

A Survey on Perinatal Mortality and Losses to Weaning in a Beef Herd

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Summary

Losses in a commercial Hereford herd run on a high country property over a seven year period are described.

Dystocia is the most consistent cause of loss and iodine deficiency was responsible for serious losses at calving time in two seasons. Treatment for this condition using iodine-containing licks and potassium iodide orally is described.

Run Management

The herd which is the subject of this discussion is a commercial Hereford herd, run on a high country property where fine wool production is the main source of income.

Calves are sold at weaning, and cow numbers have been built up from about eighty in 1970 to 224 due to calve this year. Natural mating is the general rule, and bulls have been bought privately from a Southland stud for many years. Between thirty and forty heifer replacements are kept and mated to calve as two year olds. Up to half a dozen bull calves are kept for sale locally, and the remaining heifers and steers are sold on the ground. For the last two years the worst twenty or thirty calves have been kept, and these should go to the works fat, probably as rising three year olds.

Calving takes place on flat, swampy paddocks near the homestead. Rushes provide most of the shelter available at present. Hay is fed every second day for as long as possible, usually about a month, at this time.

Two year olds, and usually three year olds, are run as separate mobs, set stocked, with hay self-fed. As the main mob of cows calve they are shedded off into a more extensive area of swamp.

Bulls are put out in late November; calves marked by knife in mid-January, and in early February the cows and calves are driven some ten to fifteen miles away to river flats where they graze native pasture, well infiltrated with white clover. They are brought back to the farm at Easter — to avoid the many trampers and shooters in the valley at this time. Weaning, pregnancy testing, lice control, and sometimes tuberculosis and brucellosis testing are done during April and May. Young stock are drenched, treated for lice, and given selenium.

In June the cows are returned to the run, spending some six weeks to two months there, most of which is on a large, sunny hill block which they share with the ewes. Some cows choose to spend the time at snow tussock level, most prefer the lower slopes, and winter among the cabbage trees.

About a week before calving is due, they are mustered and brought back to the home farm.

Calving percentage has been remarkably constant over the last seven years, calves born to cows mated

ranging from 88% to 94% and calves weaned to cows mated ranging from 85% to 88%. Until this year the policy has been to give dry cows a second chance, and cull only those which have had two dry years. This year all cows not in calf have been culled, and this should eventually improve the conception rate.

Causes of Losses

After the perinatal period and up to weaning in this seven year period six calves are known to have died. One was a post-marking death, probably from clostridial infection; one was from unknown cause, possibly tutu poisoning while living on the river flats. Two abnormal calves died at six weeks and two months of age.

One of these was the calf of a two year old in 1971. At calving time the cow was in extremely poor condition, and the calf was a midget, barely able to reach the udder, with developmental abnormalities of the uro-genital and rectal systems. After being assisted to feed for the first week or so of its life it succumbed at two months to septicaemia.

The second was one of a group of three calves with similar characteristics. All three were larger than normal, lethargic by nature, had more white areas than usual, and suspected congenital heart abnormalities. Two of these needed assistance to feed and one was eventually sold at weaning time, apparently normal. The other died at about six weeks old, having had abnormal heart sounds and a degree of ascites. Unfortunately it was well decomposed when found, so no autopsy was done. The third was not examined clinically as it was less severely affected and managed to lead a normal life till sold at weaning. All three were steers. There was no apparent hereditary basis, and the cows involved did not produce any other abnormal calves. I have seen white muscle disease lesions in hearts from calves on other properties in the district, and it may be significant that these cases occurred in cows that had never been given selenium, and that no further cases have occurred since young stock have been given selenium.

In 1976 there was an outbreak of white scours in the two year old's calves. Two were found dead without having shown signs of illness, and a third was successfully treated. The source was thought to be a daughter of the house cow which had got in calf and was run with this mob.

Perinatal losses are far more significant.

Exposure probably accounts for an average of one calf a year. Sometimes a calf is too cold or weak to feed itself, and if it is noticed in time, one or perhaps two, supplementary feeds usually gets it started alright.

One year three cows delivered their calves into ditches, and two newly born calves were rescued from ditches,

having been born at the brink and fallen in while learning to walk. For some unknown reason this has not been a problem in other years.

Mismothering — during these seven years two isolated incidents of prepartum cows stealing other cow's calves have been observed. In one case the cows involved happily reared each other's calf; the other case resulted in a dead calf. In 1976, when the herd was left unattended for three days, five calves were abandoned. Circumstantial evidence implicated goose shooters taking advantage of the owners' absence may have upset the cows. 2 calves died, 2 were given away and 2 mothered on to other cows.

Dystocia is probably the most consistent cause of calf loss. In 1971 24/24 two year olds calved, and nearly half were assisted. Apart from that year, an average of three out of about 35 two year olds and two adult cows are assisted each year, with perhaps one calf in each group lost as a result dystocia not assisted.

In 1970 there were about eighty cows to calve, and thirteen were stillborn. The local stock inspector collected specimens, and the verdict was that dystocia was probably responsible. The owners were not convinced, and as the 1971 calving approached much thought went into the matter. A couple of hairless calves were mentioned. Two calves had been born alive and survived, being apparently normal apart from being more or less bald. One of the dead calves was partly hairless but this particular one was smaller than normal, and thought to be premature. The other 12 were obviously full term calves, and there was no evidence of oedema which is usually associated with dystocia. Iodine deficiency was suspected. A lick containing copper, cobalt and iodine was supplied to the cows during the last few weeks of pregnancy. That year there were 8 dead calves, most of which were not the result of dystocia. As with most

mineral deficiencies, young animals were most commonly affected. No hairless calves were seen this year, the main signs were full term calves found dead. Several assisted calvings resulted in calves delivered alive as judged by the presence of a visible heart beat, eye blinking etc., but which failed to start breathing. At this time no simple means of administering oxygen was available. This was my first season away from dairy practice at Tauranga where I had never had trouble persuading calves delivered alive to start breathing, and I began to wonder what had gone wrong with my calving technique. Of eleven two year olds assisted, five had this sort of calf. Autopsies showed nothing but I must admit the central nervous systems were not examined as carefully as they would be now. Finally colloid goitre was confirmed in the thyroid sent from a three year old's stillborn calf which was not a dystocia case.

Since then lick containing iodine has been available to all cattle, except for the adult cows when they are wintering on the hill.

The next year colloid goitre was again confirmed in a thyroid from a stillborn calf, and it was decided to treat all first and second calvers with potassium iodide orally when they were brought in to calve. Each cow got 500 mg K.I. per os. This was highly effective, and no mystery deaths have occurred in calves born to cattle so treated, even though some of these cows calved within ten days of the treatment. However, drenching two and three year old horned cows is an awkward job, and this year we are trying an injectable depot-type of iodine supplement on the heifers.

Cow deaths from the period under discussion are as follows: Five from dystocia, one from uterine prolapse, and three from precalving stress combined with old age. One of these cows was carrying twins.