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ORCHARD AND GARDEN NOTES

FOR JULY 1st.

Rutabagas may still be planted.

Red cabbage is a good variety for pickling, and coloring salads.

Plant Wardwell's Kidney wax beans now for fall use.

Pinch back new raspberry shoots to within 18 or 20 inches of the ground.

A final planting of Golden Bantam sweet corn may be made now for fall use.

Do not grow vegetables too thick. Give them plenty of room for full development.

If the strawberry bed is to bear next year it should have been mowed and worked over before this.

Sow seeds of perennial plants to transplant later. If they are carefully wintered they will flower early next season.

Late cabbage and celery may still be set out. Late cabbage may be set on the strawberry bed that has been plowed up.

Do not let the apple and plum trees bear too heavily. The fruit should have been thinned from four to six inches apart.

The currant season should be at its best now. Perfection seems to be one of the best, both as regards size and quantity of fruit.

Has the small boy of the farm a garden or acre of corn all his own to do with as he desires? I recently visited a well-to-do gardener all of whose boys were in business with him and was interested to learn that he had made it a practice to pay his boys as good a salary as they could get anywhere to work for him. He began when each boy was small and increased it as the boy could earn more. Consequently the boys learned the business and have become a part of it until now they would not think of leaving it. He has built a business that he can turn over to them with little fear of its going to pieces for lack of attention.—LeRoy Cady, Horticulturist, University Farm, St. Paul.

ORCHARD AND GARDEN NOTES

FOR JULY 8th.

Japanese lilacs made a fine showing the latter part of June.

Swiss Chard may be used as soon as large enough to pull.

Prune out the old and diseased currant canes as soon as the fruit is off.

Plums and apples may be budded the latter part of this month and August.

Vegetables should be picked in the early morning before they have had a chance to wilt.

Rosa Rugosa in its many colors has again proved an especially good plant for the lawn.

Keep the onions growing rapidly. If they need fertilizer, hen manure or nitrate of soda may be applied.

Thorough cultivation not only kills weeds, but saves moisture and enables plants to stand drought better.

Sweet corn and peas are much more palatable if taken directly from the garden to the kitchen than if purchased on the market.

Study the matter of cover-crop for the orchard. It will need to be sown during the latter part of the month. Oats may be used.

Preparations should soon be made for exhibiting at the county and state fairs. Boost both of these institutions by showing what you can grow.

Keep a vase of flowers on the table. Sweet peas and nasturtiums are always enjoyed. Some of the ornamental grasses may be used if nothing else is available.

Have stakes been set to train the tomatoes? Better colored and more even fruit is secured by staking, although fewer fruits per plant are obtained.—LeRoy Cady, Horticulturist, University Farm, St. Paul.

TURNIPS.

Turnips require a rich soil, and grow best on freshly-broken land. They may be sown broadcast after some other crop has been removed, generally during July or August. They should grow rapidly in rich, sandy soil free from fresh manure. About one ounce of seed will be required for 150 feet of drill, and two pounds for the acre, if in drills.—LeRoy Cady, Horticulturist, University Farm, St. Paul.

SYSTEM IN FARM MANAGEMENT.

In the past most farming was conducted with very little regard to system. The staple crops were grown year after year on the same land, often without manure, until the soil failed to produce satisfactory crops, when it was turned into pasture or allowed to run wild and produce weeds to seed the rest of the farm. No books were kept and the cost of production was unknown. The farmer took what he could get for his product, often less than the cost of production. Now, science and business are being applied to the arts of agriculture with increasing thoroughness and skill.

The modern farmer must know the type of farming to which he himself is best adapted and where it can be conducted most profitably. If he is a dairyman he must know the milk breeds of cattle and the best strains for his conditions. He must know all the sanitary regulations for keeping his milk pure and marketing it in the best condition. He must figure out the rotations of crops adapted to his conditions and his needs with due regard to maintaining the fertility of his soil. He must know the demands of his market, and be able to get his products to the consumer without all the profits being absorbed in the process.

The farmer will always have to deal with many forces and conditions only partially controllable even by men of the greatest knowledge and skill, but he has before him for development a wonderful field in this direction, and he is cultivating it with a zest before unknown.—A. F. Woods, Dean, Department of Agriculture, University Farm, St. Paul.

CANNING VEGETABLES.

A Winter Supply Should be Put up Now.

Sweet corn, beans, peas, and asparagus should be canned for winter use while the garden furnishes a bountiful supply. Select and prepare them as for drying. Put them in jars that have been sterilized in boiling water, then add water until the jars overflow, put the rubbers in place and screw the lids down loosely.

Set the jars in a steamer over cold water or in a boiler or kettle of cold water, bring it to the boiling point, and cook for an hour, then set the covers as tightly as possible, let the jars stand until the next day and again put them in cold water, bring them to a boil, and let them cook for an hour. Repeat the process on the third day, keeping the covers tight after they are first tightened.

If it is not convenient to use a steamer, set the jars in water on a false bottom so that the water may pass under them and keep them from breaking.—Mary L. Bull, Extension Specialist in Domestic Science, University Farm, St. Paul.

ROOSTERS VS. REPUTATION.

June 15 or July 1 closes the hatching season in most sections of the State. Suppose that during this period there was an average of five roosters per flock on 150,000 farms in Minnesota. Now that the breeding season is over what shall be done with 750,000 roosters? It is easy to let them run, but there are consequences: eggs will be fertile, and broody hens, stolen nests, slow marketing, and hot weather will cause the development of chicks in the fertile eggs.

The loss through changes in fertile eggs during the next four months will be half as much as the roosters will be worth in the fall. They could be kept by themselves, but do you realize what it will cost at present prices? It will cost at least five cents per month for each rooster and the aggregate will be about \$37,500 besides the labor. If sold at ten cents per pound, they would bring \$450,000. Later in the season the price will be much lower. It would seem that \$450,000 in the pocketbooks of the farmers of Minnesota would be much better than 750,000 roosters in their poultry yards.

If you have a standard-bred bird, healthy and vigorous, keep him if you wish, but don't let him run with the laying flock.

We want to establish the reputation and maintain the quality of Minnesota eggs. Our eggs should command the same premium in the markets as does our creamery butter, but they never will with 750,000 roosters on the farms during the next four months.

It is simply a question of roosters versus reputation.—N. E. Chapman, Poultry Specialist, Extension Division, University Farm, St. Paul.

DON'TS FOR HORSE-OWNERS.

Don't overload your horses.

Don't feed too much corn in hot weather.

Don't make an sudden change in the feed.

Don't keep your horses in poorly ventilated stables.

Don't feed grain to warm horses. Give them hay first.

Don't allow tin harness, especially the collar, to chafe.

Don't neglect to give the harness a cleaning once in while.

Don't expect your horses to relish their feed, unless the mangers are clean.

Don't give large amounts of water at one time. Small amounts frequently are much better.

Don't give your horses patent medicine that you know nothing about, especially colic remedies.

Don't keep a horse going after it begins to show signs of exhaustion. You will save tin by resting a bit.

Don't allow your horses to drink a large amount of water on coming into the stable very warm. Allowing them to cool off a bit first.

Don't allow young horses to wear a set of shoes more than a month. Have them reamed, the hoofs leveled, and the shoes reset if they are worth it.—H. Preon Hoskins, Assistant Veterinarian University Farm, St. Paul.

HORSE BREEDING IN MINNESOTA.

Report on the Horse Industry Issued by the Stallion Registration Board.

A Report on the Horse-Breeding Industry in Minnesota, is the title of Bulletin No. 5, recently issued by J. S. Montgomery, Assistant Secretary of the Stallion Registration Board. It contains a directory of the stallions licensed in Minnesota and a series of articles by well known horsemen. One of the features of the bulletin is its illustrations of Percherons, Clydesdales, a Hackney and a combination saddle and harness horse of good type. This bulletin should be in the hands of every Minnesota horseman.

RE-USE WATER GLASS

Cheapen Egg Preservation by Economy of Material.

Water glass may be used in the preservation of eggs more than one year if properly handled. It loses its value if exposed too long to a free circulation of air, which contains carbon dioxide. The carbon dioxide causes the appearance of decided milkiness in the water glass, and a thick, heavy sediment settles around the eggs until it becomes difficult to remove them without some breakage. When this deposit is completed, only a solution of soda is left which is of no value for egg preservation.

The easiest method of keeping water glass fresh so that it may be used year after year is the exclusion of air by means of covers that fit tightly or are sealed with paraffin.

Jars may be sealed with paraffin by winding paper around the top, leaving the upper edge tacked a little above the cover. The paper may be held in place by means of a cord or rubber band, while melted paraffin is poured into the groove between the paper and the edge of the cover. It is often convenient to put the eggs in small vessels which do not have to stand open to the air very long until all the eggs in them have been used, then they may be resealed or the water glass poured into bottles and corked up until time to use eggs again.

If sealed vessels cannot be used, the deterioration of a water glass will be slower in a well ventilated room than in a cellar where the air contains more carbon dioxide.—R. M. West, Assistant Agricultural Chemist, University Farm, St. Paul.

ANT EMEDY.

The following is a tried and true recipe for driving away ants of all kinds.

Equal parts of tartar emetic and sugar. Mix dry then moisten with water to the consistency of syrup and put on a dish in the runway of the ants. They will at very freely of it and fail to return for a long time, or perhaps for the season.

The dish maybe set away when dry. When again needed add water and a little more sugar, and it is ready for use. The on dish may be used several times. Great care should be observed in order that children do not get at the tartar emetic preparation, as it is poisonous.—Mary L. Bull, Domestic Science, University Farm, St. Paul.

SILAGE AND STOVER.

Silage Makes More Pounds of Beef at a Lower Cost.

The writer found in ten years' work at the Nebraska Experiment Station prior to coming to Minnesota, that a ration of alfalfa hay with corn silage or stover gave larger and more profitable gains than any of the many other rations tested. Later tests have failed to show conclusively which is the better way of handling the corn plant, but it may be regarded as proved that the whole plant should be used instead of only the ear.

For the purpose of comparing silage and stover for cattle feeding, two groups, each containing eight steer calves, were fed from March 25 to August 15, 1911. Each animal of one group received daily 7.5 pounds of corn, 4.1 pounds of alfalfa, and 3.6 pounds of shredded corn stover. The animals of the other group were of the same age and received 6.1 pounds of corn, 3.4 pounds of alfalfa, and 15 pounds of corn silage.

These two rations were practically identical except that the corn stalk was fed as silage in one case and as shredded stover in the other. The difference in amount of grain was made because of the presence of about that amount in the silage.

The silage-fed calves made average daily gains of 1.8 pounds each or about one-third of a pound more than the stover-fed animals, and required only 3.4 pounds of grain instead of 5 pounds for each pound of gain made. They also required less total dry matter, the figures being 7.8 and 8.9 pounds respectively.

At 45 cents per bushel for corn, \$8.00 a ton for alfalfa, \$3.00 a ton for shredded stover, and \$3.00 a ton for silage, it appeared that the silage ration made 100 pounds of gain at a cost of \$4.66, the profit per steer, above the cost of feed, being \$5.88 during the twenty weeks. The stover ration made 100 pounds of gain at a cost of \$5.42, the profit per steer being \$1.31.—H. R. Smith, Animal Husbandman, University Farm, St. Paul.

TWO HUNDRED THOUSAND FARMERS NEEDED.

With 40,000,000 acres of available productive land where there is ample fertility and rainfall to produce abundant crops, and with good facilities available for marketing all of the products that can be produced, it is plainly apparent that one of the problems for Minnesota to undertake is to secure a large number of settlers. At present Minnesota has about 150,000 farms, but it has enough good land suitable for agriculture to give each of 400,000 or 450,000 farmers an 80 or a 100-acre farm.

Some of the well managed diversified farms in Minnesota are now producing a gross income of about \$25 per acre. Every bit of the 40,000,000 acres of agricultural land in Minnesota is capable of producing \$25 per acre annually in general farm products, or the 40,000,000 acres of land are capable of producing \$1,000,000,000 worth of farm products each year instead of about one-quarter that amount as they now are. Minnesota affords excellent opportunity to at least 200,000 more farmers in addition to the 150,000 she now has. Let us boost for Minnesota and try to interest the 200,000 people who want good farm homes to come here.—A. D. Wilson, Extension Division, University Farm, St. Paul.

STRAWBERRY JUICE.

Late in the season when the strawberries are small and seedy, they may be cooked, the juice drained off, again made boiling hot, and canned with or without sugar. Any bottles which may be at hand can be used for canning the juice. Boil the bottles and corks to be sure they are sterile.

When filled and the cork securely placed, dip the neck of the bottle in paraffin, let cool and dip again. The bottled strawberry juice will be found good for use in puddings, pudding sauces, sherbets, ices, cake fillings, etc. A very delicious strawberry blanc mange may be made by using strawberry juice instead of milk. Serve with cream.

The canned strawberry juice may be used later with crab apples or currants in making jelly. One part crab apple juice and one part strawberry juice makes a very pleasing strawberry jelly. The apple aids in giving the desired consistency. Equal parts of currant and strawberry juice make a nice jelly, to some much more pleasing than currant alone.—Mary L. Bull, Extension Domestic Science Specialist, University Farm, St. Paul.

NEW SEED LAW.

Minnesota Extension Bulletin 39 States the Law and Explains the Inspection and Free Tests Which it Provides.

The last legislature provided a law for the regulation of the sale or exposure for sale of agricultural seeds in Minnesota. It is in effect on and after July 1, 1913, and provides for the labeling of agricultural seeds in such a way as to indicate their germinating power, the locality in which they were grown, and the dangerous weed seeds or other impurities present.

The execution of this law is largely entrusted to the University Farm Experiment Station where it has been placed in the hands of E. M. Freeman, Plant Pathologist, and W. L. Oswald in charge of the Seed Laboratory. Dr. Freeman and Mr. Oswald have just prepared Extension Bulletin 39 which states the new law in full, explains its provisions, makes a number of suggestions valuable for seed buyers, and gives directions to those who wish to have free tests made by them at University Farm.

The bulletin has just been mailed to over 40,000 farmers and should be in the hands of all who buy or sell agricultural seeds in Minnesota.—J. O. Rankin, University Farm, St. Paul.

FRENCH WEED.

Avoid sowing the seed and prevent plants from maturing. This requires constant attention as some of the plants may mature seeds early in the summer and others at later periods leading to almost continuous seeding. The plants may even mature their seeds after they have been covered by the plow if the soil is dry.

If the weeds are found growing in the grain fields in large numbers early in the season, they may be checked and many of them destroyed by harrowing once or twice with a light, peg-tooth harrow, when the grain is three or four inches high.

Disking the land as soon as the grain crop is removed will hasten the germination of the seeds. Plow later in the fall and disk or replot in the spring. Seeding down to the tame grasses and clovers will bring about complete eradication.

The following rotation is suggested: (1) Wheat. Seed bed carefully prepared and timothy and clover sown. If weeds are bad, defer sowing grass seed until grain is harvested, when three or four inches high. (2) Timothy and clover hay, two crops. (3) Timothy hay or seed. Break in fall. (4) Corn or potatoes. (5) Wheat. (6) Barley or oats. (7) Wheat, and seed down.

Minnesota Station Bulletin 129 tells how to recognize and eradicate twenty-four of our most common and important weeds.—Andrew Boss, Agriculturist, University Farm, St. Paul.

RAGWEED.

Ragweed is an annual which grows in rich soil that is not fully occupied by a growing crop. A short rotation, three or four years preferably, which includes a grass or clover crop and a cultivated crop, will help to clean infested fields. The cultivated crop should follow the grass crop and the field must be carefully watched for late plants. Hand hoeing is often required to make the eradication complete. The seed should be prevented from maturing if possible. Cutting infested spots and roadside strips before the seed is mature is a common method of holding it in check.

Every farmer in the State should send for a copy of Station Bulletin 129 which deals very clearly with the identification and eradication of our most common weeds.—Andrew Boss, Agriculturist, University Farm, St. Paul.

THE ROOST MITE.

Roost mites are very common and troublesome. When they become numerous enough they not only infest the nests but other parts of the building, especially cracks and crevices, as well as the roosts. They are much like tiny spiders and are often called spider lice by poultrymen.

Mites are easily exterminated by applying kerosene to all infested parts of the building. They become numerous as soon as warm weather comes. As prevention is better than cure, it pays to paint your roosts once every four or six weeks in winter time and once every two weeks during the warm weather. You will probably never see a mite in a house so treated.—A. C. Smith, Poultryman, University Farm, St. Paul.