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ORCHARD AND GARDEN NOTES

October 1-8

Plant tulip bulbs outdoors this month. Pot hyacinths, tulips, daffodils, now. Swiss chard makes excellent chicken-feed.

Store onions in a cool, well-aired place.

Many vegetable growers are carrying gladioli as a side line with profit.

Asters are improved in most Minnesota localities by application of lime to the soil.

Among the best advertisements for a town are a good park and well-kept school grounds.

Do not put ungraded fruit or vegetables on the market. It pays better to grade. Try it.

Cannas are treated in much the same way as dahlias, but they require somewhat warmer places.

Geraniums, the Christmas cactus, callas, and cyclamens make good flowering houseplants for winter.

Cuttings of grapes may be taken this month and stored in sand or sawdust until next spring, when they may be set out.

Squash should be carefully handled in hauling, and placed one layer deep on wooden racks in a warm, well-ventilated storage house.

What are the most common wild flowers in your vicinity that may be used in decorative work? Many should be in bloom even now.

The giant daisy, *Pyrethrum uliginosum*, has been an excellent flowering-plant this fall. It produces larger flowers if not allowed to grow too thick.

As soon as the frost cuts the foliage on the dahlia remove all but five or six inches, lift the plant out of the earth and let it dry in the sun for an hour or so, then put in a cool dry storage cellar. The tubers must not be dry enough to shrivel or moist enough to grow before spring.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minnesota.

ORCHARD AND GARDEN NOTES

October 8-15

There is still time to plant phlox, iris and peonies.

So far as it is possible it is well to prepare flowerbeds for next year's use now.

Carrots and beets keep better if a little dry sand is put over them. This prevents drying out.

A cool cellar is the best place for cabbages. Hang them up or wrap them in paper and lay on shelves.

See that the sweet corn saved for next year's planting is stored in a well-aired place where it will not freeze.

The branches of currant bushes should be drawn close together and tied to prevent the snow from breaking them down.

While many raspberries will come through the winter without protection it is always safer to lay them down and cover them with earth.

As soon as the frost kills the foliage of grape vines they may be pruned back and laid on the ground ready to be covered with earth. They should be covered before the ground freezes.

Remove all trash and rubbish from the garden. If convenient, it is well to plow or spade the land that will be used for garden next year. This will help to get rid of many insects and weeds.—LeRoy Cady, associate horticulturist, University Farm, St. Paul, Minnesota.

Tobacco-Growing in Minnesota

Investigations indicate that tobacco may be grown successfully in Minnesota. Wisconsin's crop of tobacco has a farm value of \$6,089,000, and according to a bulletin on "Tobacco-Growing in Minnesota," by C. P. Bull, of the division of agronomy and farm management at the Minnesota Experiment Station, tobacco-growing in Minnesota may become a very considerable industry. The quality and quantity per acre in Minnesota are essentially the same as reported from Wisconsin, says Mr. Bull.

Copies of Mr. Bull's bulletin may be had by addressing the Office of Publications, University Farm, St. Paul.

DEATH RATE IS HIGH IN OCTOBER

"Deaths from tuberculosis begin to increase in October," says Dr. I. J. Murphy of the Minnesota Public Health Association. The death rate from tuberculosis is at low ebb in July and August, but rises suddenly in October and reaches its maximum in early winter, lingering there until the following July.

"The people who die from tuberculosis in October, 1915, contracted their disease before October, 1910, and most of them before October, 1900," adds Dr. Murphy. The disease is insidious in its onset, and often lies smoldering in childhood to break out during adult life.

"Tuberculosis is becoming less prevalent in the city than in the country. Last year deaths from tuberculosis in the three large cities of Minnesota, numbered 800, while in rural Minnesota deaths from the same cause numbered 1,500; nearly twice as many deaths in the country as in the cities in spite of the fact that many cases from the country came to city hospitals on the point of dying.

"Moreover, tuberculosis is increasing in the country because country people are not fighting it so effectively as city people are."

Among means for the control of tuberculosis the following are mentioned by Dr. Murphy:

Reporting of all active and suspicious cases to health officers.

Sanatoria for the care of both advanced and early cases.

Free dispensaries or other free facilities for diagnosis, preferably by paid visiting physicians.

Visiting nurses to supervise home cases and their families; to do educational work and to cooperate with existing agencies.

Fresh-air rooms and preventoria for tuberculous and susceptible children.

Pasteurization of all milk.

"These means should be made use of in every community. Where state aid is lacking, volunteer organization should endeavor to fill the gap until state aid is secured," adds Dr. Murphy.

"Wholesome food, milk from tuberculin-tested cattle, and personal hygiene will tend to protect the individual, but at present the chances for at least an accidental infection are much more frequent in the country than in the city. They will remain so until the country people regard the disease not as a personal or family affair, but as a community problem."

MILK BACTERIA TO BE COUNTED

The grading of all market milk according to bacterial content as well as butter fat is the next step in the solution of the milk problem. At the same time all milk intended for human consumption should be pasteurized, labeled, and sold in bottles or other sealed containers.

These were conclusions reached at the annual meeting of the American Public Health Association held September 6-11 at Rochester, New York, says Dr. I. J. Murphy, who attended the meeting as a delegate from the Minnesota Public Health Association. That such regulations are practical has been demonstrated for several years in New York City and for a year throughout New York State.

LACK OF CARE AN AID TO THE GERM

Improper food, impure drinking water, lack of cleanliness, bad drainage, absence of sunshine, insufficient ventilation, over work, exposure to extremes of heat and cold—all of these contribute to loss by diseases among farm animals. They do not kill of themselves, but they weaken the animal's powers of resistance against disease germs. It is because of this fact that the germs of tuberculosis, of anthrax, of glanders, of black leg, of cholera, and of other diseases are able to get in their deadly work.

Careful attention to food, water, drainage, the admission of sunshine and pure air, the need of rest, the prevention of exposure, therefore, means health to one's animals, and that means more money in pocket.

The fall season is the time to see that provision is made for the comfort of the farm animals through the winter. Extension Bulletin No. 44 on "Barnyard Sanitation," by H. Preston Hoskins, University Farm, St. Paul, will help to solve many of the problems likely to come up in making preparations for the winter.

Spray or wash the foliage of houseplants frequently, if you would keep them in good health.

Some varieties of the autumn-bearing strawberry have done very well this fall on account of the moisture and favorable weather.

GAIN IN SHELTER FOR BROOD SOWS

The brood sow should have a comfortable shelter in winter, says Bulletin No. 7, extension division, University Farm, St. Paul. Good shelter, preferably in a cot well supplied with straw, will contribute to her well-being, and in that lies strength for her offspring. The shelter should be placed a considerable distance from her feeding place, in order that she may be compelled to take exercise. Her feed should consist of bulky foods such as milk, roots and clover hay, and enough grain to keep her in good condition without causing her to put on fat.

GRAIN SAVED BY FEEDING-FLOORS

Those who have used feeding-floors for their hogs have found them to be good grain-savers, and concrete feeding-floors are coming into favor.

Such a floor should be 6 inches thick, and, if not laid against the barnyard pavement, should have a curb extending from 12 to 18 inches below the surface of the ground. This will prevent the hogs from rooting under the floor. The floor should slope slightly toward one corner in order to carry off rain, or water used in washing. A rim around the outside edge will prevent grain from being pushed off into the mud.

For feeding-floors concrete should be mixed in the proportion of 1 sack of Portland cement, 2 cubic feet of clean coarse sand, graded up to one-fourth of an inch, and 3 cubic feet of hard durable gravel or broken stone from one-fourth of an inch to one inch in diameter. Eleven sacks of cement will make enough concrete for 100 square feet of feeding-floor. The concrete should be thoroughly mixed and should contain enough water to make the mass quaky so that the concrete will flatten out of its own weight. It should be lightly tamped, however, then leveled off with a straight edge, and finished with a wooden float. The floor may be laid in slabs each 6 feet square, 2 inch lumber being used for forms.

Feeding-floors should be large enough to give each hog 18 square feet of space.

HEALTH OF STOCK IS WELL GUARDED

"Stock-owners should be more familiar with Minnesota's methods of dealing with the infectious diseases of animals and with owners' rights and responsibilities under the law," says Dr. M. H. Reynolds, chief of the veterinary division, University of Minnesota, and organizer of the state's work against diseases of farm animals.

"Minnesota carries on its work against infectious diseases of domestic animals through a state live stock sanitary board," continues Dr. Reynolds. "This board consists of three live-stock men and two veterinarians. The board members themselves receive no pay except for actual expenses and do no field work in person. The board establishes general policies and is responsible for administration of funds available for state work only. All field work is done through a secretary and executive officer, not a member of the board, who is a veterinarian, and through a staff of field veterinarians, all of whom give their entire time to the work.

"The appropriation for each biennial period is about \$108,000. A very large part of this goes directly or indirectly to the live stock owners in the form of reimbursements for live stock killed on account of infectious diseases, such as tuberculosis among cattle and glanders among horses, or for free veterinary service in fighting diseases which endanger the welfare of the community. Operating expenses aside from these items are very slight."

PULLETS FOR EGGS IN COLD WEATHER

"We must depend on well-matured pullets for the bulk of our egg supply in cold weather," says C. E. Brown, poultryman at the Northwest Experiment Station, Crookston, in Bulletin No. 21 issued by the Extension Division of the Minnesota College of Agriculture.

Pullets of the heavier breeds that have been hatched between April 1 and the middle of May, and those of the lighter varieties hatched between the middle of May and the middle of June, adds Mr. Brown, will be mature enough by the first of October or November to begin laying, and, if they are properly cared for, should be good egg-producers.

Special care is needed when pullets are first transferred to their winter quarters. If the chickens have been roosting in the open air through the summer and are suddenly transferred to close and stuffy quarters, they are almost sure to contract colds or even roup. The windows and the door of the chicken house, therefore, should not be closed too tightly at night until severe weather sets in.

HOUSE-CLEANING FOR THE COW PAYS

Before the dairy cow is taken from the pasture, the barn should be thoroughly and systematically cleaned, says G. W. Gehrand, of the dairy and animal husbandry division at the Minnesota Experiment Station. All cobwebs should be brushed down and the walls and ceiling should be white-washed or painted some light color. Either whitewash or paint will give a clean surface and make the whole stable look lighter and brighter. It might be well, too, to put in a few extra windows.

The dairy cow has had the freedom of the pasture and the fresh air of the fields for the last five months; she has practically maintained herself and produced milk upon succulent feed; she will soon be returned to the barn where she will spend the greater part of each day. It should be the aim of every keeper to see to it that his cows are housed as comfortably as possible and provided with a goodly quantity and variety of palatable feed that will nourish her abundantly and help her produce an even flow of milk.

The right kind of a cow will repay with interest every cent invested for her comfort—for warmth, light, ventilation, and feed. If she is not comfortably housed her returns will be cut down in proportion to her discomfort.

COWS NEED MORE THAN PASTURE NOW

The dairy farmer who keeps his cows too long on pasture in the fall suffers a loss. Pasturing too long causes a decrease in milk production, and recovery is not secured by supplemental feeding later. Supplemental feeding—with silage, if available—should begin at once. This will keep cows up to their best in milk yield not only for the immediate future but through the winter.

PLOW WITH CARE; THERE'S A REASON

The chief reason for plowing is to put the soil in shape to produce good crops. For best results the plowing must be done at the right time. Grain crops in particular need generous supplies of readily available plant food early in the season. Therefore, in the northwest early fall-plowing for grain crops is to be preferred. This allows the needed changes that take place in loosened soil to get started early and to continue until the ground is frozen. The result in productive soils is the accumulation throughout the cool fall months of plant food and this is easily taken up by the grain plants the following spring.

For corn, black loam soils should be plowed in the fall. On the heavier clay soils spring plowing for corn is often preferable.

Good plowing means more than making the field appear black. It means more than making straight furrows. However, a good plowman usually makes straight furrows. In a well-plowed field the soil is stirred and pulverized to the depth indicated as necessary by the kind of soil and the crop to be grown; and the stubble and rubbish are completely turned under where it will be out of the way and quickly decomposed. For most crops, deep, rather than shallow plowing, is the best practice.

To do good work with a minimum of power, plows must be equipped with properly shaped and sharpened shares. A good share allows a plow to run true and little or no effort is necessary to hold it in place.

To turn under all rubbish a good jointer properly adjusted is necessary. No stubble or weeds are left sticking up between the furrows where a good jointer is used.

Keep the plowshare properly shaped and sharpened. Use a jointer so that all rubbish is turned under completely. Increase the depth of plowing an inch or two each year for several seasons.—A. C. Arch, University Farm, St. Paul, Minn.

CATTLE SUFFER FROM RHEUMATISM

Rheumatism among Minnesota cattle has caused farmers to appeal to the Minnesota College of Agriculture for suggestions as to treatment. "About the best the farmer can do for these cases," says Dr. M. H. Reynolds, Chief of the veterinary division, "is to rub the affected parts with stimulating liniments or to apply a hot steam pack. A suitable cloth, woolen preferred, should be saturated with hot water or mild liniment. This should be wrapped around the affected joint, and, to prevent cooling, should be covered with a dry cloth over which should be placed a rubber cloth."

PROFIT IN GOOD SEED POTATOES

The right kind of potatoes bring better prices than the wrong kind, and the right kind can usually be grown with very little added trouble.

The right kind of potatoes is the kind the public wants. To find out the taste of the public as to potatoes, D. E. Willard, of the Northern Pacific Railway Company not long ago made an extended investigation—in homes, hotels, restaurants, and commission houses—from Chicago to the Pacific coast. He found the demand was for sound potatoes, of good flavor, medium size, and regular shape. He also found that such potatoes commanded higher prices than mixed lots of large and small, diseased and sound, regularly and irregularly shaped potatoes.

To grow the kind of potatoes the public wants, then, is the thing to do, and the way to begin is to plant the kind of potatoes you wish to grow. This means careful selection from the hills, observing the following rules:

Select only from hills in which a larger part of the potatoes answer the description mentioned. Potatoes from such hills are more certain to breed true to type.

Select potatoes weighing from five to eight ounces.

Use for seed no potatoes grown in fields showing a considerable amount of wilt or rosette.

Avoid potatoes showing brown ring discolorations at the stem end.

Save for planting no potatoes which are bruised, cracked, or decaying, or which show discolorations at stem end.

Store carefully in moderately warm, dry and well ventilated place.

Treat with corrosive sublimate four ounces to thirty gallons of water—for an hour and a half before planting.

SIGNS OF GROWTH IN BUTTER-MAKING

That Minnesota is growing toward higher rank in butter-production is shown by the fact that the demand for competent creamery managers is difficult to meet. Several creameries last year had great difficulty in securing good men even at liberal salaries.

The department of agriculture of the University of Minnesota, University Farm, St. Paul, is keeping in touch with the demand through its dairy school held every year under the supervision of the dairy and animal husbandry division, of which T. L. Haecker is chief. Moreover, through this same agency it is endeavoring to meet the demand.

The school will open this year on November 8 and close December 4. It will offer courses in the making of butter, cheese, and ice cream; also a course in advanced creamery work, to fit experienced men to be better operators of large plants. R. M. Washburn will be in charge.

BLEACHED OATS ARE CONDEMNED

The United States department of agriculture has sent out a warning that the transportation and sale in interstate commerce of damaged oats and oats of inferior quality which have been bleached or otherwise treated so as to conceal damage or inferiority, or of oats the weight of which has been increased by the addition of water, will be regarded as in violation of the federal food and drugs act. Proceedings under the act will be instituted wherever sufficient evidence is obtained to justify such action.

This warning is issued as the result of a request by the National Grain Dealers' Association that the department of agriculture define its position as to interstate commerce in oats bleached with sulphur dioxide, or containing added water due to the bleaching process.

Andrew Boss, chief of the agronomy and farm management division at the Minnesota Experiment Station, and C. P. Bull, an associate of the same division, think that few bleached oats are sold in Minnesota but they believe that Minnesota farmers should know of the government's warning so as to be on the look out in case such oats should be shipped into the state.

Let All The People Sing.

Community singing was tried with success in Cloquet this last summer. The people of Cloquet gathered in Pinehurst Park, and, under proper direction, sang old and familiar songs. According to reports in the Pine Knot everybody liked the plan.

If community singing is a good thing in summer, why not in winter? The school house, town hall, or some church suggests itself as a suitable place.