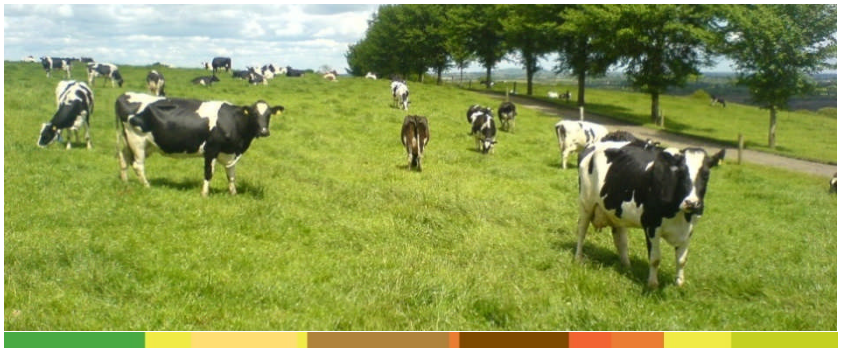

Case Study No. 1 | Tuesday 13th September |Larry Hannon, Co. Kildare

Title: Economic Breeding Index (EBI)

Summary

This is a production process innovation at the embedded stage with Irish farmers. Using an Economic Breeding Index (EBI) is a new way for farmers to select breeding stock. Previously farmers used breeding information based solely on one animal trait. EBI uses multiple traits which is converted to a € value of extra profit per cow, per lactation.

The Case

Is a farmer who has adopted a new decision making and benchmarking tool to help in choosing breeding stock for his farm. He uses the EBI which gives a single € rating for bulls and cows based on seven sub components: (1) Milk production, (2) Fertility, (3) Calving performance, (4) Beef Carcass, (5) Cow Maintenance, (6) Cow Management, (7) Health. The farmer has been using the EBI since 2000 soon after the concept was introduced.

Drivers

Teagasc researchers developed the economic model which underpins the economic breeding values intrinsic to EBI. The Teagasc Advisory Service heavily promoted EBI through inclusion in the Teagasc dairy development programme, which set targets for herd EBI improvement. Extension methodologies employed included farm visits and consultations, group meetings and a breeding competition. The agricultural media promoted the index. The Irish Cattle Breeding Federation worked in conjunction with Teagasc to identify young high genetic merit bulls for selection by the AI companies. As the EBI was accepted by farmers they began to look for more of such sires from the breeding companies.

Activities and Results

- For all Irish herds, EBI was €62 per heifer born in 2000 and increased to €160 in 2016. In 2016, Larry has a herd EBI of €159 and the 2016-born heifers average €221.
- Larry became involved in EBI because while his cows were producing good milk yields, he had great difficulty in maintaining herd fertility. As a result, his cows had a long calving interval with many calving in April-May period and he had to commence calving his autumn calvers in August. For a farmer wishing to optimise the role of grazed grass in the diet, this was not ideal.
- Using EBI has allowed Larry to breed a more fertile dairy herd resulting in his current 8 and 11 week calving periods in autumn and spring respectively. Earlier concentrated spring calving and later autumn calving has helped him to use a greater proportion of grazed grass in the diet of his dairy herd and reduce his cost base as a result. An

additional benefit of higher EBI and fertility has been the opportunity to more rapidly increase the size of his dairy herd from 100 cows in 2010 to 160 cows in 2016.

- Larry is very financially aware and interested in increasing the profitability of his dairy farm. He accepts that increasing the EBI of his herd will help to increase profitability.
- In this case, Larry's farmer discussion group of 15 like-minded farmers provided a space for Larry to regularly discuss and share his experiences of using EBI to make breeding decisions. Implementation was further supported by working with his Teagasc adviser to select suitable AI sires for his herd.
- Promoting the adoption of a successful technology increases the reputation of the adviser within the farming community. Successful promotion also raises the adviser's self-confidence. Having EBI included as part of the Teagasc dairy development programme allows the adviser to be part of a national campaign. The other actors in EBI promotion e.g. breeding companies and ICBF support the work of the adviser.

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