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## ORCHARD AND GARDEN NOTES FOR JANUARY

Plan the garden and order seeds now.

This is the time of year the wind-break of evergreen is enjoyed.

Blue or white spruce trees on the lawn are attractive now.

Have you noticed the cheerful effect of dogwood and golden willow on warm days?

Mulch the strawberries and fruit trees and shrubs if this has not been done.

King and Minnetonka Ironclad raspberries are good red varieties for general planting.

Plant a few hibernal apple trees next year for topworking with tender high-grade varieties.

Stable manure is a good mulch for apple tree and may still be put on the ground about the trees.

Get catalogs of the best nursery and seed houses. Make careful selections for next year's planting.

Tramp the snow well about the trees. This will help to prevent injuries from mice under the snow.

Did you get first-class apples and small fruits this year. If not, why not? Find the reason and remedy it.

During the winter protect smooth bark trees from the sun on the south side of the tree, or, expect injury here next spring from sunscald.

Cut and burn all dry or shriveled fruit remaining on the trees. It is diseased and will cause you trouble next year.

Buy a few Wealthy, Duchess, Anisim and Okabena apple trees for spring delivery. The Florence Crab is excellent for canning, jelly, and pickling.

Senator Dunlap still stands at the head of the list as a strawberry for general planting. Other good varieties for home use are Splendid, Brandywine, and Enhance.

Now is a good time to study the spraying proposition. Get books and bulletins on the subject. Write some of the sprayer manufacturers for their catalogs.

In planning the garden for next year get it as close to the house as possible. Plan to sow a few common flowers in a part of it for cut flowers during the summer.

In pruning the apple trees plan to form shapely heads that will permit the sunlight to get into the center of the tree. It will give better fruit.

Put grain, suet or meat scraps in the trees or on high stumps so that the birds may get them. If there are quails in the neighborhood, feed them. It pays to keep them on the place. They will eat grain scattered in open places.

Get the government and station bulletins on the subjects you are especially interested in. They may be had by sending a postal card to your Experiment Station, or the Division of Publications, Washington, D. C.

Many house plants are troubled with scale and white mealy bug at this time of year. Give them a good cleansing with soapy water, using a soft brush to wash the insects off; then cleanse with clear water. House plants should be washed once a week in winter to get the dust off. It is often a good plan to dip them in suds for half an hour or so, afterward cleaning with clear water.—Le Roy Cady, Horticulturist, University Farm, St. Paul.

## BUTCHER NOTES.

Animals with fine bones, soft, luxuriant hair, are more likely to yield good quality of meat than those with coarse bones and wiry hair.

An animal should never be losing in flesh at the time of slaughter. If failing, the muscle fibers are shrinking in form and contain small amounts of water. As a consequence, the meat is tough and dry. When the animal is gaining in flesh the opposite condition obtains and better quality of meat results. A better meat product will be obtained from an animal in only medium flesh but gaining rapidly than from an animal that is very fat but not gaining in flesh.—Andrew Boss, Agriculturist, University Farm, St. Paul.

## KANSAS HORSE DISEASE.

Horses in one of our neighboring states have recently been suffering from a disease, which for a time, puzzled the veterinarians. Minnesota horses were not affected during this outbreak but have suffered in a number of localities from what was probably the same disease in past years. The disease is called forage poisoning and is sometimes given other names. It is not positively known whether it is due to mouldy feed or to some other cause.

The horse may be stupid and the muscles of the face, neck and jaws may show nervous movements. The legs may be imperfectly controlled while the throat may be paralyzed to such an extent that the animal may be unable to swallow. The breath has a disagreeable odor. If the horse goes down, it is likely to lie flat on its side and be rather quiet except for some struggling with the front legs. The pulse, temperature, and breathing show no peculiarity except that early in the sickness there is a moderate fever. It is estimated that from 80 to 90 per cent of horses affected die, but some typical cases have undoubtedly recovered.

In the recent Kansas outbreak, the disease did not seem to be associated with any particular kind of forage or water. It was just as prevalent upon high and dry buffalo grass ranges as it was in the alfalfa pastures along the Arkansas river bottoms. It affected horses of all ages and apparently under all conditions, except that few cases appeared in the larger cities or among horses that had been kept in stables and had received only old hay for roughage. The disease apparently had some important connection with the unusual climatic conditions. The section where it was prevalent is normally very dry but had had continued and excessive rains for some weeks previous to the appearance of the disease.

Minnesota horse owners should always bear in mind the possibility of the appearance of this disease during winter and early spring. Call veterinary help and report any suspected case. Be careful to use only water that is not subject to contamination and avoid the use of any mouldy feed for horses. Unnecessary exposure to possible infection should be avoided. Do not overwork or underfeed the horse, or expose it to anything that will lower its resistance to disease.

If you suspect that you have a case of forage poisoning do not give medicine by the mouth without specific directions from a competent veterinarian. The throat may be paralyzed, and the horse unable to swallow the medicine. It is apt to produce pneumonia by passing into the lungs instead of into the stomach.—Dr. M. H. Reynolds, University Farm, St. Paul.

## PREPARATION OF ANIMALS FOR SLAUGHTER.

Animals intended for slaughter should be kept off feed from twenty-four to thirty-six hours. If kept on full food the system is gorged and the blood loaded with assimilated nutrients is driven to the extremities of the capillaries. In such a condition it is impossible to drain out the veins thoroughly when the animal is bled and a reddish colored, unattractive carcass will be the result. The blood is the most easily decayed substance in the animal carcass and often causes trouble in the curing of meat. Food in the stomach decomposes very rapidly after slaughter and if the dressing is slow the gases generated often flavor the meat.

Water should be given freely up to the time of slaughter as it keeps the temperature normal and helps to wash the effete matter out of the system, resulting in a nicely colored carcass.

It is important that the animals be not excited in any way sufficiently to raise the temperature of the body previous to killing. Excitement prevents proper drainage of the blood vessels and, if extreme, will cause souring of the meat very soon after dressing. In no instance should an animal be killed immediately after a long drive or after a rapid run in the pasture. The flesh from animals overheated is usually pale in color and often develops a sour or putrid odor within three or four days after being dressed. The animals should not be chased or driven rapidly nor should they be handled in such a way as to bruise the bodies. Bruises cause blood to stay in that portion of the body affected and often cause the loss of a considerable portion of the carcass. A thirty-six hour fast, plenty of water, careful handling and rest before slaughter are all important in securing meat in the best condition for use, either fresh or for curing purposes.—Professor Andrew Boss, Agriculturist, University Farm, St. Paul.

## CROOKSTON SHORT COURSE.

Men and Women Study Agriculture, February 10 to 21.

The third annual Short Course of the State Agricultural School at Crookston begins February 10 and continues until February 21. Noted experts will be present to discuss agricultural problems of the Red River Valley and Northern Minnesota. It will be possible for the women to live in the school dormitory during the Short Course and class work especially adapted to their needs will be presented.

Particular attention will be paid to the pure seed problem. Prominent grain experts have been engaged to be present and discuss the best methods of handling farm crops. Live stock raising will be emphasized. The latest and best thought regarding successful farming will be brought out. Short Course bulletin will be ready for distribution very soon. Address C. G. Selvig, Superintendent Agricultural School, Crookston, Minn.

Red River Valley and Northern Minnesota papers be sure to copy.

## READY FOR CHOLERA.

Some Sections Have it and all Should be Prepared.

Hog cholera has recently been rather serious in southern Minnesota. All farmers who are liable to loss from cholera should write to University Farm, St. Paul, for a copy of Experiment Station Bulletin No. 113, and Press Bulletin No. 40.

The Experiment Station will probably be able to furnish serum to all applicants, but not able to furnish a veterinarian from its force. These men are kept very busy manufacturing serum, teaching classes in the College of Agriculture and in the school. They are too busy to attend work which the local veterinarian can do for you. If you fear that cholera may come your way, make advance arrangements for serum and the services of a competent veterinarian. Dr. S. H. Ward, Secretary of the Live Stock Sanitary Board, St. Paul, Minn., will furnish a field veterinarian when possible, if circumstances seem to justify such action.

If you suspect that your hogs have cholera, cut down feed to the lowest amount that will keep them reasonably strong. Give them a very thin slop. This low diet will help to cut down your losses even though you do not use serum.

"An ounce of prevention is worth a pound of cure." Protect your hogs by keeping away stock buyers, stray dogs, threshing machine crews, and any who have recently been in public stock yards. If you neighbor's hogs are sick, be neighborly but keep him out of your hog lot.—Dr. M. H. Reynolds, University Farm, St. Paul.

Serum treatment for hog cholera is recommended if the herd has not been too long and too generally infected, neighborhood, says Dr. M. H. Reynolds, University Farm, St. Paul. It may be foolish to fail to use the serum treatment simply because the hogs show an unusually high temperature or some other symptom of cholera. This temperature may be due to some cause other than infection by cholera and a failure to apply the treatment may result in loss of animals later. The veterinarian should take the age, condition, and recent history of the hogs into consideration.

## GARGET.

A Bad Udder From Infection.

A correspondent thinks that his cow has caught cold. She was fresh a month or six weeks ago and gave sixty pounds of milk. Now she has quit milking in three quarters. The udder is not hard or swollen now, except that the left hind quarter has a large lump. It is probable that a germ infection has gained entrance to the udder and that it will never be as good as it once was. The best treatment that we can recommend is massage, or plenty of rubbing and working the udder by hand together with a long continued application of very hot water. The hot water treatment should be continued not less than an hour at a time, and applied twice a day. Cotton, oakum or anything that will hold the hot water against the udder may be packed around the quarters. It can be held in place against the udder by means of a sling placed just in front of the hips. Four holes may be cut for the teats and the hot material will be held in place in good shape by this appliance. It should be as hot as is safe to apply.—Dr. M. H. Reynolds, University Farm, St. Paul.

## AZOTURIA OF HORSES.

A Preventable Disease Common in Cold Weather.

A disease of horses that should be guarded against, especially at this time of the year, is azoturia, sometimes called "Monday morning" paralysis, or lumbago. This disease usually follows periods of rest or idleness, especially in cold weather, when horses have been kept on full feed. Horses in good flesh, in the pink of condition, are the ones usually affected. Just as milk fever picks out the best cows in the herd, azoturia seems to strike the best horses in the stable.

The symptoms of the diseases come on after the horse has left the stable, sometimes before a mile has been traveled. The first thing usually noticed is that the horse limps or favors one hind limb, frequently knuckling over at the fetlock. This rapidly gets worse if the animal is kept going. Perspiration breaks out over the surface of the body. If not brought to a standstill, the horse will travel till the hind limbs become paralyzed and collapse. If stopped when the first symptoms are shown, the horse will bear all of the weight on the unaffected limb, unless both are affected. He is very restless and uneasy. The sweating is profuse, and may run off the body in streams, even in very cold weather.

The muscles of the crop on the affected side, appear very hard and tense, and the skin seems as firm as sole leather. Urine, if passed, is very dark in color, varying from a reddish brown to a brownish-black. It frequently has the appearance of coffee, and is often quite thick. If both hind legs are affected, the horse usually goes down and makes frequent ineffectual efforts to regain his feet. The breathing is usually labored, the pulse quickened, and the temperature may run high or stay at normal.

The proper thing to do under the above conditions is to stop the horse just as soon as anything is noticed wrong. Stop right in the road if necessary and blanket the horse over the hindquarters. Do not try to return home or to reach a neighboring stable, unless the latter is within a few yards. More horses are killed by trying to keep them going than in any other way. The disease progresses very rapidly if the horse is kept going, and few horses recover if they go down and are unable to rise. As soon as possible send for a veterinarian to take charge of the case. Do not give the horse any medicine, unless directed to do so by a veterinarian.

To prevent azoturia, observe the following rules: If it is necessary for a horse to stand idle for a number of days during cold weather, cut down his feed, especially if he is in good bodily condition. Give a bran mash the evening before starting to work. Give the horse some daily exercise while idle, and see that the bowels are moving freely and regularly. When starting out from the stable, start slowly. Active, vigorous horses will want to step along freely after a rest of a few days, and it is in just such cases as this that we meet azoturia, if proper precautions have not been taken to prevent it.—Dr. H. Preston Hopkins, University Farm, St. Paul.

## VETCH.

Vetch is a name given rather loosely to those leguminous plants which resemble the common garden or the Canada Field Pea. Some kinds grow tall and rank while other are decided dwarfs. As forage plants, not all vetches are successful. Winter varieties in the United States are not considered successful except in the Southern and the Pacific coast states and even the spring sown vetches are not considered an unqualified success in all states.

In Minnesota, vetches have been used very little though they do very well as hay, green feed, pasture, green manure, or a seed crop. As a cover crop also, vetch is well adapted to the use of horticulturists. Hairy vetch is most frequently used as it seems to be best adapted to Minnesota conditions. Its use is restricted largely to growing in small areas for green feed, annual pasturage, or in short rotations, where clover would not meet the requirements. Any well drained soil will grow vetch, but it seems to do best on a sandy loam. Early spring seeding will give best results, using from 18 to 20 pounds of vetch and about one-fourth the normal amount of grain where succotash is desired, or from 25 to 30 pounds of seed where the vetch is sown alone.

Space does not permit of writing a full account of methods of using and handling the crop of vetch, but this is fully presented in Farmers' Bulletin 515 of the U. S. Department of Agriculture at Washington, D. C. Write your congressman for it.—C. P. Bull, Associate Agriculturist, University Farm, St. Paul.

## MINNESOTA SHORT COURSE.

Men and Women Should Take Special Courses at University Farm.

The Short Course for farmers, which will open January 20 to continue for one month, at University Farm, will be attended by both men and women this year as heretofore.

Numerous courses will be given by the regular University faculty.

The program provides for special lectures by Prof. Cyril G. Hopkins, of Illinois, on "Conservation of Soil Fertility." Prof. M. L. Bowman, on "Corn"; Prof. Hugh Van Pelt, of Iowa, on "Dairy Types"; and Prof. M. L. King, on "The Silo." During the last week of the course special attention will be given the breeding and care of horses. The Minnesota Horse Breeders' Association will meet with the Farmers' Short Course for a week, during which a special lecturer on horses will be present. Courses in Domestic Art, Domestic Science, Poultry, Bee Keeping, Fruit Growing and Vegetable Gardening are provided for the women.

Get a full program of J. M. Drew, University Farm, St. Paul, Minn.

## FREE SEED TESTS.

Send Early and Avoid the Rush, to Guard Against Weed Seed and Poor Germination.

The Seed Laboratory at University Farm, St. Paul, is now ready to make both purity and germination tests (free of charge) of all seeds sent in. In sending in a sample be sure that it is not too small. A good sized handful is sufficient, and a much smaller sample of clover or other small seed will do. Send your seeds in early. Do not wait until just before planting as the Seed Laboratory at that time is so busy that the reports are sometimes delayed.

All seeds should be tested both for purity and germination before they are planted. Corn, wheat, oats, barley, rye, clovers, alfalfa, timothy, and vegetable seeds, all should be tested. The individual ears of corn should be tested and a bulk test should be made of all other seeds.—W. L. Oswald, in Charge of Seed Laboratory.

All Minnesota papers should run this brief item. It may save their subscribers great loss from poor seed.—A. D. Wilson, Extension Superintendent, University Farm.

## SCALDING AND DRESSING HOGS.

It is an easy matter to dress hogs neatly provided the temperature of the water is just right. The water for scalding should be heated to a temperature of 200-212° Fahrenheit. On a farm where it must be heated in the house, usually it should be boiling when removed from the stove. If turned into a cold barrel it will then be about the right temperature, 185-195 degrees, when the hog is ready to be scalded. Water at 165-175 degrees will scald a hog, but more time will be required and the results are not so satisfactory. It is not expected that a thermometer will always be used, but boiling water carried from the stove to a cold barrel out of doors will usually be at about the right temperature for scalding, when the hog is put in the barrel, unless there is unnecessary delay.

A small shovelful of hard wood ashes, added to the water, aids materially in removing the scurf from the body, although it has a bad effect in loosening the hair. A lump of lime or a handful of soft soap will have the same effect.

While being scalded the hog should be kept moving constantly to avoid cooking the skin. As soon as the hair and scurf slip easily from the surface, scalding is complete. If it is suspected that the water is too hot, scald the hind end of the hog first; if too cold, the front end, in order to always get a good scald on the head which is difficult to clean.

The scraping should begin just as soon as the hog is removed from the water and the more rapidly it is done the easier it will be. The head and feet should be cleaned first, as they cool quickly. A small hand "candlestick" scraper is a very convenient tool for the purpose. It may be purchased at almost any hardware store for from 25 to 35 cents.

After removing the hair from the body the hog should be hung up and rinsed with hot water and then with cold, scraping down with a sharp knife to remove all hair and scurf from the body.—Andrew Boss, Agriculturist, University Farm, St. Paul.