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Farm Dairying



Dutch Belted Bull

VII.—Feeding and Watering Cows—The Silo.

By LAURA ROSE, Demonstrator and Lecturer in Dairying at the Ontario Agricultural College, Guelph, Canada.

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If we are to get adequate returns from our cows we must give them at all times all the feed they will consume profitably. Palatable food is a feature which cannot be overlooked. Cows like succulent food. Grass is their natural and ideal diet. In substituting, we ought to come as near to it as we can. Corn silage is the best and cheapest and most easily handled succulent food.

Variety in the cow's ration is also desirable, and so roots, mangels, carrots, sugar beets, one or all, should be provided. A mixture of pulped roots and silage is better than either fed alone.

If from some failure no succulent food is available, cut good oat straw, moisten it with water, sprinkle over it a little salt and let stand awhile. This makes it palatable, and if some meal be added to it cows will readily eat a considerable quantity. Shredded or cut cornstalks may be put into a silo and steamed or moistened and thus made more acceptable and digestible, but this is a poor substitute for good silage.

If it is a good mixed meal one pound of meal to every four pounds of milk given by the cow is considered about right. Cows giving a good flow of milk usually get from five to ten pounds of grain mixed together are better than feeding one straight grain, but if limited to one choose chopped oats. Equal parts of oats, peas, barley and bran make an excellent and cheap mixture. Some of the more concentrated foods, such as oil cake, cottonseed meal or gluten meal may be substituted or added.

Best Method of Feeding.

The best method of feeding is to prepare in the morning enough feed for two meals, mixing the cut straw, silage and pulped roots together in a pile in the feed room adjoining the stable. Let this stand several hours before feeding. Put the meal on top of this roughage when in the manger.

Feed twice a day, giving all the cows will eat up clean in two hours. After that time the mangers may be cleaned out. A little long hay may be given immediately after the morning and evening feed or at noon. Have the intervals between feeds of equal length. In case of heavy milkers, where they are milked more than twice a day, they should be fed after each milking.

Salt should always be before them. A lump of rock salt may be kept in the manger. It makes them drink more, a desirable thing, and makes the cream easier to churn.

Some cows have the habit of chewing bones, wood, etc. Give them a small handful of fine hardwood ashes in the feed two or three times a week. Such a habit denotes a lack of mineral matter.

Cows on good grass do not need any grain unless in exceptional cases where a record is to be made. Sometimes just a pint or two of meal put in the manger is a good bait to bring the cows willingly from the pasture to the stable to be milked. When they are on the rich, fresh grass of early summer, which is very laxative, a little cottonseed meal may be given as a corrective. The meal will improve the butter by adding firmness.

A change of pasture is good both for the pasture and the cows. If there is no shade in the pasture the cows should, if possible, be kept indoors during the hottest hours of the day. Bring them in at noon and give them a feed of silage or meal, then turn them out after the evening milking.

Where most dairymen need to improve is in providing food for the cows when the pasture gets short and dry. A small silo to open for summer feeding is coming much in vogue and taking the place of a soiling crop. Any change from one food to another should be gradual.

A few apples may be safely given, but if fed in large quantities they will give a peculiar flavor to the milk. Sour apples are supposed to have a tendency to dry up the milk. When potatoes are cheap and plentiful they may be fed to cows, but are more profitable when boiled and given to pigs. Carrots appear to exercise a specific action on the milk glands and cause an increased secretion of milk. Cows are very fond of cabbage. If the cabbage is sound and a limited amount fed after milking, no serious objection is found to the milk. In feeding all such foods care must be taken or the milk will be off flavored.

A ration is the amount of food nec-

essary for a cow for one day. A balanced ration is one in which the carbohydrates, fat and protein are in the right proportion to each other. One pound of digestible protein to six pounds of digestible carbohydrates and fats is considered about right.

Alfalfa is one of God's greatest gifts to the dairyman. For feeding value it comes nearer to grain than to hay. With plenty of corn silage and alfalfa hay very little grain is needed to keep up a good milk flow. One ton of choice alfalfa hay is said to equal one ton of wheat bran in food value.

Clover hay is one of the easiest crops on our land, is excellent in food value as a milk producer and a good food to give well flavored milk and butter. Any objectionable flavor found in rank clover pasture is overcome in the well cured hay. Next to clover might be placed hay made of peas and oats.

To have prime oat straw for feeding it is wise to cut the oats a little on the green side.

Nothing will prove more profitable than a patch of sweet corn for fall feeding for the cows. Plant it early in a convenient place. Plant thinly so as to have good strong corn. Sugar cane or common field corn also makes good autumn feed.

Into every hundred pounds of milk the cow puts eighty-seven pounds of water. A cow to keep up a heavy milk flow must have all the clean, pure water she can drink. The average milking cow will take from eighty to a hundred pounds of water per day. We should induce the cow to drink plenty. The ideal way is to have water always before her. If this is not convenient she should get water twice a day.

It is out of the question to talk of tempering the water, but if the chill could be removed the cows would certainly drink more.

Salt convenient for the cows increases their thirst.

Cement Silos Popular.

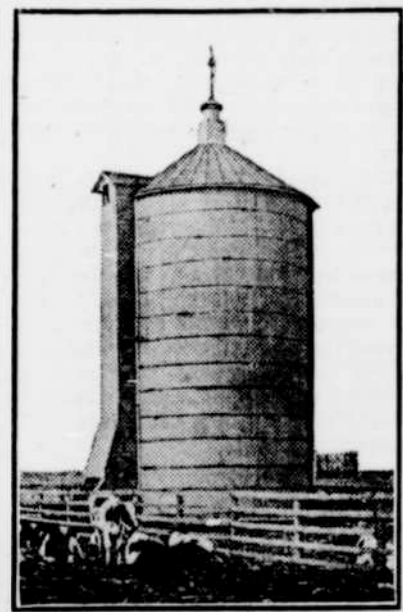
The cement silo is growing steadily in favor. It is comparatively easy to construct and has a nice appearance on a farm. The silage keeps perfectly if the corn goes in in good condition.

The primary principle in the making of silage is the exclusion of air in order to prevent decay; therefore not only the walls of the silo, but the doors, must be perfectly air tight.

The walls should not only be tight and rigid, but they should also be smooth and straight on the inside to permit the silage to settle without forming pockets.

The majority of silos being built have a continuous door which makes it very convenient for emptying the silo. Two-ply boards should be used for the door with tar paper or heavy building paper between and on the edges. Doors on hinges are objectionable.

The deeper the silo the greater the pressure and the larger amount of corn



A SILO IN THE FIELD FOR SUMMER FEEDING.

can be stored per cubic foot. A silo should not be less than thirty feet deep nor more than twelve or fourteen in diameter.

For a herd of twenty-five cows a round silo fifteen feet inside diameter and thirty feet high would be about right, or it may be 12 by 40. This size will hold a little more than a hundred tons, which allows four tons of silage per cow, which is about right.

Importance of Silage.

The kind of corn to grow for filling the silo will depend on the locality. To avoid frost early maturing varieties should be selected.

When to cut is an important question. Better to have the corn a little over-ripe than on the green side.

One may begin feeding as soon after the silo is filled as is desired. Good silage has a not unpleasant acid smell, a slightly sweetish, fermented taste and should be a brownish green color and free from rot or mold.

If a portion of the silage around the silo becomes frozen it is more of an inconvenience than a loss. It should be mixed with that from the center of the silo to allow it to thaw before being fed.

An acre of ground should produce from twelve to fifteen tons of silage in a good season. The cost from the tilling of the soil for the seed to the time the corn is in the silo is estimated at from \$2 to \$2.50 per ton.

The importance of silage as a succulent, coarse food for all kinds of cattle cannot be overestimated. Next to corn clover is considered the best crop to use for silage.

Alfalfa is being used for silage with equal success, being still richer than clover in protein.

Cowpeas, soy beans, sorghum and various other plants are successfully used to fill the silo.

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