



Net Feed Efficiency in Stabiliser Cattle



It is now 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 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. Over 1,100 young breeding bulls and finishing steers within the Stabiliser breed have been assessed over the 5-year project period.

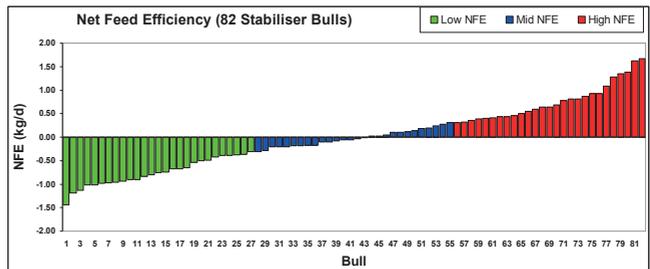
NFE is determined by accurately measuring dry matter intake, daily liveweight gain, backfat depth and killing out proportion (finishing steers only). NFE is measured in both young breeding bulls and finishing steers within the Stabiliser breed. It is then combined with both sire and dam line pedigree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



The Results

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

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).



The Impact

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

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

Improvements in NFE were achieved with no change to the animal's performance, carcass output, carcass grade, on the eating quality of the beef produced, or on the scrotal circumference of the breeding bulls tested (an indicator of fertility in both bulls and breeding heifers).

Furthermore, NFE is a trait that is 37% (+/- 0.11) heritable so selecting for NFE will breed future generations of cattle that are more feed efficient.

Project Detail

Project start date: [12/2011], finish date: [05/2017].

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