

What is data reliability?

Alongside each Euro-Star figure for an animal is a data reliability figure. **What is this and how can farmers use this reliability figure to make better breeding decisions in the future?**

Data reliability is an indicator of the level of confidence that the ICBF has that the proof will change in the future as more data accumulates on the animal. For example, a young calf will have a data reliability figure of about 20% (see Table 1). Expressing this in confidence interval term indicates that the Euro-Star index value for that animal could increase by €102 over its lifetime, but could also decline by €102 (assuming a 90% confidence interval). So taking a calf with an initial Euro-Star value of €100 (5 stars), the proof of this animal could increase to €202, but could equally fall to -€2 as more data accumulates on the animal over many years. Naturally, the extent of this proof change declines as the data reliability figure increases. So the expected change in a well-proven AI bull is reduced to only +/- €36.

If we consider the impact of genomics, then this is expected to increase the data reliability figure from the current 20% (eg, a young calf) to about 40% (eg, a five-year-old cow) for the same animal, simply through the use of additional DNA data.

Some people may be concerned by the extent of the possible changes outlined in Table 1. However, a simple and highly effective way of ad-

ressing the potential change in proof for an individual animal is through using teams of bulls. While the proof for an individual calf could increase or decrease by €102, the expected change when applied to 10 calves (eg, 10 new female replacements entering the suckler herd over a number of years) reduces to only €30. This is because, while one animal in 10 may change by the extreme, the average of the 10 animals will come much closer to the initial estimate based on the average of the group. The same applies to a team of AI bulls, except where the expected change would drop for +/- €51 to less than €20. This is exactly what the new Beef Data and Genomics Programme (BDGP) is trying to capture – to give farmers confidence in using the new Euro-Star indices on a regular basis as they make more informed breeding decisions on their farms in the future.

More than 10,000 herds have sent back calf registrations, survey forms and tissue samples for 2015

There has been a remarkable response to tissue tags and survey forms sent out over the last number of weeks – more than 10,000 herds have now sent back calf registrations, survey forms and tissue samples for 2015. This is a fantastic response and we would urge all other herdowners to please complete these two tasks as soon as possible so as to facilitate BDGP payments starting in December.

Table 1
The impact of data reliability on Replacement Index.

Reliability	Example animal	Possible change in proof*
20%	Calf	+/- €102
40%	5 year old cow	+/- €89
60%	5 year old stock bull	+/- €72
80%	AI Bull	+/- €51
90%	Well proven AI Bull	+/- €36

* Based on a 90% confidence interval

DATES FOR THE DIARY

21 October: Teagasc/Munster AI BDGP Livestock Event, Kilmallock Mart at 7:30pm.

12-29 October: DAFM, ICBF, Teagasc BDGP Nationwide Information meetings.

- ▶ 15 October: Brandon House Hotel, New Ross
- ▶ 20 October: Raheen Woods Hotel, Athenry
- ▶ 21 October: Welcome Inn Hotel, Castlebar
- ▶ 22 October: Landmark Hotel, Carrick-on-Shannon
- ▶ 27 October: Ballykisteon Hotel, Limerick Junction
- ▶ 28 October: Kilmore Hotel, Cavan
- ▶ 29 October: Radisson Blue Hotel, Letterkenny



One of Edward's stock bulls. This Simmental bull, Clonagh Dynamo Star, is sired by Banwy T-Rex (S699). He has a Replacement Index of €198 (5 stars within and across breed). He has a milk figure of +15 kg (5 stars) and a fertility figure of -1.6 days (4 stars). His first daughters are due to calve next spring with an average Replacement Index of €127 (5 stars).

Q&A

Q. Can I sell on cows and/or calves at any time and still be paid on these animals? Calves must be retained on the farm for a minimum of five months as calf quality and docility cannot be recorded before the calf reaches five months of age. If the calf is sold after it has hit five months, but before the data is recorded, you must still record the data retrospectively. Cows can be culled at any time after calving.

Q. How can I tell from a bull's Euro-Star index how well proven he is? You do this by looking at the reliability figures. A bull's reliabilities will not go above 50% until his own progeny start to hit the ground and data is recorded on them. The lower the reliability figures, the less information is known about bull ancestry. Once a bull hits 90% reliability on a trait, it can be considered proven on that trait. Genomics will increase the reliability figures on a bull's index before it is used for breeding, hence, giving more certainty as to how he will breed in the future.

FARMER FOCUS: EDWARD BUTLER

'Genomics is something I look forward to'

Name: Edward Butler, Danesfort, Co Kilkenny.

Farming System: Suckler to beef
BDGP Cow Reference No: 69

4 and 5 Star Females: Cows 14; heifers 35.

Stock Bull or AI: Three stock bulls, two Simmental and one Limousin.

Replacement Strategy: Breed all of our own.

Why did you join the BDGP? I consider it a very innovative, positive scheme and I didn't hesitate in signing up for one minute. There are huge potential benefits both for me on my own farm and for the national suckler herd.

Do you feel it will deliver for the national suckler herd? Absolutely. The scheme has secured vital data flows for the next six years which were started in 2008 with the old suckler scheme. The continuous collection and accumulation of data coupled with the power of genomics will make the Euro-Star indices a powerful breeding tool.

What replacement strategy do you plan to implement in light of the scheme? We have always bred our own replacements here. I have a Simmental bull with a Replacement Index of €198 (pictured above). The first of his daughters will be calving down next spring at 24 months and I am very impressed with his stock.

Do you use the Euro-Star indices when purchasing stock bulls? Yes, I do. I would never buy a bull without having first checked his index. Of course, the bull still has to be visually assessed for functionality, docility and overall quality; but the Euro-Star index has to be taken into account as well. A big problem is that too much emphasis is being put on the appearance of beef animals and little or no emphasis on their



Edward and Olive Butler pictured with their children Miriam (two) and Ellen (four) on their farm in Danesfort Co Kilkenny.

genetic merit. I think if the pedigree show scene started to put some emphasis on the genetics of animals it would help to change this.

Do you know much about genomics? I have read up quite a bit on it. To think that you can take a DNA sample from a young heifer calf and get a more accurate prediction of how that heifer will potentially perform as a cow in your herd in the future, is something to really look forward to.