

is cold and rough. Many now dehorn their stockers before stabling them, and find that they feed better. For the first few days feed grain lightly, unless they have been getting some before being finally tied up for the winter. As regards the rations to be fed, it is impossible to give a single ration that will not only be the best, but that will bring the highest returns and be the most economical for every feeder to use. So much depends on the locality, the crops in the barn, the possibility of being able to sell certain grains and buy others that are cheaper. Then, again, animals' digestive powers vary so that the feeder will have to carefully watch, and, if an animal is not doing its best on one kind of food, he must try something else, and thus cater to its appetite. All that can be done here is to enumerate rations that have been found suitable by certain big feeders, which will give others a pretty good idea of what amounts and combinations of feed are generally used. By studying these, and making alterations here and there, so as to avail themselves of certain food products, which they may have on hand, and which, perhaps, can profitably be brought into the rations, feeders can easily derive a satisfactory one for themselves. Experience only, however, will prove whether such a ration will be profitable. Some years it might be, and, in others, not.

In the first place, most feeders find it profitable to cut up their long feed and crush their grain. Isolated cases may be found where, through lack of the necessary machines, or of help, or by reason of too great a distance from the chopping mill, the feeder has not found it profitable to cut his hay, straw, or cornstalks, or have his grain chopped, but these cases are rare.

ENSILAGE FOR FATTENING.

Ensilage has hitherto been generally considered as suitable only for dairy farming, and it has not been much used in feeding for beef. It is, however, used by some feeders, more especially during the earlier part of the fattening period, with excellent results. It is cooling to the system, while corn ensilage that contains much grain goes far in supplying a large part of the food materials required, when beef cattle are first stabled. It is true that the carcasses of animals fed ensilage are more or less watery, like those of animals fed on grass, but it is easy later on by giving more dry food and by increasing the grain to bring the flesh up to a firm and dry condition. In experiments at the Guelph station steers getting silage and grain made better gains than those fed on roots, hay and grain.

MIXING THE RATIONS.

Where the hay, straw or cornstalks are cut, it is very advantageous to mix them with the grain and cut root at least half day ahead and let the mass heat a little before it is fed, or else dampen it, which answers nearly as well. The animals seem to relish it more than when it is fed dry, and, as quick gains in live weight are necessary in feeding cattle, in order to secure as much profit as possible, anything that tends to encourage the appetites of the animals should be employed, providing that the labor is not too great. For the same reason mixtures of grain are far better than feeding one single variety all the time. While, moreover, good gains may be made from feeding one kind alone, much better results, as regards both economy and gains in live weight, are obtained from the use of mixtures. For instance, while one pound of increase in live weight can be obtained from feeding eight pounds of bean or of pea meal, or five pounds of linseed meal, the same result has been produced from four and a-half pounds of linseed meal and peas, or from three and a-half pounds of linseed cake and beans in equal proportions. The saving here is manifest.

RATIONS.

As stated above, no cast-iron ration can be laid down for each feeder. He must utilize his feeding stuff as best he can. Hay, straw, corn stalks, ensilage, roots, and the various coarse grains can all be used. We have not, unfortunately, in this country, a bounteous supply of cheap corn

such as the feeders in the Western States have, and which they use to such good advantage, for, in our opinion, that in the sole cause of the higher prices realized by American cattle in competition with ours in the old country markets. Many of these American cattle came from this country, being sold in Buffalo as stockers and shipped to the corn districts to be fed. The freight, etc., prevent our feeders importing the western corn largely and so they have to utilize what coarse grains they have to hand.

There are some rations that have been used with good effects: Cut corn stalks and straw dampened, with three pounds of meal added for each animal. This is given every morning and evening, and hay at noon. When roots are given, the grain mixture is lessened. During the last two months the grain ration is increased.

Ensilage, oat straw, corn stalks and some meal, the latter being increased as the finishing period approaches, is the ration employed by another who feeds for the British market. This feeder considers ensilage extremely valuable not only as a food, but also as a medicine, enabling the animals to assimilate a greater quantity of food than when dry feed is given. Its value is also discovered when it is given to cattle during the winter, which are to be finished off on grass.

In a late issue of *FARMING* Simpson Rennie gave his daily ration for steers as twelve pounds of clover hay, thirty pounds of roots, and ten pounds of oats, peas, and corn, in equal bulk, with ten per cent. of oil meal added. He does not cut his bulky feed or pulp the roots, but he feeds this ration three times a day. The roots are first put in and the meal on top, together with some wheat chaff. The hay is fed long in the rack. Salt is given in a small box. This ration certainly resulted successfully, as the cattle that left these barns for England last May were a splendidly finished lot.

The rations given by Geo. Murdie in a paper read at a Farmers' Institute meeting, and printed in the October 10th issue of *FARMING* are very interesting because they show a variation of the various constituents, without altering the cost to any extent. It will be unnecessary to refer to these again, because any reader of *FARMING* can easily look them up.

FEEDING LOOSE.

Where a feeder has a barn or a shed that can be made weatherproof, he can easily test this method of fattening steers. Of course, the animals must be dehorned, and they should be put into the shed not later than such as are stabled. A feeding rack is necessary in the centre, and the animals should not be too crowded. The rations given will be similar to those given to stall-fed cattle. In mild weather the animals can run in the barnyard for part of the day, at least. They can also be watered outside if no arrangements have been made for supplying the water in the shed. More bedding is required in feeding loose, but there is the compensating advantage of less labor in cleaning and hauling out the manure. Among other advantages are less work in feeding, the better gains made, and the greater health of the animals owing to the exercise they get. They also keep cleaner if properly bedded.

SOME IMPORTANT POINTS.

It should be remembered by all that cattle must be fed regularly if they are to make the best gains. They soon learn to know the hour for feeding and get restless if the time has passed. They also must have plenty of water and be kept quiet. A bad tempered attendant, a snapping cur or noisy children should not be permitted to enter the stable. Then a sharp look-out must be kept for lice and as soon as one is seen, commence clipping the hair in a narrow strip along the back from the tail right up to the head, and dress with black oil and a little spirits of turpentine, or with oil to which a little coal oil has been added, care being taken not to put more than a fourth part of the latter in the mixture. Keep the curry-comb and brush going frequently, because cattle enjoy the process and will rest quietly and digest their food better after being curried.