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ORCHARD AND GARDEN

Dec. 15-22, 1918.

Hardy onions should be mulched with straw or strawy manure.

Keep the chrysanthemum plants cool and nearly dormant until February or March, when cuttings may be made for next year's growth.

It is not too late to cover perennials and strawberries with straw as a means of bringing them safely through the winter.

Celery for winter storage should not be blanched before being put into the cellar. It decays much quicker if blanched.

Celery, kept in a cool place and watered as it needs it, will keep until February or March. When watering be careful not to moisten the foliage. The moisture will cause decay.

Japanese barberry, hardy hydrangea and other tender shrubs should be well mulched over winter. Even with this care, they are likely to die back somewhat in the spring. If this happens, cut the branches back and new growth will take place.

The ending of the war will probably increase the demand for ornamental shrubs and plants the country over, so it will be well for all to place their orders for shrubs and flower and vegetable seeds as early as possible in order to get the best.

A call has been made by the Minnesota State Horticultural society for strawberry plants to supply the people in the burned over district in Northern Minnesota. If you can supply some, notify the secretary, A. W. Latham, 207 Kasota block, Minneapolis, Minnesota.

Attend the winter meeting of the Minnesota State Horticultural society at University Farm, St. Paul, from December 31 to January 3. You can stay at the Farm (if you get there early) and will enjoy the programs every day and evening. This is the postponed meeting from December 2. The regular winter Farmers' and Home-makers' Week will be in session also.—LeRoy Cady, associate horticulturist, University Farm, St. Paul.

ORCHARD AND GARDEN

Dec. 22-29, 1918.

Go over the cabbage and squash and remove any that are beginning to decay.

Watch for the work of rabbits and mice on newly set fruit trees.

A few thicknesses of newspaper placed around house plants on cold nights will keep them from freezing.

The home-grown Christmas tree comes in handy again at this time. Why not plant more white spruce, or other evergreens, about the place for Christmas use?

Place suet, bread crumbs, seeds, etc., on platforms where the birds can get them easily.

A little manure water made by putting thoroughly decayed barnyard manure in water and then drawing off the liquid makes a good fertilizer for ferns and other house plants.

Spruce boughs may be fashioned into beautiful Christmas wreaths. Use a hoop and tie the small branches about it. If you add a few pine cones and bright colored ruscus the effect is still better.

Don't use open candles on the Christmas tree. Electric lights are just as effective, or where they can not be had, bright candies or unlighted bright tapers may be used. Evergreens soon dry and burn rapidly. It is unpleasant to be burned out at Christmas time.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minnesota.

PROFITS IN HENS WITH EGGS GOING UP

Well selected hens or pullets that are given the right attention in care and feeding, together with good winter quarters, stand a good chance of making a real record in profits this winter. Feeds are gradually going down in price, and eggs are up.

At least three square feet of floor space should be allowed each hen and the poultry house should be kept dry and well ventilated. Only clean grains should be fed and they should be mixed to afford a variety. The mash which is made up of ground grains, including equal parts of same, also bran and middlings, should contain 20 to 25 per cent beef scraps.—W. E. Stanfield, U. S. Extension Poultryman, University Farm, St. Paul.

(Mr. Editor:

Here are two nice, juicy Christmas dinners, the menus of which the women among your readers will thank you for passing on to them. Do it in your next issue.)

TWO NICE, TEMPTING CHRISTMAS DINNERS

Two highly appetizing Christmas dinners, designed for Minnesota consumption and Minnesota consumption, have come from the home economics division of the Minnesota College of Agriculture, Mildred Weigley, chief of the division, being the architect. Here they are:

Dinner I.

Roast Duck with Apple and Prune Stuffing
Mashed Potatoes Giblet Gravy
Glazed Onions Parker House Rolls
Cranberry Jelly
Squash Pie with Whipped Cream
Coffee Nuts
To make apple and prune stuffing:
3 cups dry bread crumbs
2 tbsp melted butter
1 tsp salt
Dash pepper and paprika
1/2 tsp thyme
1 cup tart apples cut into cubes
1/2 cup stoned raw prunes
1/2 cup English walnuts, broken into pieces
Mix well first five ingredients, then add apples, prunes and walnuts.

To make glazed onions:
Peel small onions and cook in boiling water 15 minutes. Drain, put in buttered baking dish, add highly seasoned stock to cover bottom of dish and 2 tablespoons of corn syrup. Bake until soft, basting with stock in pan.

Dinner II.

Roast Turkey or Chicken with Bread Crumb Stuffing
Baked Squash Mashed Potatoes
Gravy Cranberry Sauce
Fig Pudding with Foamy Sauce
Coffee

To make fig pudding:
2 1/2 cups flour
1 tsp soda
1 tsp ginger
1 tsp cinnamon
1 tsp nutmeg
1 cup molasses
1 cup sweet milk
1 cup chopped suet
1 cup chopped figs
1 cup stoned raisins

To the flour, soda, ginger, cinnamon and nutmeg, sifted together, add the molasses, milk, suet, figs and raisins in the order named. Steam in molds the size of pound baking powder tins, for 2 hours.

To make foamy sauce:
1 cup sugar
1 cup scalded milk
Juice of 1 lemon
1 egg
Beat sugar and yolk of egg together. Add scalded milk and juice of lemon. Just before serving, fold in the stiffly beaten white.

EDITORS' CORNER

Good Work by County Agents.

The attention of the editors of Minnesota is called to the item in this number of the Press News headed "Live-Wire Work by Farm Bureaus." This gives just a glimpse of the good work being done by the farm bureaus and their field officers, the county agents.

In the last issue of the Press News something was said about the failure of county agents to realize the opportunities before them in co-operating with the press. From the item in this issue referred to it will be seen that the county agents have been very busy getting into their stride in looking after agricultural problems. Many of them, however, are already doing good work in keeping their local papers acquainted with agricultural developments and activities. There is no doubt that all of them will be doing similar work as they get the duties of their offices organized. It will pay to watch the work of the farm bureaus and their field men in Minnesota.

Weekly News Letter.

The office of publications, from which the University Farm Press News is issued, is planning to establish a weekly news letter designed especially for the weekly press in Minnesota. The aim is to give the press the actual news of University Farm that will be of interest to the readers of country weeklies. The news letter will be issued in "copy" form and an effort will be made to make the items brief and snappy. Look for the envelope bearing the inscription, "News Letter—Rush," in large type. These envelopes are not ready yet, and in the meantime the news letter will come in the regular envelopes of the division of agricultural extension, University Farm.

COMMON BARBERRY CAUGHT IN THE ACT

The common barberry last summer was practically "caught in the act" of spreading black stem rust among the wheat of the farmers in the northwest. For this reason the United States department of agriculture, the Minnesota experiment station, the office of the state entomologist represented by E. C. Stakman for the central west, E. M. Freeman for Minnesota, and A. G. Ruggles, state entomologist, are more determined than ever to push the campaign for the eradication of the barberry until this plant, which costs the farmers of the northwest millions of dollars annually, is completely exterminated.

The evidence against the common barberry (not the Japanese barberry) is damning. In Wisconsin last summer farmers suffered serious loss through rust in their grain fields and in every one of large numbers of cases investigated, except two, the infection was found to be directly traceable to rust-infected barberry plants near the fields. In Montana absolutely every case of infection was so traceable. Wherever rust was found among grain, infected barberry plants were found near at hand, and the rust was much worse nearer the plants than farther away. The only place where rust could be found in wheat up to the middle of June was near barberry plants.

In other words, the barberry was caught bloody-handed.

Consequently, sentence of extinction has been passed on the plant and the state will be urged to support the work of barberry eradication during the next two years.

RIGHT TEMPERATURE

FOR BEE CELLAR

Bees do best in winter if the temperature in the hive stands at 57 degrees Fahrenheit. In order to have the right temperature within the hive the temperature of the cellar usually should be about 50 degrees, or slightly higher. The temperature just inside the entrance of the colony should be about 52 degrees. A chemical thermometer is safest to use in keeping track of beehive temperature.

The best results in the cellar wintering of bees have been obtained in cellars of houses which are heated by furnaces. The part of the cellar used for hives should be partitioned off and so located that there will be no light or other disturbing factor while the bees are under cover. It is well to choose for a bee room a part of the cellar through which some of the furnace pipes run. If this gives too high a temperature the pipes may be insulated. The room should contain no windows and the outside walls should be thoroughly protected to the top either by a bank of soil or by other means.

These are directions found in Farmers' bulletin No. 1014, issued by United States Department of Agriculture, to which the attention of Minnesota farmers is directed by the bee division at University Farm, St. Paul.

BUTTERFAT LOST IN CREAMERIES

Butterfat losses in creameries are considered in bulletin 177, recently issued by the Minnesota experiment station, University Farm. The bulletin is based on experiments carried on at the Minnesota state creamery at Albert Lea. The results reported were obtained in normal operation of the creamery, no special effort having been made to reduce the amount of mechanical losses. The figures arrived at are as follows:

Skimmilk retained 1.64 per cent of the total fat received at the factory, and buttermilk .93 per cent.

About .5 of 1 per cent of the total fat received lost mechanically in vats and pipes.

About 1.4 per cent of total butterfat received in cream lost in the process of manufacture.

About 3.17 per cent of the butterfat received in milk lost in the process of manufacture.

When the losses were accurately considered, the butterfat in the milk, determined by the standard Babcock methods, checked with the fat in the cream separated from it, and the butterfat in the cream as determined by the Babcock test checked with the fat in the butter as determined by chemical analysis. It is clearly pointed out in the bulletin, further, that cream does not test the same in milk test bottles as in cream test bottles.

The bulletin is the work of R. M. Washburn and A. C. Dahlberg at the division of dairy husbandry of University Farm, and of James Sorenson and M. P. Mortensen of the Minnesota state creamery. Copies may be had without expense by addressing office of publications, University Farm.

LIVE-WIRE WORK BY FARM BUREAUS

Here are some of the things done by the farm bureaus—of which there is now one in every county in Minnesota—assisted by the county agricultural agents, in the course of the crop season just closed. "The beehive and the anthill have nothing on the farm bureaus of Minnesota for activity," remarked a student of Minnesota's farm activities after reading the list:

Placed hundreds of men on farms last harvest to meet the labor shortage.

Checked hog cholera outbreaks at the outset, possibly saving farmers hundreds of thousands of dollars.

Obtained and tested thousands of bushels of seed corn and other seed grains for farmers who were short. Encouraged the addition of hundreds or even thousands of acres to the alfalfa areas.

Encouraged the selecting and curing of enough seed corn to supply the state's needs for the next two seasons.

Helped to save thousands of bushels of grain by having threshing machines inspected.

Organized livestock breeders' associations, livestock shipping associations, cow-testing associations, and promoted the buying and selling of purebred stock.

Organized a tractor operators' school to increase efficiency in the use of machines.

Encouraged the treating of seed grain for smuts in order to shut off a statewide annual loss of something like \$4,000,000.

Gave an impetus to home canning that put thousands of cans of food away for this winter's use.

Built a \$17,000 creamery. Started a campaign, which in some cases added \$20 an acre to the incomes of potato farmers.

Raised thousands of dollars for the Red Cross, the Y. M. C. A., the Y. W. C. A. and the K. C.

Not every farm bureau has done all of these things, but every farm bureau in the state has done some of these things, or others like them.

WHAT IT COSTS TO PRODUCE PORK

According to special bulletin No. 30, issued by the agricultural extension division of the University of Minnesota, the cost of pork production now, based on figures taken from six farms near Halstad, Norman county, for a period of 10 years, and from 8 farms near Cokato, Wright county, for 5 years and on present prices of feeds, averaged about \$16.44 per hundred weight. This cost, however, is based on the assumption that only marketable feed was consumed and that this feed would net 2 1/2 cents per pound on the farm. The cost given, therefore, is a maximum, and would apply only to farms where it was necessary to purchase at the foregoing rate all of the feeds consumed. On a majority of farms 2 cents a pound or less would be more nearly a fair price for the feed actually consumed. This would lower the cost of production almost \$3 per hundred weight. Still further savings would bring the cost as low as \$10.80 per hundred weight. This is probably nearer the actual cost on many farms than the maximum of \$16.44, based on marketable feed at 2 1/2 cents a pound.

Copies of this bulletin, which was prepared by F. W. Peck, of the Minnesota experiment station staff, may be had without expense by addressing office of publications, University Farm, St. Paul.

WINTER GOOD TIME TO GET DRAIN TILE

Order your drain tile early enough to let you haul and distribute it by sleigh in the winter time. This is easier, quicker, and gives less risk of breakage than hauling by wagon, and you can distribute on boggy ground by team. Stack the tile on their sides in uniform piles at convenient points near proposed tile lines.—H. B. Roe, University Farm, St. Paul.

WINTER PROFIT IN SAVING THE MANURE

The season has come when stock is kept under cover. With its arrival, say specialists in the animal husbandry work at University Farm, farmers can add to their resources by making provision for taking care of all manure that accumulates during the housing season.

Too often manure is pitched out of the barn and exposed to fall and winter rains, with consequent loss of fertility by leaching. When the manure is removed from the stalls it should be placed in a covered shed or pit and packed to prevent leaching and fire-fanging, or it should be spread on the fields.

LIVESTOCK LEADERS COMING TO MINNESOTA

A group of famous livestock and other agricultural specialists is coming to Minnesota to take part in Farmers' and Home-Makers' Week at University Farm, December 30 to January 4, Minnesota's great annual farming congress. The list includes: D. D. Aitkin, president of the Holstein-Friesian association of America; Charles Gray, secretary of the American Aberdeen-Angus association; F. W. Harding, secretary of the American Shorthorn Breeders' association; R. J. Kinzer, secretary of the National Hereford association; W. W. Marsh, a famous dairy breeder of Waterloo, Iowa; Harley A. Martin, secretary of the American Red Polled association; James Watson, secretary of the American Ayrshire association; W. A. Lloyd, of the United States Department of Agriculture; Wayne Dinsmore, secretary of the American Percheron association; Nils P. Haugen, of the Wisconsin Tax Commission.

This list does not include the special speakers who will attend the annual meeting of the Minnesota State Horticultural society at University Farm during the same week.

Farmers attending the meetings of the week will also have a chance to become acquainted with C. H. Eckles, the new chief of the division of dairy husbandry at University Farm, and W. H. Peters, new professor of animal husbandry.

FARMERS TO DISCUSS AFTER-WAR PROBLEMS

Minnesota's farmers will gather during the week of December 30 at University Farm, St. Paul, to consider Minnesota's agricultural problems as affected by conditions produced by the war, and to attend meetings of the various farmers' organizations of the state. The dates of their meetings are as follows:

Minnesota State Horticultural society, Tuesday, Wednesday, Thursday and Friday, Dec. 31-Jan. 3.

Minnesota Federation of Farmers' clubs, Wednesday, Thursday and Friday, Jan. 1, 2 and 3.

Minnesota Crop Improvement association, Tuesday, Dec. 31.

Federation of Poultry associations, Tuesday, Dec. 31.

Minnesota Livestock Breeders' association, Thursday, Jan. 2.

Minnesota Swine Breeders, Wednesday, Jan. 1.

Minnesota Sheep Breeders, Wednesday, Jan. 1.

Minnesota Horse Breeders, Wednesday, Jan. 3.

Minnesota State Vegetable Growers' association, Wednesday and Thursday, Jan. 1 and 2.

Minnesota Creamery Managers, Thursday, Jan. 2.

Minnesota Aberdeen-Angus Breeders, Friday, Jan. 3.

Minnesota Hereford Breeders, Friday, Jan. 3.

Minnesota Holstein Breeders, Friday, Jan. 3.

Minnesota Guernsey Breeders, Friday, Jan. 3.

Minnesota Red Polled Breeders, Friday, Jan. 3.

Minnesota Ayrshire Breeders, Friday, Jan. 1.

Minnesota Jersey Breeders, Friday, Jan. 3.

Garden Flower society, Friday, January 3.

Minnesota Potato Growers' association, Friday, Jan. 3.

Minnesota Bee-Keepers' association, Friday, Jan. 3.

Agricultural Instructors Minnesota High Schools, throughout the week.

Boys' and girls' club work exhibits, throughout the week.

Farm Bureau Conference, Friday and Saturday, January 3 and 4.

RULES FOR LETTING HENS OUT TO RANGE

The following rules as to when to allow hens on range in the fall, if followed, will increase production and eliminate many losses by disease, says A. C. Smith, head of the poultry division at University Farm.

Hens should not be exposed to outdoor conditions:

1. After the ground freezes.
2. After the weather has become so severe that they can be allowed to go out only on days that are exceptionally warm.
3. In the late summer and early fall, when it is very damp outside, or extremely windy.

Hens that are fed liberally and with sufficient variety may be allowed the freedom of the premises later than those that are not so fed, for the simple reason that they will not avail themselves of the privilege so much. Not being in need of food they remain in the house more and keep better home hours.