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Calf-hood scours

P. M. A. Harwood

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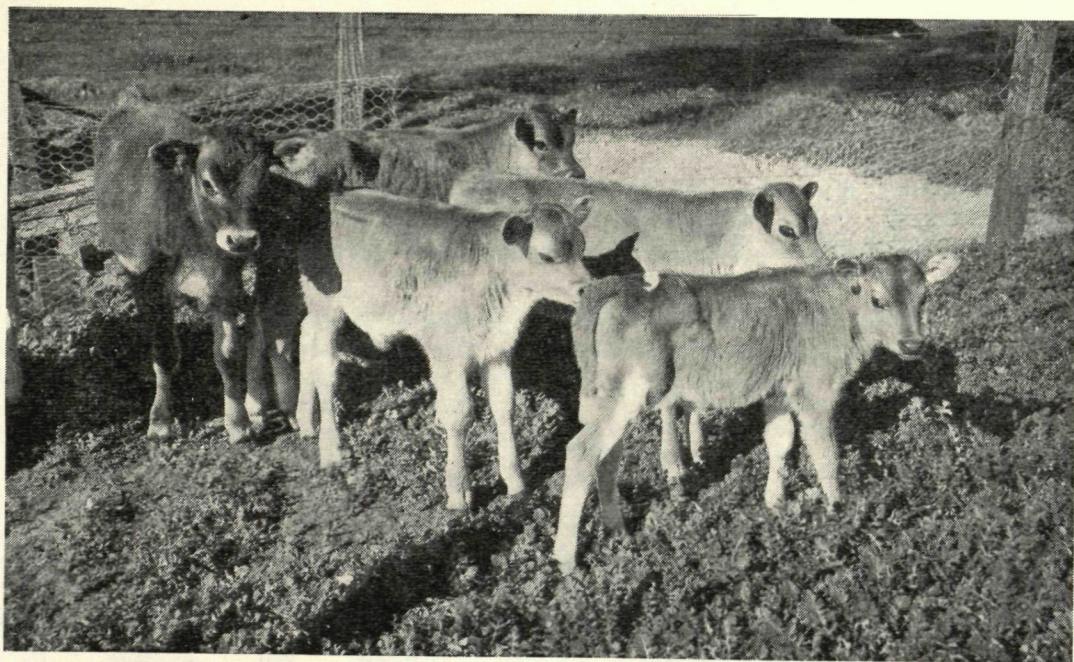


Fig. 1.—Healthy scour-free calves like these are a valuable asset

CALF-HOOD SCOURS

By P. M. A. HARWOOD, M.R.C.V.S., Senior Veterinary Surgeon

OF all the operations carried out on a dairy farm, the raising of calves is often the most haphazard. This procedure represents a false economy. Calves nowadays are a valuable asset. Not only is it most desirable to have a good crop of healthy heifers coming along each year as replacements for the herd; high prices for vealers makes all calves valuable to the farmer.

Good rearing means healthy vealers and heifers; false economies and bad rearing practice lead inevitably to calf-hood scouring problems with a wastage that is larger than it appears at first glance. Deaths may not be frequent, but loss of carcass value in the case of vealers is considerable, while the check in growth to heifers may have a life-long effect in lowering production.

Calf-hood scours fall into three main categories (there is some inter-relationship) and all can be avoided by good husbandry.

SCOURS OF NUTRITIONAL ORIGIN

Vitamin A Deficiency.

The colostrum or first milk is a potent source of Vitamin A, and under normal

conditions contains enough reserves to provide a calf for the first part of its life. Under no circumstances should any calf be deprived of its own mother's colostrum during its first three days of life.

Spring-reared calves which have received colostrum, and are then given access to good quality green pasture will obtain sufficient Vitamin A from these sources.

Calves born in late summer require Vitamin A supplements. Owing to lack of green grazing, the cow's colostrum is during this period at its relative lowest value of Vitamin A content. The calf therefore starts life with an inadequate reserve and is unable to add to it.

Green grass is the only natural source of Vitamin A for grazing animals. Cows can store sufficient reserves during the

green feed period to last them through the dry summer, but calves born in late summer have no such reserve.

Symptoms of Vitamin A Deficiency.

- (i) Whitish scour.
- (ii) Opacity and ulceration of the eyes.
- (iii) Weakness and dry scaly skin.
- (iv) Predisposition to pneumonia.

Prevention.

At all times feed colostrum and in late summer also feed Vitamin A supplements.

Treatment.

Feed Vitamin A supplements at double the preventive level. Response is rapid.

Overfeeding.

Overfeeding particularly after a period of starvation, often leads to scouring in calves. Calves left too long with high-producing cows are particularly liable to overfeed. Care in teaching calves to drink properly is a valuable preventive as properly taught calves do not get excessively hungry and have less tendency to gorge themselves when they do learn to drink.

During the first fortnight of life calves should receive 3 to 4 pints of milk twice daily.

Treatment.

When scouring results from overfeeding, give only boiled water for 24 hours then commence feeding on diluted milk (50 per cent. water for the first feed) the quantity of water being reduced at each successive feed.

Incorrect Feeding.

(a) Milk too Rich.

High butterfat milk is not a suitable food for rearing calves. 3.5 per cent. butterfat is the ideal level. Milk of 5 per cent. butterfat should be diluted at the rate of 4 pints of water per gallon.

(b) Skim Milk.

Skim milk alone is not a suitable food for rearing young calves. It should be supplemented with crushed oats or bran to make a balanced food.

(c) Incorrect Temperature.

Milk fed to young calves should be at blood heat. Milk fed too cold will cause scouring.

(d) Milk Substitutes.

Attention should be paid to the recommendations when feeding proprietary foods and dried skim milk, whey or dried buttermilk. In any event calves should receive whole milk for at least two weeks and the introduction to the substitute should be gradual. **Follow the maker's recommendations.** He has already experimented with his product.

(e) Depraved Appetite.

Calves have a tendency to eat string, old bags, straw and very coarse, fibrous grass. Make sure the calf paddock is free of such material, or digestive upsets are inevitable.

SCOURS OF BACTERIAL ORIGIN

Scouring of bacterial origin, the familiar white-scours or blood-scours is the greatest evil attendant on calf-rearing. Scouring of nutritional origin may often lead to white-scours and the condition is **highly infectious.**

White-scours is caused by the *coliform* bacillus and other related organisms. This germ is a normal inhabitant of the bowel, but under certain circumstances it becomes highly virulent, causing serious disease in the calf in which this change takes place and giving rise to a disease which spreads rapidly from calf to calf.

Symptoms of White-Scours.

(1) A profuse greyish white evil-smelling diarrhoea which has a particularly sticky tenacious nature. In severe cases this may become tinged with blood.

(2) Dehydration or withdrawal of fluids from the tissues. The calf rapidly becomes hide-bound and the eyes sink into their sockets.

(3) Weakness and prostration with death or slow lingering recovery with resultant stunting.

Prevention.

Depend on these principles:—

(1) Feed colostrum as this contains a fraction which immunises calves against the effects of White-scours.

(2) Avoid the conditions which may result in the *coliform* bacillus from becoming virulent (see section on scours of nutritional origin).



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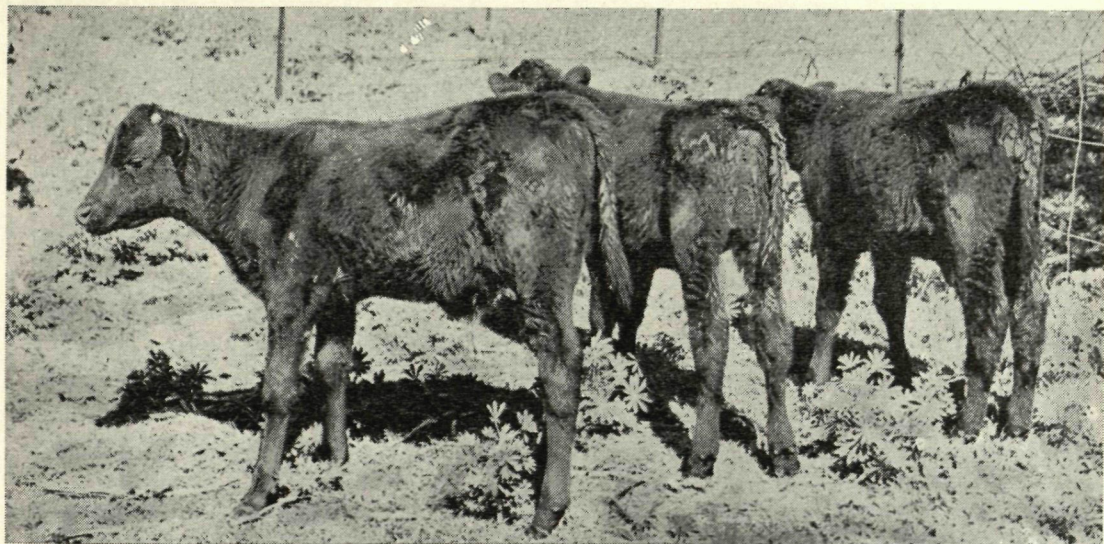


Fig. 2.—These calves, soiled and evil-smelling from continued scouring, are commencing life under a severe handicap

- (3) Keep feeding vessels clean.
- (4) Rear calves in clear uninfected paddocks.
- (5) Isolate sick calves at once.

Treatment.

White-scours respond to several drugs. These are—

- (1) Sulphaguanidine.
- (2) Phthalyl Sulphathiazole.
- (3) Sulphamezathine.
- (4) Chloromycetin.
- (5) Terramycin.
- (6) Aureomycin.

Whichever drug is used there is always a likelihood of immune strains of white-scour-causing germs to develop. While treatment may be essential, remember that **prevention is better than cure** and the drug which worked last year may lose its effect next year. In any event, whichever drug is used, make sure each calf receives a full course of treatment.

PARASITIC SCOURS (WORMS)

Worms may be a serious problem to calf raising, particularly where the same calf paddock is used year after year. The ill-effects of worms are two-fold. They suck blood from the calf thereby weakening it and also cause irritation of the bowel and scouring.

The diarrhoea caused by worms is usually blackish or greenish in colour.

Symptoms of worms in Calves.

- (1) Scouring (usually blackish in colour).
- (2) Pot-belly and harsh, dead coat.
- (3) Anaemia and weakness.

Prevention.

- (1) Rotation and cultivation of calf paddocks.
- (2) As adult cows are usually the original source of infestation, keep cows and cowshed washings off the calf paddock.

Treatment.

By means of Phenothiazine, the dose rate being as follows:—

- Calves 2-4 months— $\frac{1}{4}$ - $\frac{1}{2}$ oz.
 Calves 4-6 months— $\frac{1}{2}$ - $\frac{3}{4}$ oz.
 Calves 6-12 months— $\frac{3}{4}$ -1 $\frac{1}{2}$ oz.

Where calves are weak divide the dose into two and give on successive days.

Shortly after treatment put the calves into a clean paddock then repeat treatment in 2 to 3 weeks.

Worm infestation is most likely to occur in late winter and spring as it is at this period that climatic conditions suit the hatching of the worm eggs.

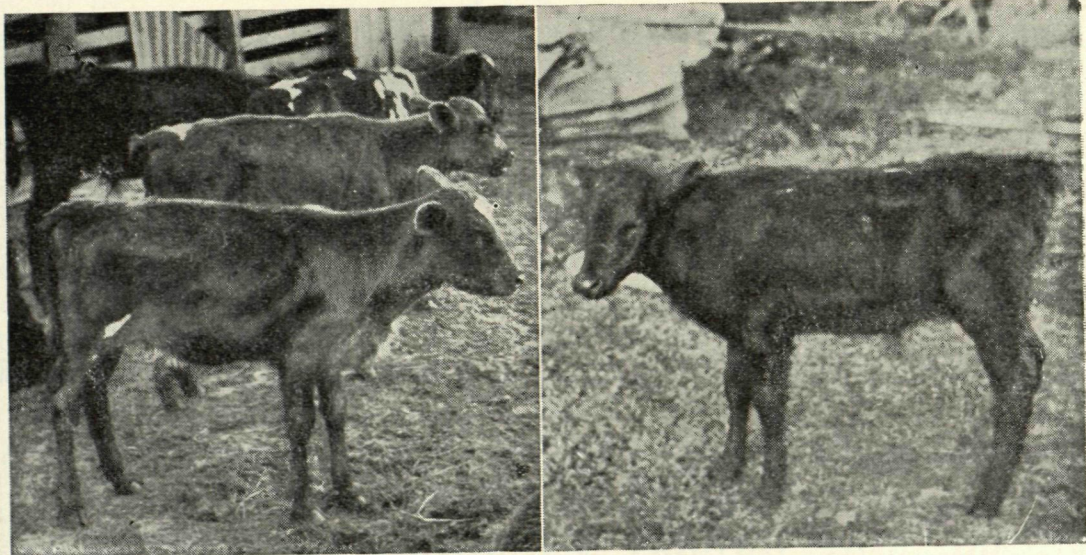


Fig. 3.—These worm-infested calves are debilitated by the parasites and the attendant scours

GENERAL POINTS IN CALF REARING MANAGEMENT

- (1) Ensure that every calf has its own mother's colostrum for at least 3 days.
- (2) Commence bucket-feeding as early as possible and take pains to ensure calves are taught to drink as soon as possible.
- (3) Regularly sterilise feeding buckets.
- (4) Prevent predisposition to White-scours by—
 - (a) Feeding milk in sensible quantities.
 - (b) Feeding at correct temperature.
 - (c) Breaking down very rich milk with water.
 - (d) Feeding whole milk for at least a fortnight.
 - (e) Effecting the change from milk to milk substitutes gradually.
 - (f) Using recommended rates of feeding with milk substitutes.
- (5) In late summer give calves a Vitamin A substitute.
- (6) Avoid straw and coarse fibrous grass. If green feed is not available use finest quality hay for feeding calves.
- (7) Immediately isolate and treat scouring calves.

THE CALF PADDOCK

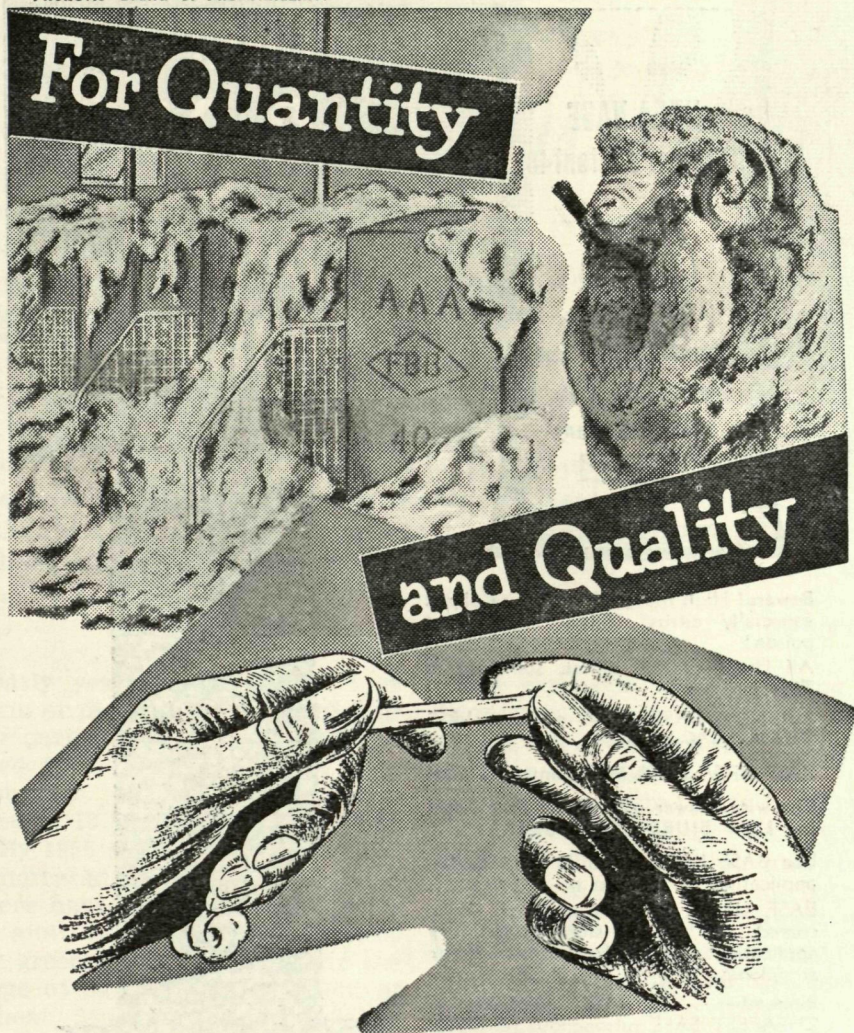
Follow these principles.

- (1) Ample size.
- (2) Aim at a short nutritious green pick.
- (3) Shelter from cold winds and rain.
- (4) Feeding bails to ensure each calf gets the correct quantity of milk.
- (5) Good fencing to keep calves in and adult cows out. **Do not run calves in the bull pen.** He may be the source of worm infestation.
- (6) Good drainage with no wash from cowshed or pig pens. (Pigs may transmit a serious disease red-water (*Leptospirosis*) to calves).
- (7) Regular rotation with cultivation so that calves are not run on the same ground every year. Deep ploughing of the old paddock will help bury worm eggs and disease-causing germs.

SUMMARY

- (1) Calves represent a valuable asset—as cash for vealers and as the future milking herd.
- (2) A serious check in calf-hood may permanently affect the productive capacity of an animal throughout its life.
- (3) Healthy calves can only be reared where attention is paid to good husbandry practice.

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