

Co-products and home-grown crimped grains feed 4,500 head of beef

One of the UK's largest beef finishers finds home-grown crimped grain is the most cost-effective feed for his Northumberland farming business.

Finishing 90 head of cattle every week of the year is an aspiration few in the industry will ever reach but on Fraser Scott's Northumberland farm, it's no more than a matter of routine.

The key to the success of the enterprise - which sees a throughput of 4,500 head every year - is to find a feed on which the cattle will grow and thrive, and to ensure it will be available at a cost-effective price right through the year.

The solution on the Scott family's 2,600 acre holding in Swarland near Alnwick has been to switch the cattle on to crimped barley which now forms the bulk of the ration.

But reaching the decision to use crimp in 2011 came after years of trial and error, during which a range of by-products and co-products were used with varying degrees of success. In fact, it was an opportunity to obtain waste steamed potatoes which really set the farm on the road to expansion over 10 years ago.

"The potatoes came in at such a rate that we had to give the cattle as much as we could," says Fraser. "We added chopped straw and grass silage to supply long fibre but even so, I think their performance was held back, they were dirtier than they should have been and we had lots of clipping to do before they were sold."

With 70-80 cattle moving off the farm every week at this stage, the Scotts had to continue their expansion - buying in stores largely from Lancaster market - simply to keep moving the feed they had committed to take. However, always aware that the supply of potatoes could finish as quickly as it had started, the inevitable happened around seven years later in 2009 when the plant processing the potatoes ceased production.

"Our back-up plan was to go to Swarland Grain Driers where we always kept a rolling 1,000 tonnes of unsold grain we could draw on at any time," he says.

Radically changing the ration to include brewers grains with home-grown rolled barley, which went into a total mixed ration with chopped straw and grass silage, and was buffered with limestone flour, Fraser continued to seek other co-products to reduce the cost of the ration.

Struggling at the time as more and more businesses were alert to the co-product options, he relied increasingly heavily on cereals from the farm.

"The grain was coming off the fields at around 23-24 per cent moisture so we had to dry it to 15 per cent for storage and subsequent use," he says. "We had three gas-powered driers which was our cheapest option for drying the corn, but because of the late cereal harvests we were losing time on getting the next crop into the ground and we had the additional cost of hiring in staff to speed up the process."

Anxious that the arable operation should dovetail more smoothly with the livestock, Fraser was keen that manure-spreading, autumn cultivations and drilling (particularly of oilseed rape) should be brought forward and achieved whenever possible with existing farm staff.

He finally hit upon the solution in 2011, when he decided to try crimping rather than dry-harvesting grain. Guided by Michael Carpenter from Kelvin Cave Ltd, he believed this would not only bring the cereal harvest forward by three to four weeks, but would also dispense with the cost of drying grain, bring forward autumn cultivations and drilling - also allowing the time for grassland reseeds - while both cutting the cost and increasing the quality of the ration.

The system met his expectations in every way and even released the shed which had previously been used for storing dry grain. Instead, part of a former silage clamp was assigned to the crimped grain which was harvested at a moisture content of 30-35 per cent, crimped and treated with Crimpstore and compacted and covered with O₂ Barrier 2in1.

"We considered a variety of crimpers to do the job and eventually bought the Korte 1400," says Fraser. "I'd seen how it would process the grains and add the preservative, and knew we could readily achieve a throughput of 25-30 tonnes per hour."

Today, crimped barley forms the largest component of the ration which has been



reformulated to include brewers grains and a high energy and protein wheat by-product, with silage and straw (see table).

At a cost of 154p/day for heifers (186p for steers), the ration is also said to have improved the health, performance and the look of the cattle and reduced the need to clip before sale. Grading sheets tell a similar story with predominantly R grades achieved from dairy cross heifers and steers, killing out on average at 330kg and selling to Scotbeef.

Margins are said to be slim and were calculated at £61/head for the Angus-cross heifers last year, while continentals made less as they were on the farm for longer.

However, he says: "This is a numbers game and the fact that margins are tight is a constant drive. They are not easy to obtain unless you run a tight ship and that is what I hope we do."

"We will continue to use grain as I think it's the best way of finishing stock and I haven't found a better way of processing it than crimping. It allows harvest to take place when its nutritional value is highest and there's virtually zero waste in the clamp," he says.

"Any co-product, by contrast, has always had its quality depleted in some way because of the way it's processed," he adds.

This year he says he will add a new larger tonnage crimper (the Korte 2000) to the inventory and increase his crimped grain storage to four clamps, each with a capacity of 750 tonnes.

And with a new livestock shed also coming on stream, the throughput of the farm will also rise to 5,000 head per year.

Cattle ration for heifers (and steers) - weights (freshweights) and costs

Ingredient	Rate (per head/day)	Cost (per head/day)
Crimped barley	6.00kg (+2.5kg for steers)	75.00p (+31.25p for steers)
Brewers grains	3.33kg	14.65p
SelcoPlus	3.33kg	31.47p
Grass silage	16.70kg	30.00p
Straw	0.53kg	3.18p
Limestone flour	17g	Negligible
Total	29.89kg	154.30p (185.55p for steers)

