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## ORCHARD AND GARDEN

March 15 to 22

It is not too late to order some fruit trees or berry plants.

Endive and Chinese cabbage are good salad plants.

Iris grows naturally near water and under cultivation has its best effect near a body of water.

Beets, onions, radishes, and lettuce may be sown in hotbeds now.

Rich soil and plenty of room are needed for the best development of sweet peas.

Dahlia and gladioli roots of good varieties find a good market in most communities.

Be sure the manure is heating well before it is put in the hotbed and then tread it down solid.

Plant radishes or other rapid-growing and rapid-maturing crops with slow-growing crops, such as parsnips, beets, carrots, or onions.

Dahlias, gladioli, sweet peas, pansies and perennials are good money crops if one is near a large town or summer resort.

Branches of lilac bushes, cherry or plum trees, with well developed buds, may be brought into the house now and forced into flower.

About 125 acres of asters are said to be grown yearly in the vicinity of Rochester, N. Y., for seed. The cool nights and even day temperatures are excellent for good aster development.

Coal ashes, cinders or other similar material scattered over snow drifts will help break up crusts as the snow melts and let small shrubs break through without damage to the branches.

It is time to get the spraying machinery in shape and to lay in a supply of spray material. It does not pay to get along without spraying. There are too many diseases and insects that may easily be kept in check by proper spraying.

In March, 1918, a national flower show will be held at St. Louis. This will be one of the greatest shows ever held in the United States if present plans are followed.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

## ORCHARD AND GARDEN

March 22 to 31

Don't plant seed too deep.

Watch the ventilating and watering of the hotbed closely these days.

Petunias, asters, snapdragons, forget-me-nots, etc., should be sown now.

Most early flowering annuals and any perennials that were not planted early may be sown now.

Plum trees do well in the poultry yard and chickens enjoy their shade on hot summer days.

Start a few pots of sweet peas for field planting as soon as the weather permits.

Be sure all cuts made in pruning trees on shrubs are clean, smooth cuts. They will heal easier.

Sow parsley in a box or pot for transplanting outside when the weather permits.

Be sure that you have good strains of lettuce, onions or cabbage if you want the best yields.

Look over plum and cherry trees for signs of black knot or other disease. Remove the disease as soon as possible.

Go over the orchard and lawn trees and take out all dead wood and do other needed pruning.

Bird houses should be made and put up this month. Keep a few near the house. The birds seem to prefer these, since they feel that they are protected.

Nearly all the large cities are paying more attention to vacant lot gardening this year than ever. The wise farmer will also have a good garden this year.

Plan for a fall garden as well as one in early summer. Radishes, lettuce, beets, rutabagas, tomatoes, cabbage, etc., are relished just as much just before the ground freezes as in early spring. Plan to have them.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

WHAT CONSTITUTES  
"ACTUAL" FARMER

The Federal Farm Loan Board is receiving many letters asking for explanations of terms in the recent farm loan act, and one of these questions is, What constitutes an actual farmer?

The answer to this question is as follows:

An actual farmer is one who conducts the farm and directs its entire operation, cultivating the same with his own hands, or by means of hired labor. An owner, to borrow under the farm loan act, must be responsible in every way, financially and otherwise, for the cultivation of his land.

FEEDING CUTS COST  
AND RAISES PROFIT

A dairy farmer in Clinton county, Iowa, last year decreased the cost of the feed for 10 cows nearly 50 per cent and increased the profit of these cows nearly 200 per cent, says H. H. Kildee, University Farm, St. Paul. He did this by feeding in proportion to production instead of feeding all his cows alike.

With good corn silage and well cured clover or alfalfa hay which has been cut at the proper stage of maturity, says Mr. Kildee, a dairy cow should have one pound of grain mixture for each 3 or 4½ pounds of milk produced. In the absence of silage, clover or alfalfa, more concentrates are needed. Ground corn or corn cob meal should form the basis of the ration in the corn belt. In the absence of corn, rolled barley, ground spelts, damaged wheat or hominy may be used. Ground oats are excellent but often too expensive except for calves, cows just before and after calving, and test cows. Bran, oil meal, gluten feed, brewer's grains, distiller's grains, cottonseed meal, and wheat middlings are among the most commonly used feeds. The choice and proportion must be governed by the relative costs which will vary from month to month and from one locality to another and the choice of feeds will also depend upon whether or not silage and clover or alfalfa hay are available.

EARLY AND LATE  
SEED CORN TESTS

Every farmer who plants corn tests his seed corn. Some farmers test theirs before planting and some test theirs by planting. Those who test their seed corn before planting are able to plant good seed and get a larger yield as a result. Those who test their seed corn by planting do not know what kind of a yield they will get until the end of the season when it is too late to do anything to improve the crop. Fortunately, more and more corn raisers now test their seed corn before planting. Certain precautions should be taken, however, in making one's tests:

The exact number of kernels taken from each ear should be known.

The seed being tested should be kept moist, but not soaking wet and should have air.

The temperature at which the corn should be kept should be about that to which the corn will be exposed when planted—from 50 to 70 degrees.

After 10 or 15 days kernels showing a strong growth should be counted.

Ears showing poor germination should then be discarded. If there is not enough corn for this then, kernels from such ears should be planted more thickly to provide for a full stand.

ONE WEEK'S SCHOOL  
GIVES BIG RESULTS

A school that lasts just a week out of the whole year and yet produces great results—that is what the Boys' and Girls' Week at University Farm is. Superintendents and principals of schools throughout the state say that the boys and girls who attend this week return home with a new and larger interest in the problems of farm life. That is why the school men over the state cooperate in interesting the young people in attending the week's courses.

This year Boys' and Girls' Week is from April 2 to 6 and a wonderfully interesting program has been arranged. The boys will make a study of dairy cattle, beef cattle, horses, hogs, poultry, bees, stock feeding, gardening and corn. The girls will be allowed to select any of the subjects offered to boys and in addition will study canning, breadmaking, garment making, and decorative needlework.

Visits to interesting points in and about the twin cities will occupy the afternoons and the evenings will be taken up with motion pictures and other programs of instructive or entertaining nature.

FARMS ENLARGED  
BY HOME MAGIC

Make the farm larger without adding to its acreage is a piece of magic that may be performed by a great many Minnesota farmers.

All that is needed to make many a farm larger in its productive area is the drainage of low and wet places, say the farm engineers at University Farm, St. Paul. Wet land which is susceptible of tile drainage nearly always is rich in soil fertility. Properly drained this fertility adds to the profits of the farmer. Usually the crop returns from land properly drained will pay for the improvement in from one to three years. Not only this, but the improvement increases the value of the farm, reducing the waste and adding to the productive area.

ROE IS A "JEWEL"  
SAYS IOWA EDITOR

The Corn Belt Publisher, the official publication of the Iowa State Press association in a recent issue paid a high tribute to Herman Roe, for several years secretary of the Minnesota Editorial association. Doubtless, this tribute was inspired by G. L. Caswell, field secretary of the Iowa association who spent a week in Minnesota attending the editors' short course at University Farm and the annual meeting of the Minnesota association in St. Paul in mid February. Whoever inspired the tribute did a good piece of work. It is brief, but to the point. Here it is:

"Minnesota has a real jewel for the publishers of that state in Herman Roe of the Northfield News. He is a man with his heart and soul in the newspaper work, of high ideals, imbued with the push and energy that gets things going and keeps them going, and whose example is a guarantee of his sincerity and success. Use him! Find the best way, and use him!"

THE COUNTY AGENT  
IN OTHER STATES

While the Minnesota legislature has before it a measure which if passed will make it next to impossible for a county to get a county agent, the demand for county agents in other states is growing. Missouri, for example, has 13 agents in the field, and several others are soon to be added to the list, if the wishes of certain important counties are considered.

The question is: Is Minnesota going to turn backward, while other states forge ahead through the use of the county agricultural agent?

Already the question has been partly answered. Confronting the measure already referred to is another before Minnesota's lawmakers, which, if it becomes a law, will make it easier to get county agents than before and will put county agents, once they are employed, on a sounder footing than now.

HALF-ACRE GARDEN  
GIVES BIG RETURN

You can make on an average \$44 net on a half-acre garden on your farm. Can you make as much on a half-acre in any other way? The thing has been worked out by the Illinois Experiment Station. After five years, this station found that the average gross income from its half-acre garden was \$74.85. With a labor cost of \$25.71 and expenditures for seeds, plants, and insecticides of \$5.08, the net return was \$44.06. Here is what the Illinois garden produced in its last year:

Onions, green 36 dozen, ripe 2 bushels; asparagus, 104 pounds; radishes, 103 dozen; lettuce, 22 baskets; turnips, green 5 baskets, early 10 dozen, late 2.6 bushels; rhubarb, 34 pounds; spinach, 21 baskets; peas, 11 baskets; beets, green 8 baskets, early 15 dozen, late 8.0 bushels; cabbage, early 108 heads, late (large) 24, late (small) 24; beans, string 16 pecks, lima 14 pecks; early potatoes, 5 bushels; parsley, supply; cauliflower, early 25, late 16; carrots, early 24 dozen, late 7 bushels; squash, summer 93, winter 330 pounds; sweet corn, 47 dozen; tomatoes, ripe 25 bushels, green 7 bushels; cucumbers, slicing 387, pickles 76; muskmelons, 1,185 pounds; watermelons, 2,063 pounds; egg plant, 41 fruits; peppers, 4 pecks; parsnips, 3.4 bushels; salsify, 1.2 bushels; winter radishes, 3.1 bushels; celery, 20 dozen.

CATTLE DISEASES  
COST MILLIONS

Twenty million dollars, and a good deal more, is the annual loss caused by contagious abortion of cows. The loss several years ago was placed at \$20,000,000, and since then the disease has spread widely. Consequently it is safe to say that the loss now is a great deal larger. It is, in fact, a heavy annual tax on the cattle man.

Contagious abortion is a germ disease. No reliable cure is known. The problem is, therefore, largely one of prevention, says Farmers' Bulletin 790, issued by the United States department of agriculture.

Prevention and control, however, are not a lazy man's job. Eternal vigilance is the price of success.

Suggestions may be found in the bulletin referred to, which may be obtained by addressing: Department of Agriculture, Washington, D. C.

FOREST FOR TOWN  
INSTEAD OF PARK

The towns of Minnesota do not seem to appreciate the opportunity afforded in a bill passed by the last legislature permitting them to acquire land either within or without their boundaries for the establishment of municipal forests.

A considerable tract of land could be acquired in the outskirts or outside of the town for the price of a single block in the business district. There is a tract of low agricultural value, but excellently suited to trees, within reach of almost every town. Once planted up, or properly cared for if it is already in forest, it greatly increases the outdoor recreational facilities. Imagine what such a tract of timber on the edge of a prairie town would mean to the people!

Furthermore, such a forest, instead of being a perpetual expense to the town, like the down town park, would soon bring a considerable revenue into the town treasury. Many of the towns of Europe have municipal forests that pay for the entire expense of running the town, leave the people entirely free from city taxes, and at the same time furnish a magnificent forest park.

Surely any town or city contemplating the expenditure of money for park purposes would do well to consider this opportunity.—E. G. Cheyney, College of Forestry, University of Minnesota.

MONEY NEEDED FOR  
TUBERCULOSIS WAR

Tuberculosis in killing power leads all our preventable diseases. Last year its victims in Minnesota numbered 2,378. The last seven years the loss of life by all the other preventable diseases, including two epidemics of infantile paralysis averaged only 848 each year.

This information comes from Dr. A. J. Chesley, a director of the Minnesota Public Health association, the man who is very ably directing the state campaign against preventable diseases. Dr. Chesley says:

"Tuberculosis caused more than twenty-two times as many deaths as infantile paralysis did last year. Many members of the legislature felt that a special appropriation of \$100,000 was a very small sum for the fight against infantile paralysis; thousands of friends and relatives of tuberculosis victims in this state hope to see these same legislators vote an adequate amount for the fight against tuberculosis."

FOREIGNERS SEEK  
MINNESOTAN'S WORK

From Germany, Russia, England, Australia, and Canada, requests have come to the general extension division of the University of Minnesota for copies of Dr. Raymond Phelan's bulletin, "Community Centers." In this country from New York to California, from Minnesota to Alabama frequent requests for this university publication have been received. Clarence Perry, community expert for the Russell Sage foundation, praises it. Even in the midst of war, three belligerent countries have sent in requests. Dr. Phelan says in "Mobilize the Community": "War is horrible, but it teaches a sound community lesson. War swallows up differences in a supreme passion. The ten or more political parties in Germany rise as one party to shut out threatening Russia, to wrest from Great Britain a place in the sun. In the market place at Paris the grand dame and the drudge forgetting social differences find themselves neighbors in spirit, made such by the calamity threatening the fatherland."

Will this unity survive the war, to be expressed in a constructive and socially beneficial way?

FEEDING THE COW  
BEFORE CALVING

The proper time to begin feeding a dairy cow is six or eight weeks before calving, and practical dairymen agree that this preparation has more to do with the amount of milk and butter fat which a cow produces during the lactation period than does the feeding during any other period.

For cows calving during the summer or early fall most dairymen like to have a small pasture away from the herd but with an abundance of grass, and, in addition, they like to feed a suitable grain mixture. Corn silage, with clover or alfalfa hay and a limited grain ration of three parts ground oats, two parts of bran and one part of oil meal is especially good for cows calving during winter or early spring. After calving the cows should be brought slowly up to full feed and thereby steadily to a higher production.—H. H. Kildee, University Farm, St. Paul.

WHY NOT HAVE A  
FLYLESS STATE

If every one would pitch in and help with a thorough clean-up throughout the state this spring when the snow goes out, Minnesota could be made very nearly flyless, says C. W. Howard of the Minnesota experiment station. The thing to do is to get after the fly before the fly has a chance to get after men, women, children, and babies. That is what the fly does; it goes after persons of all ages with deadly germs.

A clean-up should, therefore, be the first thing on the program this spring. Flies breed in manure and in other animal and vegetable waste. Remove such waste or treat depositories of it with substances that will kill fly larvae, and you will be astonished at the difference there will be in the number of flies.

For particulars communities and individuals should write to C. W. Howard, University Farm, St. Paul.

GIVE UP POTATOES  
FOR OTHER FOODS

Potatoes are not now the "poor man's food," says R. W. Thatcher, chief of the division of agricultural biochemistry, University Farm. Potatoes contain, on the average, 78 per cent of water and 22 per cent of actual food material. A bushel of potatoes, therefore, contains only a little over 13 pounds of actual food substance. At the present retail price of potatoes, \$3.20 a bushel, each pound of food which they contain costs over 24 cents. A pound of rice which contains 88 per cent of food and 12 per cent of water costs 8 1/3 cents, so that one pound of food almost exactly like that in potatoes can be bought as rice for a little less than 10 cents. A ten cent loaf of bread contains about 12 ounces of food and 6 ounces of water; hence a pound of food as bread, which is a much better balanced food than either rice or potatoes, can be bought for 12½ cents. Wheat flour furnishes a pound of food at a cost of 6 cents.

At present prices, potatoes are four times as costly as wheat flour, twice as expensive as baker's bread, and two and a half times as expensive as rice, the food which most closely resembles them in the character of food furnished. People can well afford to stop eating potatoes altogether until the price falls to less than half what it is at present.

ANTHRAX ONCE A  
HUMAN SCOURGE

Sixty thousand human deaths were once caused in one year by anthrax, a disease which affects animals and men. The scourge referred to was way back in 1613, but anthrax is still a disease of sufficient frequency to warrant the United States Department of Agriculture in issuing a new bulletin on the subject, Farmers' Bulletin 784 by Henry J. Washburn.

Medicinal treatment is usually of no avail in acute cases. If taken in time, however, the injection of antianthrax serum will often effect a cure. The most effective method of dealing with the disease, however, is by prevention—protecting individual animals by vaccination and burning or deeply burying carcasses of animals that have died of the disease so as to avoid infecting the ground.

BEES GET LOST  
SEEKING POLLEN

Bees sometimes get lost, says L. V. France of the beekeeping division at University Farm, St. Paul. They do so on being turned out in the spring if they have to go far in search of pollen. Therefore, Mr. France urges that bees should not be given their freedom in April until there is plenty of pollen available on willows and soft maples close by.

If there is no pollen available outside of the hives in April, or the weather is too bad for the bees to go out, the keeper should provide combs of pollen.

Among other things suggested by Mr. France for bees just given their freedom are these:

Clean water in a warm nook in the bee yard.

Food enough to last until May 20 in the form of sugar, sirup, or combs of honey saved from the previous year.

Protection against cold weather until May 15 or 20 by wrapping each hive with thicknesses of heavy wrapping or building paper.

Prevention of robbing by reducing size of entrances.