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## ORCHARD AND GARDEN

March 15-22

Order spraying material and get all machinery ready to use.

Root grafting of apples, elm, and lilac may be done now. Place grafts in sand or sawdust so they will not dry out until planted.

Spray or dip house plants in water frequently to keep them clean and to discourage the red spider.

High pressure and thorough work are essential for success in spraying.

The most difficult parts of the tree to reach are the ones that need spraying the most.

Progressive everbearing strawberries are being very generally ordered for planting this year. Stock is becoming hard to find.

Cotoneaster acutifolia is proving an excellent hedge plant at the Morris substation, according to the superintendent.

Well enriched and well cared for soil will produce good garden crops. Plenty of plant food is essential for vegetable growth.

When sowing fine seed, cover lightly. Large quantities of seed fail to germinate because they are planted too deep.

Small fruits and ornamentals seem to be the best nursery sellers this year. 1919 should be a good year to make plantings of both.

Hotbeds should be well on the way now. It is not necessary to dig a hole for the bed. Put the manure on top of the ground and the frame on it, and bank well.

Start a few gladiolus corms in a berry box or pot of soil. They can be set out when danger of frost is past and will come into flower early.

Every child in Minnesota who wants to grow a garden this year should have the chance. Are you doing your part to furnish the chance?

Dahlias may be started in pots or boxes now and set out after frost is past the latter part of May. They are often flowered in the house in early May.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minnesota.

## ORCHARD AND GARDEN

March 22-29

Rosa Rugosa and its hybrids are the hardiest roses and generally very satisfactory for home ground planting.

Cuttings of chrysanthemums and other fall-blooming house plants may be made now.

Most early vegetable and flower seeds which have not been planted may now go into seed flats for transplanting later.

A few everbearing strawberries make a good addition to the garden. Now is a good time to order them.

This is a good time to attend to the pruning of the orchard. Make clean cuts. Leave no stubs to decay and destroy the tree. Paint cuts with white lead or cover with thin grafting wax.

Dust spray can sometimes be put on to better advantage than liquid. If the work must be done over rough land, this is often true.

Potatoes laid in shallow flats in a sunny part of the basement or house send out sprouts, which, if carefully handled when the potatoes are cut and planted, will give potatoes earlier than those not started.

Very fine seed are sometimes best sown on top of the soil and lightly pressed in. Shade with a paper or moist cloth until they start to grow.

Willows, dogwood, and currants are easily propagated by cuttings taken while the plants are dormant and planted as soon as the ground can be worked.

Ventilate the hotbed on warm days. If the wind blows, raise the sash on the side away from the wind. Close the sash early so that the hotbed does not cool off too early.

The value of farm vegetables in 1918 on the farms of the United States was \$1,246,000,000, or 7.6 per cent of all farm crops. Fruits were raised to the value of \$638,000,000, or about 4 1/2 per cent of the farm crops value.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minnesota.

As an indication of better interest in better poultry on the farms of Minnesota, it might be mentioned that 13,587 bulletins, 302 circulars, 360 feed charts, 324 egg records and 41 blue prints of the Minnesota model poultry house were sent out from the poultry department in the agricultural extension division.

## Editor's Corner

## CONTEST IN EFFECTIVE "AD" COMPOSITION

A contest in effective advertising composition and printing will be an additional feature of the editors' short course at University Farm, May 1-3.

In this contest may be entered page, half page, quarter page, or even smaller, ads, which any country weekly publisher of Minnesota believes has been presented in an especially effective form.

Advertising entered in this contest should be addressed to W. P. Kirkwood, University Farm, St. Paul, and should be received not later than April 12. This is the absolute deadline, inasmuch as the ads entered in the contest are to be forwarded to Chicago to be graded by J. L. Frazier, of the Inland Printer. After they have been graded, Mr. Frazier will return those winning the honors to University Farm with such others as Mr. Frazier may wish to use in a discussion of effective advertising as one of the features of the editors' short course program. Lantern slides will be made of the advertisements selected by Mr. Frazier so that they may be thrown on the screen during the discussion.

The contest, of course, is limited to advertising set up in the shops of publishers. Plate ads from national advertisers will be barred.

The contest has been decided on because advertising problems are to be especially emphasized at the coming short course, and will take the place of the front-page make-up contest which has been held heretofore. Three phases of advertising will be discussed: "Effective Composition," "The Country Weekly and National Advertising," and "Educating the Local Merchant."

## PROFESSIONAL PRIDE

The profession of greatest influence is journalism and the art of greatest persuasiveness is the printer's. We were tempted to make this declaration and to enlarge upon it somewhat at the recent meeting of the Minnesota Editorial Association when the subject of interesting young men in apprenticeships in newspaper offices was being discussed, following the paper by W. A. Clement, of Waseca, on "Help Shortage—How to Overcome It." We were tempted to make the declaration because we believe that in it lies the real secret of interesting both young men and young women in newspaper work.

What we need as editors is a larger professional pride; not professional conceit or vanity, but professional pride. We need to tell ourselves how great our profession is and how effective our art, and then to be humble in the presence of the responsibilities we have assumed in entering upon the practice of both. Such humility, however, should not prevent our enthusiasm for our profession and art from leading young men and young women to enter the newspaper profession. We take just the contrary position, however. We "knock" our own profession and too often make fun of it, whereas we know, since the war especially, how great it is, and how many great men have found the gateway to success to be the country newspaper office.

The thing to do is to talk our profession enthusiastically to the boys and girls of today that the profession may not be lacking in ability with the passing years.—The Editor.

## \$702,368 SAVED

## BY KILLING RODENTS

That is pays to kill rodents is shown by government estimates just put out telling that a campaign against rodents in Utah last year resulted in the killing of 892,179 animals, and the estimated saving in crops of \$702,368. More than 1,700 farmers co-operated, using nearly 101,000 pounds of poison bait.

This is the kind of campaign that the division of entomology and economic zoology of the department of agriculture, University of Minnesota, is urging on the farmers of Minnesota as a means of exterminating rats, which annually cause a loss in Minnesota of from \$3,000,000 to \$4,000,000. The slogan at this season of the year is "Get the rat before the rat gets your crop."

## What Treasurers Get

The Municipal Reference Bureau of the University of Minnesota has made an investigation of the practice of municipalities in Minnesota as to the payment of village and city treasurers. The results appear in the February number of Minnesota Municipalities. Copies of the report may be had by addressing the bureau at the University, in Minneapolis.

## MINNESOTA AMBER

## BEST SORGHUM HERE

Minnesota amber, an early variety of sorghum, is advised by A. C. Arny, in charge of farm crops at University Farm, for planting in Minnesota. In 1880, 543,000 gallons of sorghum sirup were made, but the industry since then has undergone a decline. Just now, however, there is renewed interest in it, owing to the fact that seeds have become acclimated and are now giving good satisfaction, especially the various strains of Minnesota amber.

Evidence of the renewed interest in the subject is seen in a new bulletin prepared by J. J. Willaman, University Farm, and issued by the agricultural extension division of the University of Minnesota. Copies of this bulletin, which also deals with the manufacture of maple syrup and sugar, sugar beet syrup, and with the harvesting of honey, may be had by addressing Office of Publications, University Farm.

## SPECIALIST ANSWERS

## INCUBATOR QUESTION

"Should I buy an incubator and brooder if about one hundred or one hundred and fifty chickens are all I expect to raise this season?" This question comes about every day at this time of the year, says W. E. Stanfield, University Farm, St. Paul. He would much prefer depending on broody hens if he could get them. There are times, however, when this is impossible, and under such circumstances he advises a small incubator, say a 60-egg size, of some known make that has a good reputation as a hatcher.

If it is necessary to revert to artificial methods for hatching, adds Mr. Stanfield, a brooder comes in for its use in due time, no matter how well your chicks are hatched, and a brooder of known quality should be purchased.

## FARM EXPERIMENTERS

## AND WAR PROBLEMS

The value of agricultural experiment station work is shown by some of the things done at the Minnesota experiment station, University Farm, during the world war.

The station chemists, says Andrew Boss, vice director of the station, in seeking to find ways of using potatoes, of which there was an over-supply, discovered that frozen potatoes made a better potato flour than unfrozen potatoes made. This knowledge permitted the utilizing of what would have been a waste product. The chemists also found ways of using the soybean as human food.

The agronomists and animal husbandmen of the station grew and tried out mixtures of soybeans and corn as feed for cattle. It was found that these two crops mixed, used as silage, gave a ration which necessitated the use of very little, if any, bran. This meant a considerable reduction in the dairy ration.

The dairy division promoted the use of cottage cheese.

Studies of the elements of the cost of production were used largely in devising methods for lower costs and in determining fair prices for wheat, milk, and other commodities.

Investigations as to wheat rust and its causes were extremely useful in the barberry eradication campaign.

Investigations that had a bearing on nearly every branch of agriculture were carried on and the results were made immediately available through the publication of special bulletins, and with the co-operation of the press, through news columns.

## THIS THE TIME TO

## MAKE SURE OF CROPS

Right now is the time to make sure of crops, or at least to begin to make sure of crops for the coming summer, says C. P. Bull, University Farm, St. Paul. Well cleaned and well graded seed give better yields and higher quality of grains, adds Mr. Bull, and this is the time to clean and grade seed.

By well cleaned and graded seed Mr. Bull means seeds which are free from all badly weathered, blighted, or otherwise light kernels, and which should have at least the standard weight of their kind—60 pounds for wheat, 48 pounds for barley, etc.

If seed from the crop grown last year is not of good quality and at least 90 per cent pure, according to the variety represented. Mr. Bull advises its sale and the purchase of pure, well graded seed stock for spring sowing.

The Minnesota Crop Improvement association, University Farm, has a printed list of available seeds. This list will be mailed upon application.

## RULE FOR AMOUNT OF

## SEED GRAIN TO ACRE

The proper amount of seed to sow per acre can only be accurately determined on the basis of purity and germination tests. Of wheat 1 1/2 bushels of seed that is perfectly clean and of high germination will produce approximately the proper number of plants per acre for highest production. If the seed is low in germination it will be necessary to plant a larger quantity of seed to get the proper number of plants per acre. Considering 95 per cent germination and 99.5 per cent purity as the standard when sowing 1 1/2 bushels per acre, it would be necessary to plant 1 1/2 bushels of wheat testing 90 per cent germination and 98 per cent purity, and 1 1/2 bushels of wheat testing 85 per cent germination and 98 per cent purity. The same holds true in the case of any other kind of seed.

For the expenditure of 10 cents in postage in forwarding samples for test to the Seed Laboratory, University Farm, St. Paul, it may be possible to increase the yield of grain per acre from one to several bushels or to secure a more satisfactory stand of forage.

Find out the quality of seed and then plant accordingly.—Robert C. Dahlberg, Seed Laboratory, University Farm.

## FREE EVERGREENS FOR

## SCHOOLS ON ARBOR DAY

The division of forestry, of the University of Minnesota, announces that it will ship from its nursery at Cloquet, 25 evergreens from one to two feet high, suitable for successful planting, to any school in the state wishing a supply for Arbor Day. Orders should be sent to W. H. Kenety, Forest Experiment Station, Cloquet, Minn., so as to arrive not later than April 5. Twenty-five cents must accompany the order to cover the cost of digging, packing and mailing. Complete and definite instructions for the handling and planting of the trees will be furnished with each shipment.

## WAY TO ADD TO

## THE FARM INCOME

"The time will come—and soon in some regions the foresters say—when it will be necessary to set aside areas to produce wood and to manage these areas for maximum wood production in the shortest possible time," according to advices received at University Farm from the department of agriculture in Washington, D. C. "It is not desirable," continues the message, "to devote good agricultural land to this use. Generally the inferior land on farms will grow sufficient fuel to supply regularly each year's needs."

This is in line with information which has been sent out from the college of agriculture, forestry and home economics to the farmers and owners of land in Minnesota. Minnesota is rich in forest productiveness, and this "tip" on a means of adding to the farm income as a result of the certain increase in the costs of fuel should receive, say the people of the college, the most careful consideration. The farmer or the land owner who takes advantage of it now and begins to prepare for the day when the fuel shortage will become more or less acute, will some day thank his stars that he heard opportunity knocking at his door and was wise enough to open it.

Municipal forests are suggested in the advices from Washington, and the information is included that some towns already own forest tracts which are to be used for the growing of fuel crops.

## SUBSTITUTES FOR

## COMMON BARBERRY

The eradication of the common barberry, which helps to spread the black stem rust of wheat, one of the great grain robbers of the northwest, has created a demand for substitutes, LeRoy Cady, associate horticulturist of the department of agriculture of the University of Minnesota, suggests as such substitutes the Japanese or Thunberg barberry, a much finer plant; the Alpine currant, which will grow under almost any conditions; the native thornapple, which makes an excellent hedge on any land where apple trees can be grown; the common red-twigged dogwood, which makes an excellent hedge if kept properly trimmed; two forms of the common buckthorn,—Rhamnus catharticus and Rhamnus frangula; the lilac and the Tartarian honeysuckle for tall hedges. Mr. Cady also suggests the use of hedges of Spiraea Van Houttei, of black or sometimes of the red currant. Where a common growing hedge is wanted, he says willow cuttings may be put in.

## GOOD RED CLOVER

## SUBSTITUTE FOR ALSIKE

Because of the high price of red clover seed farmers are holding off and turning to substitutes, according to crop specialists and seedmen at University Farm. R. C. Dahlberg, in charge of the state seed laboratory, says that many of them are using alsike; that on the basis of the present market prices, two acres can be seeded with alsike at the cost of one acre to red clover. A. C. Arny, in charge of farm crops, in an article in Minnesota Farmers' Institute Annual No. 31, recently issued, lists alsike as one of the crops which may be successfully used as a substitute. He says alsike thrives in regions of cool temperature and abundant rainfall; that the preparation of the seed-bed and the seeding are the same as those for red clover; that alsike hay cures somewhat more easily, and that the best methods of handling red clover apply also to alsike. Furthermore, alsike is less damaged by clover diseases and insects than the other forage.

The number of Minnesota Institute annual mentioned deals entirely with meadow pastures and forage crops, to which right now the government is asking farmers to give special attention.

## SAVE YOUR GRAIN;

## TREAT FOR SMUT

A campaign is being waged over Minnesota by the farm bureaus and county agents to reduce the state's annual loss of something like 8,000,000 bushels of grain through the ravages of the smuts. These diseases, says C. P. Bull, of the agronomy division at University Farm, not only prevent the formation of grains, but they weaken the plants and reduce the yields. For this reason Mr. Bull urges the adoption of the use of the formaldehyde treatment—one pint of formaldehyde to 45 gallons of water. Any who do not understand how to apply the treatment may address University Farm, St. Paul.

## SMUT CAMPAIGN

## NEARS ITS CLOSE

The state-wide campaign for the treatment of seed grains to prevent Minnesota's annual loss of something like 8,000,000 bushels of grains is nearing its close.

Last year smuts destroyed in Minnesota, 954,000 bushels of barley, 3,498,000 bushels of oats, and 3,259,000 bushels of wheat. Because of these numerous losses the extension and plant pathology divisions of the department of agriculture of the University of Minnesota early this month started a state-wide campaign. Meetings were held at St. Cloud, Morris, University Farm, Owatonna, Worthington, Rochester, St. James, Redwood Falls and Montevideo, by county agents and farm bureaus to demonstrate the treatment of seed. Three more meetings will be held—Detroit, March 25; Thief River Falls, March 26, and Bemidji, March 27.

## WAR SAVINGS URGED

## ON FARMERS' CLUBS

An urgent plea for county agents throughout Minnesota to aid in the organization of war savings societies in farmers' clubs was sounded today by Dr. George N. Bauer, who is in charge of this work for the ninth district war loan organization. A closer cooperation between the farmers and the county agents in the thrift program of the national government was urged by Dr. Bauer.

"The plan will enrich the clubs in more ways than one," said Dr. Bauer. "It will add interest to their organization in many ways and certainly will not interfere with club plans. Communities which buy heavily of War Savings stamps five years from now will show the effects of this thrift in increased wealth. With the county agent rests much of the responsibility for making the societies a success."

Thousands of war savings clubs are being organized.

## MINNESOTA CITIES

## CHANGING CHARTERS

Many cities in Minnesota are considering the changing of their old charters or adopting new ones. The Municipal Reference Bureau of the University of Minnesota recently has received so many requests from charter commissions for loans of charters and other material that its files are almost exhausted. Cities are finding that they can get better results by drafting their own charters than by going to the legislature whenever they wish to have a provision changed. Rochester, Staples, Wabasha, and Luverne are among the municipalities which have commissions at work now.