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ORCHARD AND GARDEN NOTES.

March 1.

Spring is the best time to set out all kinds of fruits.

No place is too small to afford some garden or plant growth.

Do not cover fine seed deeply. Put on just enough dirt to cover the seed.

Take cuttings of all house plants that are to be planted out next spring.

Most of the bulbs put into the cellar last fall are well rooted now and ready to bring into the living rooms.

Go over the vegetables and fruits in the cellar and pick out those that are decayed.

Use wood ashes as a garden fertilizer, working them into the soil of rose beds and about fruit plants.

The roots of rhubarb put into the cellar last fall ought to be giving a good supply of stalks now which will be relished as fresh sauce.

Bring in branches of plums, pussy willows, and poplars and put them into water. They will open up and add brightness to the room.

Plants like sweet alyssum, nasturtiums, and some vegetables, as radish and lettuce, may be grown in a flat or window box if no other place is available.

Good topics for discussion in the farmers' club this month are

The Vegetable Garden
The Best Potatoes to Plant
How to Secure a Good Strawberry Bed

The Best Shrubs to Plant for a Succession of Flowers All the Year

The Best Annuals for Cut Flowers

The Best Three Flowering Perennial Plants.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

ORCHARD AND GARDEN NOTES.

March 8.

Watch the hotbeds closely. Ventilate hotbeds on the side away from the wind if possible.

Manure may be spread on the garden and plowed in next spring.

Be sure the manure is heating evenly before it is put in the frame.

If hotbed manure does not heat readily, put on a few buckets of hot water.

Bank hotbeds with manure that is not heating. Dry manure will not be so likely to freeze and take heat from the frame.

When pruning have a reason for every cut made and cut close to the limb or trunk. Leave no stubs.

Pruning may be done late in March. Cover all wounds over one-half inch in diameter with white lead or grafting wax.

Seed for most early plants may be sown at this time. Transplant when large enough and keep growing nicely till they are ready to set in the field.

Inspect all garden tools, sharpen and put them into the best condition. Perhaps there are some new ones that should be purchased. Now is a good time. Look them up.

Grafting wax is made by melting together 4 pounds of resin, 2 pounds of beeswax and 1 pound of unsalted tallow. Heat this about 15 or 20 minutes, then throw into cold water and pull in the same manner as molasses candy.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul.

ROPE ON THE FARM.

The ability to tie a few useful knots and splice a rope is useful to the farmer as well as the sailor, and at times to people in all walks of life. The average person does not wish to spend the time necessary to learn a large number of knots, but he should master a few of those that are most useful, so thoroughly that he can make them at any time from memory. There are several ways of tying some knots and of making some of the splices and hitches, but the beginner should confine himself to the one method by which he can obtain the best results, even though it may not be the way which the expert would find quickest and easiest. Those who wish to tie the simple knots and make the splices of use on the farm, may secure, free of charge, a copy of Bulletin 136 entitled Rope and Its Use on the Farm, by addressing the Agricultural Experiment Station, University Farm, St. Paul.

MATING FOWLS.

It is Time to Select Fowls for Rearing Next Season's Chicks.

It is now time to give the subject of mating serious consideration. The kept-over hens will soon begin to lay. Having rested all the fall and winter, they are in prime health and full of vigor, just the birds to breed from, much preferable to those that have been steadily filling the egg basket since last October or November. These hens and pullets have done their task well, and we can rarely expect double duty from any animal any more than double time from the help we employ.

Select the strongest, healthiest, and most active hens in your flock, as they will produce vigorous, rapidly growing chicks, that make the best layers and the most profitable roosters. It is usually well to look for specimens just about the average or standard weight or size. Select and guard against deterioration in this respect.

Strong, sturdy birds are the kind the farmer wants, and the kind he must have to pay him a good profit, and that kind he may and will have, if he will select the right kind of breeding specimens. Select birds rather long of body, broad, with legs set well apart, but at the same time not inclined to be too deep behind compared with the forequarters, as such hens are inclined to convert their food into meat rather than eggs. Select the active, energetic kind, the one that gets up early and retires late, the one that has bright eyes and red face and wattles.

It is better when hatching from high producers to select eggs from those in their second year, after they have rested and recovered from the great effort of their first year. Such a method offers these advantages: (1) the record of the hen is a known quantity; (2) the first eggs laid after the resting period, which are popularly supposed to be the strongest in generative power, may be selected; and (3) high-producing hens in their second year often begin to lay just before the most favorable season for hatching.—A. C. Smith, Poultryman, University Farm, St. Paul.

CORN AND PIG CONTEST.

Murray County boys are going to see who can produce the most and cheapest pork this summer. A committee of business men and those interested in the Slayton school have raised nearly \$450 in cash and merchandise which will be given as prizes to the boys in this and the Acre Yield Corn Contest. Three breeders of pure-bred swine in the county offered the choice of their herds to those winning prizes. The rules of the contest have not been definitely decided on, but the committee has made the statement that it intends to require each contestant to raise a litter of pigs from birth and to keep an accurate record of the feed cost. They are also to grow an acre of corn which is to be fed to this litter of pigs in the fall at the time they are fattened for market.

The prizes are to be liberal enough so many boys will be attracted to this contest. We expect to see the farmers of Murray County gain much knowledge from this contest which will help them in making the pork end of their farm business more profitable.—H. M. Bush, Farmers' Club Specialist, University Farm, St. Paul.

SOWING CLOVER SEED.

Clover should invariably be sown in the spring and, under normal conditions, comparatively early.

Broadcasting the seed and following with a harrow has been frequently advised, and is successful in Minnesota during wet seasons and on heavy soils; but is often unsatisfactory in dry seasons and on light soils. Clover should not be sown too deeply, and yet it is desirable to sow it sufficiently deep that it will neither blow out nor dry out easily. Under most conditions, either using the grass-seed attachment to the drill or mixing the seed with the grain is to be recommended. Excellent stands of grass have been obtained by mixing the red clover with the grain and sowing the balance of the grass-seed mixtures broadcast. If grass seed is mixed with the grain and sown with a drill, the drill should not be run more than from one to two inches deep.

The amount of seed per acre will vary slightly with the method of seeding and the purity and germinating power of the seed. It is believed that in general too little, rather than too much, seed is sown. If clover is sown separately, it should be at the rate of from eight to ten pounds of red or mammoth, from four to six of alsike, and from three to four of white clover.—A. C. Arny, Assistant Agriculturist, University Farm, St. Paul.

KEEPING QUALITIES OF SERUM.

Fresh Hog Cholera Serum Should be Ordered as Needed. It is Spoiled By Freezing, Long Storage, or Improper Handling.

Letters are frequently received, asking how long hog cholera serum may be kept. This question cannot be answered by giving a certain number of days, weeks or months, as the conditions under which the serum was produced must be taken into consideration as well as the conditions surrounding it after it leaves the laboratory.

Serum cannot be produced, with present methods, so that it will be absolutely free from germs. It should be the constant aim of serum-producers to keep the serum as free from contamination as possible during the time that it is in their hands. For the purpose of destroying the few germs that may get into the serum during its preparation, carbolic acid is added in the proportion of 1 part of acid to 200 parts of serum. This will kill the majority of the germs, and keep the rest from growing, provided that the serum is kept cool.

Serum has been known to remain good for two years, but this could hardly be expected of all serum. At the State Serum Plant, at University Farm, serum is stored in large refrigerators, at a temperature of about 40 degrees Fahrenheit. The bottles are sealed air-tight and kept in darkness. In this way serum can be kept for a number of months.

All Station serum sent out is to be used promptly, and not kept on hand. The Station does not furnish serum to veterinarians for them to keep on hand for use as needed. The practice of commercial serum plants allowing druggists to keep a stock on hand, under various unfavorable conditions, cannot be too severely condemned. It is quite likely that a large share of the poor results obtained with commercial serum last summer was due to the fact that it had been kept too long, and under improper conditions. The serum was probably potent when it left the laboratories, but its strength and purity had been impaired by improper methods of shipping and storing.

Indeed, serum is very much like milk. It may be drawn carefully, but spoiled by subsequent handling. Station serum is sent by express in most cases, and should be removed from the express office immediately upon its arrival and kept in a cool place until the arrival of the veterinarian who is to administer it. Do not allow it to freeze.—H. Preston Hoskins, Assistant Veterinarian, University Farm, St. Paul.

NO FRUIT WITHOUT BEES.

If there were no bees, fruit trees and other plants could not produce any fruit. Apple, plum, cucumber, clover, alsike, alfalfa are fertilized by bees. Honey is the bait with which the bee is induced to perform this task. The colored, fragrant petals of the blossom are the advertising signboard telling the bee where the honey may be found. If the blossom is to "set fruit," the bee with its fuzzy body must brush some of the yellow dust called pollen from the male organs or anthers at the bottom of the blossom, and flying away to another blossom, deposit this pollen on the female organ called the stigma. The blossoms are so arranged that to get at the honey the bee must first brush, with its pollen-covered body, against the stigma, thus completing the pollination. As soon as it has performed this duty, it may draw a check for the work in the form of a drop of honey at the bottom of the blossom. While drawing this pay the bee is involuntarily covered with pollen again and made ready to proceed to the next blossom and repeat the process.—Francis Jaeger, Apiculturist, University Farm, St. Paul.

GEESE.

The Toulouse is one of the best breed of geese for the farm. As a rule they are splendid layers, of very quiet disposition, excellent setters, and make good mothers. The general color is dary gray or blue-gray. Standard weights: Gander, 20 lbs.; goose, 18 lbs.

Emden geese are pure white, and have the same general characteristics as the Toulouse.

The African geese are of the same weight as the Toulouse; but they are not so quiet, are more rangy, with long necks and a black knot on the top of their heads. They are splendid layers and setters.—C. E. Brown, Poultryman, Northwest Experiment Station, Crookston, Minn.

VITALITY OF SEED.

Assuming that every care has been taken to get seed well adapted to the conditions of culture, it is still important to see that the seed is of good vitality and capable of producing strong, vigorous plants. Great waste of land and labor results every year from the use of seed of low vitality.

Poor seed cannot produce good plants, and poor plants give poor returns or none at all. Seed should always be tested before planting, and seed of low vitality rejected. Some of this poor seed is introduced to blend with good seed so that it can be sold at a lower price. Some of the worst weeds have been introduced and spread in this way. The loss from weeds and the cost of fighting them is great and is so well understood as to need no discussion.

Farmers often buy cheap seed thinking that they are saving money, when as a matter of fact they are paying two or three times as much for the small amount of good seed obtained as they would pay had they bought good seed in the first place at twice the rate per pound paid for the poor seed.—A. F. Woods, Dean, Department of Agriculture, University Farm, St. Paul.

CURING MEAT.

Meat that is to be cured should always be thoroughly cooled and be cut into convenient sizes, before it is put into the brine or packed in dry salt. The pieces most commonly used for this purpose are ham, shoulder and bacon pieces from pork; and the cheaper cuts, such as the plate, shoulder and chuck ribs, of beef. Mutton is very seldom cured and preserved, but is mostly used fresh. All the pieces that are to go through the curing process should be well trimmed, so as to have no ragged edges or scraggy ends left, as these portions will become dry and be practically wasted.

The two methods of curing meat that are commonly used are the brine process and dry-curing. Brine-cured meats are probably the best for farm use, for several reasons. In the first place, on most farms it is impossible to secure a desirable place in which to dry-cure. It is also less trouble to handle the meat when brine-cured; as the only attention that it requires is to properly prepare and pack the meat in the vessel, and prepare the brine for it. Whereas, in the case of the dry-curing method, it requires considerable time to rub and salt the meat at different times.—Andrew Boss, Agriculturist, University Farm, St. Paul.

KEEPING SMOKED MEATS.

During moderate weather, smoked meat may be left in the smoke-house for some time. The house should be kept perfectly dark, and well enough ventilated to prevent dampness. A dry, cool cellar or attic, with free circulation, will be a satisfactory place for smoked meats at all seasons, if it is kept dark and the flies are excluded.

If to be held only a short time, hams and bacon will need only to be hung out separately, without covering. For longer keeping, it will be necessary to wrap them first in waxed paper and then in burlap, canvas or muslin, and to hang them in an airy, cool place; the object being to gain a uniform temperature and to keep away insects.—Andrew Boss, Agriculturist, University Farm, St. Paul.

RE STOCKING CHOLERA TERRITORY.

Serum-Virus Treatment the Only Method to Consider.

The only process of immunization that can be relied upon for susceptible hogs going into territory that has been infected within a year is the serum-virus treatment. Hogs so treated should be regarded as objects of suspicion for three weeks, on account of possible vaccination cholera within that time.

A farmer living on an uninfected farm in infected territory can safely purchase only (1) hogs that have been through cholera some months before or (2) hogs previously susceptible that have received serum-virus treatment three weeks or more before they are moved to his farm. In any case, hogs going to an uninfected farm should be kept entirely apart from the healthy hogs already on the farm, taken care of by a separate herdsman, and kept in quarantine for at least two weeks.—M. H. Reynolds, Veterinarian, University Farm, St. Paul.

FARMERS' COOPERATIVE EFFORT FOSTERED.

Some of the following undertakings may well be fostered by the farmers' club. The producers in a community should decide on one variety of potatoes or other market crop to produce, and then find some way of marketing it jointly. One or two leading breeds of each kind of live stock should be adopted. Pure-bred sires may be purchased and used cooperatively, to the advantage of everyone. Feed, flour, cement, and other supplies that can be handled in large lots, may be purchased cooperatively, usually at a considerable saving.

The question of organizing a livestock shipping association is worth considering where live stock is an important factor. Home conveniences, and a beef club for supplying fresh meat should be considered. When dairying is important, the organization of a cow-testing association is valuable. In any neighborhood, community effort along the line of road improvement is worth very careful consideration. Such matters as organizing a creamery, cheese factory, or farmers' elevator, the purchase of a stallion, or the introduction of a general drainage system for the community, should be considered by the club and acted upon only after all the facts in the case are known. One of the latest attempts of a farmers' club is to organize a cooperative laundry in connection with a cooperative creamery. In short, every enterprise connected with the farms, homes, or schools may be profitably considered by the club.—A. D. Wilson, Director of Agricultural Extension and Farmers' Institutes, University Farm, St. Paul.

THE CHINCH BUG.

The chinch bug is an old Minnesota pest, although it has not been prevalent in the State for a few years. Some of our neighboring states have suffered from its ravages quite recently, and only last summer one report of its presence was made in Minnesota.

Warnings have recently been issued by the U. S. Department of Agriculture suggesting to the farmer the most up-to-date methods for its destruction. Bulletin No. 191, of the Kansas Experiment Station, Manhattan, Kansas, upon the Chinch Bug, has also been recently issued, and those interested will find it an excellent summary of the whole question.

Chinch bugs spend the winter in rubbish, corn shocks, corn husks, grass clumps in meadows and pastures, and along road-sides, etc. The majority seem to perish during the winter, except those concealed in the grass clumps. This is contrary to our older notions of the hibernation of these insects. The most practical remedy found in Kansas for their control is destruction by fire before they leave their winter quarters in the spring. It has been found better to burn them in late fall or early winter, but if other conditions are favorable this method can be used in spring, before the bugs have begun to migrate. It seems to have more effect if carried out during the winter when the grass is dryer. To be most effective the fire should burn slowly so that the heat may penetrate the densest portions of the grass clumps and reach all the bugs.—C. W. Howard, Assistant Entomologist, University Farm, St. Paul.

ORCHARD SPECIALIST.

Have Your Pruning, Grafting or Spraying Done Under the Direction of a Specialist.

The Agricultural Extension Division, University Farm, St. Paul, is ready to send R. S. Mackintosh, horticultural specialist, to communities requesting help in pruning, top grafting, and spraying fruit trees. A petition should be signed by at least 12 fruit-growers. The work is to be carried on in orchards where trees may be pruned, top grafted, or sprayed. No one should sign a petition unless willing to assist in doing the actual work himself. The petitions should be sent in at once.

SEED CORN PATCH.

Start a separate breeding plat of corn this year. It's the only way to insure perfect purity, strong vitality, and uniform type. Many farmers are now trying this plan of getting good seed corn. A quarter or half acre is enough land, but it must be separate from other corn to prevent crossing. It must be in good condition to make strong plants. It must be uniform in fertility to make selection safe. Plant only the best seed obtainable. Suit yourself as to variety and go ahead.—C. P. Bull, Associate in Farm Crops, University Farm, St. Paul.