says Dr. I. J. Murphy of the Minnesota Public Health Association.

"The infant mortality for the state is 75, for Winona County, 74; for the state, deaths under five constitute 24 per cent of the total, in Winona County, 19 per cent. But, most important, Winona County has adequate registration of births. This indicates that some phase of child welfare work is very urgent in every county except this one. Although the state as a whole has not concerned itself about infant mortality, some of its cities with voluntary organizations have set good examples. Comparative work for the entire state with its 50,000 births a year would mean the saving of about 2,000 lives a year. Montclair, New Jersey, has the enviable infant mortality of 64; while New Zealand holds the world's record of 51.

"The 38 counties in which the reporting of births is inadequate keep Minnesota out of the United States registration area. This is due perhaps not so much to the failure of physicians and licensed midwives to report births attended by them, as to unreported cases attended by unlicensed, but so-called, midwives. A large number, especially in rural districts, are attended by well-intending but untrained neighbor women. This is a condition that should be corrected without delay. Women in labor are entitled to expert care. If the family cannot afford it the municipality should bear the expense."

## KOOCHICHING COUNTY HAS HEALTH OFFICER

"Koochiching County has the first and only county health organization in the state," says Dr. I. J. Murphy of the Minnesota Public Health Association. "The county commissioners and the county school board there see the economy of hiring a medical man to preserve the health of the community and to keep the children in school the maximum number of days each term.

"Furthermore, they have chosen a health officer with a proper point of view; one who believes that a health department should be an educational agency more than a police bureau; one who reserves the 'police club' for exceptional emergencies, but who is ever ready to instruct and convert. In Koochiching County the authorities are laying the foundation for a type of citizenship that is not only going to grow up healthy, but will be so well informed that it will observe sanitary laws and insist upon proper health safeguards. A county health organization similar to the one in Koochiching County, or a better one if it can be afforded, is needed in every Minnesota county, southern as well as northern, but particularly in the pioneer district.

## A SHORT COURSE IN MERCHANDISING

The third annual merchants' short course of the general extension division of the University of Minnesota will be held at the University in the week from January 24 to January 28. Among those who will give instruction are: John S. Taylor, secretary of the Minneapolis Retail Grocery Association, salesmanship instructor of the Minneapolis Y. M. C. A. and co-author of the National School of Salesmanship text; H. K. Zuppinger, lecturer on merchandising, University of Minnesota, and director of the vigilance committee of the Minneapolis Advertising Forum; H. Leslie Wildey, Graettinger, Iowa, proprietor of one of the most successful small stores in the West; H. S. McIntyre, editor of the Twin City Commercial Bulletin and Hardware Trade; Martin E. Smeby, proprietor of

the Twin City School of Window-Dressing; Otto Buchmann, merchandising expert of Chicago; H. O. Roberts, secretary Minnesota Retail Hardware Association, and C. H. Preston, in charge of business courses, general extension division of the University.

The one-week's course will be followed by a three weeks' course which will be more of a school than a convention or institute and will appeal more directly to the employe than to the store manager. Daily instruction and lesson assignments will be given in show-card writing, window trimming, retail accounting, business law, business English, retail advertising, and salesmanship.

A special course for the hardware trade will be given during these three weeks, and for those in this group will be given instruction in hardware materials and in administrative subjects of special interest to hardware dealers.

## FOUR THINGS THAT MAKE FARMING PAY

A farm management demonstration in Southwestern Minnesota showed that the average labor income of sixty-three farms taken in order was \$423. This means that the farmer had \$423 left for his own work above all business expenses and 5 per cent interest on an average investment of \$24,500. In addition to the foregoing, the farmer had his house rent and such products as the farm furnished toward the family living. The results given coincide with extensive investigations in several states which have shown that one should endeavor to exceed the average of one's locality in as many of the following ways as possible if a profitable farm business is desired: (1) Size of business; (2) crop yields per acre; (3) live stock receipts per \$1 of feed; (4) amount of work accomplished per man.

In this locality the average farm had 192 acres of crops; the yields per acre of the leading crops were corn, 39 bushels; wheat, 11 bushels; oats, 35 bushels; the average receipts for \$1 spent for feed were \$1.16; and the average amount of work done per man was the raising of 100 acres of crops and the care of a corresponding amount of live stock. The foregoing averages should not be taken as applying to any locality except the one included in this demonstration.

There were five farmers, who fell below the average in each of the four factors. Not one of the five made as much as a \$500 labor income. Of eighteen farmers who exceeded the above average in but one of the four factors, only one made a \$500 labor income. Again eleven farmers exceeded the average in three of the four factors. Out of the eleven there were 10 who made more than a \$500 labor income. Just five farmers exceeded the average of their neighbors in all factors and every one made more than a \$500 labor income.

This demonstration shows that under the conditions prevalent in this locality, in the year 1914, a farmer who can do a little better than the average of his neighbors in at least three of the above four factors is almost certain to make more than 5 per cent interest on the investment and a labor income of over \$500.—W. L. Cavert, University Farm, St. Paul.

## NEEDLESS LOSS BY SMUT IN WHEATS

Recently in Northwestern Minnesota, we called at a local elevator and while there, a farmer brought in a sample of wheat. It was promptly rejected by the buyer. The buyer said he could not handle the wheat under any conditions.

We examined the wheat and found the worst case of stinking smut we had ever seen. Fully 10 per cent of the sample was smut balls and the whole was dirty looking and foul smelling. At best the sample of wheat was worth no more than feed prices, and it is doubtful whether any kind of stock would have cared to eat the stuff.

Here was a case where a farmer who had done all the work necessary to produce a crop of wheat and had harvested and threshed it, probably secured 15 bushels of wheat per acre worth no more than 60 cents a bushel, whereas if he had sown good seed he might have harvested 20 bushels of wheat worth 90 cents a bushel. In other words, he could have gotten \$18 per acre for his crop in place of \$9.

The entire loss could have been prevented by the formalin treatment at a cost not to exceed a very few cents per acre. A pint bottle of formaldehyde costing from 35 to 50 cents and a few hours labor would have treated enough seed grain to sow 50 acres. There is no excuse for such a loss except carelessness. Any drug store, general implement dealer, experiment station or farm paper will cheerfully furnish information concerning the treatment of grain for smut. No farmer is wealthy enough to afford to sow grain affected with smut.—A. D. Wilson, University Farm, St. Paul.

## MODERN WAY TO SHIP LIVE STOCK

The live stock shipping associations, common in Minnesota and Wisconsin, are cooperative institutions of unusual merit. They substitute for the old, local buyer system, a system of handling stock that results in an actual saving in necessary expenses amounting to forty or fifty dollars a carload. This saving is entirely outside of any profits that the local buyer might make. It is quite impossible for a local buyer to compete with a shipping association.

There are approximately 200 of these associations in Minnesota, and so far as we know, says A. D. Wilson, director of the extension division of the Minnesota college of agriculture, not one has failed. The organization is exceedingly simple as no capital stock is sold and none if needed. It represents simply a mutual agreement by a group of farmers to ship their stock together, and by this means each farmer, regardless of the amount of stock handled, is enabled to ship to a central market at carload rates and to get exactly what his stock brings on the market less the cost for freight, yardage, commission, etc. In other words, a man can sell one hog to just as good advantage as he can a carload.

The agricultural extension division of the University of Minnesota believes that every hoof grown in Minnesota should be marketed by its owner. This may be done through shipping associations, and it is the hope of the division that every shipping point in the state will soon have such an association and in this way take a safe step toward improvement of livestock marketing. Several farmers' clubs have perfected shipping associations.

Full particulars regarding the organization and operation of such an association will be sent on request, by the Agricultural Extension Division, University Farm, St. Paul.

## LIVE STOCK BARN NEED VENTILATING

The improvement of live stock in the Northwest has resulted in the construction of good barns and the careful housing of stock during cold weather, says A. D. Wilson, director of the extension division of the Minnesota college of agriculture. It has been definitely shown that growing cattle and milk cows will not make profitable returns unless kept fairly comfortable during the winter. In this climate this can be done only in good warm barns. A modern barn must also be provided with light and good ventilation. The close housing of live stock has resulted in many cases in an increase of tuberculosis. Many excellent herds have been destroyed by this disease. One of the best safe-guards against tuberculosis is good ventilation of barns, and this is something that any farmer may have.

The ventilating of barns is not expensive or difficult. A very little study of the principles involved will show one just what conditions are necessary. Briefly these conditions are, good warm construction; tight windows, preferably of double glass; tight-fitting doors; suitable intakes provided for letting in fresh air, and then one or more warmly constructed, properly located flues extending from near the floor to a point above the highest part of the roof. With these conditions, the heat from the animals warms up the air in the flue and this creates a circulation, just as starting a fire in stove does, and in this way the foul and damp air is taken out and fresh, dry air admitted.

Full particulars concerning the installation of ventilating systems will be furnished by addressing the Experiment Station, University Farm, St. Paul.

## TEN-CENT SEED SOLD FOR \$5.00

The Minnesota Seed Laboratory, University Farm, St. Paul, has sent out a warning against someone who has been selling the seed of what he calls the "Wonder Forage Plant."

Such a man was working in the vicinity of French Lake, Minnesota, selling his seed at \$5 a pound. He promised, by handbill and otherwise, that "from three to five mowings could be secured in a season; that the nutritive value of this forage plant exceeded that of any other; and that if grown for seed it would produce 3,000 pounds to the acre."

C. N. Anderson, cashier of the Farmers' State Bank of French Lake, becoming doubtful of the value of the seed offered by the man, secured a sample and sent it to the seed laboratory, and it was discovered to be nothing more nor less than pearl millet, which may be bought almost anywhere for from 8 to 10 cents a pound.

On the strength of this investigation, the farmers have been warned to be on the lookout for fake seedsmen.

## HONORS FOR MEN WHO HAVE SERVED STATE'S FARMERS

The Department of Agriculture of the University of Minnesota, hereafter will formally recognize men who have rendered distinguished service to the rural life of the state. Such recognition will be in the form of diploma-like testimonials, which will be presented to men or women whose work has added permanently to the joy or profit of rural life in Minnesota. The testimonials will bear the great seal of the University of Minnesota, and the signatures of the president of the Board of Regents, of the president of the University, and of the dean of the Department of Agriculture.

Several such testimonials will be presented on the last day of Farmers' and Home-Makers' Week at University Farm, St. Paul, January 3 to 8, 1916.

The occasion will be memorable, because it will bring together a group of men who have done great things for the advancement of Minnesota's agriculture.

Final action on the names under consideration has not been taken as yet, but one of the men whose self-won honors will be recognized is O. C. Gregg of Lyon County, the father of farmers' institutes and the founder of agricultural extension work in Minnesota.

The aim in this plan is to recognize service in behalf of a happy and more prosperous country life in Minnesota from whatever source such service may originate.

## TO MAKE STATE'S BIGGEST BUSINESS BIGGER AND BETTER

Ways and means of making bigger and better the biggest industry of the state will be discussed from almost every angle by representative men and women, themselves worth a probable total of not less than \$12,000,000, at Farmers' and Home-Makers' Week, University Farm, St. Paul, January 3 to 8, 1916.

This is just what Farmers' and Home-Makers' Week means: Twelve hundred or more persons, with investments of millions of dollars, who use their time and their money in the manufacture of the staples of life, coming together to discuss methods by which they may increase their output and their profits, and by which they may work together for mutual advancement. This is one very proper way to estimate the significance of Farmers' and Home-Makers' Week, say the people at University Farm.

The aim of the Week is threefold: To give the farmer and the home-maker such information as will assist them in meeting constantly arising questions, and to aid them in solving their specially urgent problems. This by means of talks and demonstrations.

To bring together various groups of farmers and home-makers (associations) for the consideration of subjects of mutual interest; for example, that of organizing a state federation of farmers' clubs.

To give those who attend an opportunity to enlarge their outlook, just as all progressive persons do, through hearing those who have made comprehensive study of general problems, and seeing results in pictures, etc.

The whole aim of the Week, then, is intensely practical. It is just the same as that of the meeting of any other large group of business men, assembled to confer for personal profit, mutual benefit, and larger outlook.

In this light, Farmers' and Home-Makers' Week, with the 1200 or more who will attend (if the rate at which inquiries are coming in is a guide) will be one of the biggest things among Minnesota's many important annual meetings.

## USES OF LUMBER STUDIED BY MAIL

The general extension division of the University of Minnesota has announced a correspondence course in lumber and its uses. The course has been prepared by one of the best authorities in the country and is so planned that it will be of special value to lumber dealers, contractors, carpenters, and all others whose work relates to lumber.

The subjects covered will include: The structure of wood, physical properties of wood, standard grades and sizes, structural timbers, seasoning and preservation, paints and stains, prices, cost of wood construction, specific uses of wood, and selection of materials. These will be presented by means of assigned readings from a text-book and other printed material.

The charge for the course is \$5, with \$1 added for the text material.

Letters addressed to the General Extension Division of the University of Minnesota, Minneapolis, will receive prompt attention.