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## ORCHARD AND GARDEN

July 15 to 22

Stake the dahlias. Do not let more than two shoots grow.

The Japanese lilac was at its best about July 5, some ten days later than usual.

One of the most showy wild flowers in some prairie sections the latter part of June was wild penstemon.

Have you enjoyed a good supply of peas and beans? They are easy to raise and pay well.

If tomatoes are tied to stakes, the plants will take up much less room and the fruit will ripen more evenly.

One of the striking perennials on the State Experiment Station grounds late in June was the lupine. It is similar to the wild form, though it comes in several colors.

One speaker at the summer meeting of the Minnesota Horticultural Society said that the cause of some peonies not flowering is a lack of cultivation and sometimes a lack of food.

Some varieties of peonies are imported at \$25 to \$30 a root. There are many home-bred sorts fully as good and not so expensive.

While the peony is among the most showy of flowers, many of the other perennials attracted more of the attention of the visitors at the summer meeting of the Minnesota Horticultural Society than the peony.

A strawberry bed in good condition that has fruited but one year may be mowed now and the plants thinned and cultivated to produce a new bed for fruiting next year. Cut out all the old plants and many of the new.

Have the school and church yards been given over to weeds and grass, or have they been mowed and kept clean? The well-kept yards cause the passerby to think more favorably of a community.—LaRoy Cady, associate horticulturist, University Farm, St. Paul.

## ORCHARD AND GARDEN

July 23 to 31.

Late lettuce, radish and endive may be sown now.

As soon as the gladioli begin to show buds they need plenty of water and continued cultivation.

Keep the cauliflower leaves tied over the heads if you want clean, white, marketable heads.

Keep the new strawberry beds clean of weeds and let the plants produce new runners.

Autumn-bearing strawberries should be setting heavily now.

Nurserymen say that the autumn-bearing strawberry has cut into the sales of June-bearing sorts very noticeably this year.

The effect of spraying is noticeable now in clean apples and plums. It pays to spray.

Early celery is best blanched with paper or boards. It is more apt to decay if earth is used. Earth is best to blanch late celery.

Begin to save seed of shrubs, trees and perennials for next year's planting. Some may be planted now and they will bloom next year.

What protection are you giving the birds in your vicinity? You can at least give them a pan of water to drink and bathe in on warm days.

Well-graded, neatly packed fruit sells at a good price, even when there is an over supply of a poorer quality.

Gladiolus flower stalks should be cut and put in water in a cool room when the first flowers begin to open. They will open gradually, often lasting for ten days or two weeks.

This is the time of year that man and beast enjoys the shade of a good sized tree, even though it is nothing but a box elder. Is your home yard and the pasture well supplied with shade?

## SUMMER WORK WILL DESTROY BAD WEEDS

Quack grass, Canada thistle and sow thistle, the most troublesome perennial noxious weeds in Minnesota, can be eradicated by proper and thorough tillage. This tillage should begin as soon as the crops are off the ground, because the weeds smother best in very hot weather. If it is possible to find time to give extra cultivation during the harvest season, a few days spent in fighting the weeds then will be rewarded highly.

On land infested with quack grass it is well to cut the crop as early as possible. As soon as the crop is out of the way, the land should be plowed six or eight inches deep to bury the quack grass just as deeply as possible. This plowing should be done by the middle of August or earlier. Following the plow with the disc harrow, going over the land twice a week if time will allow, and keeping it worked thoroughly

until the middle of September, when fall rye at the rate of two bushels an acre may be sown, frequently insures a clean field for next year. The fall rye starts growing promptly and crowds the quack grass badly. After the rye crop is harvested and the following year, if the quack grass is not entirely destroyed, the land should be plowed early again and kept cultivated thoroughly through the fall season. A crop of corn is good to follow the rye.

Canada thistle and sow thistle can be handled in much the same way, so far as the first plowing is concerned. Many roots of the Canada thistle will be killed if the land can be replowed in the fall or cultivated with a spring-tooth harrow, bringing the roots to the surface just before the winter freezes begin. Early bare fallowing the land the next spring and planting it to corn will give an opportunity to complete the eradication of the thistles.—Andrew Boss, University Farm, St. Paul.

## GET BINDER READY EARLY, IS WARNING

Here are ten rules for binder users that L. B. Bassett of the division of farm management, University Farm, St. Paul, recommends:

Don't wait until the day the machine is to be used to see if it needs repairs. Look over it the first rainy day.

Follow the transmission of power through the machine. Look over drive wheel, elevators, cutting parts, reel and binder head.

See that the drive wheel takes oil, that the links are good in the drive chain and that the chain is not too tight.

Don't run the elevator chain too tight.

Make sure that the aprons are in good condition and that the platform is square.

Repair broken and loose sections in the knife, line up and tighten guards and sickle plates if they are out of order.

See that the reel arms and bats are in good shape and that they do not strike the grain boards.

See that oil holes in the packers are open. Make the needle sharp-pointed and see that it runs free. Have the knotted spring tension correctly adjusted and the knife sharp.

Have on hand a good supply of links for drive and elevator chains, extra sections for the sickle, extra arms and bats for the reel, extra guards, extra slats for aprons and a good assortment of bolts and nuts.

Remember that it costs less to keep a machine oiled than to buy repairs. Oil in the morning, at noon, in the middle of the forenoon and in the middle of the afternoon. Oil rapidly working parts at least once between these times.

## MANY CULTIVATIONS RAISE CORN YIELD

Deep cultivation of corn is never necessary when the soil has been properly prepared before planting. This is the result shown by investigations at the Minnesota College of Agriculture as well as by investigations of the United States Department of Agriculture. In most cases cultivation is necessary almost entirely for the elimination of weeds. Shallow cultivation will do this just as well as deep, and it does not injure the roots of the plants.

Experiments have shown, however, that the yield of corn increases with succeeding cultivations up to six. Corn cultivated twice at University Farm, St. Paul, yielded forty-five bushels of corn and 3,210 pounds of stover, giving a profit of \$5.06. Corn cultivated six times yielded nearly sixty-three bushels and 3,931 pounds of stover, giving a profit of \$10.90.

The frequency of cultivation depends largely on the character of the soil and the conditions of the seed bed at the time of planting. Sufficient cultivations should be made, however, to keep the surface of the soil mellow, free from weeds and loose.

Late cultivations should not be more than two or three inches deep.

## SOUND SHOULDERS

Here are the directions posted in the stables of a construction camp which uses 1,200 mules in a Southern state, as told in a recent issue of Country Life in America:

Wash the shoulders, and the back of every saddle and pack animal, with cold water at noon and rub dry. If a "green" or young animal, add a teaspoonful of alum or a pound of salt to a bucket of water.

All collars must be scraped at noon and every particle of dirt and sweat removed.

For fresh sores, apply elder leaves boiled in a lard mixture.

## FIGHT THE MITE, FOE OF THE HEN

The poultry mite is no common enemy. It attacks young and old, weak and strong. It pursues with unrelenting vigor, spares none, shows no mercy. It surpasses the vampire in its thirst for blood. It attacks at night. When daylight comes, it retreats to its trenches, satiated with the blood of its prey, to await the return of another night to repeat its attack on the defenseless hen.

Mites will come. They soon appear, even in new poultry houses, unless one uses the "ounce of prevention." They may multiply at the rate of a million a month. Then to rout them requires courage, determination and action.

Be prepared by making all furnishings of poultry houses movable, so that they may be taken out for a semi-annual disinfection and cleansing. Then when the mite army arrives, take weapons and ammunition and get into action.

## Get Your Gun

An old broom, a hoe, a shovel and an efficient sprayer will do the work; the broom for sweeping and white-washing without limit, the hoe and shovel for cleaning dropping boards and floor and the sprayer for semi-monthly use "in the good old summer time."

## And Your Ammunition

Kerosene.

Kerosene and soapsuds (kerosene emulsion).

Kerosene and Creso (coal tar), 3 to 1. Kerosene and crude carbolic acid, 16 to 1.

Air-slaked lime.

Wood or coal ashes.

## Then Make the Attack

Put the flock out early in the morning, or "any old time," and "get busy." Hoe and shovel, sweep and spray—high and low, roosts, dropping boards, doors, partitions, nests and everything unmentioned. Repeat semi-monthly through the hot weather.

The result will be peace in the hen house and profit and prosperity in your house.—N. E. Chapman, University Farm, St. Paul.

## ANY TIME OR PLACE GOOD FOR VACATION

"Where shall I spend my vacation and when shall I go?" These are questions holding the interest of many now.

Any time is good and most places are suitable, says Dr. I. J. Murphy of the Minnesota Public Health Association. "The change, not the time or the place, is the essential thing," he continues. "Of course vacations taken during the summer months allow more access to the open air and outdoor activities. Summer vacations are practical for most city dwellers; farmers and many others, however, must go at some other time."

"Each vacationist upon arriving at his resort should appoint himself a sanitary inspector. The screens for the windows and the conditions and disposal of garbage are things that should be looked after at once. If antityphoid vaccination is deemed necessary for army men living under strict sanitary regulations, it is surely advisable for civilian campers."

## IF MURPHY EDITS JOURNAL OF HEALTH

The first issue, the July number, of the Journal of the Minnesota Public Health Association has just come from the press. The journal will appear regularly the first of each month. The July issue is the annual report number.

According to Dr. I. J. Murphy, secretary of the association, who is editor of the journal, each issue will contain health news of interest to every citizen of the state. Early issues will feature personal health, tuberculosis, teeth, tonsils and adenoids, hygiene of the home and community nursing. There will be a variety of topics treated, and those on related subjects will be grouped.

To pay for printing, the publishers will charge 10 cents a copy or \$1 a year for a subscription to the journal. Requests for the publication should be sent in at once to the Minnesota Public Health Association, Old Capitol, St. Paul.

## MORE CREAM WILL MEAN HIGHER PRICE

The range in prices paid for butterfat by different cooperative creameries in April was from 31 to 40 cents a pound, the better class of cooperative firms paying from 38 to 40 cents. Farmers who have cooperative creameries that paid less than 35 cents a pound should look into their management, for it is possible that a change will give a considerable increase in price.

Of twenty-two cooperative creameries

from which reports were received for April, nine paid from 38 to 40 cents a pound for butterfat; seven paid from 35 to 37 cents, and six paid from 31 to 34 cents. Those that paid 39 and 40 cents made over 20,000 pounds of butter each, which they sold at a net price of 34½ cents a pound. The overrun enabled them to pay from 4 to 5 cents a pound more for butterfat than they received for butter.

A cooperative creamery in the southwestern part of the state that is well supported by the farmers made 23,813 pounds of butter in April and paid its patrons 38 cents a pound for the butterfat. A creamery in an adjoining section that was not well supported by the farmers made 3,188 pounds of butter and paid 33 cents a pound. Both creameries received 32 cents a pound net for their product. The difference of 5 cents a pound in the price paid was due entirely to the difference in the amount of business.

Farmers who ship cream away from their local creameries lower the price for themselves and for every other farmer in the community.—A. J. McGuire, University Farm, St. Paul.

## ENLARGED BUSINESS PAYS MANY FARMERS

Enlarging the business is the easiest way for many Minnesota farmers to increase their profits. This applies particularly to farmers whose plans do not require profitable employment of at least one man in addition to the owner himself.

A farm business may be enlarged either by farming more acres or by using each acre more intensively. The acreage may be enlarged by renting or buying additional land, if land that is located conveniently near the home farm can be obtained. In many cases in Minnesota the best way to enlarge the acreage is by draining sloughs that are now totally or partly unproductive or by clearing land of stumps and brush. In many cases an additional forty or eighty acres could be worked with no additional machinery and with little extra hired help.

Providing more productive work upon each acre is another way to enlarge a farm business. Growing crops that require a large amount of labor to the acre, such as corn or potatoes, or raising live stock, furnishes a chance to use labor profitably.

In order to keep up the fertility of the land, it is often best that not more than one-third of the total crop area should be used for growing cultivated crops each year, unless a coat of manure is available for each field every three or four years. Also, unless one is exceptionally successful with livestock, it is doubtful if the farm should be stocked beyond a point where most of the feed can be raised and even a little supplied for sale in normal years.—William L. Cavert, farm management demonstrator, University Farm, St. Paul.

## NEW SANATORIUM AT LAKE PARK READY

Sand Beach Sanatorium at Lake Park, built jointly by Clay and Becker counties, will be opened by July 15. This sanatorium will have thirty-four beds. Prior claim is given in county hospitals to local patients, but, when there is room, outside cases are admitted. Sand Beach will doubtless have room for outside patients for some time. Other sanatoriums that admit patients from outside the county are Sunnyst at Crookston, Battle Lake at Battle Lake, Mineral Springs at Cannon Falls, Lake Julia at Puposky. The state sanatorium and the institutions for Ramsey, Hennepin and St. Louis counties have long waiting lists.

Patients from the county are kept in these sanatoriums for \$7 a week. Outside patients are kept when there is room for \$10 a week.

## ALFALFA CROP PAYS BIG ACRE PROFIT

Here is why an acre of alfalfa is valuable in Minnesota:

It costs about \$12 to cultivate it. At least 60 per cent of the fertilizer value is returned to the soil when the crop is fed.

A yield of three tons will return \$41.30 if fed to pigs as pasture when the pigs sell for 7 cents a pound.

A similar yield if fed to steers at 6 cents a pound will bring \$42.60.

The same yield fed to cows giving 210 pounds of butter fat at 30 cents a pound will bring \$44.

Farm feeds should be judged by the total nutrients produced an acre, bearing in mind the cost of production. Alfalfa provides a large amount of nutriment for every kind of stock. Besides this it provides nutriment for the soil, hence increasing land value.

## COLT GROWS BEST DURING FIRST YEAR

Gains during the first year of the colt's life are cheaper than at any other time. Attention to feeding and exercise may reduce the cost even more than usual.

The colt should be encouraged to eat a little grain as soon as he shows any inclination for it. Usually he will begin to eat when he is about a month or six weeks old. A mixture of equal parts of crushed oats and bran makes a nice feed. Only as much as the colt will clean up nicely should be fed. It is not well to try to keep the troughs filled. Some fresh skim milk may also be fed to advantage if only a little is given at a time.

Following his mother in the field when she is at work takes too much of the colt's energy. He is better off in a dark barn away from the flies during the day, if he is turned out to exercise at night. For the first six weeks he should be allowed to suck about the middle of each morning and each afternoon. If handled in this way, the colt may be weaned when four or five months old without missing the mother's milk and without losing the colt-fat, that should be kept on his back to carry him through the first winter.

With the present market prices, every colt of good draft breeding ought to return a good profit if fed so as to make the maximum development.—J. S. Montgomery, University Farm, St. Paul.

## WILD OATS MAY BE KILLED IN ONE YEAR

Cover the seed soon, plow up plants that germinate in October and expose the seed that start after this plowing to the winter freezes—this is the plan that Andrew Boss of University Farm, St. Paul, advises for riding infested fields of wild oats. The oats are an annual crop and much can be done in one year to destroy them if proper attention is given. Wild oats are especially troublesome in grain fields in Minnesota.

Cultivation in the spring for two or three weeks before a crop of corn is planted does away with most of the wild oats. If clean cultivation is given the corn and care is taken to prevent the formation of seed in stray plants, the field will be reasonably clean. Hand hoeing or pulling the oats from infested spots may be necessary.

Care must be taken, of course, adds Mr. Boss, not to reinfest the fields by sowing grain that contains wild oats.

## FINDS BUT LITTLE HOG CHOLERA NOW

If the amount of hog cholera reported up to July 1 is not greatly exceeded in the next three months' reports, Minnesota will have enjoyed another year of comparative freedom from the disease, for the number of outbreaks thus far reported is far below the number for the same time in 1915. This is the statement of Dr. H. Preston Hoskins, assistant veterinarian, University Farm, St. Paul. The state is not entirely free from the disease, however, for reports frequently tell of the outbreak of the disease in certain sections.

The reports to Doctor Hoskins indicate that there has been little tendency for the disease to spread in those few cases where it has appeared this year. This is without doubt due to the promptness with which a diagnosis was made, treatment was applied and sanitary measures were taken to prevent infection of herds on other farms.

If sickness among hogs is allowed to go unnoticed, the presumption being that it is not hog cholera, inestimable damage may be done through the unconscious spread of the infection," Doctor Hoskins says. "The longer treatment is delayed, the smaller the percentage of hogs that can be saved by the administration of serum. This has been amply demonstrated in the last few years."

"The prompt quarantining of a farm where cholera is only suspected will frequently prevent unnecessary spread of the disease. If the trouble turns out to be something besides hog cholera, no particular harm has been done. A far greater loss might result from allowing a farm to go unquarantined, because the presence of the disease had not been proved. In many cases some obscure disease has turned out to be hog cholera not discovered until infection nearby has become general."