



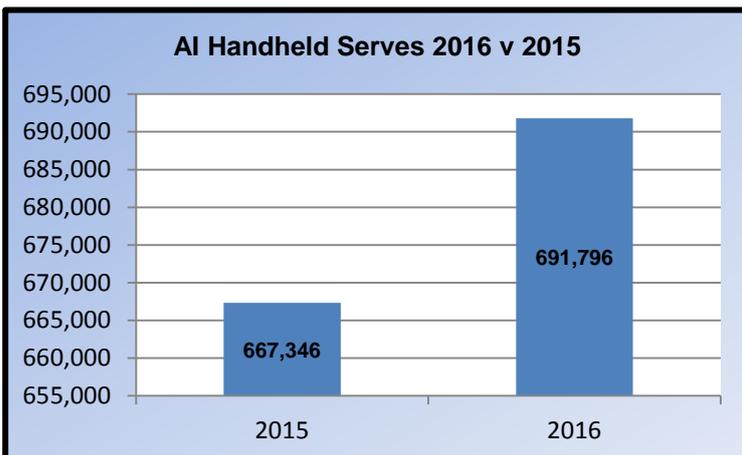
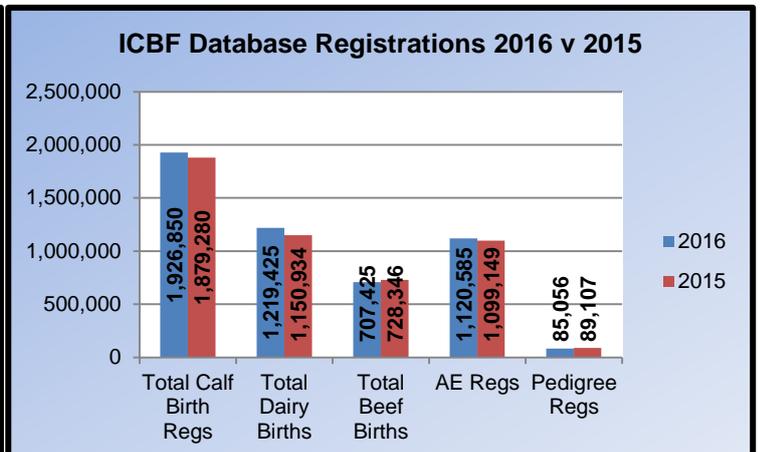
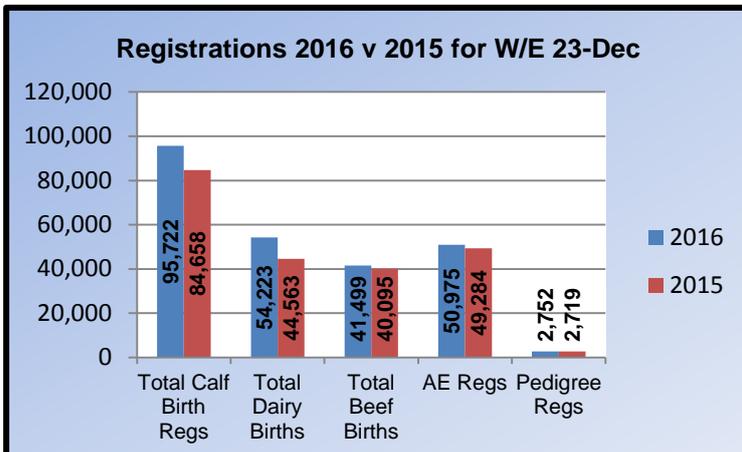
*Best wishes for Christmas and the New Year
from all at ICBF and Sheep Ireland*

ICBF Weekly Update 23rd December 2016

1 Important Dates

- ✚ **Audit & Finance Sub-Committee Meeting** – Thursday 19th January 2017 at 09:30, Killeshin Hotel, Portlaoise.
- ✚ **ICBF Board Meeting** – Thursday 19th January 2017 at 11:00, Killeshin Hotel, Portlaoise.
- ✚ **Sheep Board Meeting** – Thursday 19th January 2017 at 14:00, Killeshin Hotel, Portlaoise.

2 Database



- ✚ The stats above are compiled with the assistance of DAFM AIM systems.
- ✚ BVD test results continue to be received at ICBF and are being processed accordingly. There have been 2,366,294 results received since January 1st, of which 16,860 have come in the last 7 days. Since the beginning of the voluntary phase in 2012, 9,526,896 results have now been received.
- ✚ The chart shows Inseminations recorded on AI Handhelds in 2016 compared with 2015.

3 ICBF – A Review of 2016

As 2016 draws to a close, it is a good opportunity to reflect back on the year that was, for ICBF. Lower milk prices dampened any excitement early in the year in terms of 2016 being the first full year without milk quotas in place. However, the progress in Irish breeding programmes achieved through the power of collaboration across AI companies, Teagasc, DAFM, farmers, and ICBF was really demonstrated in 2016, with improved breeding delivering 3 cents per litre over the base price relative to where we were when ICBF was set up. That progress is on-going and sets the dairy industry up very well to take advantage of improved prices in 2017.



On the beef side, the Beef Data and Genomics Scheme (BDGP) continued to operate very well. Genomic Evaluations for beef cattle went live in August, and in general, they have been well received by farmers. The evaluations are now appearing on mart screens in over 60 marts around the country.

Over 23,000 have been trained this year as part of the BDGP scheme by Teagasc/FRS farmers joined the scheme. There has been a huge increase in the awareness of Euro-Star indexes and how they can be a tool to help beef farmer profitability, and this awareness and knowledge will continue to grow.

Adoption of dairy genomics at farm level continues to operate at very high levels. In 2016, 60% of some 650,000 recorded dairy inseminations were from genomically selected bulls. The results from both the Next Generation Herd in Moorepark, and the 'Daughter Proven' results continue to show that the genomic predictions are holding up well across the teams of genomic bulls. The AI companies continue to invest very significantly in genotyping, ensuring that the best possible selection of young bulls are going into the Gene Ireland programme for progeny testing. This is key to the on-going validation of the genomic indexes, and to maintaining the on-going rates of genetic gain.

Our genetic evaluation activities continue to be at the very heart of ICBF's role in dairy and beef. While the genotyping efforts of farmers will have a major impact on the reliabilites of our evaluations, they continue however, to be at the mercy of good quality data for real progress to continue. The on-going roll-out of the Beef Data and Genomics Programme will play a key role in improving progress here.

The GENE IRELAND® dairy progeny test program continued in 2016, with additional emphasis on getting cross-breds and pure black and white bulls tested in the same herds in order to try and get better data to help decision making. The implementation of a GENE IRELAND® beef programme continued in 2016, and it continues to get good support from commercial farmers. The Tully Performance Test station has continued to operate very successfully. The installation of further elements of the new feeding system early in 2016 (using support from DAFM) has allowed us to continue the expansion of the testing of steers. Tully is also continuing to provide a rich stream of data in the area of meat eating quality, and the results emerging have great potential in continuing to position Ireland as producers of top quality beef.

HerdPlus® membership has exceeded 22,000 dairy and beef herds. These herds have access to a wide range of valuable breeding information which farmers can use to breed more profitable cattle. On the service income side, Milk Recording had a challenging 2016 given the low milk price, but we expect a good rebound in 2017. AI uptake has continued to grow, thanks to excellent work by the service providers. Our Bull Search facility (on www.icbf.com) continues to be the facility on our website that farmers and breeders find most useful, with again over 2,500,000 searches in the last twelve months.

We continue to do significant development work in conjunction with Animal Health Ireland (AHI) in the area of IT infrastructure for management of the BVD, Beef Health Check, CellCheck and Johnes programmes. ICBF's ability to generate genetic evaluations for animals in relation to disease resistance is becoming an increasingly important area, and initial results are showing significant potential for genetics to assist with national animal health programmes. As such, our relationship with AHI will continue to be extremely important.

In terms of Big Data in Agriculture, ICBF continues to lead the way. We now have in the region of 40 billion records in the ICBF database. We have completed major infrastructure upgrades in 2016 which sets us up very well to support the Irish agri-industry in the area of big data, and big data management.

Irish farming benefits greatly from the unique partnership that exists between Government, Farmers and Service Providers. That model is currently under some pressure given the changes around the Tag Ordering process and a drop off in Tag Contributions to ICBF. We strongly believe that farmers need to maintain control over their data and resultant breeding programmes, and will be working to ensure a sustainable financial model that maintains the existing solid partnership between all parties.

Summary

2016 has been another very exciting year in the cattle breeding community. There are many challenges ahead, but also lots of opportunity. The key to ICBF's success remains the same as ever - the application of good science, a focus on the needs of farmers, working closely with our stakeholders and a 100% commitment to delivering by a talented and dedicated team. We are most fortunate to operate in an environment where ICBF's vision is shared by our Board, our members, DAFM, Teagasc and most importantly, Irish Farmers.



4 Sheep Ireland – A Review of 2016

Sheep Ireland (www.sheep.ie) continued to make excellent progress in 2016, with strong leadership from its Chairman James Murphy and a strong development team operating under the stewardship of Eamon Wall. Commercial and pedigree farmers continue to become much more aware of the existence of the Euro-Star indexes, and how they can play a significant role in removing the risk around ram purchases, and help the industry to ensure that it does not lose ground to other countries in terms of gains through genetic progress.

The commercial farms that make up the CPT programme have again put in a huge amount of work this year, and data coming from these farms is hugely valuable in generating accurate genetic evaluations for Sheep.

LambPlus has again expanded in 2016 and numbers are continuing to rise. This means that over 50% of the rams sold this year would have Euro-Star figures available. We expect this number to rise again in 2017, and current indications are that this is achievable.

In spite of not having the STAP scheme in place in 2016, farmers continued to use Euro-Stars as a tool in their purchasing decisions on rams. The Sheep Ireland/LambPlus sale in Tullamore was again very successful. The fact the Euro-Star concept is similar to that in cattle also helps in this regard. It is critical for the success of Sheep Ireland that (a) farmers use the indexes in their purchasing decisions and (b) that the performance of the sheep correlate with the indexes – i.e. high index sheep perform more profitably than low index sheep.

The output from the OVIGEN project is creating some very exciting opportunities for Sheep in the area of genomics, and we look forward to further reaping the rewards of this research in 2017 as we look to implement genomic evaluations for sheep.

Irish Sheep farming is benefitting from the unique partnership that exists between Government and the sheep industry. The ability of Sheep Ireland to put DAFM funding to good use is widely acknowledged and in 2016 was particularly evident again through the LambPlus. Without DAFM support it would be impossible for Sheep Ireland to deliver to the industry and wider community. We are most fortunate to operate in an environment where Sheep Ireland's vision is shared by our Board, DAFM, Teagasc and most importantly, Irish Sheep Farmers.

5 ICBF Board Meeting

Topics covered at the ICBF Board meeting on yesterday included:

- ✚ A report from the Audit & Finance Sub Committee around the future funding strategy for the organisation.

6 Herd Plus®

- ✚ The latest bull proofs are now available to view in excel format in the 'genetic evaluations section' of our website. The 'Active Bull List', 'Animal Search' and 'Sire Advice' are still working off the August 16 evaluations. These will be updated 10th January 2017.
- ✚ The ICBF animal search facility has had over 2.9 million individual hits for the year to date. This is an impressive statistic and shows just how much dairy and beef farmers, including people from the breeding industry value the animal search. The ICBF animal search is now available in app format on android and Apple's app store. You can download this app by searching for 'ICBF Animal Search'
- ✚ In 2016 HerdPlus membership has exceeded 23,000 dairy and beef herd members. This is a year on year increase of over 3,200 members. In 2015 year end there were 19,905 HerdPlus members. This figure currently stands at 23,185.
- ✚ Since the introduction of the new mart board initiative earlier this year, there have been indexes displayed on over 32,000 animals in 68 locations throughout the country. The mart boards provide real-time information on animals for sale thus allowing farmers ringside in marts to view the ICBF Euro-Star ratings for beef breeding stock and also EBIs for dairy stock.



- ✚ Please ensure that you record dry off dates when you have dried off your cows. Here at ICBF we don't know the difference between a Dry Cow and a cow that you plan to milk through the winter! That's why you need to tell us. Farmers that don't record dry offs do not receive an accurate Annual Report for their herd or valid lactations for their animals that have paid for.
- ✚ Herd-owners can now genotype all their female calves which will allow them to make a more informed decision around breeding and culling potential replacements. This service could cost herd-owners as little as €22/head. Please contact HerdPlus on **1850 600 900** or **023 8820452** for further details. Alternatively when logged into HerdPlus, herd-owners can make orders online by selecting 'Services' – 'Genomic Services' – 'Place Order'
- ✚ From all of us at HerdPlus, we would like to wish you all a Safe and Happy Christmas. We are looking forward to a busy and exciting 2017. Thank you for your continued support.

7 Milk Recording

National Milk Recording Statistics - Herds, Cows & EDIY 23/12/16						
Milk Recording Organisation	Total Herds Recorded YTD 23/12/16	No. EDIY Herds YTD 23/12/16	% Herds EDIY	Total No. Cows Recorded YTD 23/12/16	No. EDIY Cows YTD 23/12/16	% Cows EDIY
Munster	3,780	1,159	31%	368,839	124,420	34%
Progressive	2,393	960	40%	261,606	106,259	41%
Tipperary	118	54	46%	11,593	5,089	44%
Total	6,291	2,173	35%	642,038	235,768	37%

Recorded Cows by Milk Recording Organisation - Year on Year Comparison			
Milk Recording Organisation	YTD 2015 Cows Recorded 01/01/15- 23/12/15	YTD 2016 Cows Recorded 01/01/16- 23/12/16	2016 vs 2015 Year on Year Difference (%)
Munster	370,376	368,839	-0.4%
Progressive	265,180	261,606	-1.3%
Tipperary	11,913	11,593	-2.7%
Total	647,469	642,038	-0.8%

8 Sheep Ireland

- ✚ Firstly, Happy Christmas to all readers of this Sheep Ireland Update. We would like to thank all LambPlus members, sheep breed societies, commercial sheep farmers and all industry stakeholders for their continued support. A lot of progress has been made in 2016 and we will aim to continue this in 2017.

LambPlus Lambing Notebooks

- ✚ All LambPlus breeders should have received their LambPlus notebooks by today (Friday). Early lambing Vendeen flocks received theirs in mid-December.



OVIGEN Parentage Reports

- In recent weeks we have been sending out 'test' OVIGEN parentage reports to flocks that participated in the genotyping research project during 2015 and 2016. The objective of this initial genotyping was to establish a database of genotyped parents. Breeders can now simply genotype the offspring of these animals to verify parentage and receive all the other benefits that will come with genomics into the future.

Plans for Sheep Genomics in 2017

- Now that we have tested a number of parentage reports, we are ready to send all remaining reports to breeders. This will happen in January and the reports will be circulated by post. All the data contained in these reports will be incorporated into breeder genomic webscreens, which will be launched in the spring. These webscreens will also allow breeders to select which sheep that they wish to genotype for 2017.

Important Notes on Current Parentage Results

- For some breeders the results are very straight forward, where all DNA samples were successfully genotyped and the parentage of relevant sheep in the flock were correctly verified. However for most breeders there will be some type of issue to be addressed. The most obvious issue may be a parentage mismatch based on the DNA. Breeders need to be aware that there may be a number of reasons for this so there is no need to despair. For example, the DNA sample may have been assigned to the wrong animal at sampling. Another potential reason might be that the ancestry information on the Sheep Ireland database may be incorrect – especially for flockbooks that do not host their database on the Sheep Ireland system.
- The key message is that Sheep Ireland will work with all breeders to address any issues highlighted on the reports. Re-genotyping will be offered to all breeders where a result is in question. We ask breeders to remain patient while we establish the processes needed to deliver genotyping to all Irish ram breeders. OVIGEN is a four year research project, by the end of this four years, we aim to be delivering genomic Euro-Star breeding values to Irish ram breeders and have implemented a world class system to allow ram breeders to access this technology at the click of a mouse. We are well on track to achieving this.

Case Study - John Renehan, Johnstown, Co. Kilkenny; Violet Hill Flock

- The latest of our scanning case studies looks at results from the Belclare flock of John Renehan. Again although the number of ewes is small, the results are extremely encouraging. Click [here](#) for a full summary.

We would like to thank everybody for their contribution during the year and we look forward to another very productive year in 2017.

We close for Christmas on Friday 23rd December and return on Tuesday 3rd January 2017

National Milk Recording Results for the 10 day period, 14-DEC-2016 To 23-DEC-2016

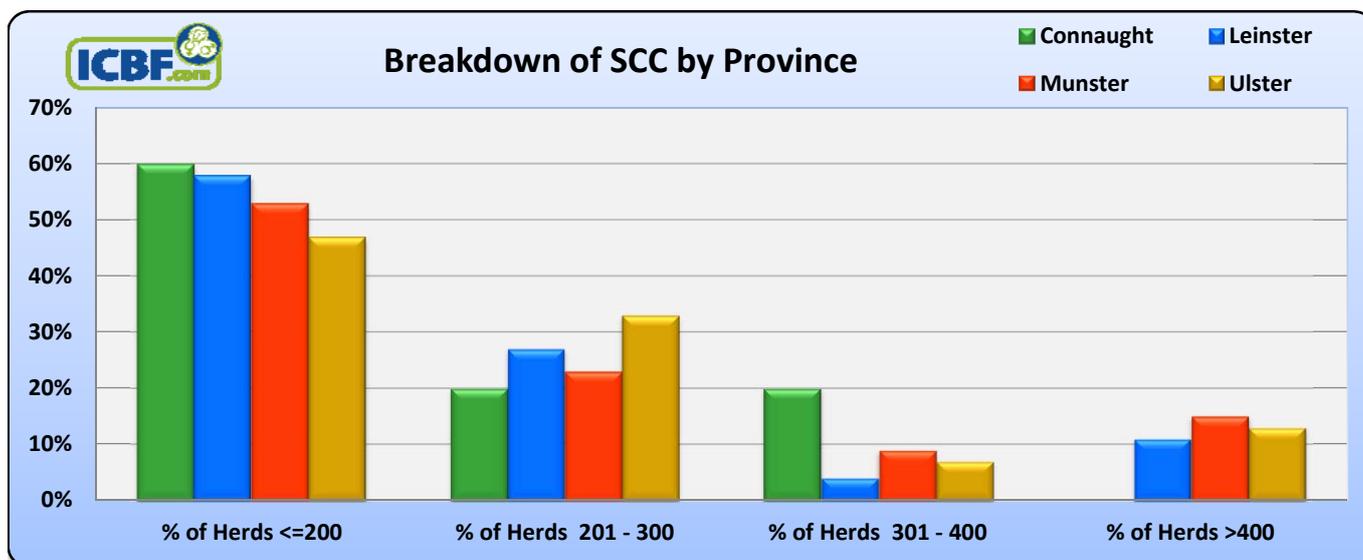
ICBF	No. Herds Recorded	No. Cows Recorded	Avg Herd Size	Avg Milk kg/Cow	Average Fat %	Average Protein %	Average F+P kg	Average SCC*
Connaught	10	391	39	19.8	4.23	3.40	1.50	145
Leinster	98	7,102	72	19.6	4.24	3.43	1.49	179
Munster	127	10,530	83	19.2	4.36	3.48	1.49	199
Ulster	15	1,032	69	20.6	4.04	3.35	1.51	218
National Statistics	250	19,055	76	19.5	4.29	3.45	1.49	189

* Geometric Mean Herd SCC

SCC Distribution for the 10 day period, 14-DEC-2016 To 23-DEC-2016

ICBF	No. Herds Recorded	No. Cows Recorded	Avg Herd Size	% of Herds <=200	% of Herds 201 - 300	% of Herds 301 - 400	% of Herds >400	Average SCC*
Connaught	10	391	39	60%	20%	20%	0%	145
Leinster	98	7,102	72	58%	27%	4%	11%	179
Munster	127	10,530	83	53%	23%	9%	15%	199
Ulster	15	1,032	69	47%	33%	7%	13%	218
National Statistics	250	19,055	76	55%	25%	8%	13%	189

* Geometric Mean Herd SCC



% Herd Breakdown for the 10 day period, 14-DEC-2016 To 23-DEC-2016								
ICBF	No. Herds Recorded	No. Cows Recorded	Avg Herd Size	Best 20% SCC	Best 40% SCC	Average SCC**	Worst 40% SCC	Worst 20% SCC
Connaught	10	391	39	94	164	183	198	253
Leinster	98	7,102	72	111	153	178	204	264
Munster	127	10,530	83	116	160	189	240	313
Ulster	15	1,032	69	147	189	211	250	299
National Statistics	250	19,055	76	115	157	185	219	301

** Percentile Herd SCC Rank (Median SCC)

