

THE CUTTING-BOX ON DANISH FARMS

BY F. M. CHRISTENSEN.

There isn't a farm in Denmark, I suppose, without its cutting-box. It is as common as the portable hand-corn-sheller used to be in the corn districts when I was a youngster.

The Dane has made an exhaustive study of animal feeding, and he is sure it is fed. So in the late summer and early fall when harvest is on he runs his sheaves of grain through the cutting-box, and the cuttings are fed with threshed grain.

All straw is housed. Fodder is too highly valued to expose it to the elements, so you never see hay and straw stacks outdoors. During the winter all the straw and some of the hay are run through the cutting-box. They believe the cut food is easier handled by the stock and thus easier digested.

A portion of chopped straw is always mixed with the grain—oats, barley, wheat, etc. These grains are also milled before being mixed with the chopped straw, and then to this is added chopped roots of some kind, such as carrots or mangels.

The Danes grow lots of roots and mangels. Cows and horses relish them and never leave a mouthful in their boxes. This insures the use of a large quantity of straw, which gives bulk to the food and is in itself an aid to digestion. When one considers that the cows are "on grass" only two or three months in the year, and that all the rest of the year the cattle are stall-fed, and that the little kingdom is world-known for her dairying, there is good reason for the meticulous care the

bender (farmer) takes in salvaging all fodder plants, feeding roots, etc.

I know from my own experience, spread over many years, that the Danish practices are profitable. It is almost immaterial what kind of fruit or roots you feed—the thing is to feed them; every man can grow the kind his ground will best produce. The fruit and roots must be properly housed, and if you can take the chill off the fruit and roots before feeding, so much the better.

Sugar-beets are not so good a root for milk as carrots or mangels. Yet they are good, and are great yielders, and the roots leave the ground in fine condition for other crops. I feel certain, after watching the Danish farmers preparing their ground and seeding it, that their intensive cultivation accounts for their prosperous agriculture. The farmers seem never to be off the land but are forever harrowing and rolling and hoeing.

Variety in feeding is too often overlooked, and here is another of the Danish farmer's strong points. Of course, no sane person will feed roots exclusively, but mixed with grain and chopped straw and fed with some good hay they give excellent results.

The Danes have no silos—they feed roots instead of silage. Good roots have a highly beneficial effect upon the bowels; the Danes think roots equal green grass and oilmeal.

Potatoes are fed, too. They are cut, to make sure an animal will not choke. They are very nutritious and cows like them.

Frozen Apples.

In many of our best apple-growing regions there is always the possibility that severe freezing weather will arrive before the crop is all under cover, and it is a real problem to know what should be done.

Prevention is, of course, the best solution, and one should consult the local weather records to see when the first serious freezes have occurred in past years, and attempt to get the apples in before that date. But there is always the temptation to delay picking a little longer in order to get more size and color—both of them very important matters and doubtless worth running a little risk to obtain.

Apple tissue begins to freeze at about 29 degrees Fahrenheit, but it requires a temperature considerably lower than that before the tissues are frozen to death, and when this point is not reached the tissues will thaw out again when the temperature rises and will apparently resume their normal functions. This accounts for the fact that the autumn period during which we get sharp, frosty nights, followed by bright days, does not injure the apples on the trees in the least, but on the contrary gives the best possible conditions for their coloring well.

When apples become frozen to what we may regard as an alarming extent, either on the trees or after picking, they should not be moved nor touched in any way until they thaw out again. The natural thing to do, if apples have stood in barrels out in the orchard or in a shed and become frozen, is to hustle them into storage. Or if they were frozen on the trees during the night one feels like getting at the picking just as soon as possible the next morning. Don't do either, for if you do injury is sure to result. Wait till they are fully thawed and then hustle them as fast as you like. The least pressure on the frozen tissues in picking or the most careful handling of frozen stuff in barrels or boxes is sure to result in permanent injury to the tissues of the fruit.

Grinding Dairy Feed.

Does it pay to grind feed? That is the question that often stands before a farmer who wants to feed his animals economically. Experienced farmers tell us that it always pays to grind feeds for dairy cows and brood sows. It is not at all necessary to grind feeds for calves and pigs, because it is better for the younger animals to grind their own feed.

There is a saving of 15 per cent when feeds fed to dairy cows are ground. In this manner you can increase the feeding value of 2,000 pounds of grain to 2,300 pounds by grinding. Suppose this grain is worth thirty dollars a ton; then by grinding you would increase its feeding value to \$34.50.

In case of steers it does not pay to grind feeds unless they are very hard or high-priced.

Hulled Corn.

Place two quarts of shelled corn and four level tablespoons of saleratus in a kettle, cover with cold water, and boil for one hour. Remove from the fire, pour off the water and pour the corn into cold water. Rub between the hands to remove the hulls. If all the hulls do not come off, put it into warm water, add one teaspoonful of saleratus, boil 30 minutes, then rub again. Wash the corn well in plenty of water. Allow it to boil in two waters when cooking it to serve, pouring off the first water after it has boiled ten minutes. Cook in the second water until tender, and serve like hominy.

Sweet clover contains more nitrogen and minerals than alfalfa, but the hay is not so palatable.

Fall Pastures for Sheep.

Any properly managed flock of sheep is well conditioned during the pasture season. This may be easily accomplished by providing ample pasture, which is usually considered more efficient if so arranged that the sheep may be alternated every two or three weeks at least. This would require a division of the pasture into at least two lots. Three divisions with a changing of the flock every two weeks would probably be best if practicable.

The process of quickly building up the breeding flock in the late summer or fall is commonly known as "flushing" and has a very definite bearing on the promptness with which the ewes are set and on the percentage of the forthcoming lamb crop.

Several days prior to the date selected for turning in the ram, the ewes should be gotten into flush feed as outlined. They will breed much more promptly and lamb out a larger percentage. The lambs will also be stronger.

After weaning the lambs and going through the hot summer months, the average farm flock is in rather low condition. Too often they are neglected at this time and allowed to remain in a short pasture as late as possible. This is one of the most serious mistakes in flock management. If there is insufficient feed in the pasture they should be gotten into some forage crop or stubble feed or second-growth clover or mixed grasses. Early-sown rye, waste cabbage, and so forth, are excellent for late-fall use in this connection.

A flock properly conditioned at this time can be wintered at a much less cost than when coming to the barn thin. A flock of sheep coming off pasture poor will require a lot of grain and take a good part of the winter to get them into condition for lambing. Early-sown rye makes an excellent late-fall feed. The sheep will do an excellent job in clearing out the fence rows and cleaning up the wastes from cabbages, turnips, mangels and almost any similar crop, and, if allowed to do this, are sure to put on flesh and go into winter quarters in shape to winter economically and with satisfaction and profit to the owner.

Feeding Hay to Hens.

Although the hen is not often thought of as a consumer of roughage, it is suggested by experiments that legume hays may come to form an essential part of the ration for laying hens.

Granting that green feed or its equivalent is one of the most vital parts of the ration for chickens, it must be remembered that this particular part of the diet is one which many poultry keepers find very great difficulty in providing, especially during the winter months.

In the tests a falfa, red-clover and soy-bean hay all proved satisfactory as a substitute for winter green feed. It is recommended that the hay be cut in half-inch lengths and then put into a wire netting basket feeder and kept before the birds all the time.

It is pointed out that, regardless of the kind of hay, it is necessary that it be made from the immature plant so that it will carry a large proportion of leafy material. It is the leafy portion that carries the valuable constituents for chickens.

It is suggested that in the case of alfalfa and clover second or third cuttings will usually be best, whereas soy-bean hay should be cut when the seeds are just beginning to form in the pods. To be of highest quality the hay should have been carefully cured without getting wet so that it will have a bright green color.

I soften paint brushes in boiling strong-soap water, when nothing else will soften them.—F. W.



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Celery in Winter.

For the average man with a home garden, the problem of growing celery is not so difficult as is the problem of storing it for the winter. A simple method that I have found entirely successful is as follows:

In an old tub, put about three inches of clear sand. Put the tub at some convenient place in the cellar where it will remain at a cool, constant temperature throughout the winter months. When the celery is ready for transplanting, which will be before heavy frosts and freezes, lift the stalks carefully, being sure to let some earth cling to the root system. Handle the plants only when they are completely dry. Set in the sand in the tub. The stalks may be set as close as they can be packed. It is really surprising how many large stalks can be stored away in a small container.

Using a pipe for a long funnel, pour in enough water to wet the sand, but do not flood the roots. Great care should be taken not to wet the leaves of the celery, or molding may result. The sand should be kept damp by watering once in about two weeks. Packed in this way in a cool cellar, celery will keep perfectly and will blanch beautifully. Some growers use loam instead of sand, but I find sand more satisfactory.—A. R.

FOR HOME AND COUNTRY

Growth of the Ontario Women's Institutes.

The Women's Institutes of Ontario continue to make excellent progress under the guidance of their able Superintendent, Mr. George A. Putnam, head of the Institutes Branch of the Dept. of Agriculture, and the Assistant Superintendent, Miss Ethel Chapman, who is in charge of the Junior Institutes. Increasingly sound lines in the science of founding a great nation by means of its homes are being emphasized, and the appreciation and response in growth of numbers is a most gratifying result. Over one thousand branches now have a membership of thirty-five thousand throughout rural Ontario.

Another result is the growing demand for Area Conventions, nine being necessary this year where twelve years ago one sufficed. Here the members foregather with their Government heads to hear reports from branches, committees and departments, to discuss what has been of

S.S. LESSON

October 24. Joshua, Israel's New Leader, Num. 27: 15-22; Josh. 1: 1-9. (Golden Text:—Be strong and of good courage.) For the Lord thy God is with thee whithersoever thou goest.—Joshua 1: 2.

ANALYSIS.

I. THE DESIGNATION OF JOSHUA AS MOSES' SUCCESSOR, Num. 28: 18-26.

II. THE DIVINE CHARGE AND COMMISSION, Josh. 1: 1-9.

INTRODUCTION—Joshua appears first as the commander of the fighting men of Israel in the battle with the Amalekites at Rephidim (Exod. 17: 8-9). He was one of the twelve spies sent from Ephraim, of which he was one of the chieftains or princes (Num. 13: 2, 8, 16). He stood with Caleb at that time for bold and courageous action, as against the timidity and hesitation of the other spies (Num. 14: 6-10, 30, 39). He became the trusted friend and "minister" of Moses, and so was prepared in an especial way to be his successor. See Exod. 24: 13; 32: 17; 32: 11; Num. 11: 29; Deut. 1: 31. The writer of Deuteronomy says of him that he "was full of the spirit of wisdom, for Moses had laid his hands upon him, and the children of Israel hearkened unto him" (34: 9). See also Deut. 31: 7-8, 14, 23. He is sometimes called Hoshua, as in Deut. 32: 44. The date of his accession to power as the successor of Moses is not certainly known, but is commonly held to be shortly after 1200 B.C.

The book of Joshua, it can readily be seen, is made up of three parts: (1) Chaps. 1 to 12, the story of the conquest of western Palestine; (2) Chs. 13 to 21, the division of the land between the tribes; (3) Chs. 22-24, the last days of Joshua. The earlier books of the Old Testament history tell of the promise of the land to Abraham and his descendants, and the book of Joshua records in detail the fulfillment of that promise.

I. THE DESIGNATION OF JOSHUA AS MOSES' SUCCESSOR, Num. 27: 18-20. "A man in whom is the spirit" The spirit dwelling in him is thought of as an influence or energy proceeding from God. In Deut. 34: 9 it is "the spirit of wisdom." Compare Isaiah 11: 2 and Dan. 6: 3. It is as though the Lord said, "He is a man of ability and energy, which gifts are bestowed on him by God."

"Lay thine hand upon him." This action represents a solemn dedication and appointment to an important office. Joshua has already been tried by long years of faithful service and he is now chosen and ordained to be the successor of Moses. In 8: 10 the Levites are set apart for the service of God by the laying on of hands of the people, and are so to speak, an offering before the Lord "in behalf of the children of Israel." In Gen. 48: 14, the laying on of hands accompanied the patriarch's solemn blessing of his grandsons. In the New Testament it is the apostolic rite of ordination to the Christian ministry and so continues in the church to this day.

Joshua is also to be set "before Elishaz the priest, and before all the congregation, that his appointment may have the sanction of the ministers of religion, whom Elishaz represents, and may have the consent of the people. Moses is to "give him a charge in their sight," that is, such instructions in his high duties, and such commands, as arise out of his own wisdom and long experience.

"The Lord shall put of thine honor upon him." Moses is to put upon Joshua something of his own authority and dignity, that the people may from this time onward recognize him and honor him. Verses 21-23 should be read as continuing the instructions to Moses and showing how he carried them into effect.

II. THE DIVINE CHARGE AND COMMISSION, Josh. 1: 1-9.

"The Lord spake unto Joshua." How God spoke to men in those days does not always appear. It might have been by the mouth of a prophet or priest, or by divine revelation within a man's own mind and heart.

"Go over this Jordan." The story of the conquest of the eastern side of Jordan has been told in Num. 21: 21-35. The position of the Israelites at this time is described as "in the plains of Moab beyond Jordan by Jericho" (Num. 22: 1 and 33: 48-49; Deut. 1: 1). They were now, under Joshua's leadership, to pass over the river Jordan westward and to undertake the conquest of the richer and more populous countries of western Palestine. For the promise to Moses referred to in v. 3, see Deut. 11: 24-25, and for the boundaries of the new land described in v. 4, see also Exod. 23: 31, and, in

AN INDOOR PICNIC FOR HALLOWEEN

BY JANE HEMMINGWAY.

Now wouldn't you just know that you were in for a rolicking good time if you were invited to a Halloween party by a girl like Isabel Lennap, who has a knack for planning the jolliest parties. Last Halloween she sent out her invitation on yellow cardboard cut round like a pumpkin, with holes cut in it to represent a jack-o-lantern. The cardboard had been folded at the side before the circles were cut, so it was double, opening like a booklet. Inside, behind the features, the lines of the verse were written:

If you'd like a real Halloween frolic, And enjoy Tomfoolery plus, You're the one that we want for our party.

To picnic indoors with us. The Lennap living room had been arranged to look as much as possible like a mysterious forest. Several trees had been cut and fastened to standards, Christmas-tree fashion, and were placed here and there; plants were set about on the floor, and there was a huge pumpkin jack-o-lantern stuck up on a tall pole in one corner for the moon. Owls and bats cut from black paper were perched on the boughs of the trees and hung from the ceiling on invisible threads, so it looked as though they were in full flight. Now and then a black cat with orange eyes, cut from the same black cardboard, was seen lurking behind the trees.

The Broomstick Tug-of-War was great fun. A small pumpkin was placed in the centre of the floor and two players were stationed at equal distance from it, with a broomstick between them. At the signal, each one pulled and the girl that pulled her opponent past the pumpkin won. They chose sides and each side sent a con-

stant to the top-of-war until each one had tried it.

For the Apple Race, apples were hung on strings all over the room—from the mantel, from the partition pole between the hall and the sitting room, from the stair railings. When the signal was given, everyone tried to see who could eat his apple first without his hands, which were held clasped behind his back.

For refreshments Isabel had packed little lunches, just enough for two, in boxes, and wrapped them in orange-and-black paper. There were sandwiches, pickles, little apple turnovers, a square of gingerbread and some cheese. The boxes were given to the boys and each girl received a tall witch's hat, made of orange paper trimmed with black paper bands. Each box was numbered and so were the hats, and the girl whose hat bore the same number as a certain boy's hat shared his lunch. A huge white cloth was spread down on the floor, picnic fashion. Lemonade was ladled from a big kettle, over which Isabel's small brother presided in a witch's cloak and hat and long white hair. The hair was made of strands of cotton batting, fastened to the hat.

After supper the cloth was removed, a pan of witch's fire was placed in the centre of the room, all the lights were turned out except the "moon" and the weird green fire in the centre of the circle, and everyone had to take up a ghost story which Isabel herself started. Every few minutes a strange and eerie noise was heard from some corner of the room—a shriek, a whistle, a gurgling, an alarm clock, a cowlbell. Kid brother was again called into action for this. Whenever a noise occurred the person next in the row had to go on with the story, incorporating the noise heard, telling what it was and why it happened.

The Orchard Clean-Up.

After harvest and before the ground freezes, the careful orchardist has an interval in which to prepare his trees for winter.

In the apple orchard, if the trees are under sod much, or if there are many large weeds, it is a good plan to mow over the whole ground and trim out around the trees with a scythe. This not only adds to looks, but it does away with hiding places for rabbits and mice, which are a serious menace to trees in many sections.

Last winter in a time of deep snow much damage was done locally by these pests, even to trees eight and ten inches through. Where the snow drifted against low-headed trees the rabbits would gnaw the bark and buds from the lower limbs, and then strip the trunk as the snow melted.

The orchardist can do little to prevent such damage. Tree guards are useless, and the best remedy is to get a full bag of bunnies each day the season is open.

The short-tailed meadow mice and pine mice gnaw trees at the ground and sometimes gnaw the roots. These can be controlled by grubbing all sods, leaves and trash away from a space three feet all around the trunk, and mounding up with fresh dirt around the base of the tree. Small trees can be protected by wire tree guards. I have seen newly set trees protected by tying three or four cornstalks around the trunk.

Where mice are bad they can be poisoned. Grain—wheat or oats—is slightly moistened and strychnine dusted on, after which melted paraffin is stirred in, just enough to waterproof each grain. The poisoned material is distributed about the orchard in old tin cans or drain tile, laid on the side, to keep the bait away from birds.

It is a good plan to do a little pruning before winter sets in, and leave the trimmings on the ground. Mice and rabbits like the tender bark and buds better than the bark of the trunk.

Mice and rabbits do not commonly attack peach trees, yet in severe winters they sometimes do considerable damage, which a good clean-up may prevent.

Blue Ointment for Lice.

When the pullets are placed in the laying quarters one of the most important steps to perform in treating the birds for body lice. Blue ointment carefully applied when the pullets are housed and again in the spring will bring about complete eradication.

Blue ointment is a mercuric ointment made by mixing equal parts of mercuric ointment and vaseline. A particle of this ointment about the size of a pea should be rubbed thoroughly into the skin just below the vent, taking care that it is rubbed thoroughly in the skin and not allowed to remain on the feathers. Parting the feathers with the thumb and forefinger with one hand and applying the ointment with the forefinger of the other hand will insure its proper application. It is the case of a stitch in time saves nine.

To prevent rust on plows after getting entirely through with them after the season's work, varnish the wing point and landside. I would suggest two coats on the wing. The same method can be used on disk harrows, cultivators, etc.—L. C. T.

detail, Num. 34: 1-12. The farthest extension of these boundaries, to the land of the Hittites and the river Euphrates in the north, was not reached until the reigns of David and Solomon.

"There shall not any man." Compare the words of Moses in Deut. 7: 24. For the exhortations in vs. 5-7, see the parallel passage in Deut. 31: 6-8. The promise of God to his servant is: "I will be with thee; I will not fail thee." Compare David's exhortation to his son Solomon in 1 Chron. 28: 20.

"The law" (v. 7), is, most probably, that which is set forth in Deuteronomy, chs. 12 to 26, and "this book of the law" (v. 8), is the book of Deuteronomy. See Deut. 31: 9-13. It is held by many scholars that this book, as it has come to us, is a new and revised edition of the laws and speeches of Moses, prepared for the instruction of the people by prophets of the seventh century B.C., and that it was this book of the law which was found in the temple in the reign of Josiah in the year 621 B.C. The laws of Moses were thus preserved from the time of Joshua onward, and continued to exercise a powerful influence upon the life of Israel right down to the time of Christ.

The exhortation—"Be strong and of a good courage," is inseparable from that to obedience to God's just and righteous laws, and from the great assurance, "The Lord thy God is with thee whithersoever thou goest."

Finishing the Pullets.

In order that the pullets which are now placed in the laying houses be able to stand up under forced feeding and artificial illumination, and in order that they may continue to lay well throughout the summer and fall of next season it is important that they be placed in the most efficient condition just previous to maturity.

We hear a lot of advice and suggestions about the importance of finishing the broilers and roasters for market. It is just as important that the pullets be finished in much the same way by a special method of feeding. During the previous months the growing pullets on range have been receiving a well-balanced growing ration, containing meat scrap, milk, cracked and whole grains and grain by-products. Just about the time the pullets are housed this feeding practice should be changed.

The quantity of concentrated protein feed should be greatly reduced. This practice will slow up or retard the sexual development, but will enable them to put on an additional half-pound or so of body weight. It will increase the intensity of the yellow pigment in their shanks and beaks, as a result of which they will stand up better under forced feeding for production. Such a finishing process should involve almost the entire elimination of a growing mash, feeding the birds largely on a cracked-grain ration composed of two parts of cracked corn and one of wheat; or if it is desired to continue them on a mash ration, the meat scrap should be entirely eliminated from the mash and the concentrated protein which they consume be limited to a small quantity of milk or milk products.

Corn-Song.

Heap high the farmer's wintry hoard! Heap high the golden corn! No richer gift has Autumn poured From out her lavish horn!

—John G. Whittier.

When you gather herbs for medicinal purposes, do not hang them in dusty places. When herbs are dry, put the leaves in glass jars, label them, and seal to exclude dust and preserve quality of leaves.