

THE REARING OF CALVES

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THE failure of adult cattle to reach the standard expected of them, no matter how well they are fed and looked after, may in most cases be traced to the lack of sufficient care and good management during the earlier stages of life. The chief factors which influence the successful rearing of calves are proper housing, precautions to be taken at birth and correct feeding.

THE CALF PEN

No special type of building is required for housing calves, but it should provide for plenty of sunlight and fresh air. The ventilation should be such that cross-draughts are avoided.

A cement or cement-concrete floor is most suitable from a sanitary point of view, but the floor may also be constructed with paved bricks or rock stones set in cement. In cold climates the floor should be covered with straw or litter as a protection against chills.

When a number of calves are housed and fed in the same pen, care should be taken to see that the animals are of uniform size, as there is otherwise the likelihood of the weaker ones not getting the requisite quantity of food. An improved type of calf house with individual pens does away with this difficulty, and is particularly advantageous if a contagious disease has to be dealt with. In this type of building the pens, each 5 ft. square, are arranged on two sides of a central walk, and are partitioned with wooden planks which are fixed to iron posts. The partitions should be about 10 inches above the floor level to facilitate the cleaning of the pens. The front of the pen is provided with palings and each pen is fitted with a hay rack and trough for food and water. The floor slopes towards the

centre of the building and is drained by two gullies on either side of the central walk.

- A paddock for exercising the calves should be provided in close proximity to the calf pen.

THE NEW-BORN CALF

At the time of calving a bedding of clean straw should be provided for the reception of the calf. As soon as the calf is dropped it should be removed to its pen and the navel cord ligatured. The ligature may be of soft twine, which has been saturated in tincture of iodine or a solution of corrosive sublimate (strength 1 in 500) and should be tied about an inch below the navel ring. The cord should then be cut off about half an inch below the ligature, and the stump painted with iodine or touched with copper sulphate.

The calf should then be rubbed down with wisps of straw until it is quite dry. It is essential that the ligature to the cord be applied immediately after the calf is born, before the cord can be contaminated with disease germs. If it happens that the calf has been born some time before it is noticed, the best procedure to adopt is not to ligature, but only to immerse the cord in a solution of iodine. Until it shrivels and dries up the cord should be dressed twice daily with tincture of iodine. A little margosa oil is applied at frequent intervals to keep away the flies and thus prevent the navel from being infected with maggots. Neglect in taking these precautions may result in "white scour" and pneumonia amongst calves.

FEEDING THE CALF

Calves may either be suckled, or weaned at birth and hand-fed.

The practice of allowing the calves to suckle has the advantage of requiring less labour and, being the more natural method, is usually adopted. The drawbacks to this method are, first, that it does not permit of the thorough milking of the cow and invariably brings about udder troubles and, secondly, that the quantity of milk left for the calf has to be estimated by the milker, and as a result the calf is either underfed or overfed.

Hand-feeding does away with these difficulties and is recommended where labour is available, as it permits the systematic and restricted feeding of the calf.

It is essential that the calf should receive the Colostrum or first milk of the cow. The Colostrum contains a high percentage of albumin and its nutritive and laxative properties aid in starting off the digestive system correctly. In case the cow dies at calving, an useful substitute for Colostrum may be made by beating up an egg with half a pint of water, adding half a teaspoonful of castor oil and stirring in one pint of milk for each meal.

The welfare of the calf during the first month of its life is most important, and its progress is considerably retarded if it is not well looked after during this period. When calves are weaned at birth, the first feed should consist of two pints of Colostrum which should be given an hour or two after birth, when the calf is well on its feet. To induce the calf to drink, two fingers are dipped into a bowl of Colostrum, and inserted into the calf's mouth ; the hand is then lowered into the bowl and the calf soon learns to drink by itself. A certain amount of patience however is required in some cases.

During the first two weeks the calf should be fed three times a day on six to eight pints of milk daily. Particular care should be taken to see that the milk is given fresh and at a temperature at which the calf would ordinarily get it from the cow. The milk pails and feeding utensils should be scalded with boiling water and kept scrupulously clean.

From the third week the daily allowance of milk may be given in two feeds, morning and evening.

When the calves are about a month old they usually commence to chew the cud and may be given a little straw or grass to nibble. At this stage the feeding of concentrates may be started. These are best given in the form of a dry food mixture and may consist of the following :—

Gingelly poonac	..	..	2 parts by weight
Pollard	..	..	3 do do
Coconut poonac	..	..	3 do do
Gram	..	..	1 part do
Fish meal	..	..	1 do do

About quarter of a pound of the mixture may first be placed at the bottom of the pail when the milk is being given, and the calf is gradually accustomed to the new diet by leaving a box containing some of the mixture in the calf pen.

The concentrate ration should then be increased by quarter of a pound once a fortnight, and this should be accompanied by the gradual decrease in the milk allowance.

At the sixth month the milk may be stopped entirely and the calf should get a concentrate ration of two and a half pounds daily. In the "dry feed" method of feeding, calves should always have access to water and given as much grass and straw as they can conveniently consume.

A suitable programme for feeding, which in some cases may have to be altered to suit the individual, is given below :

<i>Month</i>	<i>Concentrates</i>	<i>Milk</i>
1	—	6 pints
2	$\frac{1}{4}$ lb.	4 do
3	$\frac{3}{4}$ lb.	4 do
4	$1\frac{1}{4}$ lb.	2 do
5	$1\frac{3}{4}$ lb.	2 do
6	$2\frac{1}{2}$ lb.	—

The maximum ration of two and a half pounds of mixture together with increasing quantities of straw and grass should be sufficient for the average calf until it is about a year old, but the concentrate allowance may be increased to about three and a half pounds if more rapid development is desired.