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## ORCHARD AND GARDEN NOTES.

July 15.

Musk melons ought to be ripening soon.

Iris may soon be transplanted. This is an easily grown plant, having many delightful varieties.

Don't stop cultivation in the flower or vegetable garden now. Keep the soil loose and weeds out.

Sweet peas should be at their best now. Keep the blossoms picked if the flowers are to be kept blooming.

The Tartarian Maple is interesting at this time of year on account of its fruit keys which are changing color.

Late celery may still be set out. Boston Market, of the green celeries, and Golden Self-Blanching are good varieties.

Cut out and burn the old canes from the raspberry hills as soon as they are through fruiting. This gives the new growth a chance.

Colorado columbine has been especially good again this year. This is a little blue columbine which makes a splendid flower for table bouquets.

Nitrate of soda or dry hen manure scattered over the onion field when the bulbs are half or two-thirds grown will often increase the size and value of the bulb.

Currants were at their best the first part of July. This is a fruit that should be more often raised. It is easy to cultivate and, if occasionally pruned, gives good returns of fruit.

Seeds of perennials, such as hollyhock, columbine, larkspur, and foxglove may be sown now. As soon as large enough, transplant the seedlings to flats, protect them during the winter by putting them in a cold frame and covering with straw. Cover the frame with sash or shutters to keep the plants from becoming wet. They may then be planted out as soon as the garden is in condition in the spring.—LeRoy Cady, Horticulturist, University Farm, St. Paul.

## ORCHARD AND GARDEN NOTES.

July 22.

Strawberries may be set in August if the soil is in good condition and moist.

Budding may be done late this month or early next. Try setting a few buds of apple or plums.

This season has demonstrated the need of an irrigating plant of some sort where small fruits, especially strawberries, are to be raised.

Cover crops of oats or buckwheat may be sown in the orchard now to hold the snow next winter and check the growth of the fruit this autumn.

The American elm has many times demonstrated its superior value as a street or lawn tree. It is not nearly as subject to disease or insects as many other trees.

Red raspberries are propagated by suckers which come up around the old plants. These may be taken up in the autumn, heeled in during the winter and set out in a permanent bed the next spring.

Black raspberries and dewberries are propagated by layering. The tips of the canes are bent over to the ground and covered with dirt to a depth of about four inches as soon as the fruiting season is past.

It is time to make up lists of tulips and other bulbs that are to be planted in quantity this fall. Send to some of the large importers of bulbs for their catalogs. Tulips, crocus, and occasionally daffodils, do well outside.

It pays to put vegetables and fruits in clean, neat and attractive packages that are to go on to the market. Two small well-graded and well-packed packages often bring double what the same amount will bring in a large package. It does not cost much more to pack in the smaller package.—LeRoy Cady, Horticulturist, University Farm, St. Paul.

## SEED-TESTING SHORT COURSE.

The Minnesota Seed Laboratory offers a short course in seed testing commencing July 21 and ending July 26.

The course is given for the benefit of those wishing to become acquainted with laboratory methods of seed testing and with the provision of the new Seed Law.

The course is open to any one wishing to take it and is free. For particulars communicate with W. L. Oswald, University Farm, St. Paul.

## LOSSES IN MARKETING

In many cases great saving is accomplished by co-operative marketing for particular districts, and associations for this purpose are springing up rapidly in all parts of the country. The product of many small growers is brought together, graded and put on the market in better condition in carload lots, thus saving greatly in freight rates and in loss by handling.

Although there has been great improvement in transportation methods and reduction in rates in the last forty years, as well as a decrease in the cost of marketing generally, there is, at present, too much waste between producer and consumer, in the case of certain special products, like fruits, vegetables and flowers. By the time transportation charges, commission charges, wholesale profit and retail profit with all the costs of handling, are paid, the consumer often pays twice as much as the producer receives.

Every possible saving must be accomplished in the cost of production and marketing. Consequently the farmers are organizing their own co-operative warehouses, elevator systems, and trading facilities and demanding legislation to control railroad rates, grading, weighing, etc.

Every farmer and consumer should take an active interest in these matters that so greatly affect the profits of labor and the cost of living. The average farmer does not pay enough attention to market demands and requirements. If he does not produce the right varieties of fruits and vegetables and send them to market properly and honestly packed he cannot expect the best prices.—A. F. Woods, Dean, Department of Agriculture, University Farm, St. Paul.

## LIVE STOCK TRAIN.

Farmers of Twenty-Four Communities Discuss Farm Topics With Agricultural College Professors.

A special live stock educational train operated by the Minnesota University, College of Agriculture and the Northern Pacific Railway recently spent half a day in each of 24 communities. The smaller towns were visited in order that the audiences might be made up of stock raisers.

The first hour in each town was devoted to lectures on dairying, live stock feeding, horses, hogs, poultry, potatoes, silo construction, rotation of crops, and domestic science. A special car was given to talks for boys and girls. During these lectures the live stock was unloaded and the second hour was given to a study of the strong and weak points of the animals. During the remainder of the time local live stock was judged and criticized and prizes offered by local business men were awarded to the winners. This proved one of the best and most interesting features of the work. The live stock carried included good specimens of Percheron and Clydesdale horses, Guernsey, Holstein, Short Horn, and Aberdeen Angus cattle, and four breeds each of hogs and sheep. A special car carried exhibits of good fowls, and of miniature poultry houses and various labor saving devices for use in poultry raising.—Harvey Bush, Farmers Clubs, Extension Division, University Farm, St. Paul.

## PIGWEED.

Prevent pigweed from going to seed, and avoid sowing the seed in grain and grass seeds. Frequent and thorough cultivation of the seed bed before sowing the seed will check growth in grain fields. Good plowing, thorough cultivation, with some hand hoeing and pulling, will eradicate the weed from cultivated crops. It does not give serious trouble in fields where crops are grown in a good rotation. It is most troublesome in gardens, but shallow cultivation and hoeing or pulling by hand will eradicate it.

Minnesota Station Bulletin 129 tells how to recognize and eradicate twenty-four of our most common and important weeds.—Andrew Boss, Agriculturist, University Farm, St. Paul.

## DRYING STRING BEANS.

Select young, tender, stringless beans, wash them, cut off stem and blossom ends, cut in one inch lengths, and put them on plates or trays. Cover with a net to protect them from flies, and put to dry in a strong current of air. Stir occasionally while drying. When thoroughly dried, put into insect-proof bags, tie securely, and keep in a dry, well-ventilated place for future use. Some think beans are improved by steaming them a short time before putting them to dry. By putting a few to dry each time beans are prepared for the table, a good supply may be preserved with very little trouble.—Mary L. Bull, Extension Domestic Specialist, University Farm, St. Paul.

## TUBERCULOUS COW DANGEROUS.

Three things have become quite plain in the course of a world-wide study of the relation between human and bovine tuberculosis. (1) That tuberculosis is a common disease among cattle. (2) That there are constant opportunities for transfer of any possible infection from cattle to people. (3) That man is at least susceptible to bovine infection.

There can be no reasonable question now that the most serious source of human tuberculosis, particularly for older children and adults, is the advanced case of human tuberculosis in the home. It has been satisfactorily shown, however, that man is at least susceptible to tuberculous infection from cattle and that tuberculosis among young children, due to germs from cows, is sufficiently common and serious to make it necessary to recognize the tuberculous cow as an important element of danger.—M. H. Reynolds, Veterinarian, University Farm, St. Paul.

## SILAGE AND CORN STOVER.

While at the Nebraska Experiment Station the writer conducted tests to determine the relative value of silage and shredded corn stover (stalks) for cattle feeding. In order to determine the amount of stover fed each steer, it was necessary to husk the corn from the stalk, and as the cattle were kept in the barn, shredded stover was more convenient although more expensive. The use of bundle corn, however, would greatly reduce the cost as it can be harvested and shocked as easily as the ears alone can be husked from the stalk and cribbed. During the fall and early winter the use of bundle-corn containing ears might even prove more profitable than the use of silage.

The further fact that this experiment was conducted during the summer months without the use of grass pasture, is evidence that calves can make very satisfactory gains by using corn silage and alfalfa as a substitute for grass.

In sections where enough grass cannot be grown to carry the number of cattle wanted through the year, but where a large tonnage of corn can be grown on a relatively small acreage, the silo will become an important factor for use in summer as well as in winter.—H. R. Smith, Animal Husbandman, University Farm, St. Paul.

## TIPS FOR HOG RAISERS

Provide sufficient shade for hogs during hot weather.

Losses from cholera are heaviest during late summer and fall.

Kerosene emulsion, properly applied, is an efficient remedy for hog lice.

See that your young pigs have access to sufficient mineral matter. Their growing bones need it.

It will pay you to be careful in castrating pigs. Many are lost from careless and unclean work.

If your pigs have diarrhea, find out the cause for it. It may be cholera, worms, or serious bowel trouble.

Pigs from immune sows will usually remain immune to cholera while sucking. This immunity has lasted for six months in a few cases.

Tuberculosis affects hogs. During 1912 the government inspectors condemned about one million carcasses and parts of carcasses for this disease.

For the best results shoats should not receive the double vaccination until they weigh 40 pounds. If it is necessary to protect them from cholera sooner, give them the single treatment, and later the double, when they weigh 40 pounds or more.—H. Preston Hoskins, Assistant Veterinarian, University Farm, St. Paul.

## WILD MUSTARD.

Wild mustard is most common in fields that are devoted to grain growing and disappears when a rotation with grass or cultivated crops is used. If scattering plants appear in the grain, they should be pulled by hand. If the field is badly infested the plants may be sprayed while in blossom with a solution of sulphate of iron, in the proportion of from 75 to 100 pounds of iron sulphate to 50 gallons of water.

After the grain is harvested the land should be worked up with a disk or spring tooth harrow to cover the seed and induce germination. Some of the plants can be destroyed by late fall plowing. Early cultivation before seeding in the spring will destroy more of them. If the field is still badly infested the treatment should be repeated.

Send to the Minnesota Experiment Station for Bulletin 129 if you are interested in weed eradication.—Andrew Boss, Agriculturist, University Farm, St. Paul.

## A STITCH IN TIME.

Don't forget to fix the fences. A trip around the pasture and field fences now and then will often save trouble, strength, and the time of having to drive the cattle back into the pasture. Animals are almost human when it comes to going where some one does not want them. Remove the suggestion, therefore, by not allowing any sags in the wire or any loose or decayed posts in the line. A well-kept fence is an indication of a good farmer.—C. P. Bull, Associate in Farm Crops, University Farm, St. Paul.

## YEAST AND TEMPERATURE.

Yeast is a very important ingredient in bread making. It must be fresh, vigorous, and capable of rapid growth. The temperature best suited to the rapid development of true yeast is 75 degrees F. This temperature should be uniform during the entire time the dough is rising. A higher temperature destroys the true yeast and increases the development of foreign ferments.

These foreign ferments give the bread a sour, or "yeasty" odor and flavor. A lower temperature than 75 degrees F. arrests the growth of the yeast, making the bread slow and it is apt to be rather heavy and of poor flavor. What might be good bread is often rendered unfit for food by improper baking. The general tendency is to underbake bread. Bread which is not sufficiently baked deteriorates rapidly and is indigestible, as well as less palatable than thoroughly baked bread.—Mary L. Bull, Domestic Science, Extension Division, University Farm, St. Paul.

## TENT CATERPILLARS.

If a grower is spraying his fruit trees faithfully with arsenate of lead in any form, this will prevent injury from tent caterpillars, or the tents may be crushed with the gloved hand, when they can be reached, at a time when the caterpillars are inside; or burned by a torch on the end of a pole, twisted out of their place by means of a wire brush, attached to the end of a long pole. These remedies are effective only when the caterpillars are in their tents, early in the morning, or in stormy wet weather. A single spraying of arsenate of lead, when caterpillars are observed, would probably stop their depredations.

The forest tent caterpillars can be destroyed when they collect in bunches on the trunks of trees. Prune off and destroy the twigs holding the eggs.

## CARE OF EGGS.

In the summer months, eggs should receive the same care and consideration as sweet milk and cream, and be marketed daily if possible. They should not be exposed to draughts of warm air, and should be protected from the rays of the sun and from moisture, in handling, marketing and shipping. The common practice of holding eggs for a higher market-price in autumn results in poor quality and serious loss instead of gain. Under ordinary farm conditions, eggs should never be held. The farmer, however, is not the only one responsible for the shrunken eggs on the market. Country merchants have been equally blamable for the annual loss.

A fresh egg will absorb odors as readily as fresh milk. Mustiness or mouldy growth in egg-cases or fillers will taint the egg and lower its quality.

Eggs should not be stored in musty cellars, or in rooms with fruit, vegetables or fish.

The flock should never be allowed to drink filthy water, be fed musty grains or strong-flavored vegetables, as onions and garlic, nor given access to decaying meat or substances that will flavor the product and impair its quality.—N. E. Chapman, Extension Poultry Specialist, University Farm, St. Paul.

## THE POULTRY HEAD LOUSE.

The head louse attacks young chicks generally before they are feathered out, and is first found on the head with its claws or feeders sunk into the skin of the head. As they become more numerous, they attack the throat and neck as well. The remedy is simple, but it takes a little time. Each chick must have its head greased with lard, cottonseed oil or olive oil. You will have to look closely to see these insects. They are very destructive to chickens and must be controlled or exterminated if the chick is to be healthy.—A. C. Smith, Professor of Poultry Husbandry, University Farm, St. Paul.

## LAUNDRY ROOM.

Every house which can afford it, should have a laundry-room, because washing in the kitchen is unsanitary and makes more work. A moderate sized, well built laundry-room adjoining the kitchen, but separated from it by a hall with a window in each end, extending the entire length of both kitchen and laundry-room, will give a very good place for washing and ironing, the ventilated hall preventing odors entering the kitchen and the laundry-room affording a comfortable place for work.

At one end of the dividing hall there should be a fuel room opening into both laundry and kitchen and at the other end of the hall, a men's wash-room and a closet for hats and coats. In case coal is used, a dust-proof fuel bin made of metal should be provided. In any case, the partition should not extend entirely to the ceiling on either the fuel end or the washroom end of the hall, but should be full and tight, with close fitting doors between it and each room. The partial partition will permit of ventilating the hall, by opening the windows. The washroom entrance should be from the outside that the men need not go through either of the other rooms.

All utensils needed in washing and ironing, together with the laundry stove, washing machine, and other labor saving laundry devices could be always in place and ready for use in this room, instead of being constantly carried from one point to another as is unavoidable when the kitchen is used as a laundry-room.—Juniata L. Shepperd, Domestic Science, University Farm, St. Paul.

## THRUSH IN HORSES' FEET.

This trouble is due quite frequently to standing in manure or other filth, which alters the condition of the horn and may be accompanied or followed by infection. Long continued standing on very dry floors may lead directly to this trouble. In some cases thrush seems to be associated with contraction. The frogs in horses' feet need exercise just the same as any other part of the body. When a horse is shod with high heel and toe calks, or the wall is allowed to grow down very long and the horse stands on a board floor without getting frog pressure, the condition of the frog is impaired and it easily becomes subject to infection and disease.

Such cases need a clean, dry stall. The hoof should be properly trimmed; the diseased parts removed as thoroughly as possible; and a strong disinfectant used over the sole of the foot. Any of the coal-tar disinfectants may be used in full strength, or even pure carbolic acid, care being taken that the disinfectant does not run down the heel and burn the skin. After this first strong disinfectant calomel is a very satisfactory treatment for ordinary cases. The calomel can be dusted over the diseased surface and then some thick clay applied over the entire sole of the foot.—M. H. Reynolds, Veterinarian, University Farm, St. Paul.

## NEW ROPE.

A new rope, particularly if it be sisal, often causes trouble because of its stiffness. If used as a hay-fork rope, or in any place where it runs through a set of pulleys, it is apt to be troublesome until it has been used for some time. This trouble may be avoided by boiling the rope in water. The plan usually used is to coil the rope in a boiler or large soap kettle and cover with water and bring to boiling heat. The rope is then stretched out and allowed to dry, when it will be found to be soft and pliable. Manila rope is usually soft enough to use without such treatment.—J. M. Drew, University Farm, St. Paul.

Fruits of all kinds are a wholesome part of our diet. They contain considerable mineral matter and carbohydrates, and naturally supplement the cereals, meats, eggs, and dairy products, which supply protein.

With a strawberry bed, a few berry bushes, and some plum and apple trees the table can be constantly supplied with a variety of desserts easily and quickly prepared.

When a woman has crowded thirty-six hours of work into eighteen and still finds the mending undone, the windows unwashed, and the magazine uncut, it is time to devise methods for lightening the routine work.

A shelf attached to the wall by hinges and having a prop underneath makes a good addition to the kitchen table, and when not in use it can be raised and fastened against the wall by a button or a hook and staple.