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## MARCH ORCHARD AND GARDEN NOTES.

Pruning of apple and plum trees may be done this month on warm days.

Do not set apple trees too close—twenty by twenty-five feet is about the right distance.

Early cabbage, tomatoes, cauliflower and celery, may be planted now and transplanted into cold frames or flats early in April.

Has any effort been made to purchase plants and fix up the school ground this spring? There is still time if the work is done at once.

If there is not already a good asparagus bed on the place, purchase about two hundred plants and set them this spring. Palmetto is a good variety.

Indoor spring bulbs are at their best now and those who were wise enough to plant a few hyacinths, daffodils, or tulips are envied by their neighbors.

If especially early sweet corn is wanted, a few hills may be started in old berry boxes in the house early in April and set out as soon as danger of frost is over.

Don't throw away the bulb after it has flowered but set it back in a cool place and plant it in the garden or shrubby border as soon as the land can be worked next spring.

The globe amaranth, rhodanthe and helichrysum are three good everlasting flowers to plant. The flowers, picked late in the fall and put in a dry vase, will keep all winter.

See that all the spraying equipment is ready for use. Get Minnesota Bulletin 121 and make a study of the materials to be used. Know the best time to apply the spray and why it is to be applied.

The planting of a few shrubs as spirea, lilac, mock orange, highbush cranberry about the edges of the lawn or in groups often adds much to the value of the farmstead.—LeRoy Cady, Horticulturist, University Farm, St. Paul.

Top-working of Hibernal or other apple trees may be done this month. Try setting a few grafts. It is not a very difficult operation and it is always interesting to watch the results. Many worthless seedlings that are hardy may be changed to be good fruit.

Order sweet pea seed now. It should be planted as soon as the ground can be worked. Mixed seed may be used but much better results are obtained by planting named varieties. The following are good kinds: Aurora, Blanche Ferry, Flora Norton, Janet Scott, King Edward VII, Lady Grisel Hamilton, Lovely, Midnight, Prince of Wales, Lord Nelson.

## THE ROAD DRAG.

The earth road will doubtless be commonly used in rural communities for many years because of its low first cost. The ever recurring problem of upkeep on such a road can be solved very largely by the use of the so-called split-log drag.

Anyone who can use tools reasonably well can build one of these drags at a cost of four or five dollars for labor and material. Very few tools are required in making the drag, and its use is as simple and cheap as its construction. If desired, metal drags can be purchased at a somewhat greater cost from manufacturers of road machinery.

Careful use of the drag on a road that is already in reasonably good condition will almost entirely prevent trouble from ruts, mud holes, or dust, and give good service at a low cost.—H. R. Flint, University Farm, St. Paul.

## CARE OF COWS PREVIOUS TO CALVING.

For ten days preceding the time for calving, the cow should be kept in a comfortable, well-littered box stall or pen, in which there is no manger. The feed should be given in a box or basket, which should be removed after the feed is taken. The coarse feed may be put in the corner, and no more should be given than she will eat. This rule should be observed, not only before calving, but at all times. Throwing large quantities of roughage before a cow leads her into the bad habit of eating only the most appetizing parts, and so wasting much feed. It is a good practice to take a lantern and go the rounds of the barn, before retiring for the night, to see that everything is as it should be.—T. L. Haecker, Dairy and Animal Husbandry Division, University Farm, St. Paul.

## RECIPE FOR CORNED BEEF.

Good Corned Beef Can be Prepared at Home by This Recipe.

The pieces commonly used for corning are the plate, rump, cross ribs, and brisket, or in other words the cheaper cuts of meat. The loin, ribs, and other fancy cuts are more often used fresh, and since there is more or less waste of nutrients in corning, this is well. The pieces for corning should be cut into convenient-sized joints, say, five or six inches square. It should be the aim to cut them all about the same thickness so that they will make an even layer in the barrel.

Meat from fat animals makes choicer corned beef than that from poor animals. When the meat is thoroughly cooled it should be corned as soon as possible, as any decay in the meat is likely to spoil the brine during the corning process. Under no circumstances should the meat be brined while it is frozen.

Weigh out the meat and allow eight pounds of salt to each 100 pounds; sprinkle a layer of salt one-quarter of an inch in depth over the bottom of the barrel; pack in as closely as possible the cuts of meat, making a layer five or six inches in thickness; then put on a layer of salt, following that with another layer of meat; repeat until the meat and salt have all been packed in the barrel, care being used to reserve salt enough for a good layer over the top. After the package has stood over night, add for every 100 pounds of meat, four pounds of sugar, two ounces of baking soda, and four ounces of saltpeter dissolved in a gallon of tepid water. Three gallons more water should be sufficient to cover this quantity. In case more or less than 100 pounds of meat is to be corned, make the brine in the proportion given. A loose board cover, weighted down with a heavy stone or piece of iron, should be put on the meat to keep all of it under the brine. In case any should project, rust would start and the brine would spoil in a short time.

It is not necessary to boil the brine except in warm weather. If the meat has been corned during the winter and must be kept into the summer season, it would be well to watch the brine closely during the spring, as it is more likely to spoil at that time than at any other season. If the brine appears to be rosy or does not drip freely from the finger when immersed and lifted, it should be turned off and new brine added, after carefully washing the meat. The sugar or molasses in the brine has a tendency to ferment, and, unless the brine is kept in a cool place, there is sometimes trouble from this source. The meat should be kept in the brine twenty-eight to forty days to secure thorough corning.—Andrew Boss, Agriculturist, University Farm, St. Paul.

## GOOD SOAPS.

Points to Consider in Buying Soap for Home Use.

A knowledge of the chief characteristics of good household soap is necessary if one is to select soap intelligently. Among these characteristics the following may be mentioned as of the greatest importance: No fabric should be perceptibly weakened by soap, white clothes should remain white, colored clothes unfaded, and woolens unshrunk. A soap should not be wasteful of material or time, that is, it should neither dissolve too readily nor with such difficulty as to retard the work, or in the case of soft soap, fall and lie undissolved in the bottom of the tub.

A soap should contain so little water that the bars will retain their form when dry, and shrink very little in drying.

A soap should contain so little rosin that when the hands are washed with it they will, after being rinsed, feel smooth and soft, not rough and sticky. If it gives a yellowish tint to white clothes, it should be suspected of containing too much rosin. There should not be enough free alkali present to give the sharp, biting sensation of lye when touched to the tongue although good laundry soaps usually contain some free alkali. This is not considered objectionable in a soap for washing white clothes. A soap should not contain so large a per cent of fatty acids that these will separate when the soap is dissolved in water, because such a soap causes yellowing of the clothes, and does not cleanse as well as it should. A soap should not impart to the clothes a decided and tenacious odor. A soap should not contain so high a percentage of rosin as to cause it simply to suds well without cleansing properly.—Junia L. Shepperd, Domestic Science Department, University Farm, St. Paul.

## CARE OF THE YOUNG CALF.

A Little Special Care at This Time Will Save Trouble Later.

When the calf is dropped, leave it with the dam a few hours, to afford her an opportunity to lick it. If the cow gives milk containing only a medium amount of solids, the calf may be permitted to take what nourishment it wants the first time; but if the cow gives very rich milk, only a little should be allowed; otherwise there is danger of having a bad case of indigestion on your hands the second day. Just at this time much attention should be given the cow by way of grooming; not with a curry-comb, but with a brush. Frequent rubbing of the udder will prove beneficial to the cow and profitable to you. After the calf has taken nourishment once, it should be removed, preferably when the dam is not in the stall or pen; for it is better that she should not associate you with the loss of her calf, that she may more readily transfer her affection to you. By removing the calf at once, it is soon forgotten, and thus disturbance is minimized.—T. L. Haecker, Dairy and Animal Husbandry Division, University Farm, St. Paul.

## SEED-GRAIN TREATMENT.

An important problem, which confronts every farmer, is that of plant diseases and how to combat them. It is a well-known fact that some of these diseases live over the winter on the seed or in the soil. This is true of the stinking smut of wheat, covered smut of barley, oat smut and flax wilt, all of which can be controlled more or less readily by seed treatment and crop rotation.

The most common solution used in the treatment of the above diseases consists of one pint formaldehyde thoroughly mixed with forty gallons of water. The grain to be treated for smut is either sprinkled with the solution, placed in sacks and dipped in the solution, or run through a smut-cleaning machine. Before treating with the formaldehyde the grain should be run through a fanning mill in order to get rid of the lighter seed and the smut balls, or placed in a barrel of water, when the smut balls will come to the top and can then be easily skimmed off. Having treated the grain by one of the above methods pile it on a clean floor or canvas and cover with clean sacking for from twelve to twenty-four hours. The sacking is then removed and the grain spread out and allowed to dry. Grain can be treated several months before seeding, but must then be thoroughly dry so that it will not sprout or mold.

In the case of flax the sprinkling method is preferable. The flax should be thoroughly stirred while the solution is sprinkled on it in order that all of the seeds may come in contact with the formaldehyde. It is then piled and covered with clean sacking or canvas for an hour when it is again stirred to prevent the clumping of the seeds on drying.

After treating it is important that the grain be placed on a clean floor, that all sacks and bins to be used for seed be thoroughly disinfected, and that a clean seeder be used. Unless this is done the seed treatment will be of little value.

The seed treatment is stated in detail in Minnesota Experiment Station Bulletin 122 and in Extension Bulletin 14 on "The Smuts of Grain Crops."—A. G. Tolaas, Division of Plant Pathology and Botany, University Farm, St. Paul.

## WATER FOR THE LAUNDRY.

Where there is no running water in the house, a barrel with a faucet placed about one-third of the distance up from the bottom may stand in the shed within equally easy reach of both boiler and tubs. This should be filled with water the day before the washing is to be done. If the men can always do this filling with the aid of a stepladder, the barrel may rest on a platform raised high enough to allow the water to run by gravity through the faucet and be carried through a length of rubber hose directly into the tubs or boiler. Those who are fortunate enough to have a pump very near the shed may use this same rubber tubing to fill the barrel without the aid of stepladder or man. A homemade drain leading from the shed to a safe distance from the house and well, and emptying where the water will be carried off and the ground kept sterilized by sunlight, will very much lessen the heavy labor of emptying tubs, besides protecting the worker from exposure to winter cold.

Soft water is preferable for use in all laundry work, but if not available, hard water should be softened on the day previous to washing and allowed to settle.—Junia L. Shepperd, Domestic Science, University Farm, St. Paul.

## DIRECTIONS FOR TESTING SEED CORN.

From fifteen to twenty ears of corn will plant an acre. If one of the ears planted fails to grow, about 6 per cent of the stand is lost. If two ears fail to grow, 12 per cent is lost. About fifteen minutes of time are required to test enough corn, by the individual ear method, to plant an acre. This method is economical, and enables one to weed out all poor and weak ears.

### Marking Ears.

Some convenient method must be used to number the ears. If no better way suggests itself, lay the ears on a plank with nails driven 2½ inches apart. To keep ears separate, write number of plank beneath each ear. See cut above.

### Test Box.

A germination box 24 inches square and three to five inches deep is large enough to test 100 single ears of corn, at one time, and leave a margin around the sides of the box. Partly fill the box with sand or sawdust; moisten with warm water; cover with a cloth marked off in two-inch squares and numbered with a lead pencil. Place six kernels from different parts of ear No. 1 on square No. 1, etc. Reading the list is easier if all kernels are placed germ side up, and tips pointing all in the same direction. When all of the squares are filled, cover with plain cloth and a little more sand, sawdust, or a piece of quilt. Keep moist; leave from five to seven days in a warm room, and count. Use seed corn of the strongest germinating power that it is possible to get. Count as germinated only such kernels as start strong and show both stem and roots.—The Extension Division, University Farm, St. Paul, Minn.

## DRY-CURING PORK.

A Well-tested, Practical Recipe.

For each 100 pounds of pork weigh out five pounds of salt, two pounds of granulated sugar, and two ounces of saltpeter, and mix them thoroughly. Rub the meat once every three days with a third of the mixture. While the meat is curing it is best to have it packed in a barrel or tight box. For the sake of convenience it is advisable to have two barrels, and to transfer the meat from one to the other each time it is rubbed. After the last rubbing the meat should lie in the barrel for a week or ten days, when it will be cured and ready to smoke. To cure nicely it is desirable to have a cool and rather moist place in which to keep it.

This recipe should not be used where the meat must be kept in a warm and dry place, as the preservatives will not penetrate easily and uniformly.

This recipe and a great deal of other information in regard to meats on the farm may be obtained by writing to your congressman for Farmers' Bulletin 183 prepared by Professor Andrew Boss, University Farm, St. Paul, but published by the U. S. Department of Agriculture, Washington, D. C.

## IMMUNITY FROM HOG CHOLERA.

It seems probable that immunity against cholera on the part of the sire has little to do with immunity on the part of the offspring. Work at the Minnesota Experiment Station has shown quite clearly that pigs are born with about the same degree of immunity as the mother had at the time of farrowing. This inherited immunity is gradually lost by the young pigs, as a rule, as they get heavier and older, although occasionally such a pig seems to remain permanently immune. Owners of highly immune brood sows cannot depend upon inherited immunity alone after the pigs are about five weeks of age. The sows themselves are never permanently immune unless they are either natural immunes—which is rare—or have received actual infection. Serum-only treatment does confer an immunity to dams that can be transmitted to the offspring.—Dr. M. H. Reynolds, University Farm, St. Paul.

The old rule of improving the human race by beginning with the grandparents applies also to poultry raising.

Breeding stock should be carefully selected by the poultryman and then given the best care, plenty of fresh air, sunshine, and exercise.

Eggs selected for hatching should be typical of the variety—perfect in shape, normal in size, uniform in color and firm of shell. During cold weather they should be gathered frequently to avoid chilling. The vitality decreases with age, even under the most favorable circumstances.

## AGRICULTURAL INVESTIGATION.

The far-sighted statesmen who provided for the colleges of agriculture and mechanic arts saw that a knowledge of the laws governing the growth and development of plant and animal life and soil fertility is the foundation of agriculture. The experiment stations were established to study these laws and to find out how to apply them more effectively. The knowledge gained from such investigation has been gradual and contributed to by many workers in this country and in Europe. This work of investigation has not generally been understood by the average farmer. He has expected immediate and practical results. Scientific work is of necessity slow and painstaking. If it is of any value every factor must be considered, carefully controlled, measured with exactness, and accurately recorded. Careless, inexact work is worthless, and should not be tolerated where the great agricultural interests are involved. The man who applies in practical business the results of these scientific investigations too often does not know how the valuable information was secured. Truths that are simple after they are known are often long and costly in discovering.—Dean A. F. Woods, University Farm, St. Paul.

## FEEDING YOUNG CHICKS.

When hatched the chick contains a natural supply of food, sufficient for thirty-six hours. For this reason it should not be fed until this natural food is absorbed and it is able to run about and seek food for itself.

This first feed should consist of hard boiled egg (shell and all mashed together), stale bread crumbs, stale bread and milk, pin-head oatmeal or rolled oats. Any of these will be found a satisfactory food for the first two or three days. For brooder chicks the dry feeds are recommended. Chicks should be fed these feeds on a board or shallow pan and what is not eaten within ten minutes or so should be removed from the pen and the board or dish cleaned. Five meals a day is sufficient, though if convenient they may be fed more often and in smaller amounts. After the first few days, these feeds should be replaced with such grains as finely cracked corn, pin-head oatmeal, cracked wheat and millet seed. The prepared and already mixed chick-feeds that are found on the market are usually satisfactory. Corn bread (baked rather hard or dry), either dry or moistened slightly with sweet milk, pieces of stale bread, cottage cheese, and similar articles of diet make delicacies that are relished by the young chicks, if fed occasionally. The manner and time of feeding these is immaterial if the chicks are not overfed, but the hard grain and seeds should be fed in a litter of cut straw, cut hay, hay chaff, or cut alfalfa or clover. Some form of green food should also be given. Pure water should be supplied, sufficient for a day's requirement, each morning. If possible, milk should be given in addition to the water; for young chicks, the milk should be perfectly sweet. A good rule to follow is to keep chickens busy and hungry. Do not feed them until they are hungry enough to run for the food. They will not develop quite so rapidly under this method, but will be healthier.—Alice McFeely, University Farm, St. Paul.

## RINGWORM IN CALVES.

This is a skin disease that appears most frequently during the late winter and early spring. Its presence is shown by the appearance of scabby areas that vary from half the size of a penny to that of a dollar, and even larger. The hair falls out and the surface of the scabby area is covered with a fine white scurf. It shows oftenest about the calves' heads and necks, but may also appear on any part of the body.

Ring worm is caused by a small parasite that burrows in the skin. Its contagious nature is well demonstrated by the fact that the diseased animals spread it by rubbing against others that are healthy. The fact that heads and necks come in frequent and close contact while the calves are pushing and crowding about the mangers explains why the disease appears oftenest on these parts.

Treatment is simple and effective, requiring but a short time for complete cure in all ordinary cases. Tincture of iodine applied to the scabs with a suitable brush or swab several times, at intervals of several days, is all that is required. When the disease encircles the eyes, care must be taken to avoid getting the medicine into them.—Dr. C. C. Lipp, University Farm, St. Paul.