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ORCHARD AND GARDEN

April 1 to 8

Apple and plum trees may be pruned now.

Watch the hotbeds closely. Ventilate them early.

Gardens will be extremely popular this year. Never have we heard so much about them as this year.

A few evergreens planted about the home this year will soon reach a size that will protect the home from winds. The zinnia is an old-fashioned annual, easily grown, and, if the newer varieties are used, will make good cut flowers.

Do not throw away the hyacinth and narcissi bulbs when they are through blooming, but plant them in the garden or the flower border.

Sow radish seed with onion, parsnip, or carrot. They come up quickly and mark the row, making it easy to cultivate early.

Parsnips properly cooked are an excellent vegetable. They are easy to grow. Get fresh seed and plant them early. Cultivate well during the summer. They are not hurt by frost, either early or late.

Cut out and burn dead trees or branches. Clean up fence corners and around the buildings. A coat of paint on all the farm buildings will make them more attractive and will cause the wood to last longer.

Spiraea Van Houttei makes a good hedge plant that does not need clipping. Thunberg's barberry is perhaps better because it carries berries in the autumn. It is not a host plant for rust.

Indications now are that it will be in a large way up to the home gardener to produce his own vegetables this year. The commercial gardener can not get labor to raise as much produce as will be used, hence the amateur must do his part to release food for the allies.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

ORCHARD AND GARDEN

April 8 to 15

Topgrafting of plums and apples may be done now.

Use plenty of well-rotted manure in the garden this year.

Treat all seed potatoes for scab before planting them. Plant on clean ground.

Strawberries may be set out as soon as the ground works easily and the plants can be dug.

Small onion sets are just as good as large ones for growing bunch onions, and there are more to the quart.

Herbs that should be in every garden and that are easy to grow are mint, sage, and caraway.

Be prepared to spray the orchard this spring. Then do it at the right time. If you can't do this, better cut out the orchard.

Onions that have been frozen over winter must be used as soon as they thaw out. As soon as they get soft they begin to decay.

Eat two potatoes instead of one and use less meat. You will be better off and the soldiers will have more bacon.

If your order of nursery stock comes before you are ready to plant, heel it in for a few days. Cut the bundle open and spread out the plants in a trench, packing the dirt well about the roots. It is a good plan to cover half or two thirds of the shrub in order that it may not dry out.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minn.

POOR SEED CORN BEING SHIPPED IN

Word is being received by C. P. Bull, secretary of the Minnesota Crop Improvement association, that seed firms of the northwest have agents in the New England states who are picking up lots of seed corn for shipment to Minnesota and the northwest. This corn is very low in germinability. In fact, reports say that the agents in the east are taking corn without any germinability at all.

Farmers should be warned against the purchase of any seed from anybody, without first knowing something of its viability.

Without a doubt much of the seed used this year will not germinate more than 80 or 85 per cent; possibly some of it as low as 75. The farmers should take this into account when preparing for their spring's planting. When seed of low germination is to be planted, planting in drills, using correspondingly more corn per acre than usual in this method, is recommended. With ordinary check-row planting about eight pounds will plant an acre. This gives a basis for figuring as to the amount to be used with corn of low germinability.

TOILING IN FIELDS FOR ARMIES IN TRENCHES



The women of France are toiling to uphold the morale of the French soldiers. We can help them by giving to them the greatest freedom in their food supply, and for this, wheat is the chief factor.

(Editors who wish to print this picture can have an electroplate without expense by addressing M. J. McGowan, Director of Education (Publications and Printing), Food Administration, University Farm, St. Paul.)

POTATO'S VALUE AS A HOG FEED

As a growing or as a fattening ration potatoes alone are not an efficient hog feed. Grain should be fed with them and usually it will pay to add a protein supplement such as milk, oilmeal, or tankage. Grain is the standard hog feed. If the feeding value of potatoes can be stated in terms of grain their monetary value can be readily ascertained.

Here are three such values. The Denmark station says 4 pounds of potatoes will replace 1 pound of mixed grain; the Wisconsin station says 4½ pounds of potatoes will replace 1 pound of cornmeal; the Oregon station reports that 5½ pounds of potatoes are equivalent to 1 pound of barley. On the basis of the Wisconsin results, \$1.50 corn is as cheap a feed as potatoes at 35½ cents a bushel. Or, a bushel of potatoes will replace 13½ pounds of corn. In a recent test by the United States department of agriculture at Beltsville, Md., potatoes were compared with corn. To replace a pound of corn 5.85 pounds of potatoes were required. Moreover, the potato ration required for each 100 pounds of pork produced 27 pounds more of protein supplement than was required on a corn ration.

Feed grain with potatoes. Many feeders consider cooked potatoes more efficient than raw ones. One plan is to mix the grain with the potatoes as soon as the latter are cooked, and allow it to steam until cool enough to feed. Use from one-sixth to one-fourth as many pounds of grain as of potatoes. Any grain is good. Add milk if possible. If not available, add one pound of oilmeal or half a pound of tankage to each fifteen pounds of grain-potato mixture.—R. C. Ashby, University Farm, St. Paul.

WHAT IT COSTS TO PRODUCE MILK

The problem of the cost of the production of milk, which in recent months has been almost as troublesome as was once the question "How old was Ann," has been answered in Special Bulletin 19, prepared by the division of agronomy and farm management, and issued by the agricultural extension division University of Minnesota.

The solution of this difficult and intricate problem is based upon studies at Northfield, Halstad, and Cokato in Minnesota. All of the factors of cost are included and it is found that at Northfield the average annual cost per quart is 5.2 cents, with prices of feed based on the market of January 1, 1918. To this price, however, must be added about eight-tenths of a cent additional for the production of market milk to cover costs not included when the product is sold to creameries in the form of butterfat.

Those who talk of milk at the old price of 5 cents a quart, therefore, should remember that it costs about 6 cents at the farm to produce milk for the market, and that there is a large additional expense entailed in transportation and bottling, and in distributing to the consumer.

Copies of this bulletin may be had without expense by addressing Office of Publications, University Farm, St. Paul.

The best horseradish roots for grating are obtained by planting sets about the size and length of a lead pencil. Dig these in the fall and you will find them easy to grate and better than old, rough stock.

COUNTY AGENTS FOR ALL BUT 4 COUNTIES

All but four of Minnesota's 86 counties have made provision for the employment of county agents, and all but 15 have already made contracts with men to fill the positions. The counties which have not made provision for county agents and whose commissioners have refused to comply with the request of the federal government to appropriate \$1,000 toward the support of a farm bureau are Douglas, Houston, Koochiching, and Pope.

Of the 15 counties which have not yet made contracts with county agents, six have formed farm bureau associations and will employ county agents as soon as suitable candidates can be found. These six are Fillmore, Olmstead, Scott, Chippewa, Wadena and Lake. Four other counties in this group have agreed to grant an appropriation of \$1,000 as soon as a farm bureau has been formed. These are Norman, Aitkin, Meeker and Nicollet.

EDITOR'S CORNER

\$2,000,000 WILL DO IT

J. M. Campbell, an advertising man of wide experience, says in the March 16 number of the Editor and Publisher that the Third Liberty Loan can be sold by a truly wonderful advertising campaign that will not cost more than \$2,000,000.

1,200 BROKEN, AND WHY

Twelve hundred newspapers went broke last year. These are the fellows, the Higginsville Jeffersonian concludes, who run Astoria ads, for three cents an inch, who take oil stock instead of money for their ads, who "guess" a job will be worth so much, and who figure that the profit of one job will take care of the loss of five.—Kansas City Star.

HERE'S AN IDEA

When for any reason business slows up the wise merchant puts new power into his selling organization by the use of advertising. In proof of this, Gordon S. Ciley, advertising manager, has announced that the Philadelphia store of John Wanamaker will this season use twice as much advertising space as last. This has been decided upon as a means of overcoming selling handicaps imposed by war conditions.

AN EARLY PAPER SHORTAGE

The war for the independence of the American colonies was marked by a paper shortage not unlike that which has given the American press so much trouble during the world war for freedom. The New Jersey Gazette, April 23, 1778, printed this: "No more subscriptions can be received at the present by this Gazette for want of paper." In the same period of stress the Fayetteville Gazette issued this conservation item: "The economical housewife who supplies the paper mill with rags, serves her country in her sphere as well as the soldier who fights for it does in his." The situation was such that not a few papers were compelled to raise their subscription rates. History does repeat itself.

BARBERRY ERADICATION DAY, MAY 4, BEGINS MINNESOTA OFFENSIVE AGAINST WHEAT'S FOE.

Minnesota and the federal government have mapped out a campaign for the complete destruction of the common barberry plant which is the natural ally of black stem rust of wheat and other cereal crops which, in 1916, robbed Minnesota's farmers of about 30,000,000 bushels of wheat.

The first move in this campaign was the recent action of the Commission of Public Safety declaring May 4 as Barberry Eradication Day. On that day all patriotic citizens of the state including the boys and girls of the schools will be asked to make a special effort to find and destroy all common barberry plants in their several communities.

This action was taken at the suggestion of E. M. Freeman, dean of the college of agriculture and head of the division which treats with plant diseases.

The common barberry is known to harbor the rust itself and to be one of the chief sources from which cereal crops become infected. There are two common forms—the green and the purple. They grow from four to eight feet tall. In the spring, spores of the black stem rust from wheat stubble are blown into the air and fall on barberry leaves in the vicinity. The rust develops on the barberry leaves from early in May until about June 15. The rust spores produced are then carried by the wind to the wheat fields and to other cereals often causing the loss of ten of millions of dollars.

Care should be taken in attempting to eradicate the common barberry not to disturb the Japanese barberry which does not harbor the rust itself.

MINNESOTA HORSES FOR THE ARTILLERY

The United States government is sending George W. Winterburn, lieutenant-colonel of the quartermasters corps, to Minnesota and other northern states to purchase siege artillery horses for the army.

Col. Winterburn in conference with Dr. Carl W. Gay, at University Farm, recently announced the details of the plans. He said that he was to get 12 carloads of animals from Minnesota, one carload from each inspection point on the first round, the inspection point to be announced later.

Col. Winterburn said that the government would pay \$200 for each animal accepted according to the following description: geldings, though 15 per cent will be accepted in mares; between the ages of 5 and 10 years; sorrels, bays, blacks, and bays with white markings; weight between 1,400 and 1,700 pounds; height between 16 and 17 hands; sound, gentle and broke to harness; without material blemish or defect; passed the mallein test for glanders.

Dr. Gay has been an advocate of the direct purchase from farmers and is, therefore, very anxious that this first attempt on the part of the government to buy from the farmers in Minnesota shall prove a success, and the services of the State Stallion Registration Board have been enlisted to help.

SEED CORN THAT WON'T GROW, SOLD

Robert C. Dahlberg, in charge of the Minnesota seed laboratory, reports that complaints are coming to the attention of the laboratory at University Farm to the effect that the farmers and others have bought seed corn that won't grow, though the salesmen have given assurance that it was good corn.

Mr. Dahlberg urges that purchasers of seed corn demand a germination test before buying, and warns purchasers against paying high prices for untested seed corn. He says, furthermore, that no corn should be planted in Minnesota this spring that has not been tested and suggests testing for one's self, or appealing to high school agriculturists or county agents. In case none of these things can be done, Mr. Dahlberg advises sending a sample of at least 200 kernels to the seed laboratory, University Farm, St. Paul.

Mr. Dahlberg also calls attention to the fact that the state seed law requires that seed be tested and labeled before it can be sold, and that it is good business on the part of the seedsmen to label their seed properly.

CLOVER FOR SOIL IS A WAR PLANT

Because clover conserves soil fertility and increases crop production it has been called a war plant. Its growing by the farmers offers a means of helping to defeat the Hun by increasing America's food supply.

To emphasize the value of clover as a Minnesota crop in the present war crisis and to serve as a guide to the farmers in growing and handling the crop, the agricultural extension division of the University of Minnesota has issued a new edition of Minnesota Farmers' Library bulletin No. 47.

Copies of this bulletin may be had without expense by addressing Office of Publications, University Farm, St. Paul.

NEW CORN TESTER OF GREAT VALUE IN CORN CRISIS

A Minnesota young man, J. W. Lawton, recently drafted from the Chatfield high school to become county agent of Wabasha county, has invented and given to the world unpatented a device for the rapid testing of seed corn. The Farmer, St. Paul, in its issue of March 9 says: "The Lawton method perhaps is as great an improvement over the sawdust-box and rag-doll methods of testing corn as the Babcock tester is an improvement over the old gathering method of measuring cream."

The Lawton tester, which is of immense value in the present corn crisis when every ear of corn intended for seed should be tested, consists of a mammoth rag doll shaped around a cylinder of galvanized wire screen and placed in a specially devised germinating can.

The rag doll is a strip of unbleached muslin or cheap sheeting 22 feet long and 11 inches wide. The grains of corn taken from the ears with a cleverly contrived "sampler" are placed in rows with the ends equally distant from the edges of the rag doll strip by another cleverly contrived instrument called a "placer." Instead of being rolled by itself the cloth is then wrapped around a core or cylinder of galvanized wire screen 9 inches long and about two inches in diameter. This leaves about an inch between the ends of the cylinder and the ends of the rows of corn kernels around which to put a string or binder to keep the kernels from falling out. It also leaves about an inch of the strip of muslin extending beyond each end of the core. This mammoth rag doll is placed in the germinating can which is made of galvanized iron about six inches in diameter, and 11 inches deep. There is a hole in the center of the cover, also a hole in the center of the bottom with a collar about an inch high around it. There are also 3 small holes in the side of the can about a quarter of an inch from the bottom. Before the rag doll is placed in the can, water is poured in to the depth of the holes in the sides. The loose ends of the rag doll serve as a wick to lift the moisture to the kernels of corn. The only attention the tester needs is the inverting of the doll at night and in the morning to secure an even distribution of moisture, and the addition of water if needed.

The tester can be made by your local tinsmith and the cost of the whole outfit need not exceed \$3.

GETTING VARIETY IN POTATO DIET

Potatoes are usually baked, boiled, or steamed. Less often they are fried or scalloped. Great variety may be given to this vegetable by the use of different flavoring materials. The proportions in the suggestions given are for six medium-sized potatoes. Well mashed potatoes may be served plain, or

Mixed with 4 tablespoonfuls of grated cheese
Mixed with 3 tablespoonfuls cooked bacon, cut fine
Mixed with 2 tablespoonfuls chopped pimento
Mixed with 1 tablespoonful cooked chopped onion

Whipped with a well-beaten egg white, piled loosely in a baking dish and delicately browned in the oven.—Lucy Corder, Agricultural Extension Division, University of Minnesota.