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ORCHARD AND GARDEN NOTES.

February 1.

Send for seed catalogues.
Purchase seed as soon as possible.
Make a careful test of all seed to be sown. It pays.
Early Jersey Wakefield is among the earliest cabbage.
Order vegetable and flower seeds now before the stock is exhausted.
The Florence is among the best of crabs for planting as it fruits early and is prolific.
Pansy seed may be sown now. Use a friable, light, sandy loam and cover the seed very lightly.
Early garden crops require a warm, sunny location and sandy, though rich, soil.
Paper pots are often handy for growing plants. They are easily made or may be purchased from dealers.
Plan the garden now. Extension Bulletin 17 on the Farm Vegetable Garden will help. Order it from University Farm, St. Paul.

Sparks Earliana is one of the earliest tomatoes. Globe, Beauty, and Stone are good later varieties.
King and Minnetonka Ironclad raspberries are very generally planted for home and market use in Minnesota.
Plant the seed or set out trees of black walnut and butternut this year. They grow more valuable as they grow older.
Make provision for a good liberal flower garden. It may occupy a part of the vegetable garden and be cultivated the same as the vegetables.
The large and more tender varieties of onions should be sown in the greenhouse or hotbed this month for transplanting outside as soon as the weather will permit.
When watering house plants give them a thorough soaking when they are dry and then wait until they need water again before applying it.

Apply plenty of manure to the garden. Good vegetables must be quickly grown, and in order to get rapid growth, plant food must be easily available.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

ORCHARD AND GARDEN NOTES.

February 8.

Watch for rabbit injury to the apple trees.
Get material ready for the earliest hotbeds.
Labels for next summer's garden may now be prepared.
Do root-grafting of apples now and get ready to top-graft late next month.
The German iris, peonies, phlox, and asters in variety are all excellent perennials to use.
Go over the ferns, palms and other house plants and remove any scale or other insects found on them.
A weekly bath in soapy water rinsed off with clean clear water will help keep house plants in good condition.
The white elm and the hackberry are the best two trees for the street. They should be planted at least forty feet apart.
It is best to sow seed in drills in a hot bed or cold frame, since they may be easier taken care of and weeded.
The cut-leaf elder, mock orange, golden currant, Juneberry, spirea Van Houttei and Japanese lilac are all good shrubs for the yard.

Ampelopsis engelmanni or Englemann's Ivy is the most satisfactory climber for brick or stone work. The common ivy or woodbine will not cling to brick or stone.

Good garden work cannot be easily done unless good tools are available. See that all tools are in good condition and that you have those best adapted for your work.

Be sure seed of the best possible quality is purchased for the garden. Neither the gardener nor farmer can afford to use poor seed because it is cheap. It is the most expensive in the end.

Bulbs planted last autumn may be brought into the light and heat now and should furnish a succession of bloom during the rest of the winter and spring.

Asters, marigolds, cosmos, petunia, phlox, pansy, snapdragon, stocks, sweet alyssum, and bachelor's button, will give good cut flowers when planted in the garden.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

HOW HOG CHOLERA IS SPREAD

Visiting Farmers Bring Infection in One-Third of the Cases While "Distant" Causes Including Crows and Sparrows Cause Nearly Half the Cases.

In the co-operative work of controlling and eradicating hog cholera, being carried on by the Federal Bureau of Animal Industry and a number of the states, an attempt has been made to determine the source of infection wherever a herd was found to be infected with hog cholera. It was not always possible to do this, and in quite a few cases there was some doubt as to the exact way in which cholera had gained entrance to the herds.

The reports of these investigations were presented at a recent meeting of the United States Live Stock Sanitary Association, in Chicago. The sources of infection were divided into two great classes, designated "distant" and "near-by" sources. It was surprising to learn that in 45 per cent of the herds infected, the disease had been spread from "distant" sources. The remainder—55 per cent—appeared to have been infected from "near-by" sources.

In 33 per cent of the cases the infection seemed to be due to the visiting of neighbors, or the exchange of work between neighboring farmers. It has long been thought that this was a common mode of carrying infection, and the results of the investigations appear to verify it. Birds appear to be guilty of spreading the infection in over one-fourth of the cases. Sparrows and crows have been under suspicion for a long time, and it would appear that the suspicion has been well grounded.

Although none of the above figures were obtained from Minnesota, we have no reason to believe that conditions here are radically different from those in the states where the investigations were carried on.—H. Preston Hoskins, Assistant Veterinarian, University Farm, St. Paul, Minn.

INFLUENCE OF CLIMATE UPON COMPOSITION OF WHEAT.

Climate is a very powerful factor in determining both the yield and the composition of the wheat crop. Its effect is produced by lengthening or shortening the period of kernel formation. If this period is prolonged, it causes a greater filling of the kernels with starchy material, increasing the size of the kernels and the weight per bushel of the grain, and the starchy character, or "softness" of the wheat. Thus a cool summer season, with a liberal supply of moisture, produces large yields of plump, relatively soft wheat. On the other hand, a hot, dry summer, particularly during July, while the grain is filling, gives a smaller yield of grain per acre, with a lighter weight per bushel and harder grain. In general, climatic conditions which favor large yields per acre produce grain of lower milling quality than that which matures more rapidly under conditions which give smaller yields.

Climate varies from year to year in any given locality, causing corresponding variations in the quality of wheat. There are also large variations in the quality of wheat of the same variety when grown the same season in different localities of the same state, because of the different weather conditions during the summer season in these different localities. It is impossible to say, therefore, that any one variety of grain will always be of better or poorer milling quality than some other variety if the latter is grown under different climatic conditions.—R. W. Thatcher, Agricultural Chemist, University Farm, St. Paul.

PARASITIC DISEASES.

Parasitic diseases have caused serious losses among our domestic animals, and are often diagnosed as some other malady showing similar symptoms. Heavy rainfall serves to convey eggs and young worms from place to place. Animals pastured on low ground or on infested ground are quite liable to parasitic diseases.

Medicine is often of little value in dealing with parasites. As soon as a dangerous parasite appears on a farm the healthy animals should be removed to high ground and allowed only pure water to drink. Pastures and yards where infested animals have been kept should be planted with cultivated crops for several years. Infested animals should have dry feed at frequent intervals and access to salt at all times.

Carcasses of diseased animals must be burned or deeply buried.—W. L. Boyd, Assistant Veterinarian, University Farm, St. Paul.

CROOKSTON SHORT COURSE AND CROPS SHOW.

University Farm and Other Agricultural Authorities Aid in Short Courses and Crops Show February 10-20, 1914.

The Women's Short Course February 10-20, and the Fourth Annual Agricultural Short Course at Crookston will terminate in the Farm Crops Show, February 18, 19, and 20. These days will be Farm Crops Day, Livestock Day, and Farm Problems Day. Liberal premiums in numerous classes are announced in the premium list, which should be in the hands of every probable exhibitor in this territory.

The courses and program will be presented by the regular faculty of the School at Crookston, assisted by representatives from at least three State Agricultural Colleges. Among those from the various colleges of the University of Minnesota are: President George E. Vincent; Dean A. F. Woods; Dean George F. James; Andrew Boss, Professor of Farm Management; A. D. Wilson, Director of Agricultural Extension; A. V. Storm, Professor of Agricultural Education; H. R. Smith, Professor of Animal Husbandry, and Josephine T. Berry, Professor of Home Economics. Others on the program are: Thomas P. Cooper, formerly of University Farm but now director at the College of Agriculture and Experiment Station at Fargo, North Dakota; President F. L. McVey, University of North Dakota at Grand Forks; President J. H. Worst, North Dakota Agricultural College, and Professor R. A. Moore of The Wisconsin Agricultural College. Entertainment will be furnished by the Viking Chorus of Crookston and by Miss Frances Lapham of Caledonia, who will give a number of selected readings.

For a copy of the official program and premium list, which contains full information as to board, lodging, expenses, and train service, address O. I. Bergh, Secretary, Crookston, Minn.

A NEW WHEAT.

The Minnesota Agricultural Experiment Station at University Farm, and the Crookston Substation have been making comparative tests of Marquis wheat, Minnesota No. 169 (bluestem); Minnesota No. 163 (fife); and velvet chaff wheat during the last two years. Marquis averaged 28.11 bushels per acre, as compared with 27.06 for Minnesota No. 169, 27.23 for Minnesota No. 163, and 28.38 for velvet chaff wheat. The Marquis compares favorably also in weight per bushel.

Milling tests made by the Division of Agricultural Chemistry of the Minnesota Experiment Station show that Marquis wheat is rich in protein and compares favorably with fife and bluestem in color and other bread-making qualities. The fact that it yields and mills well are points in its favor. In addition to these advantages, it ripens in from seven to ten days less time than bluestem.

In some localities, especially on the lighter soils, it does not do as well as the fife and bluestems, and each farmer should try it, if at all, only in small quantities until he knows that it will do better under his conditions than the old varieties.

Those desiring to try this variety may secure the addresses of growers by addressing the Division of Agronomy and Farm Management, University Farm, St. Paul.—Andrew Boss, Agriculturist, University Farm, St. Paul.

THE DAIRY COW'S RATION.

Since it is important that a cow should have enough feed to satisfy the appetite, the proportion of coarse feed to grain must be adjusted to her actual needs. Roughage, in a general way, should be fed according to her size, allowing two pounds of hay per hundredweight when it is the only roughage used. When silage is fed, the general rule may be to feed one pound of hay and three pounds of silage per hundredweight and the balance of the nutrients needed should be provided in concentrates, except that when roots are fed they will take the place of a part of the grain at the rate of ten pounds of roots for one pound of grain. These directions are only general, as in practice it will be found that spare, big-bodied cows will take relatively more roughage.

For complete feeding directions write to the Division of Dairy and Animal Husbandry, University Farm, St. Paul, for their booklet on feeding dairy cows.—T. L. Haecker, Dairy and Animal Husbandman, University Farm, St. Paul.

FREE FARMERS' LIBRARY.

University Farm Ready to Furnish a Free Agricultural Education for Your Leisure Winter Evenings.

There are still many winter evenings of which our readers would like to make some profitable use. A study of farm problems and of plans for next year's work may very well occupy the evenings not spent at meetings of farmers' clubs, at entertainments, or in visiting with neighbors. Such study should include the best available farm papers, and the numerous bulletins which may easily be obtained free of charge from the United States Department of Agriculture, Washington, D. C., either by writing directly to that department, or perhaps better still by writing to your Congressman at the Capitol at Washington.

While space does not permit us to print a list of the bulletins available at Washington, we will suggest these from University Farm:

3. Industrial Contests for Minnesota Boys and Girls.
7. Pork Production.
9. Selecting and Storing Seed Corn.
11. Dressing and Curing Meat for Farm Use.
14. The Smuts of Grain Crops.
15. Cost of Horse Labor.
16. Small Fruits on the Farm.
17. The Farm Vegetable Garden.
19. Domestic Science in Rural Schools.
21. The Care and Management of Poultry.
22. Establishing the Orchard.
24. Seed Testing.
25. Annual Pasture, Soiling and Hay Crops.
27. Flax-Growing.
29. The Keeping of Dairy-Cow Records.
30. Marketing Eggs From the Farm.
31. Dressing and Marketing Veal and Poultry.
32. Tuberculosis of Cattle.
33. Some Knots and Splices.
34. Bundle-Corn and Beef Production.
35. Potato Diseases.
36. Egg-Marketing.
37. Hog Cholera.
38. Potato Growing in Minnesota.
39. Minnesota Seed Law.
40. Preservative Treatment of Fence Posts.
41. Two Types of Silos.
42. Co-operative Creameries and Cheese Factories.
43. Flies and Their Control.
44. Barnyard Sanitation.
45. Mutton.
46. Farmers' Clubs.
47. Clover.

In ordering from this list give both the number and title of the bulletin in order to avoid any possibility that the wrong bulletin may be sent, and if you would like to receive twelve other bulletins of similar character each year as they are issued, ask to have your name placed on the permanent mailing list. Those who are already receiving such bulletins from University Farm without having sent special order, should not make this request, as it would only result in their receiving two bulletins of the same kind instead of one. Address Office of Publications, University Farm, St. Paul.

FRESH MEAT.

Meat, when used fresh, is more palatable and desirable than when salted or cured. On the farm, where there is no ice or cold storage of any kind, it is very difficult to keep meat fresh during the summer months, and only a small amount can be handled at a time. It may, however, be kept for a few days, or even a week, in a cool cellar, where there is a free circulation of dry air, and flies and insects cannot get at the meat. A very convenient means of keeping a supply of fresh meat, most of the time, is where two farmers kill a veal or sheep every week or so, and divide the carcass. After the meat is cut into convenient-sized pieces, it may be sprinkled with salt, which will greatly add to its keeping qualities.

During the winter months there is usually no difficulty in keeping fresh meat. It can be frozen or packed in snow, and kept in good shape. The most convenient way is to cut the carcass into desirable pieces for home use, and then put them out to freeze. Lay each piece out separately, so that it will freeze thoroughly. After this it may be packed in a box or barrel and kept frozen. To freeze a quarter of beef, and hang it in some place where it will remain frozen solid, is not so satisfactory as cutting it into small pieces, because it is more difficult to handle when a piece of meat is desired. Avoid alternate freezing and thawing of meat, as that makes the meat flabby and also makes it lose its flavor.—Department of Agriculture, University Farm, St. Paul.

THE LAUNDRY ROOM.

It Promotes Health and Comfort.

By Juniata L. Shepperd, Domestic Science, University Farm, St. Paul.

To conserve labor and to promote health is the duty of every housewife. During the winter months the housewives in the rural districts of Minnesota find that, of all household tasks, the laundry work is the most taxing not only on strength, but also on health.

The need of a laundry room is extreme at this season of the year. It is not possible to do washing without the house becoming somewhat damp from the steam which arises from the hot water, and in case there are little ones in the family, they are almost sure to contract colds on each washday and thus suffer from such local congestion during most of the winter. This should not be regarded lightly. "Nothing but a cold" is an expression too commonly heard. A cold reduces the vigor while nature is trying to make both growth and daily repairs, and prevents that perfect development which might otherwise take place during childhood—not to mention those dangerous gatherings in ears and mastoid bones, so common to childhood, which are almost invariably caused by colds.

But before building and equipping a laundry room at home, think over the possibility of a co-operative laundry whose expenses and benefits may be shared by the entire neighborhood. It may not be practicable in all cases. The admonition is simply to think on this matter and decide what is best in your particular case, remembering that laundry work done in the kitchen in winter is always a menace to family health. Meanwhile, the following suggestions may help to tide over winter washdays with lessened dangers and hardships.

When washing is done in a room not under the same roof with the main part of the house, the dampness may be confined to that and the adjoining room, thus keeping the living room largely free from drafts; but when such work is done in the kitchen the living room adjoining is usually both damp and cold, because the little ones find many excuses for opening the door to go where mother is even though not permitted to remain there.

SAUSAGE.

Pork sausage should be made only from clean, fresh pork. To each three pounds of lean pork add one pound of fat. As the pork usually used for sausage is the shoulder, neck and lean trimmings, the sausage is quite likely to be too fat unless part of the fat is removed and used for lard. Mix the fat and lean meat together in chopping. Where a rotary cutter is used, it is best to cut the meat twice. After it is cut the first time, spread it out thinly and season. One ounce of pure, fine salt, one-half ounce of ground black pepper, and one-half ounce of pure leaf sage, rubbed fine, to each four pounds of meat, will suit the taste of most persons. The seasoning should be sprinkled thinly over the cut meat, and the meat again run through the cutter, to mix the seasoning thoroughly. This method will give a more even mixing of the spices than can be obtained by working it with the hands. For immediate use, the sausage may be packed away in stone jars or crocks, to be sliced for frying. Many people stuff it into casings made from the small intestines of the hog. When this is done, the intestines must be turned inside out and carefully cleaned.—Department of Agriculture, University Farm, St. Paul.

SELECTING BREEDING FOWLS.

When purchasing breeding stock, careful attention should be paid to "strain" or "family;" for "breed" is never a safe indication of productiveness. There are numerous breeders in the country who have built up profitable strains of fowls by trapping or otherwise selecting, and breeding from their best. It is to this class of poultrymen that we should turn when it is necessary to renew our flocks.—C. E. Brown, Poultryman, Northwest Experiment Station, Crookston, Minn.

The way one acts in the sick-room has an important bearing on the condition of the patient. Be clean and neat in dress, punctual and pleasant, and speak with a low, soft voice—but do not whisper. Do not bring the unpleasant happenings into the sick room. Keep the family troubles in the barn, if need be.