

not be allowed to remain too long in the same field. Place all the stook at once in the same field, until it is eaten down, and then change them to another piece. Thus, the cattle at periodic times will enjoy the flavour of newly grown grass, their appetites will not be cloyed by long pasturing in the same field, and the grass will not become foul by their constant passage over it. Watch the evident delight of beasts, horses, or sheep, turned into a fresh bite, and you will acknowledge that my recommendation is in accordance with reason and nature.

There is another principle involved in this way of treating pastures: the manner in which different animals crop the grass. The ox bites high; the sheep low, and the horse both high and low. And from these facts, we may deduce the following rules: the horse or the sheep should accompany or follow the ox; they should never precede him.

I need hardly harp upon the necessity of an ample supply of good fresh water for all stock. Sheep can, and do, bear its absence better than other stock; but even in the damp climate of England, every sheep-master provides drinking places for them: as may be seen any day on the Downs, where the water-cart is as necessary a companion of the shepherd as his dog. These Down lands, however, have a climate of their own, and are as dry in summer as our own province. In the western districts, where the clouds passing from the Atlantic first discharge their superfluous moisture, no water seems to be drunk by the sheep.

Shade is particularly desirable for the calves of the year. A portable shed, in the absence of trees, can be knocked up for a trifle, and will well repay the trouble of moving. Constant exposure to the burning sun of this country cannot be advantageous to the tender younglings.

The signs by which you may tell that your calves are doing well are these: a clear eye, a dewy nose, and a pleasant, gay manner. To be a good thriver, the hair should feel mossy, and the handling, or touch of the skin, be mellow. If the calf seems dull; if it keeps away from the rest; if it hangs its head; if its skin is hard and tight; in all these cases there is something wrong with the animal, and it should be attended to. Particular care should be taken to inspect young stock throughout the latter part of the season. The autumn rains and chilly nights seldom fail of injuring the health of one or more calves.

Acute rheumatism, called by different names in different districts, is the chief evil, and many a thriving youngster is thrown back by its attacks. Here, again, the portable shed will be of use, as a protection against the driving wind and rain. The moment you observe a calf suffering from pain—they generally lie stretched out at full length—remove it to the stable, keep it warm, with cloths or sacks steeped in hot water put over the loins, and the body rubbed dry afterwards, and give it warm mash of bran and crushed linseed with a little nitre. The swollen joints should be rubbed with hartshorn and sweet oil, after long continued fomentation with water as hot as can be borne.

A great cause of damage to young stock is changing them too suddenly from a bare pasture to one over-luxuriant. I may say that in some of our districts there is not much danger of this happening; but in the Eastern Townships, when the farmers turn the stock into the meadows after mowing, I have seen the calves gorge themselves, and evil consequences ensue. The first sign of illness in these cases is weakness, accompanied by a feeble and rapid pulse; some part of the body swells, becomes puffy, as if containing air, and the animal soon succumbs. There is no cure for it, but, as a preventive, our English graziers apply a seton in the neck, or dewlap, to all their calves in the autumn. A little good hay, as an alternative, might be beneficial; and I have heard, from

a large Scotch farmer, that since he gave his young ones linseed or cotton-seed cake, he has never lost one.

Towards the middle of October, the calves should be taken into the yards at sun-down. I say, into the yards, as no one can approve of tying them up, at all events the first winter. Colts and calves should have as much freedom as is compatible with the necessary warmth. Let them run loose as long as possible, and when confinement is absolutely needed, for want of room, try and contrive that they shall have a separate division of the stable, where they may kick about and play: half a dozen calves won't take up much space. Plenty of air, exercise, and well chosen food, will make very different things of your young stock in the spring to what we generally see in the province.

On the treatment they receive during their first winter depends the future profit or loss of all young stock. Bone and flesh (muscle) are the desiderata; fat is not required now, but if the animal is properly fed, a certain sufficient proportion of fat will always be deposited in the tissues, or rather, between them. Rough hay, good sweet straw, a little pease-meal and crushed linseed, is all that is necessary. Corn-meal is not wanted for any young stock, except for lambs preparing for the butcher.

Practical ration for calves: Chaff $\frac{1}{2}$ a bushel; pease-meal 2 lbs; linseed 8 ounces; linseed (crushed) to be mixed with $\frac{1}{2}$ gallon of water and poured over the chaff and pease-meal; the water may be hot or cold—except for milch cows, and, perhaps for fattening beasts. As a rule, I don't care for cooked food for cattle; in fact even milch cows don't absolutely show any profit on cooked food—potatoes, however *must* be boiled. For fattening beasts, it is so necessary to suit them in every way; to watch their tempers; to care for their peculiarities of disposition; and they do like warm food so much, and seem so comfortable after it, that I should, even with all experience to the contrary, be tempted to cook their food—at least to the extent of mixing the linseed with a good lot of boiling water.

The calves will be glad of any roots you have to spare; but with the above ration and plenty of good straw, cut green, they can do without them. The theoretical ratio of the diet of the growing animal may vary from 1:5 to 1:7, the more nitrogenous diet being most suitable for growing animals, or for the production of more rapid increase; our practical ration, mentioned above, will be found to be a medium between the two.

The character of the fattening process has been a great deal more thoroughly studied than the nutrition of the younger animals. And no wonder; for the profit and loss is very much more visible in the one case than in the other. To care for an animal with perfect attention for 3 years is one thing; to wait upon it for 4 months is another. If the body is to increase in weight, it is clear that the food supplied must be in excess of the quantity necessary for mere renovation of tissue, and for the production of heat and work. And when such an excess of food is given, part of the albuminoids and ash constituents will be converted into tissue, and part of the fat, carbohydrates, and albuminoids will be stored up in the form of fat.

And in this conversion is involved a most important consideration: quick, and therefore liberal, feeding is the most economical system. For it is clear that if a lamb be made fit for the butcher in one year, instead of taking two years about it, the food necessary to produce the work and animal heat for one year will be saved.

Again, economy of food is promoted by diminishing the demand for heat and work. A beast at rest in a stall, will increase in weight faster than a beast that has to hunt about on a pasture for his living. A pig, once more, will fatten