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ORCHARD AND GARDEN

April 15 to 22

Pansies should be in cold-frames now. Are all the tools in shape for use this summer?

Celery and tomatoes may be transplanted to the cold-frames now.

Top-grafting of apple and plum trees may be done now.

Rose bushes should be trimmed severely, if flowers are wanted.

The small white onion sets are best, although the yellow and red kinds may be used.

Radish, lettuce, smooth peas and spinach may be put in the ground now, if they have not been sown already.

Don't plant early peas very deep. Late peas may be put in three to six inches, but the ground is cold and moist now, so there is more danger of decay.

Watch the hot-beds and cold-frames carefully this month. It is an easy matter to spoil a crop of lettuce in the frames by letting it get too warm.

The sweet pea should be planted as early as possible in deep rich soil. Use named varieties of the Spencer type for best results.

Do not take strawberry plants from an old bed to set a new bed, unless you can easily pick out the varieties and the plants are young and vigorous.

Do not crowd the spring flowers in vases. Half a dozen flowers well placed will make a much more attractive vase than two dozen crowded.

It is a good plan to dig out two or three inches of soil from the bottom of the cold frame and fill with thoroughly rotted manure or leaf mold, covering this with three inches of soil before transplanting plants to the frame. This light material makes it easy to take up the plants when it is time to set them in the field.—LeRoy Cady, associate horticulturist, University Farm.

ORCHARD AND GARDEN

April 22 to 29

Cabbage and cauliflower may be set out now.

Beets, carrots, peas and Swisschard may be sown now.

If you like greens, plant plenty of Swisschard. It grows much like a beet. A well-grown potted plant of cineraria, primrose or a pan of daffodils makes a good table decoration.

Cucumbers and melons may be started late this month on sods or in strawberry boxes in a hot bed.

This week brings the Easter season. Brighten somebody's life by sending them some flowers or a plant.

Plant a few currants this spring. No fruit is easier to grow or will give better returns for labor.

Sweet alyssum is one of the best dwarf border plants. It comes into bloom quickly and lasts most of the season.

Don't sow seed too thick. Know its germinating power and sow at proper distance. The extra plants are only weeds.

Have you made provision for a good bed of annuals in the garden? They give a variety of cut flowers for the table which will be appreciated all the year.

Place a pan of water in the garden or on the lawn for the birds. Keep it high enough from the ground that there will be no danger of cats getting the birds.

Old onions planted the same as onion sets in the spring give good green onions. In fact, the edible portion produced is often longer than in the set.

The high price of meat this year ought to be a reason for establishing a good garden. Try a good variety of vegetables and cut down the meat bill.

Sow the new lawn as soon as possible. Use pure Kentucky blue grass, white clover and red top, about ten times as much of the blue grass as of the other seed.

Place some of the straw removed from the strawberry plants between the rows. This makes a clean path to work on. Some straw may be left on the plants.

Strawberry plants may be set out now. Keep them well cultivated and keep all blossoms off, if you want the strongest plants. Everbearing sorts will need to have their blossoms picked only until July.

The tulip beds should be coming on now. Pick out the sorts you like and order them next fall. There are few plants easier to grow or that give better satisfaction than tulips.—LeRoy Cady, associate horticulturist, University Farm, St. Paul.

NEGLECT IS COSTLY
IN NURSERY STOCK

From 10 to 25 per cent of the nursery stock bought is lost every spring through poor handling, says W. G. Brierley of the horticultural division of the Minnesota College of Agriculture. One should

buy all nursery plants subject to inspection, he said, and reject the stock if it is in poor condition.

"One of the safest methods of handling nursery stock," he continues, "is to remove it from the shipping case and 'heel in,' so that the plants may replenish the moisture lost in transit. If the bark appears shriveled it may be advantageous to even bury the entire stock in light soil for a day or two. Immersing in water is not advisable; it softens the bark too much.

"Other means of safe handling," Mr. Brierley continues, "are packing the soil firmly around the roots, throwing the richer top-soil in the bottom of the hole and crowning the top with light, loose soil, so as to preserve all moisture for the plant.

GOOD LAWNS MAKE
BEST RURAL SCENE

A lawn is the foundation of every beautiful farmstead picture. Each farmstead should be a picture well framed with trees and green fields. Persons who travel over the state appreciate the change that has taken place in appearances in the last twenty-five years. The prairie house without lawn, tree or shrub has given place to a home in a setting of well-kept grass and flower plots, shade trees and shrubs. And this is doing its part toward making Minnesota a more beautiful place to live in.

In the early spring the lawn needs to be cleared of such rubbish as leaves and twigs and weeds. This may be done by raking, as soon as the ground is hard enough to prevent injury. One should never go on the lawn when it is soft.

An application of rotted barnyard manure will furnish plant food to enable the grass to grow strong and to make it dark-green in color. Rolling will firm the surface and make it more even. Where the grass has been worn off or worn through, a little seed should be scattered over and lightly raked in.

Kentucky blue grass is the best variety for permanent lawns. For the first planting, a mixture of eight pounds of Kentucky blue grass, one pound of Red Top and one pound of white clover may be used. The clover and Red Top will give way in a few years to the blue grass.—R. S. Mackintosh, horticulture specialist, University Farm, St. Paul.

SWEET CLOVER MAY
PAY IN THREE WAYS

Honey, hay, and seed—three crops from the same acre—are the things that make white sweet-clover a promising forage crop for use under some conditions.

Sweet-clover will do better than alfalfa on lands which are wet, dry, hard or sandy. Two crops of hay, yielding about four tons an acre, may be expected under favorable conditions. Sweet clover seed sells for about \$12 a bushel. Four, six or even eight bushels an acre are not uncommon yields. One crop of hay may be taken off and the second crop allowed to mature for seed. The bees can get a big supply of honey while they are helping to fertilize the blossoms.

Sweet-clover is one of our earliest pasture crops, and pigs do almost as well on it as on alfalfa. Tests at the Iowa experiment station showed that they did better on sweet-clover than on medium red clover. When the pasture becomes short, they will eat the big tap roots down as far as they can dig. Of course, this kills the plant. The Iowa station reports that hogs will not root out the plants if their grain ration is supplemented with meat scraps or tankage.

Besides being a good hay, seed and honey crop, sweet-clover, a legume, enriches the soil. The fleshy tap roots go deep after water and nutrients, and besides adding nitrogen from the air they add more than a ton of dry matter in roots to an acre. Being a biennial, sweet-clover fits into some rotations much better than alfalfa.

Sweet-clover has its disadvantages. There is a characteristically bitter vanilla flavor about the hay. If cut late, the hay has a woody stem that will not be eaten by stock. When cut young, however, it approaches alfalfa's feeding value.

To get the best results, it is necessary to inoculate for sweet-clover. Two hundred pounds of soil from an alfalfa or sweet-clover field, having an abundance of bacteria present, scattered on an acre and harrowed in will usually inoculate the plants thoroughly.

From ten to fifteen pounds of hulled seeds an acre will give a good stand. If planted alone, or with a nurse crop, it should be planted early. If allowed to reseed itself, it will grow indefinitely.

MOTHERS NEED AID
OF A LOCAL NURSE

Effectively combating infant mortality depends upon an effort for the personal instruction of mothers by visiting nurses, supplemented when necessary by reliable milk stations, consultations, baby contests and hospitals. This is the opinion of Dr. C. V. Chapin of Providence, R. I., which Dr. I. J. Murphy of the Minnesota Public Health Association gives in reply to the frequent inquiries as to the best methods of preserving infant life. "Effective work," quotes Doctor Murphy, "depends upon each community's doing the task for itself, either through a local health department or some other agency.

"It is the proper function of the state to stimulate each town and city to take up this work," Doctor Murphy says. "Only one or two states so far have made any systematic effort to do this.

"Most state health departments," he continues, "issue pamphlets or circulars of instruction, giving information about the care of babies. Some of these are excellent and the value of this literature is probably considerable, though the experience in eastern cities has been that it is markedly inferior to personal instruction. No doubt it is more effective among the better educated native population of other parts of the country.

"In most states this literature is simply distributed as are other circulars or is sent out on call or perhaps given to mothers' clubs. In North Carolina and Indiana an excellent baby booklet is sent with a congratulatory letter of the governor to every mother.

"Such things may help considerably," Doctor Murphy concludes, "but a greater aid in removing the difficulty would be local effort."

41 TOWNS EMPLOY
VISITING NURSES

Twenty-six Minnesota towns, in addition to the three large cities, Minneapolis, St. Paul and Duluth, are employing visiting nurses all the year, says Dr. I. J. Murphy of the Minnesota Public Health Association. This includes most of the cities above 5,000 in population, and a few towns below 2,000 have visiting nurses for a considerable time. All towns of over 3,000 population could employ a visiting nurse to advantage the entire year, Doctor Murphy says, and smaller towns could group with other communities in getting a nurse. In many parts of the state no doubt a county nurse would be the most practical plan, he thinks.

"Some cities seem to utilize the visiting nurses to a fuller extent than others," Doctor Murphy continues. "In Albert Lea, Austin, Brainerd, Eveleth, Faribault, Owatonna, St. Peter and South St. Paul, besides the school work, the nurses do tuberculosis work and in some cases act as assistant health officers, contagious disease inspectors, and truant officers.

"Besides these towns," he adds, "and the three large cities, which employ nurses the year round, fifteen towns employ nurses during the school terms. These towns are: Aurora, Biwabik, Cloquet, Chisholm, Gilbert, Hastings, Hibbing, Mankato, Red Wing, Rochester, St. Cloud, Stillwater, Virginia, Windom and Winona."

In these towns the services of the nurse should be recognized as being of as much value during the summer months to the embryo school children, the health association official warns, as it is to the older children during the school terms.

HEN LAYS LITTLE
AFTER THIRD YEAR

Old hens are the cause of low averages in egg-production. The pullets work regularly, a Chicago farm paper says, but the old hens lay about a dozen eggs and rest the remainder of the year.

Unless you are raising a particular stock of chickens of which you have only a few hens, you can not afford to keep the old hens as layers. A hen is not profitable after her third summer as a layer. Selling the old hens and using the incubator for hatching is the best plan for the small poultryman.

PORCELAIN IS BEST
LINING FOR ICE BOX

With refrigerator time drawing near, the Division of Home Economics of the University of Minnesota sounds a warning as to the refrigerator and its care—important factors in the health of the family.

The lining of the refrigerator should be smooth—free from seams or visible soldering and with rounded corners. Galvanized iron as a lining is almost impossible to keep clean and the white powder so often noticed on a zinc lining is a chemical poison—oxide of

zinc. White enamel is prone to scale if it covers a zinc base; tile lining cracks, and glass breaks easily. Porcelain, however, does none of these things.

There are "friendly" and "unfriendly" bacteria which affect food, and there is a deal of difference between the two when shut up in the family ice box. One changes the taste without creating harmful conditions; the other creates ptomaines and a whole family of ills. If you are not quite sure which is which, you'd better ask. It will be worth your while as the housekeeper and the guardian of the family health.

In the meantime insist upon pure ice. It can be had. If there is an odor, look first to the cleanliness of the box, next to the condition of the food and, if the odor persists, get after the ice man.

STALLION IS BEST
WHEN FIT TO WORK

A stallion that is not fit to work is not fit to sire work horses, in the opinion of J. S. Montgomery of the animal husbandry division of the Minnesota College of Agriculture. "The horse should be in good physical condition before the beginning of the breeding season," he says. "Plenty of exercise should be provided. If it is impossible to work the horse, a large paddock should be arranged where he may play in all kinds of weather.

"A clean, roomy, light and well-ventilated box-stall should be used for him. It is best to have the stall where the horse is near to other horses.

"In feeding the stallion for the season," Mr. Montgomery cautions, "it should be remembered that a thin animal is just as bad off as one that is too fat. The horse should be in good flesh, preferably on the gain, to open the season. The flesh should be put on by a ration free from excessive corn or other heating and fattening feeds. Oats make a good grain ration, but may be advantageously supplemented by one-fifth—by weight—of wheat or bran. A little oil meal, up to 8 per cent, is also desirable. Bright hay should be fed at the rate of a pound a day to each hundred pounds the horse weighs. If the stallion is being worked, he should have a pound and a day to each hundred pounds the clover is fed it should be limited to one-half the ordinary hay ration, for the excess of protein in it overworks the kidneys and is hard to eliminate from the system."

Mr. Montgomery believes that less pampering of the pure-bred sires would give more vigorous horses.

GOOD COLLARS KEEP
HORSE'S NECK WELL

A good collar, fitting the horse's neck, and hames adjusted to fit the collar without too great down and side draft will do much to prevent sore shoulders, says Dr. M. H. Reynolds, veterinarian at the Minnesota College of Agriculture. Sore shoulders can be prevented easily by a little care at the right time.

"Collars must be kept clean to avoid sores. Many cases of sore neck are caused also by loose hames sawing back and forth until the top of the shoulder is raw.

"Some horses have abnormally shaped shoulders. In this case, the agricultural college veterinarian suggests Dr. J. C. Curryer's plan of soaking the collar a day or two in water just before it is used on the horse. While soft from soaking, the collar will adjust itself to the horse's shoulders.

"Prevention," he says, "is easier than cure," but there are several simple remedies recommended. "White lead ground in oil is good. Stove blacking is a useful remedy. It forms a smooth surface over the sore, thus preventing chafing, and has mildly astringent properties."

HATCHING TROUBLE
DUE TO NEGLIGENCE

Incubators holding from 150 to 250 eggs have given best results here, says F. S. Jacoby of the Ohio agricultural college. Their operation is more definite and certain than that of machines of different sizes.

During the hatching season, Mr. Jacoby says, one may reasonably expect to get 70 per cent hatchings if the stock is healthy and care is taken in handling the machine. Most instances of incubator failure are due to poor ventilation or improper regulation of the temperature in the room in which the incubator is kept.

Barnyard manure applied to clover sod to be turned under later in the spring has yielded an average return of \$4.60 a ton in experiments at the Iowa experiment station. Applications on cover-mixed meadows left for hay have produced an annual return of \$3.76 a ton at the Iowa station.

SKIPPING FOOD OF
COLT IS EXPENSIVE

It is a poor policy to skimp the colt's feed, says J. S. Montgomery of the animal husbandry division of the Minnesota College of Agriculture. The feed and care a colt gets the first year and a half of its life determines largely what it will be at maturity, Mr. Montgomery says.

"If the mare is worked, keep the colt in a cool, dark stall during the day," he suggests. "For the first few weeks after foaling, bring the mare to the barn and allow the colt to suckle. Do this in the middle of the forenoon and in the middle of the afternoon, as well as at morning, noon and night.

"Encourage the colt to eat early, preferably feeding crushed oats and bran in equal parts. Let him have alfalfa and clover hay as soon as he will eat it. Experience shows that a ration of corn and alfalfa gives better results than a ration of corn and timothy or prairie hay."

Mr. Montgomery says the best ration for the colt during the summer is good pasture grass. Maximum growth comes with a feeding of some grain with the pasture grass. Horses and colts in the pasture should be given ready access to fresh, cool, clean water and salt. A colt stunted early never fully recovers, he says.

A little attention to the feet of the colt will greatly repay by better feet and legs in the mature horse, Mr. Montgomery thinks. The heels should be trimmed, he says, for they soon become high, narrow and rolled under, and the toes should not be allowed to grow abnormally long.

SUMMER TERM TO
OPEN ON JUNE 13

Those interested in the development of country life appreciate the value of having for the public schools teachers who are informed regarding agriculture and home-making.

The best teachers expect to attend summer school somewhere, and the summer is the best time of the year to get training in agriculture and home economics. The State Department of Education maintains summer training schools at University Farm, St. Paul, at the School of Agriculture, Morris, and at the School of Agriculture, Crookston. Regular certificate subjects as well as agriculture, manual training, and home economics are offered at each.

The summer term will open June 12 and will close July 21. Board and room can be had at any of the schools at reasonable prices.

Bulletins have just been issued describing the sessions and will be sent to those who apply to C. G. Selvig, Crookston; E. C. Higbie, Morris; or A. V. Storm, University Farm, St. Paul.

MAKING THE MILK
SUPPLIES SAFER

"How may we know when milk is safe and when it is not safe?" Many are asking the Minnesota Public Health Association this question. An answer is given by Julius Hortvet, chief chemist, State Dairy and Food Department, and member of the United States Joint Committee on Food Standards, which committee is co-operating with the New York Milk Commission. He says:

All milk should be graded and sold under its proper label. All grades which contain over 100,000 bacteria a cubic centimeter should be pasteurized. All milk which contains less than 100,000 bacteria per cubic centimeter should be permitted to be sold only as "raw milk." Pasteurization is defined as subjecting milk to not less than 145 degrees Fahrenheit for not less than thirty minutes. This process should be carried on under the supervision of local and state health officials. Pasteurized milk should be divided into three grades:

First, that which contains not more than 200,000 bacteria to the cubic centimeter before pasteurization and not more than 10,000 bacteria to the cubic centimeter when delivered to the consumer.

Second, that which contains not more than 1,000,000 bacteria a cubic centimeter before pasteurization nor more than 50,000 bacteria per cubic centimeter when delivered to the consumer.

Third, that which should be restricted in its use to cooking and manufacturing purposes only. Such milk should not contain more than 1,500,000 bacteria a cubic centimeter before pasteurization and not more than 300,000 after pasteurization.

These are the New York rules. Under them New Yorkers know when their milk is safe.