

Net Feed Efficiency in Stabiliser Cattle

Is it possible to identify and select for cattle that eat less without compromising performance?



The Challenge

There is a considerable difference in feed efficiency between individual cattle. The challenge is to identify cattle that eat less feed but perform just as well, therefore, improving profitability, using fewer resources and lowering the carbon footprint.

The Results

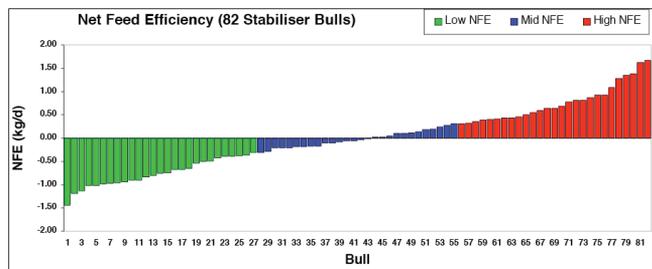
NFE varied by approximately 30% from the most to least efficient individual beef cattle. The best performing third used 13% less feed to produce the same level of overall performance compared to the lowest performing third.

The Research

The Net feed Efficiency (NFE) unit is managed as part of the BIG Stabiliser cattle-breeding programme in conjunction with SRUC and other project partners. At least 1,000 young breeding bulls and finishing steers within the Stabiliser breed will be assessed over the project period.

The graph below shows individual NFE values (in kg DMI/day). Those bulls on the left hand side with negative NFE values (in green) used less feed compared to projection (i.e. were more efficient) while those on the far right hand side (in red) consumed considerably more feed than projection (i.e. were least efficient).

NFE is determined by accurately measuring dry matter intake, daily liveweight gain, backfat depth and killing out proportion (finishing steers only). NFE is measured in both young breeding bulls and finishing steers within the Stabiliser breed. It is then combined with both sire and dam line pedigree information to generate an estimated breeding value for NFE.



The Impact

Feed cost savings of £23/head over a 12-week feeding period exist between the most efficient third and the least efficient third of beef cattle tested.

Low NFE beef cattle (classed as those in the most efficient third) produced approximately 15% less methane emissions compared with high NFE cattle (classes as the least efficient third).

Improvements in NFE were achieved with no change to the animal's performance, carcass output, grade or on the eating quality of beef produced.

Furthermore, NFE is a trait that is 34% (+/- 0.02) heritable so selecting future generations for NFE will breed cattle that are more efficient.

Project Detail

Project start date: 12/2011, finish date: 11/2016.

SAC Research team: Dr Jimmy Hyslop, Prof Rainer Roehe, SRUC, West Mains Road, Edinburgh, EH9 3JG, Scotland; industry research partners: Beef Improvement Group (BIG), JSR Ltd, Keenan Ltd.

Email contact: jimmy.hyslop@sac.co.uk

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For further info visit: www.bigbeef.co.uk

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Further Information

For more information on farm business management, beef systems, nutrition and breeding contact your SAC Consulting local office or beef and sheep specialist at beefandsheep@sac.co.uk