ICBF Opening statement:

I want to thank the Chairman and members of the committee for the invitation to come before you and I welcome the opportunity to provide some information to the committee on some of the key elements of the recent Beef Euro-Star index changes. We have attended the various farmer meetings around the country over the past couple of months and have fielded many queries and concerns in relation to the updates to the Euro-Star evaluations. In that context, and in the context of the invitation to attend here today, I propose to cover some of those issues raised over the next number of minutes. My colleagues, Dr. Paul Crosson (Teagasc Grange) and Michael Doran, Chair ICBF will be more than happy to answer any questions here today.

What are Euro-Stars and how are they calculated?

In order to make it easier for beef farmers to quickly understand the genetic merit of an animal, a star rating system was introduced in 2012. The idea was that the animals would be divided into quintiles based on their genetic evaluations. The top 20% would be five star, the top 40% would be four star, and so on.

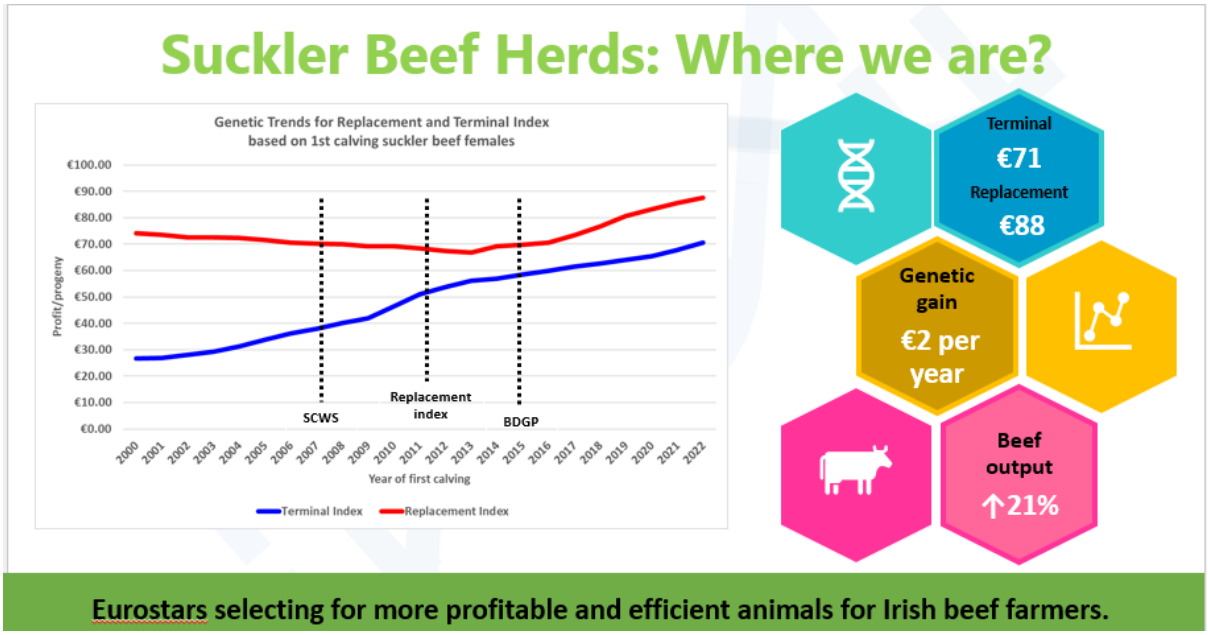
In terms of farmers quickly getting an understanding of the genetic merit of an animal, the system has been very successful, and the use of the Euro-Star ratings has been widespread as part of the purchasing decisions of stock-bulls over the past number of years, especially given the link between the Star Ratings and the Terms and Conditions of the recent beef technology schemes implemented by DAFM, namely the Beef Data Genomics Programme (BDGP) and the Suckler Cow Efficiency Programme (SCEP).

How do we know that the Euro-Stars work?

In any analysis that one chooses to undertake, at a national level, 5-star animals consistently out-perform one-star animals. Whether that is in the context of weight gain, carcass quality, calving difficulties, cow milk, cow fertility, or any other trait. Teagasc/ICBF have published scientifically peer-reviewed analysis of the effectiveness of these indexes in improving profitability on Irish beef farms. Twomey et al. (2020) found that suckler cows which ranked higher on the Replacement Index had superior performance across a range of key maternal traits. Furthermore, Kelly et al. (2021) showed that, for each unit change in Terminal Index and Replacement Index value, gross profit per livestock unit increased by €1.41 and €0.76, respectively.

To give some discrete examples, of females that calved for the first time over the past year, the age at first calving of the 5-star heifers was 100 days earlier than the 1-star heifers. In both those groups, there was a strong continental breed representation. This difference represents a significant improvement in the profitability (and environment sustainability) of those heifers – they are productive at a much earlier age, and a lower replacement rate is required. The 5-star animals also have a calving interval of 30 days less than the 1-star animals. Projecting this on the national population of suckler cows means that there are millions of days lost to longer calving intervals that can be reduced by improved genetics.

That should not be surprising. The basic genetic evaluation models being used are well proven internationally, and are used across species. Combine that with the very large quantity and quality of data, and you have a very sound basis for confidence in the figures produced. Each evaluation is provided in conjunction with a 'reliability figure', which indicates the level of data/confidence that there is in that evaluation. The better the quantity and quality of data, the higher the reliability of the evaluation. Of course there will be anomalies where animals perform better or worse than what their star ratings might suggest – that will always be the case because genetics creates the potential but management realises the potential – but in building a more profitable and sustainable industry, we need to build it around a strategy of pursuing the highest star ratings possible.



The genetic trends in the Suckler herd have been positive in recent years, reflecting the level of engagement through BDGP. The improvements in the Suckler Cow herd have been achieved while also continuing to make progress on the Terminal side. Carcase weights and conformation continue to improve, and age at finishing continues to reduce.

What are the core drivers in terms of the changes to the Euro-Star Indexes?

The core drivers to the changes in the Euro-Star index is the change to input (e.g. feed, labour) and output prices (e.g. price per kg of beef carcass and price per kg of weaning weight). These updates are primarily taken from the CSO and are incorporated into the Teagasc Farms Systems model. This model, which was developed by my colleague here today, Dr. Paul Crosson, then calculates the economic value of each trait.

Secondly, we have incorporated 'carbon' into the indexes, to help produce a lower carbon-footprint animal. This strategy has already been adopted in the two dairy breeding indexes in Ireland. The approach taken was to assess the impact of a unit change in each performance trait on farm emissions and convert this to monetary values by assuming a carbon price of €80/t.

Thirdly, we have included three new traits into the indexes; finishing age, TB resistance and carcass specifications. There is general acceptance among farming and industry stakeholders that these traits are important for beef farming in Ireland.

Why do the updates now?

The economic values were previously updated in 2015. According to the CSO, in the period 2015 to 2020, prices increased by only 2.2%. So, over that period, prices remained stable. However, between 2020 and 2022, prices increased by 47%. Despite some easing in 2023, it would appear that agricultural input prices, in line the rest of the economy, have established a new baseline much higher than heretofore. Although beef prices have also increased, and we include a 16% increase for this relative to 2015, it is clear that a major challenge for beef systems is to manage production costs.

In relation to GHG emissions, the ambition is to further reduce GHG emissions from beef cattle in line with government objectives to reduce emissions from agriculture by 25% by 2030 relative to 2018. While we accept, that at the present time, farmers do not get rewarded for reducing GHG emissions, there are clear policy, market and consumer signals that this is an important issue and we must future-proof farmers interests through the indexes in line with these expectations.

These new economic figures have been applied to the evaluations to make them more relevant. We need to ensure that the next generation of suckler animals that we are breeding, are economically and environmentally sustainable in this new era of increased output prices, but even higher input prices.

Are these evaluations a 'one-size fits all'?

No. The economic model, developed by Teagasc, that underpins the calculation of the Euro-Stars, derives an economic value for each of these critical traits. This means that animals with quite different characteristics can be profitable, and therefore can have high star ratings. Hence, we have animals from all of the breeds with high (and low) star ratings. There is often more variation within the breeds than across the breeds.

However, the economically important traits apply to all systems. Regardless of whether a farmer is autumn, spring or summer calving; whether a farmer is producing weanlings, stores or finished cattle; whether a farmer is on 'heavy' or 'dry' land, profitable beef farming requires easy calving, fertile and low maintenance cows, producing progeny that show good live-weight performance and are feed efficient.

What is genotyping, and why is it useful?

Genotyping is the process by which a tissue sample (an ear notch in the context of the Genomics Scheme) is used to generate a DNA profile of the animal. This DNA profile can then be used to further enhance the accuracy of the genetic merit figures on an animal, as well as confirming an animal's ancestry.

What happens <u>when</u> the Euro-Star indexes move?

The first thing to note is that the indexes continue to move and evolve like all genetic evaluations around the world. ICBF run evaluations 6 times per year, in particular, as new data on animal performance becomes available (e.g. mart data, factory data, calving data etc.). Some animals will

move more than others; however, the vast majority will move to some extent. That is the case in dairy animals, sheep, pigs, chickens, and beef is no different.

There will also be evolutions in terms how we calculate the indexes. Research is ongoing. For example, researching the technical solutions to improve the accuracy of the models. That will be a never-ending process. This is part of the job of an independent evaluation organisation like ICBF. Unlike most organisations doing evaluations internationally, ICBF does not have a commercial interest in the animals it is evaluating. That allows it to use independent science to act in the best long-term interest of the broad farmer population.

What have been some of the impacts been to commercial farmers from the recent changes to the star ratings?

There has been some movement in the star ratings on commercial farms. But 84% of the females who were 4/5 star before the recent changes, remain in the 4/5 star category. Those that have dropped in the star ratings will hold their original star rating qualification status for the duration of the SCEP scheme. Currently, 82% of herds have enough females in the herd to make them eligible for the next SCEP deadline at the end of 2025. We will need to engage with some farmers, especially those with closed herds, in order to help them implement a strategy that keeps them SCEP compliant, but this will be a minority of herds.

The index changes have reranked bulls, however there continues to be bulls in all breeds that farmers can use to meet the requirements of SCEP. ICBF are not telling framers that they need to change the breeds of cows they have on their farms. We have however, updated the indexes, as is international best practice, to help farmers to continue to improve the profitability (and environmental efficiency) of their suckler herds in response to evolving market conditions and new research findings.

What have been some of the impacts to pedigree breeders of the recent changes to the star ratings?

Of bulls born in 2022 and 2023 which are yet to be sold (~25,000), around 4.5% that were previously eligible for SCEP, and are ineligible. Thus, 95.5% of those previously eligible for SCEP are still eligible. In 2022, only 40% of pedigree bulls sold to suckler herds were sold into SCEP herds. 60% were sold into non-SCEP herds. On the replacement index (Across Breed), 8% of the bulls that were previously 4 or 5 stars are now not. Some of those bulls would be 4 or 5 stars on the within breed replacement index or on the Terminal index, and therefore are still scheme eligible.

Communication

Despite our best efforts to engage with representative groups ahead of the change and doing all we can to flag the changes in media when they happened, it is clear that there is some confusion among farmers about the impact of the current changes and that has naturally caused anxiety. Our communication of these changes needs to be reviewed to better manage the anxiety that farmers and herd owners feel when these indicators change. We are going to look at how we can improve that. This week, we have written to all SCEP participants. We will be doing further direct communication to allay fears and to ensure farmers have a full understanding of what the changes are, and how these changes will benefit the national suckler herd. ICBF is setting up an Industry Stakeholder Forum early in 2024 to engage with all stakeholders on the Suckler Beef Indexes.

In conclusion

Suckler farming continues to be under pressure from many fronts. We are very confident in the ability of genetics to deliver improved economic, environmental, and social sustainability for Irish Suckler farmers. The new economic values are more representative of the impact that advances in production traits have on the profitability of Irish suckler beef production systems.