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ORCHARD AND GARDEN NOTES

July 1-8

Keep the cultivator going.
Late celery and late cabbage may still be planted.
Sow turnips or rutabagas on the newly plowed strawberry bed.
A final planting of Golden Bantam sweet corn may now be made.
Watch the sweet peas closely for aphids and green fly. Spray with soap and water or some tobacco preparation.
Visit the city parks or other horticultural plantings and make a study of the plants found there and of their uses.
See that the tomatoes are staked. Some of the branches may be cut away. This will give larger fruits, but not so many.
The highbush cranberry was one of the fruits that was not injured by the early frost and is now well loaded with green fruit.

Keep the dahlia plants pruned to not more than four canes. Much nicer flowers will be the result. The plant should also be staked for best results.
It pays to grade strawberries. See that the boxes and the crates are uniform, even if a few boxes of poor fruit must be thrown away. The poor ones only reduce the value of the whole crate.

Colorado columbine (*Aquilegia coerulea*) is one of the best blue perennial flowering plants for the garden. If one wants other colors than blue, a variety of color may be found among the *Aquilegia*.

The old strawberry bed may be renewed by mowing the foliage, raking it off or burning it quickly on the bed, then hoeing out or plowing all but a strip about one foot wide, and letting the new plants take the space.—LeRoy Cady Associate Horticulturist, University Farm, St. Paul, Minnesota.

ORCHARD AND GARDEN NOTES

July 8-15

Sow a little of the Chinese cabbage and some endive for fall use.

Spiraea Van Houttei makes a good hedge. It may often be pruned to advantage.

Use Paris green and lime on crataegus or the cotoneaster to prevent injuries by the leaf miner.

Perennial lupines are among the early flowers and their long flower stalks always attract attention.

The Juneberry is desirable, not only for its spring flowers, but because the birds like it at this time of year better than currants.

Cut out and burn the old raspberry canes as soon as they are through fruiting. Cultivate the young shoots and keep out all weeds.

A mulching of well rotted manure is often put on canna beds about this time of the year. It keeps the weeds down and supplies plant food.

The California poppy is one of the most satisfactory small annuals. Its yellow flowers furnish color for a garden border almost through the summer.—LeRoy Cady, Associate Horticulturist, University Farm, St. Paul, Minnesota.

NOW IS THE TIME TO SELL BROILERS

Surplus cockerels, particularly those of the lighter and more quickly maturing breeds may be marketed now, to advantage, says A. C. Smith of the Poultry Division, Minnesota College of Agriculture. Poultry-raisers, particularly those not largely engaged in the occupation, market their surplus cockerels sooner or later. All realize that cockerels of the lighter breeds become a nuisance very early in life and for that reason it is very desirable to get rid of such at the broiler age. This is comparatively easy to do in Minnesota as broilers are used at all seasons in both St. Paul and Minneapolis. So active, in fact, is the demand for chicks under two pounds in both these cities that often a price of at least two cents a pound above other quotations is offered for them.

While chicks of the broiler size are always salable, it must be borne in mind that they will not always bring the same prices, and that the present is the time of high prices, which—at the top about July 1—drop soon afterwards, and with accelerated rapidity as the season advances. The recent quotations of \$6.50 to \$7 per dozen, appearing in the St. Paul papers for the two pound broilers and of \$5 or \$6 for one-pound specimens are attractive.

TETANUS GERMS IN DUST OF THE STREET

"Fourth-of-July celebrations regularly result in numerous maiming injuries, many of which terminate fatally," says Dr. I. J. Murphy of the Minnesota Public Health Association. "Tetanus, commonly called lockjaw, is the most frequent cause of death following such injuries. The specific germ which causes tetanus may be present in any dust. It is most abundant in horse manure. Consequently it is very likely to be present in street dust. Toy-pistol wounds of innocent appearance may result in tetanus just as well as wounds of an alarming nature.

Symptoms of the disease do not develop for a week or ten days after the germ first gains entrance into the wound. Hence the early treatment of all Fourth-of-July wounds is important. It is customary now in all suspicious cases for the physician to administer anti-tetanic serum. In addition the wound is opened up widely, cleansed of all foreign material, cauterized, and dressed without closing. If treatment is delayed until the first symptoms appear (difficulty in swallowing, stiffness of the neck, etc.) the patient can very rarely be saved.

RABIES NOT LIMITED TO ANY SPECIAL SEASON

Rabies, commonly called hydrophobia, was the cause of a death recently at the University hospital, Minneapolis. The patient had been bitten by a mad dog during the cool weather in May. Dr. O. McDaniel, of the Pastuer Department of the State Board of Health, says "Dog Days" do not influence the occurrence of rabies, and that this case corroborates the view. The important point, however, is that anyone bitten by a dog suspected of being rabid, regardless of the season of year, should receive proper attention.

The suspected dog should be kept under observation for at least two weeks. If it remains well, rabies is excluded. If it becomes sick or dies, the head should be examined by the Pastuer Department of the State Board of Health and the individuals bitten should report at the department for treatment.

Rabies is usually fatal to dogs in from three to five days after the first symptoms are observed. Individuals bitten by rabid dogs, unless under treatment, become sick in from five to nine weeks. The popular belief that individuals may develop symptoms several months or years later is as false as the belief that Dog Days cause mad dogs. Literature regarding rabies may be had for the asking at the office of the Minnesota Public Health Association, St. Paul, and at the Pastuer Department of the State Board of Health, Minneapolis.

PLANT LICE ABUNDANT

Nicotine Spray will Destroy Them if Properly Used.

This season plant lice or aphids on trees and shrubs are more abundant than in many years. Weather conditions have been very favorable for their reproduction and very unfavorable for the reproduction of their parasitic enemies. Many of the aphids in normal years attracted very little attention. In abnormal years artificial methods of control must be used to keep them within bounds.

"In our experience at the Minnesota Experiment Station," says A. G. Ruggles of the Division of Entomology, "the extract of tobacco containing 40 per cent nicotine in the form of nicotine sulfate has been very effective. This material is on the market. One half-pint of this in 50 gallons of water is very effective if sprayed on the plants in such a way that every insect is touched with a small particle of the spray. This material is even more effective if mixed with whale oil soap—one pound of whale oil soap to ten gallons of the diluted nicotine solution."

LIVE STOCK ASS'N STRONG

Red River Valley Booklet Shows Breeders are Active.

The increasing interest in live stock in the Minnesota Red River Valley is indicated clearly by a little book just issued by the Minnesota Red River Valley Live Stock Breeders' Association. This book shows that the membership of the association is nearly 100 and that the amount of good stock owned by the members is large. These facts show a desirable trend, and give assurance of a future prominence of the "Valley" greater than ever attained in the days of exclusive wheat-growing. They ought to encourage those already engaged in developing the live stock industry in the Red River Valley and to lead others to engage in the same industry.

Watch the rose bushes for snout beetles and other insects.

HOG CHOLERA SEEMS TO BE LOSING ITS GRIP

Indications are that hog cholera will do much less damage in Minnesota this year than last year or the year before. Demands on the State Serum Plant for serum so far this spring have been relatively light, says A. Preston Hoskins, of the Veterinary Division of the Minnesota Experiment Station. By the first of July last year 500 advance orders for serum and for virus for the double treatment had been received. So far this year only 35 such orders have been filed. From this there is evidence that the disease is doing less damage, and also that the double treatment is rapidly waning. Not a drop of virus has been sent out from the plants since April 12, and the serum distributed since that time has been used for the single treatment of recently infected herds, with good results so far as reports indicate.

The demonstration work carried on by the Federal Government in Renville County last year is evidently bearing fruit, continues Dr. Hoskins. Many localities have adopted the Renville County plan of fighting hog cholera by organization, education, sanitation, and vaccination.

Not a single serious outbreak of cholera has been reported so far this year, although there have been serious losses from other diseases. With the State Serum Plant well stocked with a large supply of tested serum, available for distribution, and a lighter demand, the outlook on the whole is rather encouraging.

TO ALL EDITORS

Editors receiving questions from farmers in relation to agricultural problems, in answering same can have the services of members of the faculty of the Minnesota College of Agriculture, by addressing the Office of Publications, University Farm, St. Paul.

The Press News wishes to be placed on the mailing list of all publications in Minnesota in any way interested in agriculture and rural life.

In the last issue of the Press News announcement was made that papers wishing special articles in relation to rural affairs could obtain them by addressing the Office of Publications, University Farm, St. Paul. It is hoped that many publishers will avail themselves of this offer.

EGGS KEEP WELL IN WATER-GLASS

There are several good methods of preserving eggs, but the water-glass method is the best, says C. E. Brown, of the Crookston Experiment Farm. Water-glass can usually be purchased at a local drug store for less than \$1 a gallon, making the cost about one cent for each dozen eggs.

The receptacle used should be an earthenware jar of from five to ten gallons. The eggs should be placed in the jar each day, when gathered, as the fresher the egg the better it will keep. Care should be exercised to see that none of the eggs is cracked, or the whole jar of eggs may be spoiled in a short time.

The jar should be placed in a cool cellar, a piece of oiled paper or some other water-proof cover should be placed over to prevent evaporation. If this is not done, any eggs that appear above the liquid will spoil rapidly. The eggs should be kept at least two inches below the surface of the liquid.

The solution recommended is one part of water-glass, to ten parts of pure water.

QUESTIONS AND ANSWERS

"I have sent you a bottle of milk in another package and kindly ask you to analyze for tubercular germs, and let me know results."—Farmer, Westbury, Minn.

"Permit me to explain that it is a long and costly process to analyze milk to discover tubercular germs. It can be done by injecting the solid part of milk into the body of some small animal, permitting it to grow there for some weeks, then killing the animal and examining the character of the sores produced. Even this method is not at all certain. By all means the preferable way is to have the cows themselves tested with tuberculin. Such tests can be made by any competent local veterinarian. This tuberculin test is the one uniformly used by state and government officials for inter-state shipments.—R. M. Washburn, University Farm, St. Paul."

FARMERS REORGANIZE TO MARKET THEIR WOOL

A vigorous effort is being made to restore the wool-growing industry in Minnesota.

The Minnesota Coöperative Wool Marketing Association has been reorganized. The old association for several years performed excellent service, saving the farmers on an average about three cents a pound on ungraded wool at ordinary market prices. With a fireproof warehouse at Farmington, where wool received will be carefully graded by experts and sold at the highest prices obtainable, the reorganized association is in a position to render an even better service.

There is no reason why Minnesota wool should not enjoy a reputation corresponding to that of Minnesota butter. This is the view, at least, of those who are interested in the reorganization of the Wool Marketing Association, and their opinion is supported by that of authorities at the Minnesota College of Agriculture. Minnesota wool has qualities that make it very desirable among spinners. It can hardly be equaled by wools from other countries. Minnesota farmers should capitalize this fact and pull together to put Minnesota on the map as a wool-producing state. The reorganized association offers an excellent agency for this purpose.

SPRAY POTATOES TO PREVENT EARLY BLIGHT

The attention of all potato-growers is called to the important leaf diseases of the potato, early and late blight. Both of these diseases annually cause large losses. Late blight last year did much damage in Minnesota.

Proper methods of spraying will prevent such losses to a great extent, says Arne G. Tolaas, Assistant in Plant Pathology, Minnesota Experiment Station. The vines should be kept thoroughly covered with 5-5-50 Bordeaux mixture during the growing season. The first spraying should be done at this time, as the early blight generally makes its appearance in the early part of July. It is important to get the spray on the vines before the disease appears, as the spraying of vines already attacked will do very little good as far as the diseased plants themselves are concerned, though it will prevent the spread of the disease to healthy plants. Three sprayings, at intervals of two weeks, on the early varieties, and four or five on the late varieties, will keep the vines covered during the season, depending on weather conditions.

Further details and particulars are given in Extension Bulletin No. 35 which can be obtained by writing to the Office of Publications, University Farm, St. Paul.

CARE WILL DO MUCH FOR APPLE CROP YET

Minnesota apple growers will have apples to sell this summer, although the crop will not be so large as signs indicated in the early spring, owing to unfavorable weather conditions. But the quality of the crop will depend largely upon the care exercised by growers between now and picking time, says R. S. Mackintosh, University Farm, St. Paul. The crop being light, special care should be taken to keep out the codling moth and the more serious diseases. One or two extra applications of lime sulphur and arsenate of lead may be needed. In case trees are heavily loaded thinning is necessary.

"We lose two crops if we leave our trees overburdened with fruit," says Clarence Wedge a well-known Minnesota apple-grower. "This year's crop will be small and of little or no value for market and next year the trees will be barren. By thorough thinning this crop will be large and fine, and there will be good chance for a crop next year."

NICOTINE SPRAY KILLS THE CUCUMBER BEETLE

A concentrated nicotine solution of which there are several brands on the market, properly applied, is fatal to the larvae of the cucumber beetle which sometimes does large amount of damage to cucumbers whether in the cold frame or in the field, says William Moore of the Minnesota Experiment Station. One teaspoonful of a 40 per cent solution of nicotine to a gallon of water is enough.

The gardener should look for the larvae of the beetle just at the surface of the soil. When he discovers them he should pour his nicotine solution on carefully with a narrow half-pint cup, being sure to let it run down all sides of the stalk.

Fighting the larvae of the cucumber beetle is better than fighting the adult beetle itself, as the adults work chiefly on the leaves and do not get at the vital parts of the plant.

CORN'S START POOR LOOK AFTER IT WELL

Conditions in June were very unfavorable to the development of the corn crop. Much corn was not planted and that which was planted early came up poorly and many fields had to be replanted. The season was late and cold. As a result the best handling will be necessary now in order to secure even an average crop, says Andrew Boss of the Minnesota College of Agriculture.

The important point in maturing a corn crop is to keep down the weeds so that the moisture may be available for the growing corn when warm weather comes. It is especially important that the roots of the corn plants should not be pruned or destroyed. Investigations show that each root-pruning with the cultivator retards the maturity of the corn by several days and also reduces the yield. Deep cultivation in the middle of the row is allowable early in the season, but after July 1, the cultivator shovels should not run more than two or three inches deep. The cultivation should be frequent to stop the weeds and keep the surface mellow, but shallow to avoid pruning.

CALF DIPHTHERIA IS A SERIOUS MATTER

Calf diphtheria is due to a specific infection, and is always a serious matter, especially when affecting young animals, says Dr. M. H. Reynolds of the Minnesota Experiment Station.

The trouble may appear with calves from three to five days old. Such calves refuse to drink milk or suck. They show more or less discharge of saliva from the mouth and inflamed patches inside of the mouth. These patches gradually develop into ulcers covered with a dead, granular, or cheesy mass which does not peel easily from the raw surface underneath. There is considerable rise of temperature and an offensive odor from the mouth. The trouble may easily extend to neighboring parts, to the lining membrane of the nose, and then there appears a yellowish discharge. In some cases the lining membrane of the digestive tract is similarly affected and then there is tendency to diarrhoea. Little pigs show similar symptoms.

So far as now known the germ is a normal inhabitant of the intestines of healthy hogs and cattle and probably always virulent. When the disease is prevalent, the virus is, of course, scattered everywhere. Very young animals are most easily and most seriously affected, but cases have been reported in calves and pigs six or eight months old, and even occasionally in adult cattle and adult hogs.

The sores may be cleaned with two per cent creolin in warm water, and then treated with Lugol's solution, applied twice a day to the ulcers. Permanganate of potash may also be used, two ounces to each gallon of water; made up fresh each time, as the mixture cannot be kept from day to day. Either treatment should be given to valuable animals about twice a day for from four to six days.

Frequent and thorough disinfection of calf-pens and calf-yards is one of the first essentials in management.

CATALOGUE POINTS WAY TO SUCCESS

The new catalogue of the School of Agriculture is ready for distribution. The registrar, J. M. Drew, would like to send one of these catalogues to every farmer in the State having sons or daughters who are interested in getting an education beyond that offered in the district schools. To all such young people, and to their parents, the following facts and suggestions are offered by Mr. Drew:

A large majority of those who have attended the School of Agriculture since its founding in 1888, have returned to farm life and in nearly all cases have shown in their work at home that they have profited greatly from knowledge gained at the school. Those students who were fairly mature when they entered the school have been the best students, as a rule. For this and other reasons the rule making the lower age limit seventeen years has been adopted.

On the farms of Minnesota are many young men and young women who think they are too old to go to school and who for this reason never get anything in the line of education beyond the common branches taught in the districts schools. Many of them do not even get all they could from the district schools, because, on account of leaving school every spring as soon as active farm work begins, they drop behind their classmates. This continues until they have grown so large that they are ashamed to go to school with the smaller children in the neighborhood. Such would receive a welcome at the School of Agriculture where the average age of students is nearly twenty years, and a great many are old enough to vote. Two of the best students ever at the school were twenty-seven years old when they entered.