



IRISH CATTLE BREEDING FEDERATION

The Irish Experience; DQI, breeding programs and genetic evaluations.



Dr Andrew Cromie, Technical Director ICBF.



The Irish Experience; Almost Positive!



The Irish Experience; Always Enjoyable!



Overview of Talk.

Irish cattle breeding.

Genetic evaluations => Euro-Star Indexes and genomics.

Breeding Programs => GENE IRELAND.

Data Quality Index => Whole Herd Performance Recording.

The Irish Beef Genomics Program.

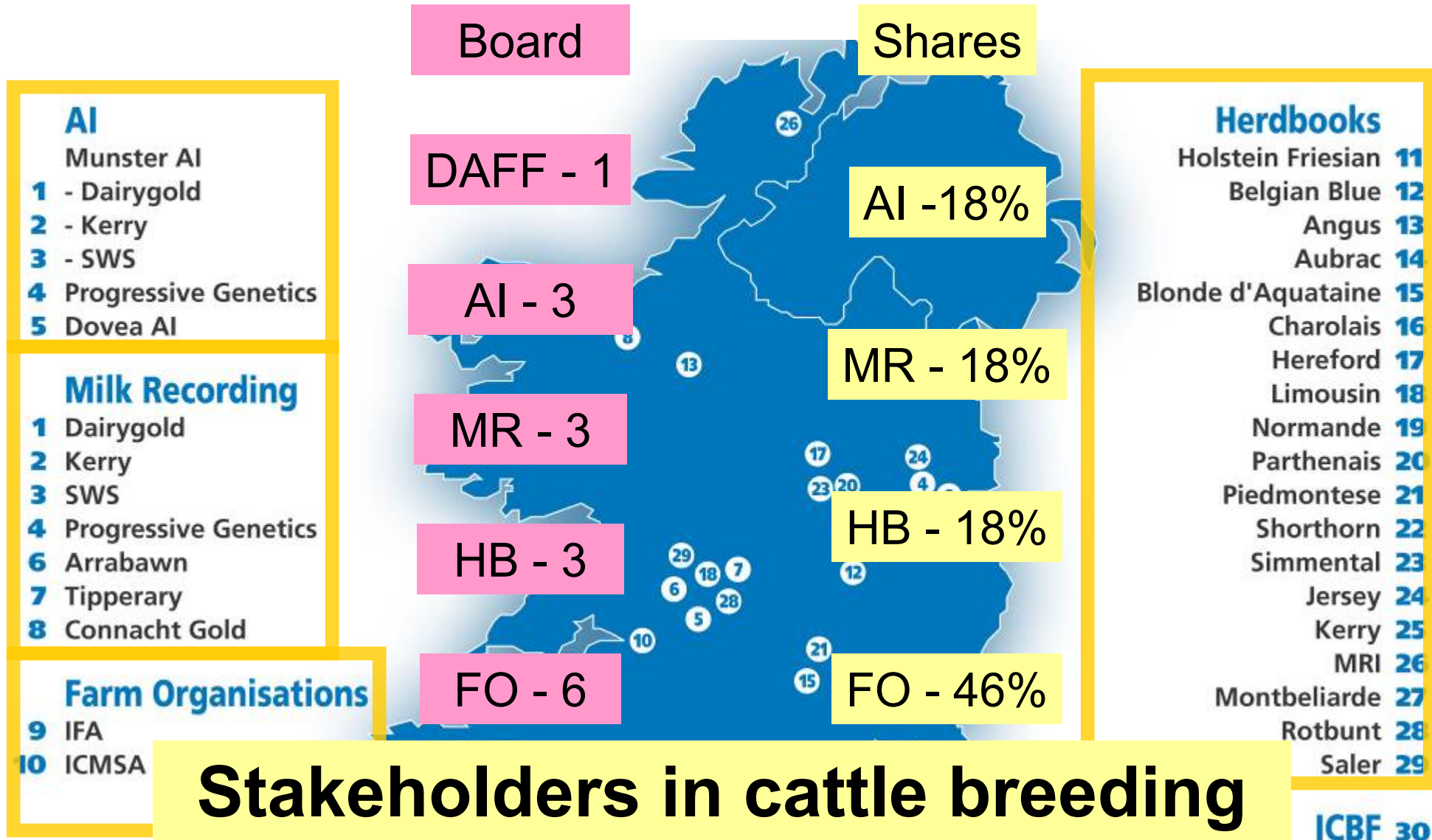
ICBF Beef HerdPlus

Summary.

Irish Cattle Breeding.

- Co-ordinated by ICBF.
 - A co-operative of 30 cattle breeding orgs.
 - Operating budget of ~\$10m/year.
 - Staff of 70 servicing 100k dairy & beef farmers.
- Established ICBF database in 2002.
- Focused on profit from science.
- Independent genetic evaluations => Trust.
- World-leading (research => implementation)
 - Beef Genomics => largest livestock genomics project globally.

MEMBERS, BOARD & SHARES - ICBF



Stakeholders in cattle breeding control decision making.

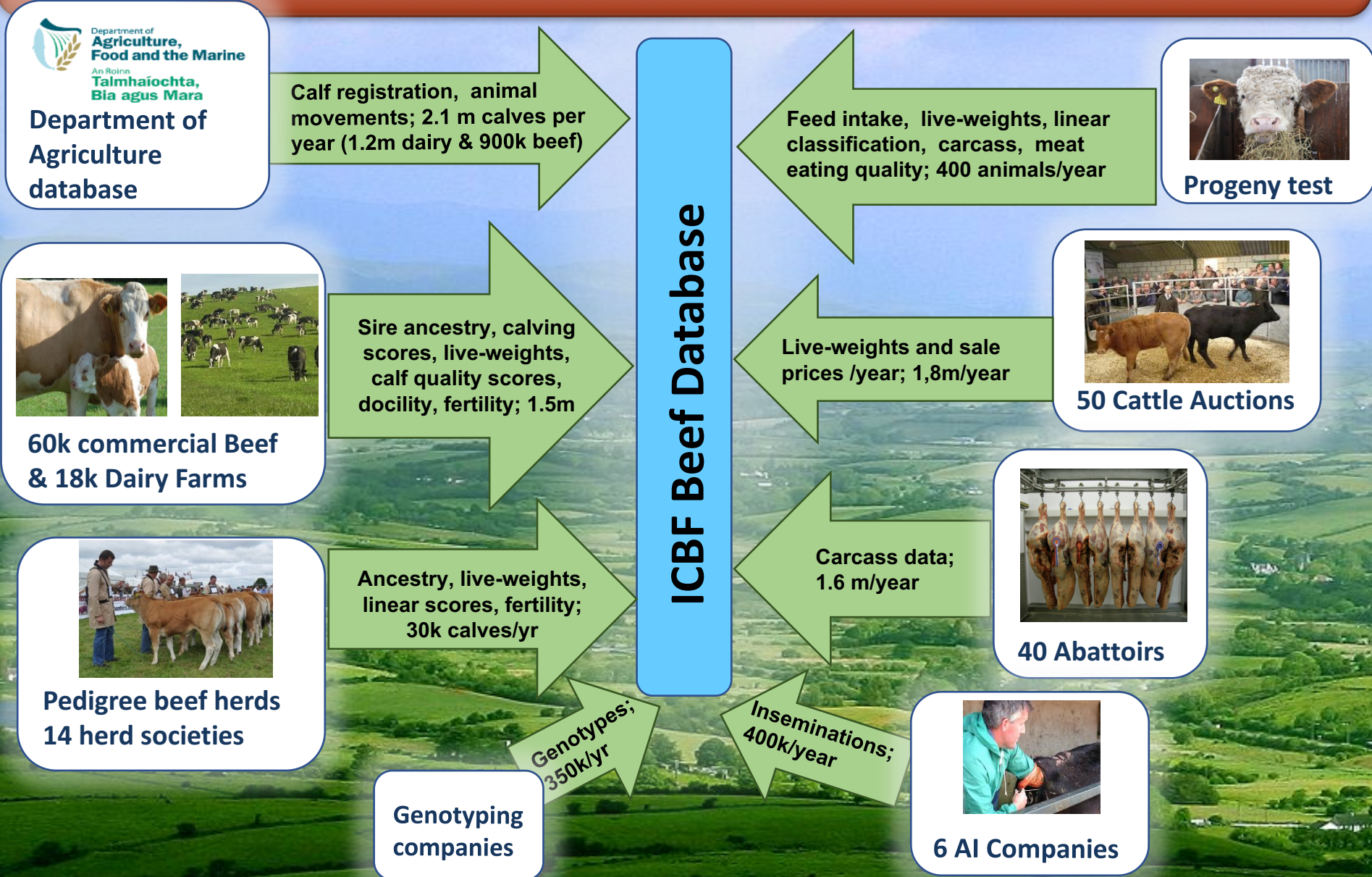
Sheep Ireland Ltd.

- Established in 2009.
- Separate legal entity to ICBF, but direct link.
 - Using ICBF infra-structure, GE staff, offices etc.
- Staff of 6, plus contracted field support.
- Budget of ~\$1.2m/year
 - 70% DAFM & 30% Industry (via slaughter levy).
- Board of 9 people
 - 3 from Farm Orgs, 1 DAFM, 1 Flockbooks, 1 MALP/CPT, 1 Producer Groups, 1 LambPlus & 1 MII.

Beef performance evaluations in a multi-layered and mainly crossbred population

R.D. Evans*, J.F. Kearney*, J.McCarthy*, A. Cromie* and T. Pabiou*

*Irish Cattle Breeding Federation, Highfield House, Bandon, Cork, Ireland



The Breeding Goal in Beef.

- The ideal suckler cow must;
 - Calve herself.
 - Calve each year.
 - Have enough milk to rear her calve.
 - Be not too big.
 - Have a good quality calf at foot.
 - In summary, a “balanced” cow.
- She needs to produce more output from less input => more profitable, more sustainable, more carbon efficient.

A balanced cow!



An Irish 5-Star cow.



One of David's best cows. This nine-year-old SI X cow has a Replacement Index of €169 (5 star, top 1%). She calved for the first time at 24 months, has had eight calves with an average calving interval of 364 days and she weaned the heaviest calf of David's 2015 calf crop. She is sired by the old Simmental AI bull Hurtig (HRG).

€uro-Star Replacement Index.

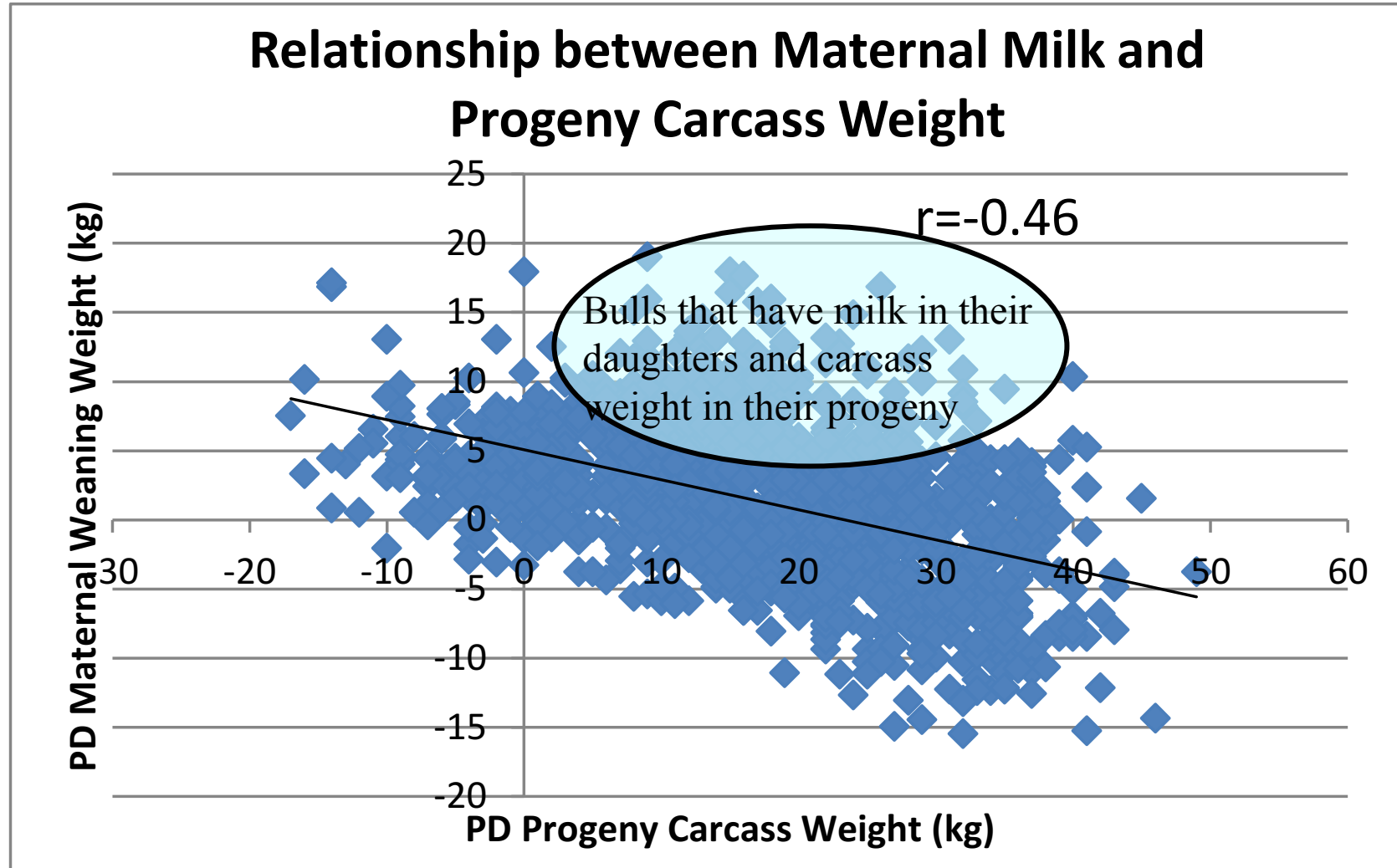
Trait	Goal	Relative wt
Calving	Emphasis: Cow traits 71% Calf traits 29%	6%
Feeding		8%
Carcass		1%
Maternal milk		18%
Female fertility	More	23%
Docility	More	4%

€uro-Star Indexes.

Star Rating (within Limousin breed)	Economic Indexes	€uro value	Index reliability	Star Rating (across all beef breeds)
★ ★ ★ ☆ ☆	Replacement (per daughter lactation)	€80	47% (Average)	★ ★ ★ ★ ☆
★ ★ ★ ★ ★	Terminal	€152	49% (Average)	★ ★ ★ ★ ★

- Profit Index, e.g., €80 more per calving.
 - Multi-breed evaluations.
- Star system; 5 star versus 1 star.
 - Across all breeds. Also within breed.
- Very high level of farmer understanding.

Identifying the “curve-benders!”

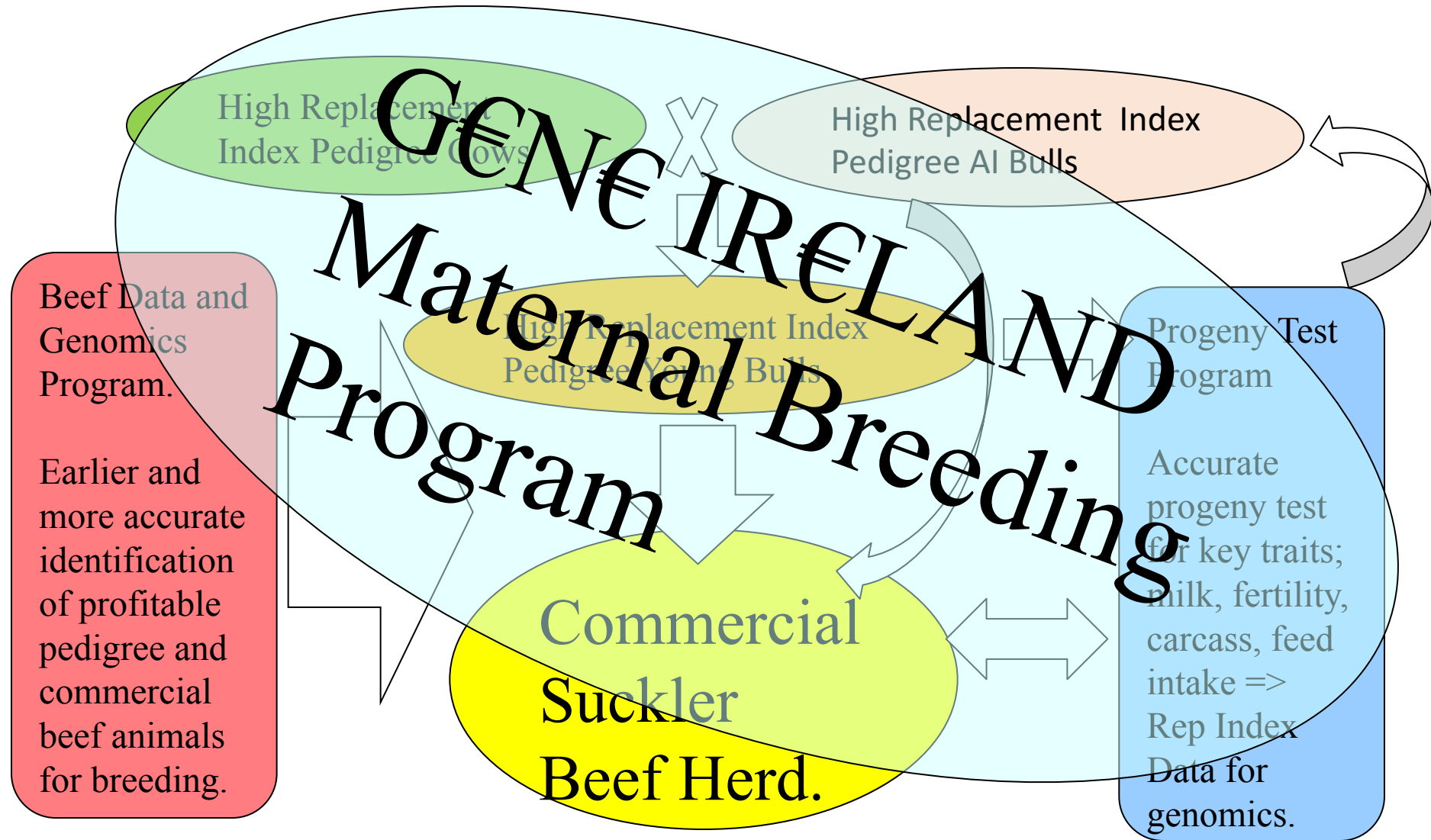


5 star cows are more profitable & more carbon efficient.

Stars	Repl Index	Cow Wt	Calf wean weight.	Calving Interval	Progeny carcass wt	Co2 Output
5 Stars	€108	669 kg	336 kg	403 days	358 kg	3,355 kg
4 stars	€86	680 kg	324 kg	407 days	356 kg	3,432 kg
3 Stars	€60	690 kg	319 kg	411 days	356 kg	3,475 kg
2 stars	€43	691 kg	315 kg	416 days	357 kg	3,502 kg
1 Star	€12	739 kg	309 kg	423 days	357 kg	3,552 kg

- Compared to 1 star cows, 5 stars are;
 - more profitable, sustainable & carbon efficient (+€100/cow).
- How do we generate more 4 & 5 star cows.

How do we generate more 4&5 star cows?



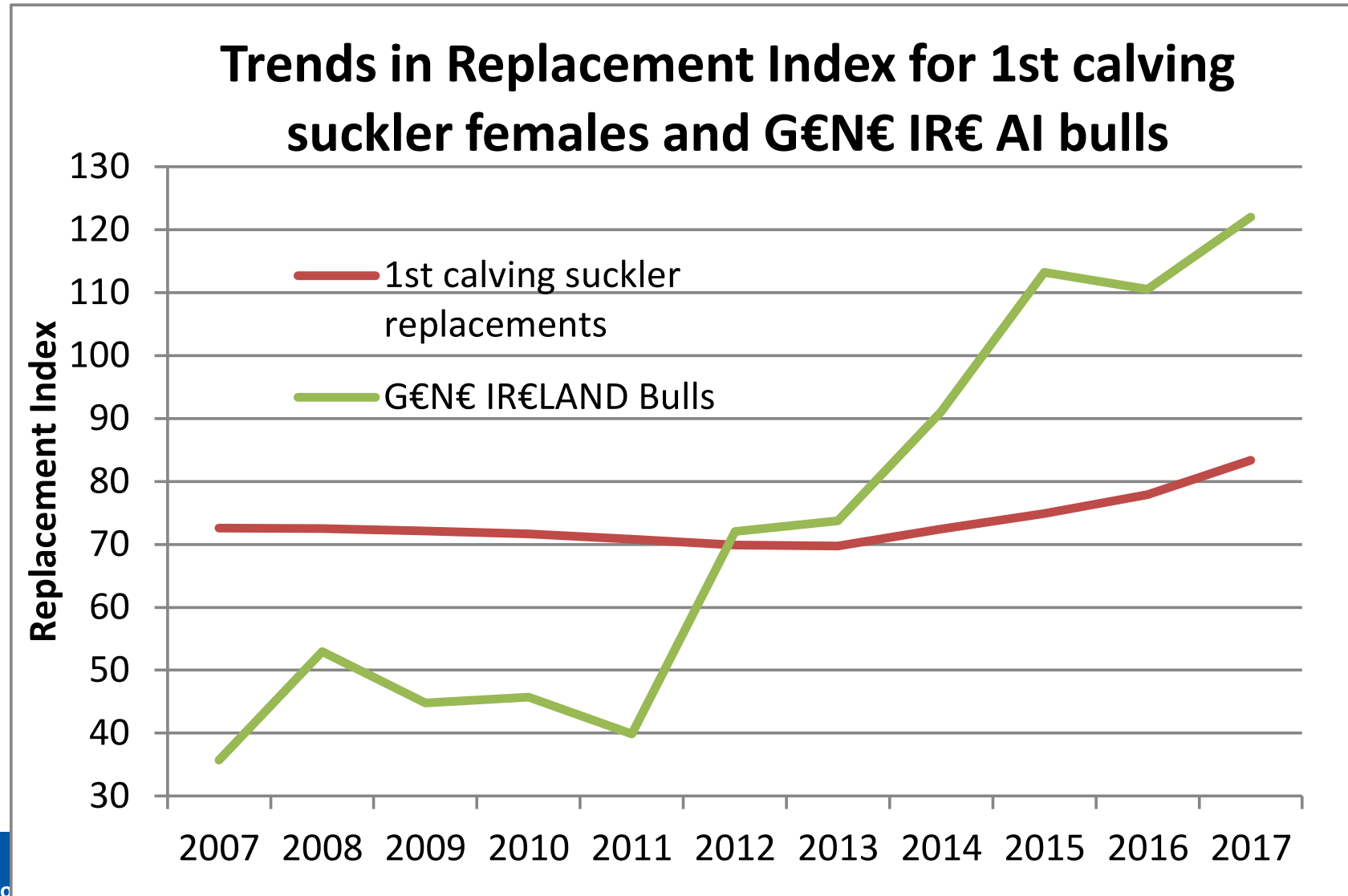
GENE IRELAND Maternal Breeding Program.

- Launched in 2014 involving ICBF, AI companies, herdbooks & farmers.
 - Previous program from 2007 => PTest Structure.
 - Principles established with industry => AbacusBio
- Objective of increasing genetic gain through generating more high repl index AI bulls.
 - Testing more bulls + more quickly + for all traits + genomics => increased genetic gain.
- ~100 bulls tested to-date.
- First graduates with daughters calving now.

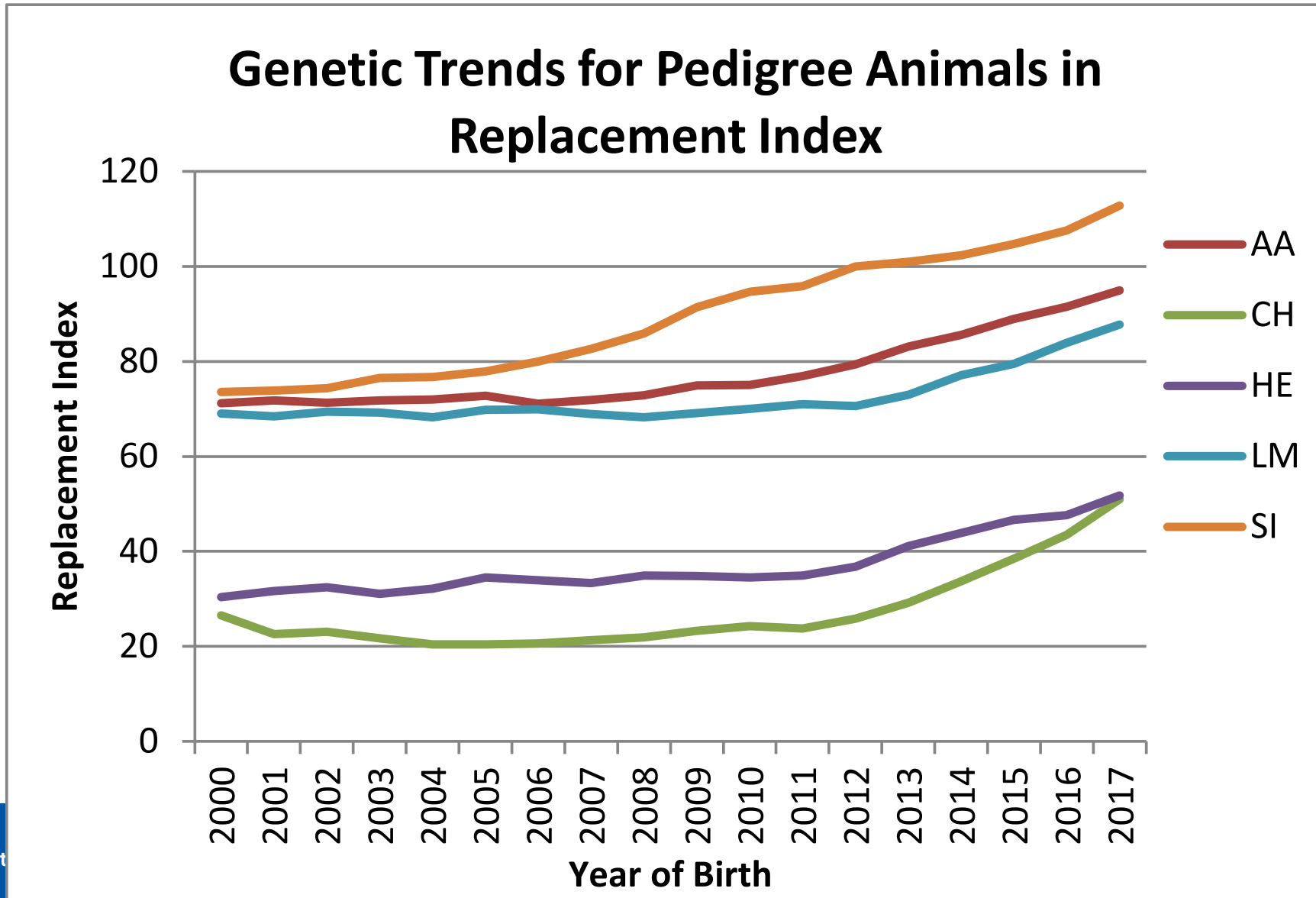
Are we making progress?

- 11 of the top 20 active AI bulls (with semen available) for Replacement Index have come through GENE IRELAND.
 - From a total of 49 bulls with Rep rel \geq 50% \Rightarrow 22% success.
 - Breeders are starting to use these bulls.
- Genetic Trends are now moving in the right direction, but it will take time.

Progress has started – and will increase!



Positive Trends in Pedigree Herds Also.



How to get more momentum?

Past

- Breeding bulls for show ring & sale success.
- More focus on visual rather than indexes.
- Focused on terminal.
- ICBF “tolerant” of under-recording & mis-recording.
- 1000 herds involved in performance recording (25% herds & 40% cows).

Future

- Breeding bulls for profit.
- More focus on indexes, then visual.
- Focused on maternal and terminal.
- ICBF promotion of breeders that “want to do the right thing”
- Program just launching.

Bid to increase accuracy of pedigree data

Pick up your tickets on page 41 of Irish Country Living

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Is it time to license pedigree breeders?

Kevin Malvey's article on licensing pedigree breeders. This can take...

Should data be accepted from pedigree breeders?

showed that 70% of pedigree herds in Ireland have 25 or less calves per year. This means that 70% of all pedigree cows could be eliminated when evaluating animals. The second weighing would also be a false reflection on the quality of the...

Pedigree breeders are finding reform a struggle

The long-suffering Dealer prominent members of the the accuracy of data on the ing an attempt this week with

Is the pedigree breeder an easy target?

Progress to tackle false pedigree data is sluggish

Beef breeders want 'to take their data back' from ICBF

Pedigree breeders would be given a...

Claire Mc Cormack

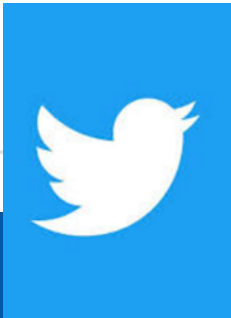
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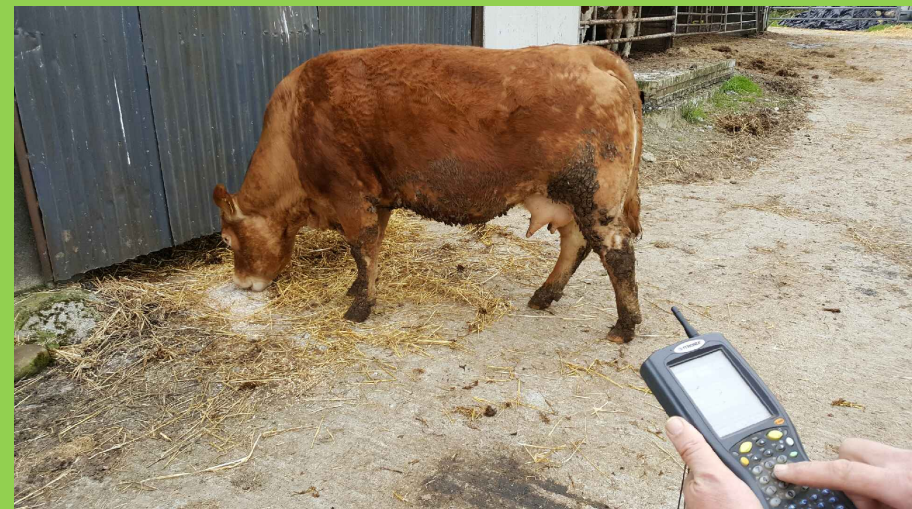
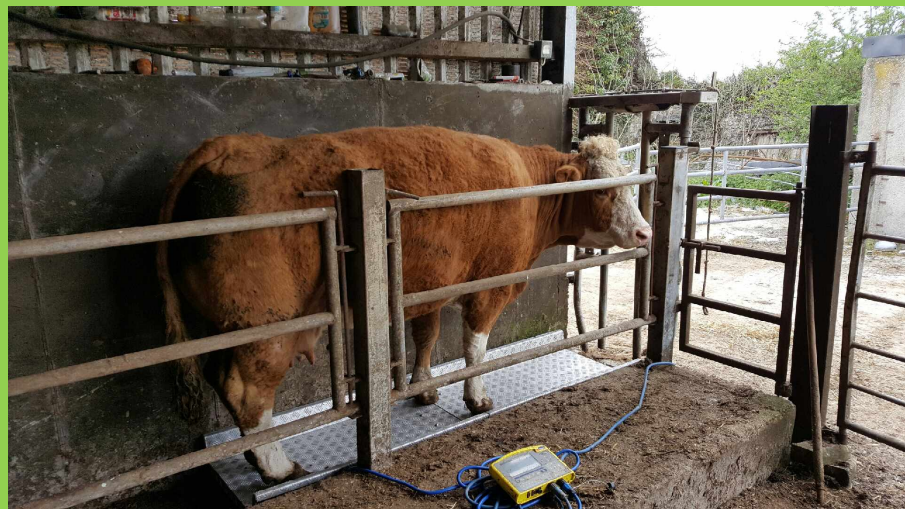
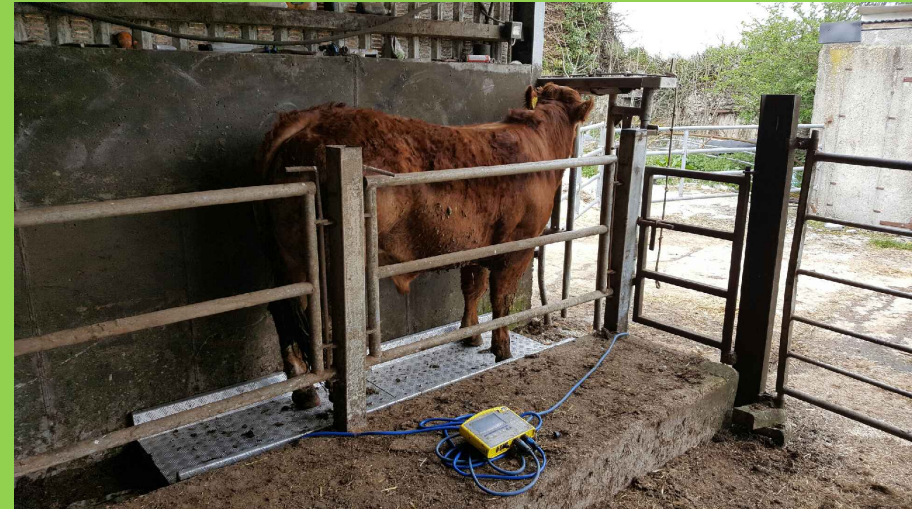


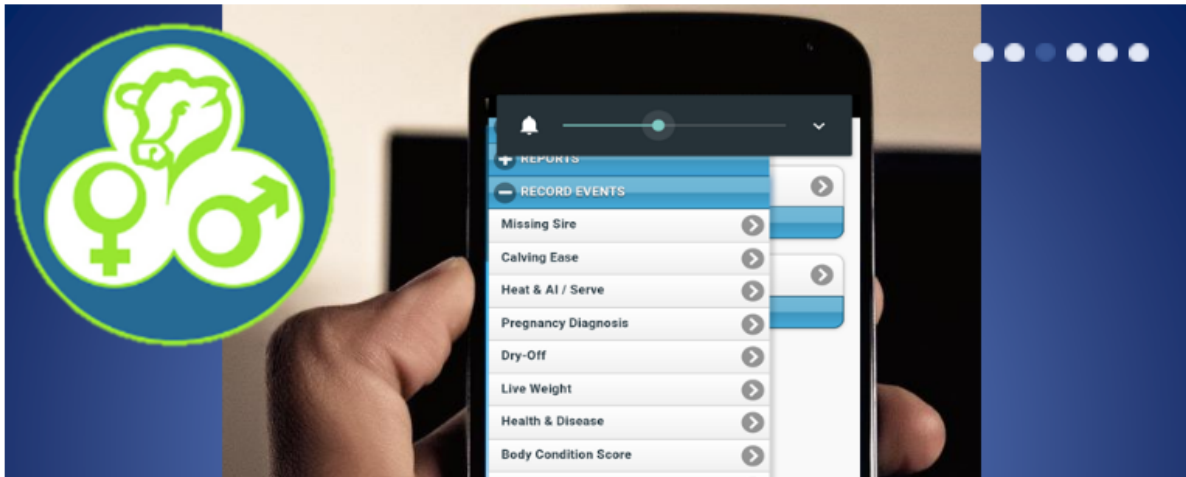
Whole Herd Performance Recording (WHPR)

- Data recording program for Beef Pedigree Breeders.
- Voluntary Program
- Strong across industry support; ICBF, herdbooks, farmers & AI companies.
 - Previous DQI attempts had not worked.
 - Preference to have minimum quality standards for inclusion

‘Participating Breeders want to show that the data recording carried out in their herds is done with the utmost Accuracy & Transparency’

WHPR – all animals weighed, scored & inspected (e.g., caes)





New ICBF Mobile App

This free app is available on the Apple App Store and Android Play Store. You can find it by searching for 'ICBF'.



Some Key Breeding Improvements ...

Herd Est	
HerdPlus	€140
Non HerdPlus	€119
Calving Interval (days)	
HerdPlus	387



ONLINE SERVICES

User name

Password

[Forgot your password?](#)

ICBF ANIMAL SEARCH

- Animal Tag, AI Code, Herdbook No.
- Name / part of name (Males only)



Bullfinder

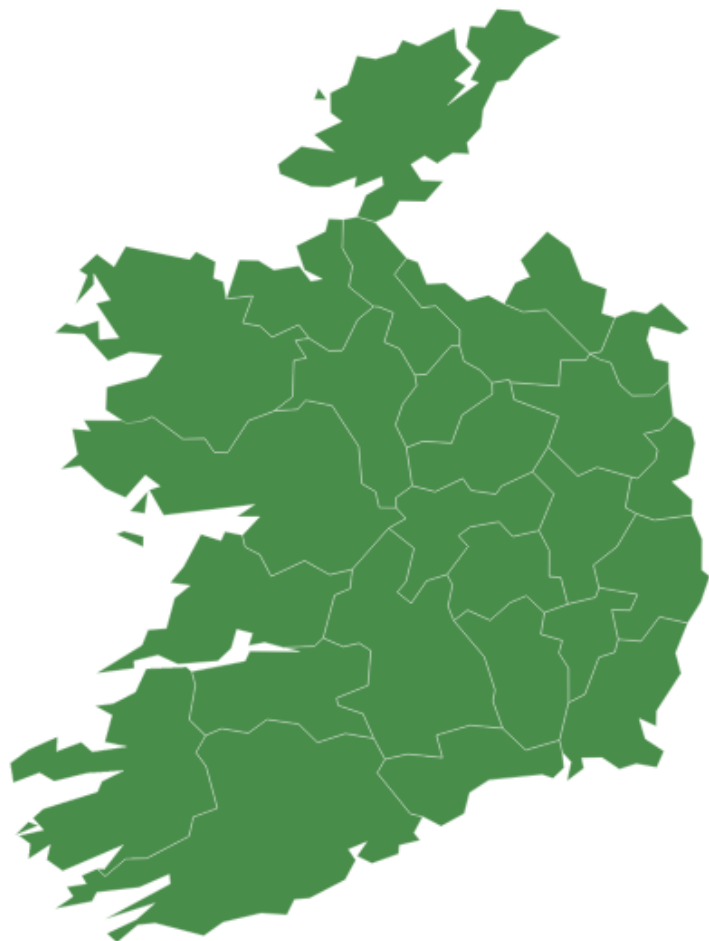
Stock Bull Finder

[Click here or scroll down to see you search results](#)

Region

Click on counties to limit your search to those counties

Deselect all



Breed

Limousin

Charolais

Hereford

Angus

Aubrac

Simmental

Blonde d'Aquitaine

Belgian Blue

Salers

Parthenaise

Shorthorn

Rolled out in Sheep in 2016.

Search by Tag Number

Animal ID

Replacement Index

(Across Breed)



To

5

From

1

Terminal Index

(Across Breed)



To

5

From

1



Attention Pedigree Beef Breeders

Get your bull into the "Bull Finder" by booking your "Whole Herd" Performance Recording visit with ICBF today!

Phone 023-8820452 or Email whpr@icbf.com.

For a Bull to be displayed below it must be in a 'Herdplus' herd that has had its ICBF WHPR visit in the last 12 months.

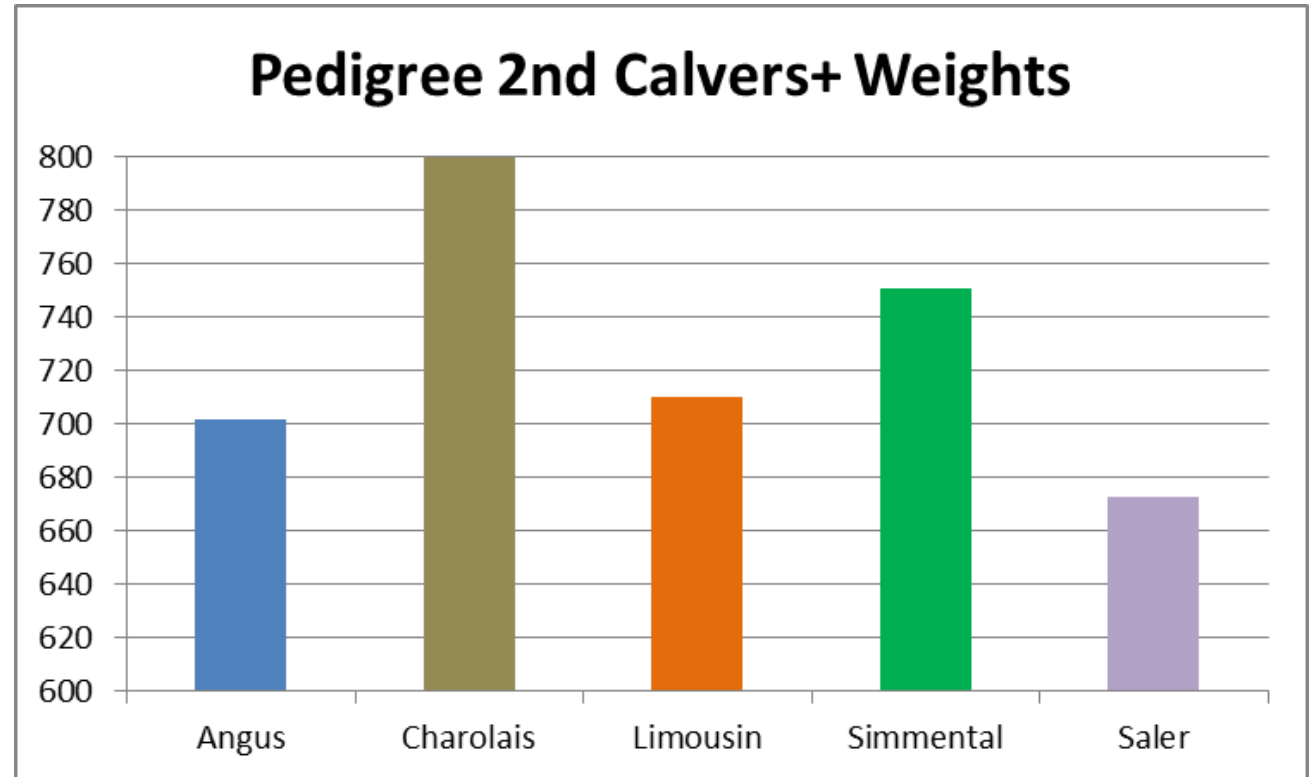
The Bull must be 18 months of age or older & have been at least visited by ICBF

Bullfinder

Bull Details				Replacement Index		Terminal Index							
Tag	Breed	DOB	Sire	€	Stars Across	€	Stars Across	Weight	Genomic Eval.	Owner	Comments	Photo	
IE141402761357	Angus	15-JAN-15	IE211142110416	€229	★★★★★	€95	★★★	Show	NO	SEAN SHANNON			
IE361414590386	Aubrac	21-FEB-16	IE361414311503	€188	★★★★★	€161	★★★★★	Show	YES	SHANE BOWERS			
IE361414510387	Aubrac	08-MAR-16	IE361414311503	€187	★★★★★	€163	★★★★★	Show	YES	SHANE BOWERS			
IE201038411116	Aubrac	02-MAR-16	FR1210002490	€183	★★★★★	€140	★★★★★	Show	YES	MICHAEL MCCALL			
S3104	Limousin	11-NOV-14	S1421	€182	★★★★★	€172	★★★★★	Show	YES	THOMAS BAILEY			
IE201038431101	Aubrac	30-JAN-16	FR1210002490	€179	★★★★★	€114	★★★★★	Show	YES	MICHAEL MCCALL			
IE221241751419 7 Recent Views	Limousin	19-SEP-15	S1421	€177	★★★★★	€183	★★★★★	Show	YES	THOMAS O'SHEA			
IE371402350734	Simmental	08-MAY-16	S1624	€169	★★★★★	€103	★★★	Show	NO	MATTHEW MCDONALD			
IE221241771420 5 Recent Views	Limousin	19-SEP-15	S1421	€169	★★★★★	€177	★★★★★	Show	YES	THOMAS O'SHEA			
IE341595160009	Angus	02-OCT-15	S1250	€167	★★★★★	€74	★★	Show	YES	PAUL MATTHEWS			
IE201038461104	Aubrac	07-FEB-16	FR1210002490	€160	★★★★★	€103	★★★	Show	YES	MICHAEL MCCALL			
IE301303240268 5 Recent Views	Limousin	06-APR-16	WTA	€159	★★★★★	€176	★★★★★	Show	YES	PETER KEANE			

WHPR Progress to-date.

- Just launching.
- Already 480 herds (~7.2k cows) signed up to-date.
 - Cow weights a key addition.
- Bull-finder available this Autumn.
- Will drive uptake => commercial beef farmers will support WHPR herds.



Getting more momentum - BDGP

- Beef Data and Genomics Program (BDGP)
 - More profitable, sustainable & carbon efficient cows
- €300m total funding 6 years (2015-2020)
 - Farmers paid ~€90/cow/year to complete key actions re: the scheme, e.g., targets for 4/5 star cows & bulls.
 - ~1m animals genotyped to-date. ~2.5m animals in total will be genotyped during period of scheme. Cost of genomic service is €22/animal.
- Based on blending EBV's with DGV's. Moving to single step GBLUP in 2018.

And more momentum - HerdPlus



Beef Output Report

01/01/2016 - 31/12/2016

Herd Owner: WILLIAM NICHOLSON
 Herd Number: D2160138
 Page: 1 (3)

- Subscription service from ICBF.
 - 26k users & growing.
- User friendly reports and profiles.
- Customer Support
- Education and knowledge transfer

1. Summary Data

Report calculates how much liveweight was produced from this herd in the selected year. It then breaks this figure down into various KPI's which are detailed in section 2 below. All weights are liveweights.

A. Total Beef Output (Kgs)

Sales - Purchases + Inventory Change, in the selected year **75,291**

B. Total Livestock Units (LU)

Average livestock units in the herd, in the selected year. **197.1**

C. Total Hectares (Ha)

Total hectares available to the cattle enterprise, in the selected year. **93**

2. Key Performance Indicators (KPI's)

		Bottom 1/3	Average	Top 1/3
A. Beef Output per Livestock Unit. (LU)	Your Herd	249 Kgs		314 Kgs
	National Average			
Total beef output (75,291) ÷ Total livestock units (197.1)		343 Kgs		530 Kgs
B. Beef Output per Hectare.	Your Herd	1.13 LU		1.62 LU
	National Average			
Total beef output (75,291) ÷ Total Hectares (93)				
C. Stocking Rate per Hectare.	Your Herd	2.12 LU		
	National Average			
Total Livestock units (197.1) ÷ Total Hectares (93)				

Summary.

- The Irish experience of beef breeding.
 - Still very passionate.
 - Has moved from visual and terminal traits to profit and maternal + terminal traits.
- A number of key initiatives are driving this change.
 - The central database, Euro-Stars, GEN€ IRELAND, WHPR, HerdPlus & BDGP (genomics).
 - **Engagement with breeders is crucial.**
- Exciting times for Irish beef breeding; Challenging but exciting!

Acknowledgements.

- Irish Department of Agriculture, Food and Marine (DAFM) for support of ICBF and the “Beef Data and Genomics Program”.
- A few New Zealanders!
 - Brian Wickham.
 - Dorian Garrick
 - Peter Amer & Team at AbacusBio.
 - Graham Alder & B+LNZ Genetics for kind invitation to speak today.



Our Farmer & Government Representation



Our AI & Milk Recording Organisations



Our Herdbooks



Acknowledging Our Members