

Radical weaning in north-western Queensland

B.M. Burns, and R. Sneath, Beef Cattle Husbandry Branch,

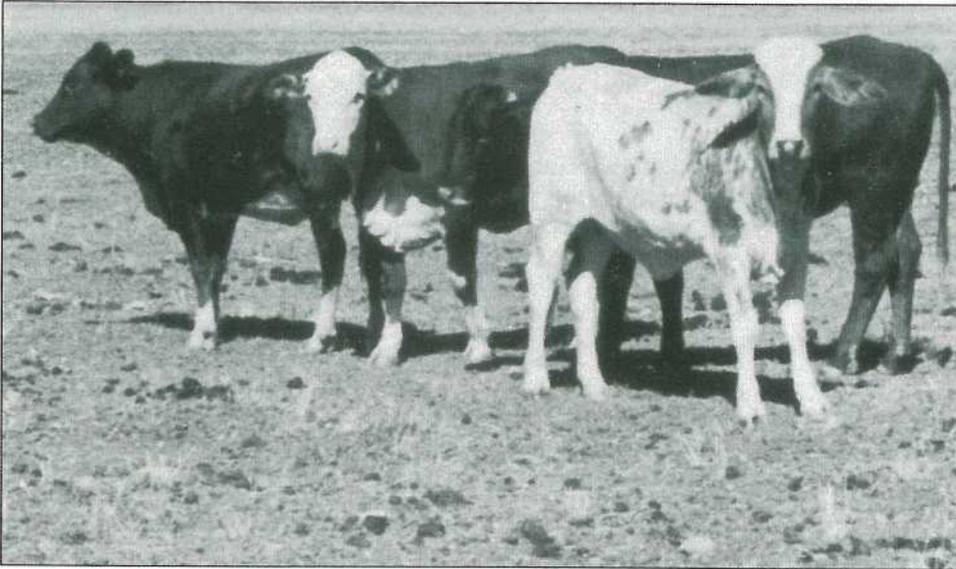


Plate 1. Radically weaned helpers 396 days after completion of the trial .

Two radical weaning demonstrations using calves between two and eight weeks were organised on properties in the Richmond area of north-western Queensland during the drought of 1988. Following these demonstrations, funded by Australian Meat Livestock Research and Development Corporation a number of other properties throughout the area successfully weaned very young calves.

Demonstration one

On the first property, some cows had stopped lactating, and cows and calves were already dying when the decision to wean was made.

For the first demonstration, 90 Brahman crossbred calves ranging from two to six weeks of age and weighing between 36 kg and 70 kg were used. These calves were divided into two groups on body condition and strength. Each group was fed a different ration in the yards for 56 days. At the end of this period the calves were supplemented for a short period, and were then sent away to agistment.

The strong calves were fed 1.5 kg/head/day of Burval Calf Weaner

Pellets and 1.4 kg of good quality sorghum hay. During the feeding period, they gained 25 kg liveweight at a cost of \$29.68/head.

The weak calves were fed Burval calf weaner pellets at the rate of 1.1 kg/head/day, but the roughage was a mixture of good quality sorghum hay and grassy lucerne hay fed at the rate of 1.4 kg/head/day. This feeding regime cost \$26.69/head and the calves gained 17 kg over the 56 days.

Weaning prevented further cow deaths, but five of the calves died from coccidiosis during the course of the demonstration.

Demonstration two

On the second property, calves between four and eight weeks of age were weaned. The reasons for weaning these calves were:

- to remove the stress of lactation from first calf heifers and older cows which could not have survived while supporting a calf
- to allow older cows to improve in condition before sale. The sale of

older cows reduced stocking pressure, making more country available for younger cattle

- to give young breeders a better chance of getting back in calf
- to convert the single stomached digestion of the calves, with a limited chance of surviving under drought conditions, into a ruminant animal with a good chance of surviving on a roughage and molasses based ration
- to remove the need for one weaning muster of breeders on agistment, therefore reducing costs.

The cows were pregnancy tested and drafted according to age and pregnancy status. Old cows were tail tagged according to whether they were empty, six weeks to four months in calf, or over four months in calf. All old cows and young cows were sold. The older pregnant breeders brought premium prices on southern markets.

The remaining breeders were sent to agistment. As a result of the radical weaning before they left, it was only necessary to muster these cows once for weaning while they were away. Without the radical weaning, at least two musters would have been required. Therefore, weaning muster costs were cut by at least half.

For the second weaning demonstration, 60 Brahman crossbred calves weighing between 62 kg and 105 kg, and ranging in age from four to eight weeks, were divided into two groups.

Each group was fed 1.4 kg/head/day of Burval calf weaning pellets and 1 kg/head/day of grassy lucerne hay. The rumen modifier Rumensin was incorporated into the pellets fed to one group.

Rumensin, in addition to modifying the way in which the rumen works and making it more efficient, is also a coccidiostat. Coccidiosis, the disease which Rumensin controls, is usually seen as a black scour which develops about 1 month after calves are weaned. The organisms which cause coccidiosis are called coccidia, and they are carried in the intestines of all cattle. However, healthy strong calves are usually resistant to this organism, and it is only when calves suffer stress at weaning that coccidiosis develops. Severely affected

calves lose weight rapidly and may die. Those that do not die remain in poor condition until the break of the season.

A third property of Rumensin is its ability to control intake of feed. It appears to be quite unpalatable to cattle and therefore it prevents gorging of feed by older or stronger animals at the expense of weaker ones.

The demonstration ran for 62 days. At the end of that time the calves on the ration containing Rumensin had gained 39 kg, while the calves on the ration without Rumensin had only gained 30 kg. There were no deaths in either group and gorging was reduced in the Rumensin group.

After the demonstration concluded, the calves were run together in a paddock on short, dry mitchell grass. Calves which had been fed Rumensin developed scouring with a few spots of blood present. This probably occurred because the coccidiostat effect of Rumensin suppressed the coccidia and prevented natural immunity from developing.

When the Rumensin was removed from their diet they were susceptible to the organism. This situation could probably have been avoided by gradually weaning the calves off the pellets, or by gradually introducing them to a molasses supplement containing Rumensin before turning them out of the yards and then gradually reducing the quantity of Rumensin in the molasses. This would have given the weaners the opportunity to develop their immunity to coccidia before removing the molasses supplement.

Recommendations

The following recommendations can be made about weaning calves under three months of age as a result of the Richmond demonstrations:

- Calves should be weaned while they are still in good body condition
- Segregate smaller or weaker calves and bigger or stronger calves and feed each group separately
- Begin feeding a high quality ration on the day that the calves are weaned. This reduces the stress of weaning
- Keep feeders up off the ground



Plate 2. Early weaned calves fed from homemade feeders designed to prevent spilling and waste and increase hygiene.

- Calves can be fed every second day without ill effects
- Ensure clean water is always available
- Two-week-old calves should be fed a meal, rather than pellets, containing at least 18% crude protein. The protein should be in a highly digestible form, for example soybean or milk powder
- Calves four to 12 weeks old should be fed a ration containing at least 16% crude protein
- Rumensin can be added to the ration to control coccidiosis, but it may not be necessary if the calves are weaned before they begin to lose condition, if they go straight onto an appropriate high quality diet when weaned
- If prevention fails, scours can be treated with sulphonamide based products which are effective against coccidiosis.

If radical weaning is to be considered as a management practice during severe droughts, producers should be aware of the costs and husbandry practices involved in feeding calves under three months of age. They should also recognise that after the calves reach three months of age they will require further supplementation with a true protein supplement fed alone or with molasses.

The cost of feeding calves in these demonstrations until they reached three months of age varied from \$26 to \$30/head, a cost the producers involved considered very reasonable.

A sample of animals (steers and heifers) was recently weighed 396 days after the completion of the trial. No significant difference in liveweight was

found between the two different ration groups, with steers and heifers gaining approximately 0.54 kg/head/day and 0.45 kg/head/day, respectively. At a further non-trial site, calves averaging 62 kg at weaning gained 0.35 kg/head/day over a 316 day period.

Producers in north-western Queensland who adopted radical weaning as a management strategy during the severe drought conditions of 1988 are more than happy with the premium prices that these store cattle are now attracting.