

ADVANTAGES OF THE LOWLINE COW

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Stripped back to the basics, a beef cow has one job – to provide you with a calf.

The features of the Lowline breed which individually – and in combination – create the Lowline advantage in respect of what we want from a cow are:

- A low calf birth weight
- Rapid daily weight gain in the calf
- Good milking ability in the cow
- Very efficient feed conversion attributable, in part, to the breed's smaller frame
- A demonstrably shorter gestation period when compared with other beef breeds
- The lower live weight of the individual Lowline cow compared to most other beef breeds.

The low birth weight – usually in the 22kg to 30kg range – contributes greatly to ease of calving. Cows with calving difficulties are extremely time consuming and labour expensive; in addition, they have been shown in New Zealand trials to have a death loss in calves four times that of calves born unassisted.

The rapid daily weight gain of Lowline calves was one of those attributes being bred for in those early Trangie trials and has been cemented into the stabilised breed. Lowline calves at least double their birth weight in the first six weeks. In part this is a result of the smaller frame – less bone compared to flesh, and bone takes longer to grow than muscle. In part it is also a result of the good milking ability of Lowlines.

From the first Trangie trials the ability of the cow to produce ample milk over an extended period was a sought-after trait.

These trials demonstrated that the Lowline at the start of lactation produced about 6 ¼ litres of milk a day, but by mid lactation was up over 7 litres and by late lactation, when the calf demand is at its greatest – the Lowline was producing still over 6 litres a day. The quality of the milk is equally important. (In this regard it is worth noting that tests in New Zealand have shown that the Aberdeen Angus actually produced 0.05% more butterfat a litre than the Jersey).

A primary thrust of the Trangie experiment was to establish efficiency of feed conversion and from this experiment the Lowline – the efficiency breed – evolved.

The acknowledged superior feed efficiency of the Lowline has many commercial consequences – more cattle to the acre, more meat produced from the same amount of feed, and so on – but it also has consequences for the breeder: the cow that can more easily maintain her own body weight through better feed conversion can more easily maintain or increase her milk

production on the same amount of feed. In addition, the cow that can more easily maintain her own body weight under stress is more likely to take the bull while still rearing a calf than a cow that is struggling.

This plus for the Lowline's feed efficiency is further magnified by the Lowline's inherently lower feed requirement, itself a consequence of the Lowline cow's lower live weight. In short, the smaller-framed Lowline cow needs less feed than a larger animal and she makes better use of it.

The other factor mentioned earlier was the demonstrably shorter gestation period of Lowlines, generally accepted to be an average 14 days less than the standard British beef breeds and again part of that Lowline genetic formula that results in lower birth weights.

To address the bottom line, the cash return, whether the calves are sold at weaning or steered and raised for sale Whatever the age, the Lowline animal – everything else being equal – will weigh less than an equivalent-aged animal from a standard British breed and there will be a bigger gap if the comparison is with a European breed. And since payment in most instances is related directly to weight, this would seem to be an in-built handicap for the Lowline. This needs to be analysed more carefully.

It is true that the important factors when determining the productivity of a herd of cows are:

- The number of calves taken through to weaning, as a percentage of the number of cows put to the bull, and
- The average weight of those calves, since weaning weight helps to determine the eventual profit off that carcass.

To enable meaningful productivity comparisons between breeds, however, we must relate the calf weaning weight to the weight of the cow that reared it.

But – and it is a very big “but” – the total feed consumed by a herd of large cows is greater than that consumed by a herd of smaller cows so, to gauge the efficiency of a herd, the productivity measured above has to be adjusted to take account of the feed input.

Interesting figures from a long-term trial in Texas, USA, are pertinent. This trial showed that, in general, for each 100lb (45kg) increase in cow size, there is a corresponding increase of 10lb to 12lb (4.5kg to 5.4kg) in calf weaning weight. However the heavier group of cows – 1,201lbs to 1,700lbs (544.8kg to 771.1kg) – required an average 18 per cent more energy and 13 per cent more protein a day than the lighter group – 1,000lbs to 1,200lbs (453.6kg to 544.3kg).

Significantly, in spite of the much higher energy and protein demands of the heavier cows, the average weaning weight of

their calves was only 2.4 per cent more than the average weaning weight of the calves from the smaller cows. The differences in annual feed consumption means that smaller cows rearing smaller calves can be just as efficient and profitable as large cows rearing large calves.

It is worth repeating that statement: smaller cows rearing smaller calves can be just as efficient and profitable as large cows rearing large calves.

But something happens when we factor in the feed input and the efficiency of feed conversion. Because the smaller cows use less feed, either the production of the same number of calves has cost you less; or you can use the same amount of feed to run more cows and get more calves.

I haven't dealt with breed fertility – Lowlines are very fertile – nor have I dealt with the advantage of earlier puberty, allowing you to breed from a heifer earlier. The Lowline heifer can be bred from 12 months, but then so can many other British breeds so the advantage is more pronounced in comparisons with European and Bos indicus breeds. In all of the aspects we have talked of, physical and financial, the Lowline cow is at least an equal and often a better performer than other breeds. But on a purely personal front, the chief advantage of Lowlines to me is temperament. Because we tag calves at drop, often while the cow is still cleaning it, I rate the docility and easy handling of the Lowlines very highly.

