**Commentary on new Test Proofs for ICBF Active (Dairy) Bull List**

**Updated genomic evaluations explained**

**Tuesday 21st November 2017**

Attached are the Test Proofs for the Irish Cattle Breeding Federation’s (ICBF) December 2017 Active (Dairy) Bull List.

You have received this as part of ICBF’s consultative process where the proof data is made available to interested stakeholders ahead of official publication.

The publication of the quarterly list incorporates the latest changes and improvements to genomic evaluations systems and processes including the following;

* **Test Day Model**

In line with international best practice, Ireland has now moved to applying a Test Day Model (TDM) approach for genetic evaluation of milk production traits, as opposed to the previous approach of predicted 305-day yield. TDM approach is scientifically proven to be more accurate, as it can account for non-genetic effects specific to each test day, (e.g., weather, grass quality, level concentrate feeding). This change increased EBI values by approximately €10 - 15.

* **Economic Value**

Teagasc has updated the economic values in its Dairy Farm systems model which was last reviewed in 2014. The new Teagasc values reflect the changes in the marketplace and include; increasing the projected milk price by 1 cpl, from 29.7 to 30.7 cpl; decreasing the relative value of protein to reflect the higher value of fat on world dairy markets; and increasing farm labour costs from €12.4/hour to €15/hour. Applying these updated Teagasc figures increased EBI values by approximately €10 - €15.

* **Updated Training population**

An additional 1,500 sires have been added to the training population from which the genomic predictions are derived, bringing the size of the training population set to just over 7,000 animals. All new animals have daughters milking in Ireland. The net impact of this change to the EBI is negligible.

The collective impact of these changes is minimal, with the average EBI of bulls on the ICBF Active Bull List expected to increase by approximately €30 (this is due primarily to the increase in milk price and value of fat kg). The average correlation amongst all Active AI sires is 0.97, with relatively little re-ranking amongst the high EBI sires on the ICBF Active Bull List.

A new and technically more accurate approach to calculating the reliability of EBI evaluations has also been applied, which has resulted in a slight reduction in the average reliability for some animals.

Improving genetic evaluation is an on-going process. The more accurate the data included in the genetic evaluations for bulls the more reliable it will be. It is therefore incumbent upon the ICBF to constantly take account of any new data, new traits, better processing software or changes to the economic values over time.

It is only by constantly updating the Active Bull List in an open and transparent manner that the ICBF can help farmers and breeders have the best information on which to make confident breeding decisions.

In the past, some farmers and breeders have been impacted by the movement in EBI values. For that reason we continue to emphasise the same fundamental advice. Farmers who want to improve their herd performance should use genomic bulls, but they should use them in teams. We advocate a minimum of 8 bulls for a typical 100 cow herd.

On average, a group of genomic bulls will still be better than any daughter proven bull when it comes to delivering production and fertility. For example, the current average EBI for a team of the top 5 genomic bulls is still some €40 ahead of the best daughter proven bull available in active AI.

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