

should be given in small quantities at a time, and, in the case of a healthy calf, not until it has strength to stand, as it is clear as it could not suck its mother until it had so far progressed.

Should any apprehension be felt respecting the inactivity of a calf's bowels, or tardiness in expulsion of the meconium, the simple mode of inserting a piece of common soap, from two or three inches in length by half an inch in diameter, in the anus, and then rubbing the part briskly with the hand, in nine cases out of ten will cause a proper evacuation. I have so very often seen this plain and harmless treatment successfully applied, that I invariably adopt it, and with the greatest confidence recommend it from its simplicity and efficacy.

The colostrum or beistyn, more commonly called "beastings," sometimes continues so long as to be of serious injury to the calf, but this is chiefly caused by feeding the cow too highly after calving.

The milk given to the calf should not be suffered to become cold, and by the assistance of the herdsman's fingers (which the calf will eagerly suck) as much may be taken up as required. Some calves will learn to suck by the fingers in a day. The palm of the hand is placed over the nose, with the fore-arm against the face; the middle finger is inserted in the mouth of the calf, while the other fingers retain the head in the proper position. With the other hand the vessel is held, which at first should be somewhat raised, and not allowed to rest on the ground—that being an unnatural position, and different from the one the calf would be in if allowed to suck its mother. In this we shall be only adopting in the calf-house the same amendment which has already made its way into the stable, where the hayrack is no longer fixed in a manner rather suited to the giraffe than the grass cropping horse.

The milk should at first be given in small quantities, say three pints every four or five hours, till the calf gain strength, when it may be increased gradually to as many quarts. Of this increase the herdsman alone can be the judge—a practised eye at a glance sees anything wrong. There is no animal in which disease is more easily detected than the calf. In health, he sleeps quietly or is full of play; in sickness he is dull, and, from the action of the flanks, distaste for food, sharp champing of the teeth, cough, or symptoms, it is clear he is *amiss*.

There is considerable danger to calves from taking up straws and swallowing them before their powers of digestion are able to master such food. I have seen valuable animals lost by this, and, on being examined after death, a mass of undigested straw has been found incarcerated in the stomach. In order to guard against such occurrences, a muzzle should be kept on the calf until after it has been perceived to "chew the cud." The muzzle may be made of either wire or leather, simply shaped, with a band sewn at

each side to buckle behind the ears. It is used for the calf to begin to the cud in ten days when the muzzle may be removed.

Much injury has been caused to calves housed together, from sucking each other, as they frequently take hold of the navel-string, a part of great delicacy in a newly dropped calf.

The passage of the urine is also very important. I have seen calves appearing heavy and dull, lying down and panting, and to an observing eye evidently "wrong." The herdsman satisfies himself that the bowels are regular, but he cannot be so sure of the urine. I have observed him get the calf up, stand immediately behind it, and rub its sides vigorously with both hands at the same time, then gently manipulate the sheath, when presently the water flows copiously, and the animal is at once relieved. Now here are cases which, perhaps, were they neglected, might become formidable and require the drenches of the cow-leech, and they combated most successfully by the simplest means.

It is important that the calf should be fed from the milk of the same cow daily; a very little attention will ensure this, if the cows are milked and the calves fed in the same order. Any sudden change of food is injurious, as the least sourness in the stomach causes "scour"—one of the worst evils calves are liable to. On first observing it, a diminution in the quantity of milk may check the disease, which not unfrequently arises from the stomach being overtaxed.

In rearing calves our object must be to combine efficiency with economy, and to realise profit from the dairy without robbing or stinting the calf. We follow nature for a while, but are forced into another course ere long. We begin with pure "mother's milk," but in a fortnight a change must come. Milk is too valuable to be continued in its pure neat condition, and a slight very slight, change is introduced, consisting in the substitution of oil-cake gruel for a portion of the milk. The gruel is prepared in the following proportion—one quart of cake (ground fine) to four of water. This pulverised cake is put into a bucket, and the water, boiling, poured on it. It is allowed to stand about eight hours being occasionally stirred. My practice is to begin when the calf is about a fortnight old, to add a very little of the gruel to the milk, and to increase the quantity by slow degrees, with a decreasing allowance of milk, until, at weaning time, the former has gradually taken the place of the latter. But when a large quantity of gruel is given, its potency must be lessened, to guard against purging; and it will be desirable to add to every two quarts of the gruel, as above mentioned, one quart of water.

In employing an artificial substitute for milk the following principles should guide our choice:—

1st. The nearer we are to nature the better and the food which most resembles milk must be the best for calves.