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## ORCHARD AND GARDEN

May 1 to 8.

Prune early-flowering shrubs just after flowering.

Plant peas, radishes, lettuce, beets, carrots, swisschard, etc., in the open ground.

Plant a few gladiolus bulbs now and at intervals up to June 1.

Keep an eye on the hot-beds and cold-frames. Too much heat is injurious.

Bee-raising makes a good side-line for a fruit or vegetable grower.

Annual flower seeds, such as marigolds, bachelor's buttons, zinnias and petunias, may be sown now.

Leave the straw taken from the strawberry bed near to throw back on the plants, if there should be a frost.

What was the first tree, shrub or herbaceous plant to bloom in your neighborhood this year? Get one.

Grapes should be uncovered as soon as their buds begin to start. Keep them covered as long as possible.

Shrubs and trees with a fibrous root system are best for transplanting. A large number of small roots is better than a few large ones.

Has the lawn been raked clean, holes filled up and all made ready for the mower? Start the mower early.

Evergreens may be set out now if the new growth has not started very much. Do not let the roots be exposed to the wind or air even one minute.

Leguminous crops, such as the clovers and alfalfa, make good preparatory crops for the vegetable garden where barnyard manure is hard to get. They leave nitrogen in the soil as well as humus.

More strawberries are being set out this spring than ever before. Have you a patch set? It is not too late to plant a few of some autumn-bearing sort.

Get a few early celery plants and set them in the garden. It is well to put them on low ground or where they can be watered if the weather is dry. One hundred plants will do.

Protect the birds. Give them houses and shrubbery and they will work for you and give you entertainment. Place a pan of water where they can drink and bathe.

Some of the local horticultural societies in Canada plant and care for flowers and shrubs in their local parks. This scheme might be copied in some of our towns.

Don't neglect patching that old lawn any longer. Spade up the soil. Put some manure and a little lime into it and sow some Kentucky blue grass, white clover and Red Top. It must be done right away.—LeRoy Cady, associate horticulturist, University Farm, St. Paul.

## ORCHARD AND GARDEN

May 9 to 15.

Pansies may be set out now in the border.

Sow late cabbage seed for transplanting between now and May 20.

It is not too late to set out a good asparagus bed. Do it now.

Onion sets are ready to harvest from three to four weeks earlier than onions from seed.

Cucumbers, melons and squash may be planted between May 15 and May 20.

Tender plants should not be set out until about May 25 or May 30 on account of late frosts.

Annual plants and vines will quickly cover an unsightly fence or rubbish pile.

Is there a good vegetable and flower garden under way? Both are good to have and it is not too late to start right now.

Plant dahlia roots about May 15. Nothing is to be gained by early planting, unless the season is moist and cool.

Ferns make a good foundation plant on the north or east side of the house if well protected from sun and wind.

Sunday, May 14, is Mother's Day. This is a good time to send her a few flowers, or to wear a flower in her memory.

It is sometimes a good plan to top-work apple or plum trees with other varieties in order to be sure of good pollination.

It will soon be lilac time again. There are some fifteen or twenty hybrid lilacs that are well worth planting.

Some of the nurserymen are reporting a great increase in the sale of perennials this year. Have you set out any?

Sow nasturtium seed now. They are among the best of plants for cut flowers, growing best on rather light, sandy soil. If the soil is too rich, there will be a rank growth of foliage instead of flowers.

One essential in setting out a plant, tree or shrub is to see that the soil is firmed well about the tips of the roots. Don't firm the top soil. It must be left loose. Be careful that no roots come in close contact with fresh manure.—LeRoy Cady, associate horticulturist, University Farm, St. Paul.

## STRAWBERRY PESTS ARE ACTIVE NOW

The strawberry weevils are active now. The pests began coming out of their winter-long hibernation nearly two weeks ago at University Farm, St. Paul.

A shortage in the number of blossoms is the first indication of the work of the strawberry weevil. It cuts off the buds of the plant, after depositing eggs in them. The pest is about one-tenth of an inch long, and because it is so hard to see, the effects of its ravages are usually attributed to hail, frost or climatic conditions. In the Hopkins region, it is not uncommon to find beds with 40 to 90 per cent of the buds cut off, says S. Marcovitch of the division of economic zoology at University Farm.

Since the weevils do not scatter readily, hibernating within the field, the one-crop system and plowing the beds immediately after picking would probably do away with the pests entirely, Mr. Marcovitch says. The one-crop scheme could be followed for about two years, when it might be advisable to return to the two crop system if the weevils have disappeared.

Recent experiments with a dust spray of a mixture of arsenate of lead and sulphur in equal quantities by weight have been successful in New Jersey. The mixture was applied twice, April 30 and May 6, as a repellent.

Another method that Mr. Marcovitch thinks might be practicable is to remove the straw from a few rows to hasten their maturity, leaving the rest of the beds covered. This would attract the pests from the other rows to the uncovered ones, so they could be destroyed by plowing under or by burning over the rows.

## ENRICH LAWN BY FINE FERTILIZER

Maybe the lawn needs fertilizing. Ordinary barnyard manure for lawns is not good now. If the grass was covered with barnyard manure last fall, it should be taken off at once, taking care to leave as much of the fine part as possible. A finer fertilizer is needed for the spring.

One of the best fertilizers for spring applications on lawns is pulverized sheep manure, says W. L. Oswald, head of the seed-testing laboratory at University Farm, St. Paul. This manure can usually be bought for about \$1.25 or \$1.50 a hundred weight. It should be applied thinly and raked in. The lawn should be watered soon after the application of sheep manure, if it does not rain soon. The fertilizer may be applied several times during the summer if it is needed.

Bone fertilizer is said to be good on the lawn in the spring. Nitrate of soda may be applied at the rate of a pound to 300 square feet. If nitrate of soda is used, it should be applied just before a rain or the lawn should be watered soon after, or it will burn the grass.

## COLUMN SPACE IS MEANS OF PROFIT

Nearly every farmer could well afford to take advertising in the home paper, says W. P. Kirkwood, editor of publications, University Farm, St. Paul. Rarely does one find a man in a rural district who realizes the saving in time and trouble of letting everyone in the county know that he has something to sell or would like to buy something, Mr. Kirkwood says.

Here are some of the things frequently sold that lend themselves readily to advertising: Pure-bred stock; selected seeds; seed corn; special plants, as strawberries, sweet potato slips, cabbages; eggs from pure-bred fowls; seeds of unusual crops, as sweet clover, rape, alfalfa; honey and bee products; supplies of lumber, fence posts or wood; facilities for doing farm work, as fanning grain, testing corn, planting, feed chopping or harvesting; used farm implements. There are a hundred other things that might be added.

Of course, he continues, there are some things that do not lend themselves to being advertised. Cream, butter, ordinary eggs, meats, ordinary chickens—things for which there is a market at some town within a few miles of the farm—are best disposed of by taking them to town and selling them locally. But many dozens of other things can be sold more quickly and at a higher price by spending a few minutes in writing an advertisement.

Buying things needed may also be made easier by newspaper space. "I have known men," Mr. Kirkwood says, "who rode day after day trying to buy cattle or hogs, when an 'ad' that would have cost him \$1 would have saved \$10 worth of time."

"Most live publishers, to get new farmers' advertising accounts would take a contract to run a 25 or 50 cent advertisement every week for a month or longer and guarantee results. You will get as many telephone calls in a week for your product as you have words in a sensible advertisement."

## PARIS GREEN HIGH; USE LEAD ARSENATE

Paris green is now at a prohibitive price for spraying plants. Arsenate of lead can be used as a substitute, however.

Arsenate of lead is sold either dry or in the form of a paste. Dry, it costs about 20 cents a pound; and in the paste form it costs from 9 to 12 cents.

In the dry form it may be used either mixed with dust or air-slacked lime, the same proportions being used as for Paris green. It may be mixed with water at the rate of one and a half pounds of arsenate of lead to fifty gallons of water.

In the paste form, usually sold in small pails, it is to be mixed with water at the rate of three pounds to fifty gallons of water.

As well as being cheaper by one-third than Paris green, arsenate of lead may give better results. It is less likely to burn the foliage of the plants and sticks to the leaves better.

## WANT A NURSE? WELL, THEY'RE QUITE BUSY

"Can you send us a nurse to address our parent-teachers' association?" "Where can we get a nurse to help in our infant welfare campaign?" "We have an epidemic of scarlet fever; can you send us a school nurse for a month?" "Where can we find an experienced visiting nurse who would work a year in a town of 3,000 persons?"

Such are the questions referred daily to Dr. I. J. Murphy, secretary of the Minnesota Public Health Association. More speaking engagements have been offered recently than could be taken care of by the two demonstration nurses in the employ of the association.

In some cases it is feasible to find a speaker in a neighboring town, because thirty cities and towns, in addition to Minneapolis, St. Paul and Duluth, have visiting nurses. Most of these nurses are willing to address meetings in neighboring towns if the engagements do not interfere with local work and if transportation is paid.

It is hard to get experienced visiting nurses, especially for short engagements, Doctor Murphy says. In most cases where a nurse is employed temporarily to help control an epidemic she is retained when the epidemic is checked. Apparently the demand for experienced visiting nurses is going to exceed the supply embarrassingly, he thinks. There are about 100 visiting nurses in the state now. If more communities of 3,000 or over decide to hire permanent nurses, as many are doing, there will soon be a demand for between 400 and 500 nurses, he estimates.

## STATE'S PROBLEMS TO BE DISCUSSED

The All-Minnesota Development Association, designed to focus the attention of all organized state interests on the big problems for the improvement of the state, will meet at the State Capitol, June 14 and 15.

Members of farmers' clubs, county farm bureaus, commercial clubs and similar organizations for community betterment, are expected to attend in large numbers to discuss such problems as drainage, the control of flood waters, rural credit, land classifications, immigration, the improvement of schools, good roads, and other vital subjects.

The work of this organization is of extreme concern to every resident of Minnesota. It contains possibilities of increased prosperity for all, and the expectation is that every community will take steps to send a representative to the June meeting.

## CLOVER IS GOOD PASTURE FOR PIGS

Plenty of tender, nourishing hog pasture of good quality may be had during the entire season if clover is grown, say men at the Minnesota College of Agriculture. As soon as the pigs are strong enough, the brood sows with their litters may be turned into a clover field. If one-third to half of the clover is mown about June 10, the hogs will eat the young shoots that spring up and will not bother the uncut part of the field.

The rest of the field may be cut at the regular haying time. By having the pasture well stocked with pigs and calves one need not worry about taking care of the pasture for the rest of the summer. By fall the pigs ought to weigh from 50 to 80 pounds each.

This system has worked well with many hog-raisers in Minnesota. In a good season, one acre of pasture will provide feed for three brood sows and their pigs. Plenty of cot room and trough room with proper feeding facilities ought to be provided in each pasture. The cots should be from twenty to forty rods from the feeding place, so that the pigs will get out into the pasture and take plenty of exercise.

## TEACHERS' CHANCE TO STUDY FARM

The teachers of Minnesota wish to know more about the farm and the farm home. One way to learn is to go to a summer school where such things are taught. Over a thousand teachers attended the summer school at University Farm, St. Paul, last summer. They studied cooking, sewing, agriculture, shop work, weeds, crops, live stock, gardens, orchards, physical games, besides such subjects as arithmetic, history, reading, music, drawing and geography. They boarded and roomed right on the college grounds and enjoyed many other features such as play, evening entertainments and public addresses.

The next summer school will be held at University Farm, St. Paul, June 12 to July 21, 1916. A bulletin describing it can be obtained by writing to the conductor, Prof. A. V. Storm.

## SEED PLOT PAYS POTATO GROWERS

With spring comes the early potato problem. Special Bulletin No. 5 of the Agricultural Extension Division, University Farm, St. Paul, on Standard Potato Varieties for Minnesota, describes the leading varieties suited to the state, with illustrations of ideal types. Early Ohio is the leading early potato. Triumph and Irish Cobbler are most important as seed potatoes for southern trade.

According to Richard Wellington of the division of horticulture, University Farm, one of the authors of this bulletin, the selection of seed potatoes does much toward governing the yield. One should discard all elongated or abnormally tapering potatoes and potatoes with very deep eyes, he says. Small potatoes weighing less than five ounces should not be used, and badly sprouted potatoes may reduce the yield.

After the tubers have been selected, it is best to soak them in a solution of four ounces of corrosive sublimate to thirty gallons of water to free them from Rhizoctonia or scab, he says. Corrosive sublimate corrodes metals, so it is best to put the solution in a wooden tub or barrel.

Seed pieces of potatoes should not be cut to weigh less than three-fourths of an ounce and pieces weighing an ounce are desirable if not too expensive. After the potatoes are cut, they must not be stored in large quantities, for there is danger of heating.

The depth of planting depends on the type of soil, continued Mr. Wellington. Early potatoes are generally not planted so deep as late ones. In light soils four or five inches is deep enough; in heavy soils an inch less will do. The width between rows ought to be from three to three and a half feet. Early potatoes are usually dropped fifteen inches apart in the row.

If it is possible to get seed of a good variety for the entire field, growers would find it profitable to plant a plot of the good variety to raise seed for next spring.

## CHECKING CORN IS AID TO WEED CONTROL

Checking corn, so that it may be cultivated both ways, is the most satisfactory method of planting in Minnesota, under average conditions, says A. H. Benton of the division of agronomy and farm management of the College of Agriculture, University Farm, St. Paul. The weed problem is important, said Mr. Benton, and when the corn is checked, with the hills three feet and six or eight inches apart, it allows splendid opportunity for weed eradication.

The depth at which corn ought to be planted varies with the type of soil and the amount of moisture. The seed must be covered only deep enough (1 to 2 inches) to get plenty of moisture for germination, and not so deep as to exclude the air. The planter should be adjusted so that the depth of the planting is uniform. Three or four kernels to the hill are desired.

"Under exceptional conditions, where the ground is free from weeds," continued Mr. Benton, "the corn may be drilled, using slightly more seed to an acre than when planted in hills. Greater yields have been obtained under this plan, but it makes weed control more difficult."

When silage corn is wanted, the same variety should be planted as for field corn, according to Mr. Benton. Southern corn, formerly used for silage and fodder, is now uncommon and undesirable.

## BEWARE TURNIP-RAPE!

Two hundred thousand pounds of turnip-rape seed have been imported from Argentina and Japan. The seed specialists of the United States Department of Agriculture are cautioning farmers to avoid seeding turnip-rape—which is not winter rape and is not suitable for the forage purposes for which winter rape is grown.

## CONTROL OF PLANT PESTS

Prepared by divisions of economic entomology and plant pathology, University Farm, St. Paul.

The first spraying of the apple orchard should be given just as the center bud of the flower cluster begins to show pink. The material to use in the spraying compound is lime sulphur—1 to 40—plus arsenate of lead, 1½ pounds of the powder or 3 pounds of the paste to 50 gallons of the made-up lime sulphur. If done properly this will get the scab of the apple and blossom blight of the brown rot in the plum and is the most important spray for plum pocket. The arsenate of lead in the mixture will control the young leaf eating insects and the precocious plum curculios.

The second most important spraying of the year should be given a week after the blossoms fall, with the same spraying compound. This spraying kills many of the germinating spores of such things as apple scab, and is the most important spray for codling worm as well as for the plum curculio and for leaf eating insects.

Watch carefully for the hatching of plant-lice eggs. The ideal time to spray for these is just after hatching, and before the young lice become hidden in the bud scales or in the curl of the leaves. The spraying material to use at this time is a sulphate of nicotine.

Plow the plum orchard as soon as possible to turn under mummied plums which are responsible for much of the primary infection of brown rot.

Plowing the apple orchard early to turn under the old leaves is essential in preventing scab spreading to the flower stalks.

Cultivate the vineyard to turn under the mummies. Practice clean cultivation from the very beginning to help control black rot and downy mildew. If the rot or mildew was very bad in former years, early spraying with the bordeaux mixture, 4-4-50, is very important.

Keep the radishes, cauliflowers and cabbages covered with a poison spray from April 30 to May 20 to prevent the ravages of the cabbage maggot. This should be applied once a week in fair weather, and twice a week in rainy weather. The spray is made of:

Lead arsenate . . . . . ¾ ounces  
New Orleans molasses ½ pint  
Water . . . . . 1 gallon

Look over the seedling cabbages carefully and destroy all which show any sign of wilting or rotting.

Cut out apple twigs badly injured by the buffalo tree hopper and burn them immediately.

Watch for plant lice on lettuce in cold-frames. To combat the insects the plants should be sprayed with nicofume liquid, one teaspoonful to a gallon of water.

## YELLOW LAWSNS ARE EASILY MADE GREEN

If your lawn is yellow rather than green, don't let the dandelions make you blue. There is an easy method of killing them recommended by W. L. Oswald, head of the seed-testing laboratory at University Farm, St. Paul. This is by spraying with a solution of sulphate of iron.

Heavy growths of dandelion may be killed by spraying from a nozzle that gives a mist-like spray with a solution of 1½ pounds of sulphate of iron to a gallon of water. An ordinary garden sprinkler does not give good results. The solution should be sprayed over the lawn about three days after the grass has been cut and on a bright day when the possibilities of rain are slight. The lawn must not be cut or watered for three days or more after the application.

The lawns may be sprayed once a month during the entire summer, starting at the time the dandelions appear. With proper care the spray will not injure the grass. Care should be taken in applying the solution to keep it off concrete walks, as it permanently discolors them. Stains in clothing made by the sulphate of iron are not removable.

If there are only a few dandelions on the lawn, Mr. Oswald says, they may be removed by cutting them off just below the surface of the ground with a knife. Gasoline or kerosene applied to the crown of the individual plant will kill it.

Permanent relief from dandelions and other weeds can be secured only by getting a thick vigorous growth of grass. This is secured by using plenty of fertilizer and grass seed.

## MAGAZINE OF IDEAS

Articles of value to towns and cities are to be found in the second number of Minnesota Municipalities, just issued. These articles deal with "The Need of a Constitutional Conference in Minnesota," "Report of the Paving Committee," "A Resurrected Commercial Club," "Public Water Supplies and Fire Protection." Minnesota Municipalities is published bi-monthly by the League of Municipalities, Main Engineering Building, University of Minnesota.