

Entered as second-class matter January 15, 1920, at the postoffice at St. Paul, Minn., under Act of July 16, 1891.

Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized July 29, 1918.

## ORCHARD AND GARDEN

December 15 to 22

Some Massachusetts gardeners are using oil with great success to heat their greenhouses.

R. H. Adams, market master of the Minneapolis Vegetable Market, estimates that about \$4,000,000 worth of business will be done this year.

Clean and put away all garden tools. It is a good plan to oil the cutting surface so it will not rust. See that all are in repair for use next spring.

Straw covering may be kept from smothering perennials if the branches are laid down first and then straw thrown over them. This gives a circulation of air which is to be desired.

A light spray of lime sulphur applied in early spring will discourage the growth next season of scale insects on shrubs and trees. Examine all shrubs and trees now for signs of these troubles.

An interesting bulletin, No. 1082, on the production of tulip bulbs, has just come from the U. S. Department of Agriculture. It can be obtained at 25 cents per copy from the Bureau of Publications, Washington, D. C.

Go over vegetables and fruits in the cellar and remove those which are decaying. Those that remain will last longer.

A flowering plant, a fern or a box of flowers makes a fine Christmas present. No gift carries with it a better sentiment than flowers.

Every farm can have its own home grown Christmas tree. There are few homes that can not grow Norway Spruce. Many can grow White and Black Hills spruce, all good Christmas tree materials. Every Jack pine makes a fair Christmas tree. Grow a wind-break of evergreens. It pays.—Le Roy Cady, associate horticulturist, University Farm, St. Paul.

## ORCHARD AND GARDEN

December 22 to 29

Apple trees may be pruned these days if the weather is not uncomfortably cold to work outdoors.

Examine house plants frequently for signs of the aphid and scale. Get rid of them early.

Remember the birds these cold stormy days. Suet in the trees and sheafs of grain or even thrashed grain will bring many birds through the hard winter days.

Nuts are a food for man as well as squirrels. Even birds will eat them if they can get through the outer shell. Plant a few nut trees next spring. Order them now from your nursery.

Not many of us would see \$50,000 in a strawberry plant which is the price reported to have been paid a noted strawberry breeder for a single plant. Any family can get good returns in money and enjoyment from a few dozen strawberry plants in the garden.

Now is a good time to get rid of advertising signs on the highways. If each property owner would clean up his frontage it would not take long to banish these small nuisances which, in the aggregate, are large. Why should they be permitted? Our highways would look better without the big bill boards. Let's keep them down.—Le Roy Cady, associate horticulturist, University Farm, St. Paul.

## POOR QUALITY CREAM SHOWS IN PAY CHECK

Analyzing the September reports of 150 cooperative creameries in Minnesota, dairymen of the agricultural extension service of the university found a difference of 15 cents a pound in prices paid the farmers for butterfat. Volume of business transacted had something to do with this variance, but in the main it was traced to the difference in prices received by the creameries for butter, this difference amounting to eight and a fraction cents per pound.

Losses of this sort are unnecessary, say dairymen of the university. "There is no difference in the value of butterfat for buttermaking when it is produced by the cows," they say. "The loss in quality takes place in the handling of the milk and cream on the farm, in the delay before it is delivered to the creameries, and in the workmanship in the creameries. Milk should be run through a clean separator, the cream cooled immediately after separating and kept where the air is pure and free from odors until delivered to the creameries.

"For the highest quality butter, cream must be delivered every other day. This can be done by cooperation. The price is constantly widening between good and poor butter. The greatest danger to the success of cooperative creameries is the manufacture of low grade butter."

## PROPER FEEDING WILL REDUCE PIG LOSSES

Summary of a survey carried on last season by H. G. Zavoral of the university livestock extension force shows there was a loss of 32 per cent of pigs before weaning on 337 Minnesota farms. Much of this loss could be traced, says Mr. Zavoral, to improper feeding of brood sows, inadequate shelter, and general neglect. The general tendency to rely too much on corn as a constant ration for brood sows contributed materially to the heavy mortality among the new litters.

"Where too high a percentage of corn is fed to brood sows, the pigs are not likely to have normal strength and development when farrowed," says Mr. Zavoral. "Corn is all right for fattening, but it must be reinforced with other feeds and a mineral mixture for muscle and bone building. Proper food is not all, for along with it the breeding stock should have good, clean quarters and opportunity for daily exercise."

Mr. Zavoral suggests the following rations for brood sows and gilts: (1) Corn one-half, oats one-half, tankage 8 per cent. (2) Corn one-third, oats one-third, shorts or middlings one-third, skim milk. (3) Barley one-half, oats one-half, tankage 8 per cent.

"The amount to be fed depends upon the condition of the sows," he says. "Ordinarily two pounds of grain for 100 pounds of live weight is sufficient. Gilts require more feed than mature sows. A good quality of alfalfa or clover hay and a mineral mixture should be self-fed. A mineral compound of one-third limestone, one-third salt, one-third bonemeal with one-half ounce of potassium iodide for 100 pounds of mixture has given satisfactory results."

## NEW "U" BULLETIN FOR TIMBER LAND FARMER

"Making a Living on a Timber Farm" is the title of Special Bulletin No. 65, written by W. L. Cavert and published by the agricultural extension division of the University of Minnesota. Suggestions and recommendations contained in the bulletin, the author explains, are based largely upon 395 records of their business furnished by farmers in the timber counties of Beltrami and Itasca for the years 1918, 1919, and 1920.

Problems confronting the average settler on cutover lands—proper type of buildings, what machinery to buy, cropping systems, right kind of livestock to keep, etc.—are discussed in the light of the experience—"the best teacher"—of those who have been "through the mill" in the northern country. The close observation of extension workers and county agents as to the practices of successful farmers has also been drawn upon in giving suggestions as to what to do and what not to do.

Farmers already established in the timber country are likely to find Special Bulletin No. 65 of value, and new settlers and those contemplating early settlement on northeastern Minnesota lands should find it particularly valuable. Those interested should write the Office of Publications, University Farm, St. Paul, for a copy of this bulletin.

## MINNESOTA WILL HELP FIGHT THE PEA APHIS

Entomologists and canners of the middle west recently met at Chicago to plan a drive against the pea aphid, which has developed into a serious pest, particularly in Wisconsin, where the pea canning industry has reached large proportions. A. G. Ruggles, of University Farm, Minnesota's state entomologist, attended the conference and was appointed a member of an advisory committee which will assist in working out plans for attacking the problem of control in a manner that will get results.

In general charge of the project will be a federal entomologist who will be stationed at the Wisconsin college of agriculture at Madison. The program calls for intensive study of the natural enemies of the pea aphid and the relation of climatic conditions to its production. Data will be collected as to the relation of farm practices to control. Phases of the investigation will be carried on in Minnesota under the supervision of Mr. Ruggles. Growers of peas will cooperate.

The pea aphid is a close relative of the aphid found on rose bushes and sweet peas. Under favorable conditions it multiplies at a tremendous rate. Its particular business is to feed on the succulent juices of pea vines. Yields of peas are reduced or wiped out under its attacks.

## LAST ISSUE OF UNIVERSITY FARM PRESS NEWS

Farm Press News rings off with this issue, in accordance with explanatory statements made in the December 1 number. This number not only completes the Farm Press News service for all of 1922, but finishes volume XIII. For the present at least it is hail and farewell for the Press News.

## FARMERS' HOME MAKERS' WEEK, JAN. 1-6; LET'S GO

University Farm will celebrate the birth of the new year as usual by opening the annual Farmers' and Homemakers' Short Course. The dates are January 1 to 6 inclusive.

Mass meeting Monday afternoon, January 1, for the "opener."

Annual meeting of the Minnesota Farm Bureau Federation January 2.

Noon-day general meetings and evening entertainments in the auditorium. Songs by the Agricultural College Male Quartet at all meetings; instrumental music and readings.

Annual meetings of the Minnesota Livestock Breeders' association and various allied organizations.

Nine continuous programs of class work for the men and six for the women.

Big farm supper at which President L. D. Coffman of the University will preside.

Supper and special entertainment for the homemakers.

Special livestock show. Coverdale, Cooper, Coffey, Cox, Reed, Glover, Dr. Amy Daniels, Mrs. Vera Schuttler and Mignon Quaw (Mrs. Lott) as speakers.

Nearly 100 school and college faculty members as instructors.

Solid week of class room work mixed with recreation and entertainment.

Reduced rates on railroads—fare and one-half on the "certificate plan."

Good accommodations at the farm at cost prices.

Make your plans to go—and then go.

January 1 to 6 inclusive, 1923.

## ORCHARD SPRAYING TO BE "U" PROJECT IN 1923

To meet the demand for additional information and help regarding orchard spraying, the agricultural extension division of the university will assist various counties in definite project work during the season of 1923.

The work will be charge of R. C. Rose, plant pest specialist, and C. E. Mickel, extension entomologist. They will conduct spray demonstrations in the orchards of co-operators and will give advice in the mixing of sprays, time of application, and the best types of sprayers. Short talks will be given on orchard parasites and up-to-date methods of bringing them under control. The university men will also aid in forming spray rings and in giving estimates on the amount of spray materials needed. At picking time one or both will assist the county agent in taking notes on the yield and results of the work.

Orchardists and farmers interested in this project are invited to open correspondence with Mr. Rose at University Farm, St. Paul.

## COUNTRY CALLED ON TO EAT MORE EGGS

The "Eat More Eggs" campaign, which was launched on the Pacific coast and has spread cross country until New York has felt its influence, is credited by poultry marketing authorities with being a factor in sustaining prices. An initial fund of about \$30,000 was raised for publicity that would prompt consumers to eat more eggs in order that the then surplus of about 3,000,000 cases above normal requirements might be absorbed. Government figures of date November 27 showed 1,999,000 cases in storage as against 1,420,851 at the corresponding date in 1921.

N. E. Chapman of the extension staff at University Farm says that receipts of eggs are rather moderate at this time, and that producers have no reason to be alarmed. Country prices for good, fresh eggs range from 40 to 50 cents. Egg producers have a distinct advantage this year over other years in the fact that prices of grain are low.

That eggs are not a seasonal commodity, but rather an all year food, good not only for breakfast but for every meal, is one of the points emphasized in the "Eat More Eggs" drive.

## NOW'S GOOD TIME TO LAY FOUNDATION FOR HERD OF BEEF STOCK

After making a preliminary study of conditions just now governing the growing and fattening of beef cattle in Minnesota, particularly in southwestern counties, Austin A. Dowell of the agricultural extension division, University of Minnesota, believes this is an opportune time to lay the foundation for either a grade or purebred herd of beef stock.

"Have you found it profitable to feed beef cattle?" is a question Mr. Dowell has been asking many experienced cattle feeders in Minnesota. Without exception to date replies have been something like this: "There have been years when we lost money feeding cattle, but, based on average results secured over a period of years, it has been a profitable part of our farming operations."

"Statements like the foregoing," says Mr. Dowell, "perhaps offer little comfort to the in-and-out stock farmer who jumps first into one thing and then another, usually going out at the low time and buying in when prices are high. They should, however, give heart to the man who desires to follow a definite policy which he believes to be well suited to his particular farm. He can be certain that in handling any utility class or breed of beef cattle, the good years will more than counter-balance the lean. The first lesson, therefore, to be put across is the importance of permanency."

"Though no one knows what the future price level is going to be, we do know that a dollar will go further towards the purchase price of a beef cow today than any other farm animal, horses alone excepted. The business of fattening beef cattle, either purchased or raised on the farm, will prove profitable if carried on year after year as a permanent part of the farming operations."

## NUTRITION PROJECTS ARE GETTING RESULTS

Reports furnished by the home demonstrators in nutrition in Nobles, Lake, Pipestone, and Watonwan counties to the state office at University Farm are exceedingly interesting. Of the 156 women who enrolled for the course, 89 completed the project and reported.

From two of the counties come reports of better natured children; a number report they are using less sweets than hitherto and yet have satisfied and healthy families. Several are delighted because their children have learned to drink milk and to enjoy it, and the children, too, write of their pleasure in this achievement.

Seventy report an increased use of vegetables, 20 that they have canned more vegetables than in former years, and seven that they planted more vegetables in their gardens.

Twenty-seven have used more fruit, while 33 increased their use of milk.

From the health standpoint these women are glad they enrolled in the nutrition project for 23 have overcome constipation either themselves or in their families, and 29 report an improvement in general health.

Five women proudly relate that they have gained weight and thirteen report that the wheels of meal planning have been oiled.

The nutrition specialist of the extension division, Miss Cordiner, was assisted in completing the discussion by Miss Edna Anderson of the resident home economics staff.

## HOLIDAY SEASON NEAR; GUARD THE CHILDREN

"School authorities often point to the fact," says Lucy Cordiner, specialist in nutrition, University of Minnesota, "that after the Christmas holidays, children re-enter school with colds and with generally lowered vitality; consequently there is an increased number of absences due to sickness."

"This condition is preventable. Your children should not be the victims of their pleasures and will not be if their daily program is supervised by you. This is a time to guard especially against irregularities. Regulate their sleeping hours; plan daily for outdoor play and exercise; plan daily for an indoor quiet hour. Prevent eating except at meals.

"Sugar and candy are among our most stimulating foods. When taken alone, health authorities say they irritate the delicate membranes lining the throat and digestive tract; consequently they cause colds instead of protecting against them."

"At the same time, candies are conducive to sociability, a most desirable asset at meal time. Children like them and are satisfied when they have them. For all these reasons, and because we are human, do not taboo candy, but give it at meal time as a substitute for other made desserts and pastries. It will save you work, give joy, and protect health when so given."

## Leguminous Crops for Minnesota

(This is the fourth of a series of short articles, prepared by Minnesota Experiment Station men, on the value of legumes—soybeans, alfalfa, red clover, sweet clover, alsike, cowpeas, and Canada field peas—in the farming scheme on the average Minnesota farmstead.)

## SWEET CLOVER SEEN AS GOOD FORAGE CROP

Recently in Pipestone county I observed a herd of cattle that were carrying an unusual amount of flesh for cattle that had had no feed except pasture, while on neighboring farms most of the cattle were in rather moderate flesh. When the owner of these cattle was asked the reason he led me to a sweet clover pasture. "These 25 acres of sweet clover are the reason," he said. "These 25 acres of pasture have carried 35 animals throughout the season and I never had my livestock in such good condition at the end of the season. With the ordinary native pasture, it ordinarily takes about two acres to carry one animal. I intend to use sweet clover pasture almost entirely in the future."

The foregoing is typical of the experience of farmers here and there throughout western Minnesota who have been using sweet clover for pasture the last year or two. Occasionally a farmer says he has had difficulty in getting his animals to eat it at the start, but we have heard of no case where there was any trouble when the cattle were turned on the sweet clover early in the spring before the other grasses had made a good start.

Sweet clover, contrary to popular belief, requires an abundant supply of lime in the soil and should be seeded only in those localities where alfalfa is known to thrive without lime. However, it stands wet feet better than alfalfa. In general, the soils of western Minnesota have an abundance of lime, and farmers in that section who have not tried sweet clover for pasture would do well to try a few acres the coming year. It may be seeded with small grain the same as other clover and grasses. About 18 pounds of unscarified seed should be used per acre while 12 pounds of the scarified is sufficient.

By scarified seed, we mean seed that has been put through some machine for scratching the seed coats. Otherwise usually 20 to 40 per cent of the so-called hard seeds will not germinate the first year. Occasionally there are 60 per cent of these hard seeds. It is important in any case to make a germination test so that one may be sure to use sufficient seed to provide a good stand the first year.

If it is desired to pasture the sweet clover more than one year it is well to keep in mind that sweet clover is a biennial, or two-year plant, the same as red clover. However, we have seen several sweet clover pastures that have given good results for three or four years in succession. In this case unscarified seed was used so that only a part of the plants grew the first year; the rest of them grew the second year and provided pasture for the third year from seeding. It is almost impossible to pasture the sweet clover so closely that it does not seed rather freely, so that if one starts with unscarified seed he has a continuous crop of new plants that will replace those that die out.

An added advantage to sweet clover pasture is that the price of seed is the cheapest of any of the clovers. There are two varieties of biennial sweet clover—the white blossom and yellow blossom. The white blossom is the stronger growing variety and seems to be generally preferred.—W. L. Cavert, agricultural extension division, University of Minnesota.

## BIG GAIN IN ALFALFA ACREAGE SEEN IN 1923

"Do your alfalfa seed shopping early" is the advice of farm crops men at University Farm who have prepared a list of growers who have limited quantities of superior Grimm seed for sale. Prices are likely to be some higher later on, hence the desirability of laying in a stock when quotations are reasonable and the supply is fairly good. A noticeable impetus has been given alfalfa growing in widely separated parts of Minnesota. The new county of Lake of the Woods in the far north will increase its alfalfa growing area several hundred acres next year, says H. C. Lende, county agent. Wadena county farmers, to the west, have pledged themselves to sow more than 500 acres to alfalfa another year. Mille Lacs county farmers will do as well, says the agent for that county. Counties south and east are also getting the alfalfa fever.