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ORCHARD AND GARDEN NOTES

March 15-22

This is the time to sow early vegetable and flower seeds.

Cuttings of chrysanthemums may be made now in large quantities.

Plan to cultivate the garden thoroughly this summer. Get the best tools for this work.

Plan to add some flowering shrubs to the lawn, and perennials to the garden, this spring.

Sow pepper and egg plant seeds at once. They should be sown early in March to get the best results.

Callas require plenty of water when flowering, and should also be given a good supply of liquid manure once in a while.

If peonies or rhubarb are set out in the spring the work must be done just as early as it is possible to work the soil, as both start into growth early.

Golden Self Blanching celery may be sown now. Sow in fine loamy soil and just slightly cover the seed. It is often a good plan to shade the seed box with burlap or cotton cloth until the plants come up. Be careful to get good seed.

Among the best annuals for cut flowers are nasturtiums, gaillardias, asers, calliopsis, cosmos, nigella, scabiosa, pot marigold and cornflower. Order seeds for these now and be ready to plant them either in the house or in a cold frame.

Farmers Bulletin 643, United States Department of Agriculture, contains a very interesting discussion of the culture of the blackberry. Missouri stands first with 6000 acres, New Jersey, second, with 4300, and Illinois, third, with 3500 acres.

Liquid manure is made by filling a barrel or a tub half or two-thirds full of cow manure and then adding enough water to fill the barrel. Take off the liquid for use on any planting which needs fertilizer. Melon vines may be made to grow much more vigorously if this liquid is added to the hills once in a while. -LeRoy Cady, Associate Horticulturist, University Farm, St. Paul, Minnesota.

ORCHARD AND GARDEN NOTES

March 22-29

Cannas may be started into growth now.

Don't forget to spray all apple and plum trees this spring. It pays.

Try bringing in a few pussy willow branches or plum boughs to force into flower.

Bulbs will be at their best now for Easter flowers and a trip to a greenhouse will be well worth while.

Bring canna bulbs from the storage room and pot them in a loamy soil. Later the pots may be put out in a cold frame.

Do not grow seedlings in a close warm place. They must be encouraged to grow stocky and strong, not weak and succulent.

Sweet peas may be sown as soon as the soil can be worked. They may also be started in pots in the house, and transplanted early outside.

It is said the mistletoe is next to fire and insects in the amount of damage to forest trees in the west. It is a parasitic plant, living on the tree.

Late this month is a good time to prune ornamental shrubs and trees. Do not prune early spring-flowering shrubs until they are through flowering.

Norway has 144 tree-planting societies. The first was founded in 1900. 26,000,000 trees have been set out. More than 2,000,000 were set out last year.

Have you noticed the color of the red twig dogwood, golden willow, and soft maple twigs on warm days? They are worth having around for their cheerful color now.

English cottage gardens are famous the world over for their beauty and utility. Why not pay more attention to making our own gardens more useful and beautiful?

Watch the hot beds. Ventilate on bright warm days when the temperature rises, and be careful about the watering. Water is best applied early in the day, so that it may have a chance to evaporate from the foliage before night. -LeRoy Cady, Associate Horticulturist, University Farm, St. Paul, Minnesota.

TUBERCULOSIS IS NOT HEREDITARY

"Tuberculosis is not hereditary," says Dr. H. W. Hill of the Minnesota Public Health Association in a recent open letter to the legislators in session in St. Paul. "Farmers and stockbreeders all know this is true as to cattle, but some of them still believe, as do most city dwellers, that tuberculosis is hereditary in the human race. Yet, like so many other popular beliefs, this is wholly untrue. Of course the disease often 'runs in families,' but that is merely because members of families live in close association, and if one has the disease, the others are likely to get it. Here is an instance in Cottonwood County, one of the many cases recently investigated by the State Board of Health.

"The official records show that the present patient, a farmer of thirty-five, comes of a sound healthy family. Twenty years ago his sister married a man who had tuberculosis. She nursed him, contracted the disease, and died fifteen years ago. Her younger sister nursed her, contracted the disease, and died ten years ago. She in turn was nursed by a still younger sister, who in turn also contracted the disease, dying five years ago. This third sister, for the last years of her life stayed with the present patient and his wife, both of whom contracted the disease from her. The wife improved, the husband grew worse. Meanwhile two of their four children contracted the disease.

"Now count up and see how that fatal marriage twenty years ago introduced tuberculosis by direct infection into a sound healthy family. Seven wholly unnecessary cases, with three deaths already, and more to come, is the score. Suppose that first man had gone to a sanatorium and had not infected his wife? But there were no county sanatoria then such as Minnesota is now building.

"Are not these facts, of daily occurrence in Minnesota, enough to spur any one with a kind heart and human sympathies to demand prompt, efficient, widespread action to end this fearful unnecessary sacrifice of life, with its consequent tears and suffering?"

REGISTRATION AS CHILD-PROTECTION

"Mothers are the best nurses for infant minds, but, too often, not the best for their bodies," says Mrs. W. J. Marley, Chairman of the Public Health Committee of the Minnesota State Federation of Women's Clubs, who is urging complete birth-registration in Minnesota. "We would not have so many deaths among children if mothers' knowledge about their babies were as great as their love for them."

Miss Julia C. Lathrop, chief of the Federal Children's Bureau at Washington, D. C., regards infant mortality as the most important question in child welfare; and the recording of children's births as the first step in reducing infant mortality. Why? Because registration locates the child, gives it legal existence, and chiefly, because it prepares the way for supplying the mother with instructions in the care of the baby, and even of herself, which she too often lacks, and the lack of which often results in sickness and deaths.

How many babies are born in Minnesota every year? About 50,000. Why must the word "about" be used? Isn't the exact number known? Consequently the State Board of Health is asking the cooperation of all Women's Clubs to advertise the fact so that all mothers may start their babies right, with a local habitation and a legally recognized existence.

Is your baby registered? If not, why not?

SHORTAGE IN SEEDS

War Prevents Imports - Buyers Should Order Early

War has prevented the importation of flower seeds and there is something of a shortage in the domestic stock of many garden seeds, says LeRoy Cady, University Farm, St. Paul. Those who have not already ordered garden and flower seeds, therefore, should do so at once, otherwise they may be unable to obtain a supply, as the market is likely to show a shortage soon after the spring demand becomes urgent.

A NEW STRAWBERRY

State's Fruit-Breeding Farm Originates An Ever-Bearing Variety

An ever-bearing strawberry that promises to be in a class by itself has been developed by Charles Haralson, Superintendent of the State's fruit-breeding farm at Lake Minnetonka. Test plants will be distributed this spring through the Minnesota Horticultural society.

SMUTS BRING HEAVY LOSSES TO FARMERS

Several serious diseases of cereals can be very largely controlled by means of seed treatment and rotation of crops. The smuts are the commonest of these diseases. The stinking smut of wheat (bunt), and covered smut of barley, and oats smut can all be controlled in this manner.

Serious losses are suffered by the farmers of Minnesota every year as a result of the smuts. It is not at all uncommon, to find fields in which from two to ten per cent of the crop has been destroyed. These diseases can be controlled by a very simple and effective method of seed treatment, and this should be made use of in preparation for seeding.

One pound of formaldehyde (a pint) should be put into forty gallons of water and thoroughly stirred. The seed grain may then either be dipped into the solution, or the grain may be spread out on the floor or a clean canvas and sprinkled with the solution. If it is dipped, fairly small quantities should be dipped at one time, and should be either in a coarse-meshed gunny sack or in a basket lined with wire screening. The grain should be dipped a number of times in order to get every kernel wet. Afterward it should be covered with clean sacking or canvas for from 12 to 24 hours. It may then be sown at once or it may be kept indefinitely. For sprinkling, the grain is spread out on the floor and as one man sprinkles or sprays the formaldehyde solution over the grain, another person turns the grain very thoroughly in order to make sure that every kernel becomes wet.

Precautions must be observed in applying this treatment. These are all described in Minnesota Farmers' Library Bulletin 14, a copy of which may be procured by writing the Office of Publications, University Farm, St. Paul.

The formaldehyde treatment is desirable not only on account of the fact that it prevents the smuts before mentioned, but also on account of the fact that it is valuable in preventing various other less well known diseases. It costs no more than two or three cents an acre, and should by all means be used.

WHEAT SCAB NEEDS FARMERS' ATTENTION

Several diseases which are carried over from season to season largely in the seed are prevalent in Minnesota. Some of them are fairly destructive. The symptoms, however, are not always well marked. The scab of wheat is destructive, causing light heads and shriveled kernels, also attacking the very young plants as they come from the soil and sometimes killing them. The chaff is often glued together with a pink substance.

This disease affects wheat, barley, and probably rye. It is of the greatest importance, therefore, says E. C. Stakman, of the Division of Plant Pathology and Botany, Minnesota College of Agriculture, that all seeds bearing this disease should be removed. This is especially true, since there are other diseases which are carried over in practically the same way and the processes for removing affected seed are the same.

The kernels from affected plants are practically always shriveled and very much lighter in weight than normal kernels. To remove these kernels by means of fanning and grading, therefore, is fairly easy. After the grain is thoroughly fanned and graded, so that only the bright plump kernels are left for seed, it should be treated with a formaldehyde solution, one pint of formaldehyde to forty gallons of water, in order to kill spores which may remain on the surface.

FIX MACHINES NOW; SAVE TIME LATER

Now is the time for all good farmers to look carefully into the condition of their farm machinery. L. B. Bassett of the Division of Agronomy and Farm Management, Minnesota College of Agriculture, suggests that an inventory of farm machinery should be made, and that while it is being made, every machine should be carefully examined; also that note should be made of any repairs necessary. Such repairs should be completed before the rush of spring work begins.

RULES FOR PIG CLUB CONTEST

The February number of Rural School Agriculture, issued by the Agricultural Extension Division of the University of Minnesota, contains rules for the pig club contests of the current year. Several pig clubs have already been organized and the contest promises to be one of the liveliest yet held among the farm boys of Minnesota.

Copies of Rural School Agriculture containing the rules, may be had by addressing the Extension Division, University Farm, St. Paul.

LOOSE SMUTS AS A MENACE TO FARMERS

The loose smuts of wheat and barley, sometimes referred to as "black heads," occasionally cause heavy losses. Last season several fields were visited in which the disease was causing a loss of from five to fifteen per cent.

Unfortunately the method of seed treatment for the prevention of these smuts is not so simple as that for the prevention of the covered smut of barley, oat smut, and the stinking smut (bunt) of wheat, says E. C. Stakman, of the Minnesota Experiment Station. However, it is not nearly so difficult as it may seem at first glance, and it is recommended very strongly in localities where the loose smuts have been prevalent.

The treatment requires an accurate thermometer and a little care. The thermometer can very probably be purchased from a local druggist. Precaution should be taken to have the instrument standardized. It should be accompanied by a certificate from the Bureau of Standards indicating its degree of accuracy. The use to be made of the thermometer and other details of the treatment are told in Minnesota Station Bulletin 122.

The treatment is not applicable to large quantities of grain. It is therefore recommended that a seed plot be set aside for the planting of well treated grain only, and the grain from this be saved for general planting the following year.

The matter is of great importance at this time of the year, and all who wish to avoid danger from the loose smut should write immediately for Minnesota Station Bulletin 122.

BREEDERS TO SPREAD STATE'S GOOD NAME

"Bred in Minnesota" is to be written across the face of every pedigree certificate of live stock bred in this state, if the secretaries of the several breed associations comply with the request of the Minnesota Live Stock Breeders' Association. Such a request was voted at the annual business meeting of the Minnesota association in Minneapolis, February 19, in the form of a resolution introduced by F. E. Millard.

An effort to secure the National Dairy Show for Minnesota this year is also to be made. A resolution was carried, calling for the appointment of a committee of five to confer with the management of the Minnesota State Fair with regard to the matter. This action was taken on the strength of reports that the show might have to be abandoned in Chicago as a result of the outbreak of foot-and-mouth disease last fall.

As another result of the outbreak of the foot-and-mouth disease, a resolution was passed requesting the Live Stock Sanitary Board to urge upon the legislature the importance of an emergency appropriation of not less than \$50,000 to provide a fund out of which losses from the disease might be paid.

The Northwest Live Stock Breeders' Association, organized at Crookston recently, was welcomed as an auxiliary of the state association.

A suitable law for the protection of sheep against dogs, it was felt, should be passed by the legislature as a means of promoting sheep-raising.

The plan of the State Fair board to have a new and commodious cattle barn, for which the legislature has been asked to make an appropriation, was endorsed.

Officers were elected as follows: President, L. E. Potter, Springfield; first vice president, O. F. Henkel, Kenyon; second vice president, D. A. Wallace, St. Paul; secretary, W. A. McKerron, University Farm; treasurer, C. W. Grotfelter, Waterville.

Executive committee: First district, Finlay McMartin, Claremont; second district, G. W. Patterson, Worthington; third district, L. W. Orr, Afton; fourth district, T. G. Paterson, St. Paul; fifth district, C. E. Willson, Minneapolis; sixth district, Leslie Smith, St. Cloud; seventh district, F. E. Millard, Canby; eighth district, C. P. Craig, Duluth; ninth district, T. H. Canfield, Lake Park; tenth district, Luke Stannard, Taylors Falls.

BOYS' PIGS AT FAIR

Pork Grown in Boys' Contests To Be Shown at State Show

The prize-winning hogs in the boys' state-wide, pork-raising contest will be exhibited at the Minnesota State Fair, according to an arrangement made between T. A. Erickson, who is in charge of boys and girls club work for the Agricultural Extension Division of the University of Minnesota and the State Fair board. The counties will hold their contests before September 1 and the freight on the winning pig in each county will be paid by the State Fair board.

FARMERS ARE WARNED AGAINST WHITE GRUB

The white grub is going to eat next fall's crops this spring if Minnesota farmers "don't watch out."

There are reasons for believing this. Last summer there were great numbers of June beetles in Minnesota. These June beetles lay the eggs from which are hatched the white grubs. That white grubs hatched was sufficiently evident from an examination of ground plowed last fall. These white grubs will eat the seed of hill planted crops if they are given a fraction of a chance.

Farmers were told last fall that fall-plowing would do much to destroy the pests which prey upon corn, potatoes, strawberries, and other hill-planted crops. Many farmers, as a result, plowed industriously, but there remains a lot of plowing to be done this spring, and, in doing this, farmers who are wise will watch their furrows for white grubs. If they find only a few even they may know that their fields are badly infested and that they should avoid planting in such areas corn, potatoes, or similar crops. Fields in grass, grain or sod last year will be most seriously infested this year. Fields in clover last year, do not seem to be so badly infested. Fields that were in cultivated crops last season, will have few or no grubs in them.

If the farmer does not wish to have his labor neutralized, he should avoid planting his corn, potatoes, and so on, where there are signs of the white grub.

EARLY SPRING IS TIME FOR PRUNING

Early spring after cold weather is gone and before buds start, is the best time to prune fruit trees. For this reason information is being sent out by the Agricultural Extension Division of the University of Minnesota, as to methods and practices in pruning.

Pruning is done to give trees good form, to eliminate crowded centers, and to keep trees growing and producing normally.

Fruit growers, in planning their work for the 1915 season, should keep in closest touch with the Agricultural Extension Division, University of Minnesota. This division is prepared to give the services of specially trained men to aid in the development of the fruit industry in Minnesota, and is using every influence at its disposal to encourage Minnesota people to use Minnesota grown fruits—to EAT MINNESOTA APPLES.

FRUIT GROWERS ARE URGED TO SPRAY

Spraying is the fruit grower's defense against injury to his fruit crops by insects and diseases. Whenever large numbers of trees of the same kind are grown close together, insects and diseases will thrive among them and do much mischief. The fruit grower's protection against this is the right kind of spraying at the right time.

In the March Minnesota Horticulturist, A. G. Ruggles and E. C. Stakman, of the Minnesota Experiment Station, give a complete spraying calendar, but any special information desired by fruit growers can be obtained by addressing the Extension Division, University Farm, St. Paul. This division is doing all in its power to encourage the fruit industry in Minnesota, not only through the grower but through the consumer. Minnesota people are being urged to use Minnesota fruits and especially to EAT MINNESOTA APPLES.

ALLIES OF BIRDS PLAN A CAMPAIGN

Have you joined a bird club? This will be a question common in Minnesota this spring.

The National Association of Audubon Societies has arranged with Miss Florence Lillie, well known in Minnesota as a bird-lover, to travel over the State lecturing and organizing both adult and junior clubs or societies. She will give special attention, however, to the organization of junior societies, as the funds from which her expenses will be paid are those of the Junior Audubon Society.

To become a member of the Junior Audubon Society a child must give ten cents. In return he will receive a society button, ten colored pictures of birds, ten outline pictures, and ten leaflets describing the birds pictured. The local clubs will be organized in schools, and the teacher in each school where a club is formed will receive Bird Lore, a magazine, from which she will give a lesson each month. Clubs must contain at least ten members.

Miss Lillie will receive no compensation save voluntary contributions. Communities or schools wishing to arrange for visits by her should address her at 2153 Scudder Avenue, St. Paul, Minn.