

Beef Feed Efficiency Programme

The four-year Defra and AHDB-funded Beef Feed Efficiency Programme aims to demonstrate how feed efficiency traits can be measured and selected for in beef cattle, showing that the most efficient cattle will eat less than others but grow at the same rate.

This will provide significant opportunities to cut the cost of production. Including feed efficiency in the genetic selection indices of beef cattle has the potential to increase farm-level profit by 39% and reduce greenhouse gas emissions by around 22%.



Scotland's Rural College (SRUC) recording unit

The collection of 500 cattle records at the SRUC recording unit near Edinburgh is nearly finished. Pure and crossbred cattle from suckler and dairy herds have been sourced, representing a wide range of genetic merit within the Limousin breed. Cattle were aged between seven to nine months at the start of the measurement period and have had their individual feed intake and performance recorded for 63 days.

Commercial feed recording units

Two commercial data-recording units have been established, located in Dorset and North Yorkshire. Both farms have capacity for batches of 120 cattle and can finish them after the recording period, allowing valuable carcass data to be fed into the genetic evaluation. GrowSafe feed recording troughs and associated software have been installed on both farms, allowing data recording to begin in September 2016. This equipment continuously records the weight of feed in the trough and cattle identification as feeding takes place. The commercial units will have collected records on 350 cattle by the end of March 2017 and two more batches are planned for this year.

Interim results

Residual feed intake (RFI), or net feed efficiency (NFE) as it is also known, is a measure of the level of the animal's dry matter intake in relation to its predicted intake, taking account of its liveweight, growth rate and carcass composition. It identifies cattle that eat less than predicted without any effect on rate of liveweight gain. The ability to select more feed-efficient cattle has important implications for reducing feed costs for suckler cows, as well as growing and finishing cattle.

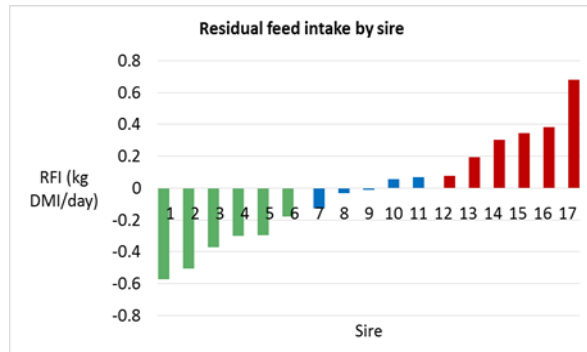


Results so far have shown that actual intake of the more feed-efficient cattle (low RFI) tends to be around 12% lower than the less-efficient cattle (High RFI) (Table 1). Difference between sire groups has also been found (Figure 1). In practical terms, results are showing that across 100 growing cattle gaining 200kg of liveweight, the resultant feed cost savings would be over £2,200.

Table 1: Performance of low, medium and high RFI cattle on the trial

	Residual feed intake		
	Low	Med	High
Average liveweight, kg	327	356	342
Average growth rate, kg/day	1.57	1.63	1.61
Residual feed intake, kg DM/day	-0.67	-0.03	0.57
Actual DM intake, kg/day	7.53	8.65	9.08

Figure 1: RFI by sire



Limousin-sired calves are still required for the programme. Cattle can be purchased or loaned via a retained ownership arrangement, come from dairy or beef herds and be aged up to eight months old. Please contact Natalie Cormack on 07866 934563 / 01890 781006 or email natalie.cormack@ahdb.org.uk if you have suitable cattle.

