

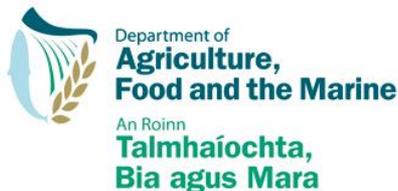


IRISH CATTLE BREEDING FEDERATION

GENE IRELAND Beef Open Day.



Tully Beef Performance Test Station, 19th May 2017.



Agenda.

- Program overview.
- Tully Performance Test.
 - Overview & summary performance.
 - Comparisons for key traits.
 - Replacement Index.
 - Feed Intake.
 - Carcass attributes.
- Whole Herd Performance Recording.
- Progeny viewing.
- Lunch & questions.

Objectives of Today.

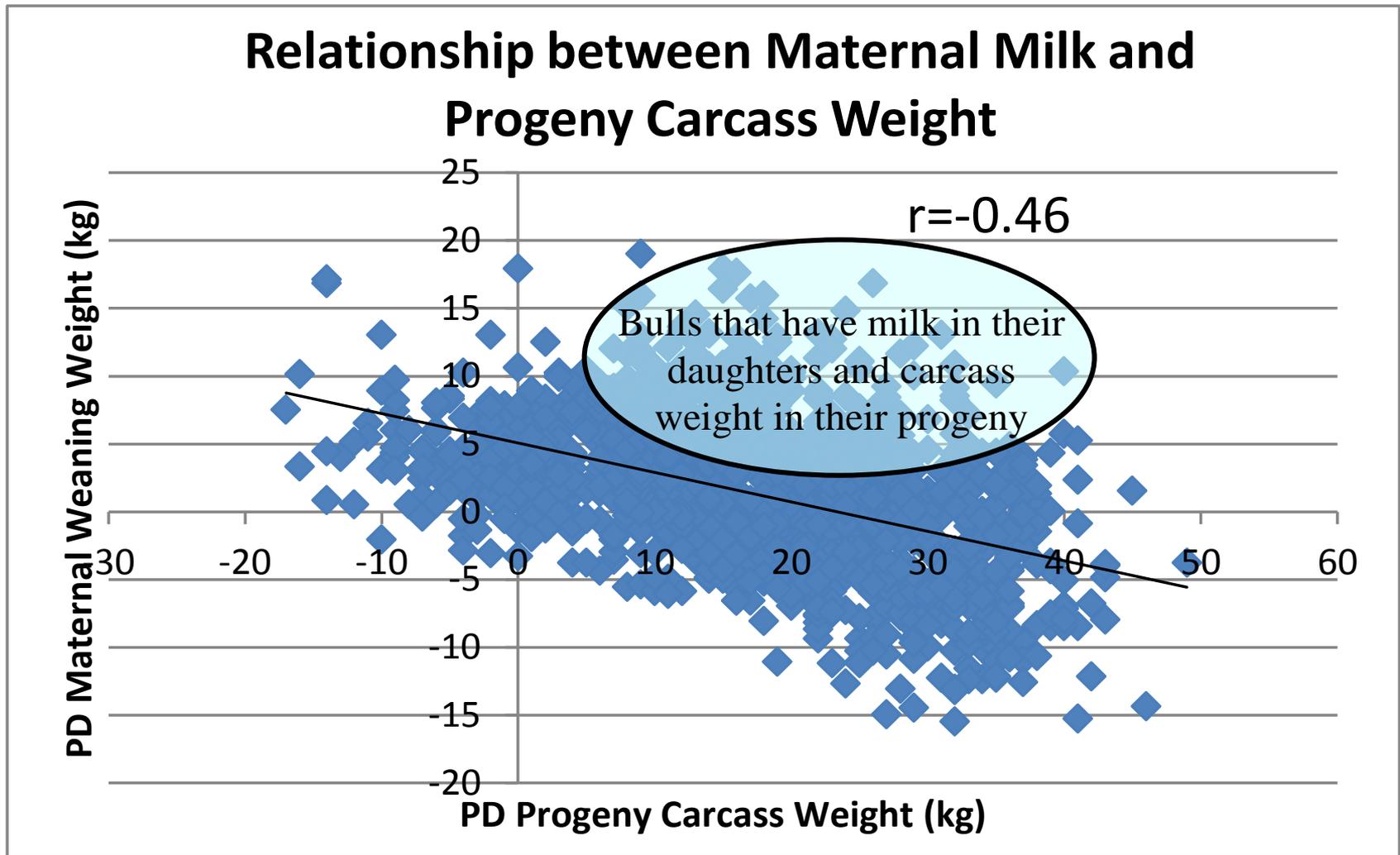
- To give you confidence that GEN€ IRELAND is achieving its key objective of delivering more profit for suckler beef farmers.
- Within this, that Tully is delivering on its core objectives of; (i) providing key data on hard to measure traits linked to profit, (ii) validating the Euro-Star Indexes and (iii) demonstrating the value of better genetics.

€uro-Star Replacement Index.

Trait	Goal	Relative wt
Calving	Less	16%
Feed Intake	Less	18%
Carcass wt (for age)	More	21%
Maternal milk	More	18%
Female fertility	More	23%
Docility	More	4%

- The ideal Irish beef cow; A weaned calf every year of good weight & quality.

Identifying the “curve-benders!”

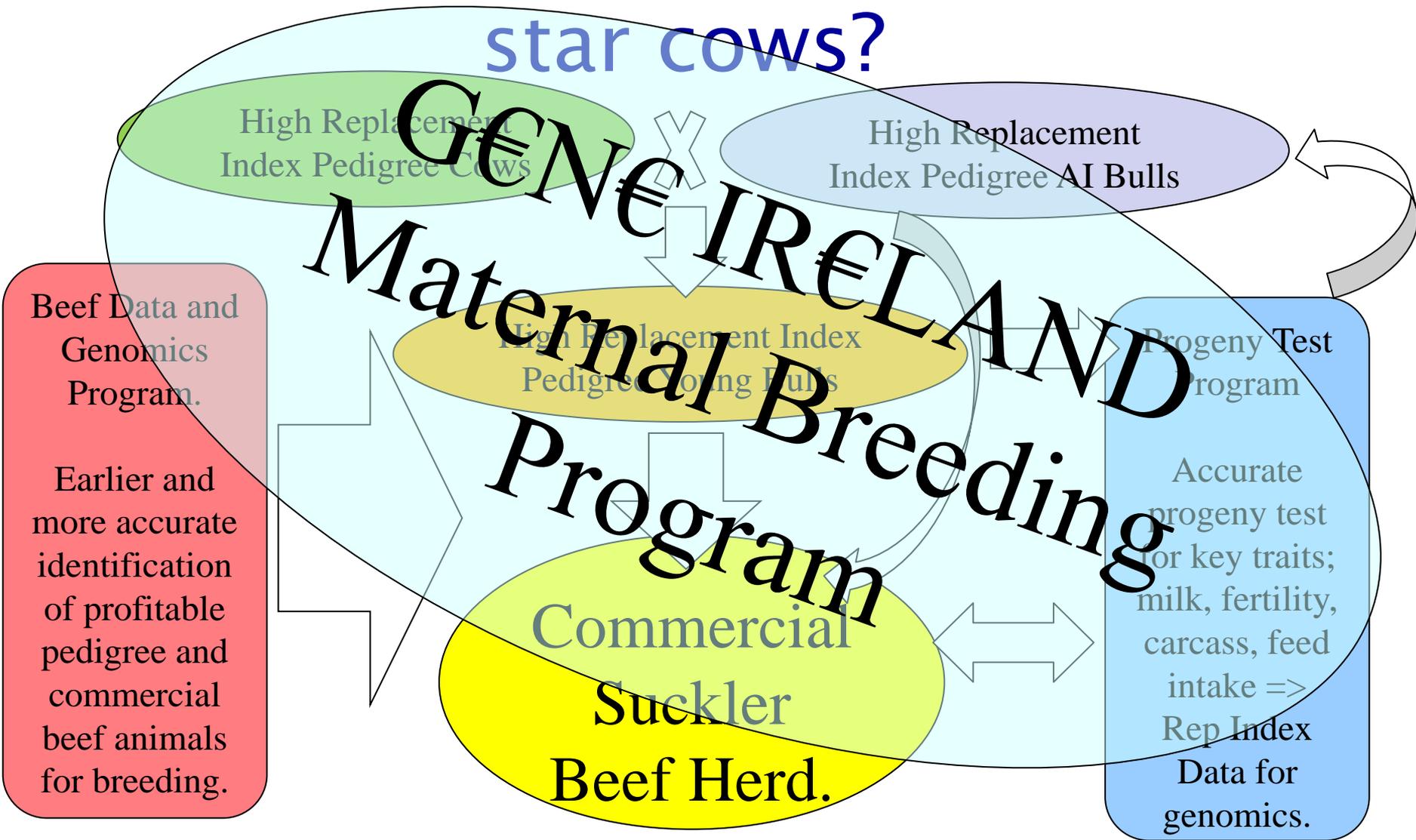


5 star cows are more profitable & more carbon efficient.

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

- Compared to 1 star cows, 5 star cows;
 - Produce more milk (27 kg's heavier at weaning),
 - Are more fertile (20 days shorter calving interval).
 - Have the same progeny carcass weight (1 kg more in cwt).
 - Are more carbon efficient (4.5% lower in gross CO2 output).
- How do we generate more 4&5 star cows?

How do we generate more 4&5 star cows?



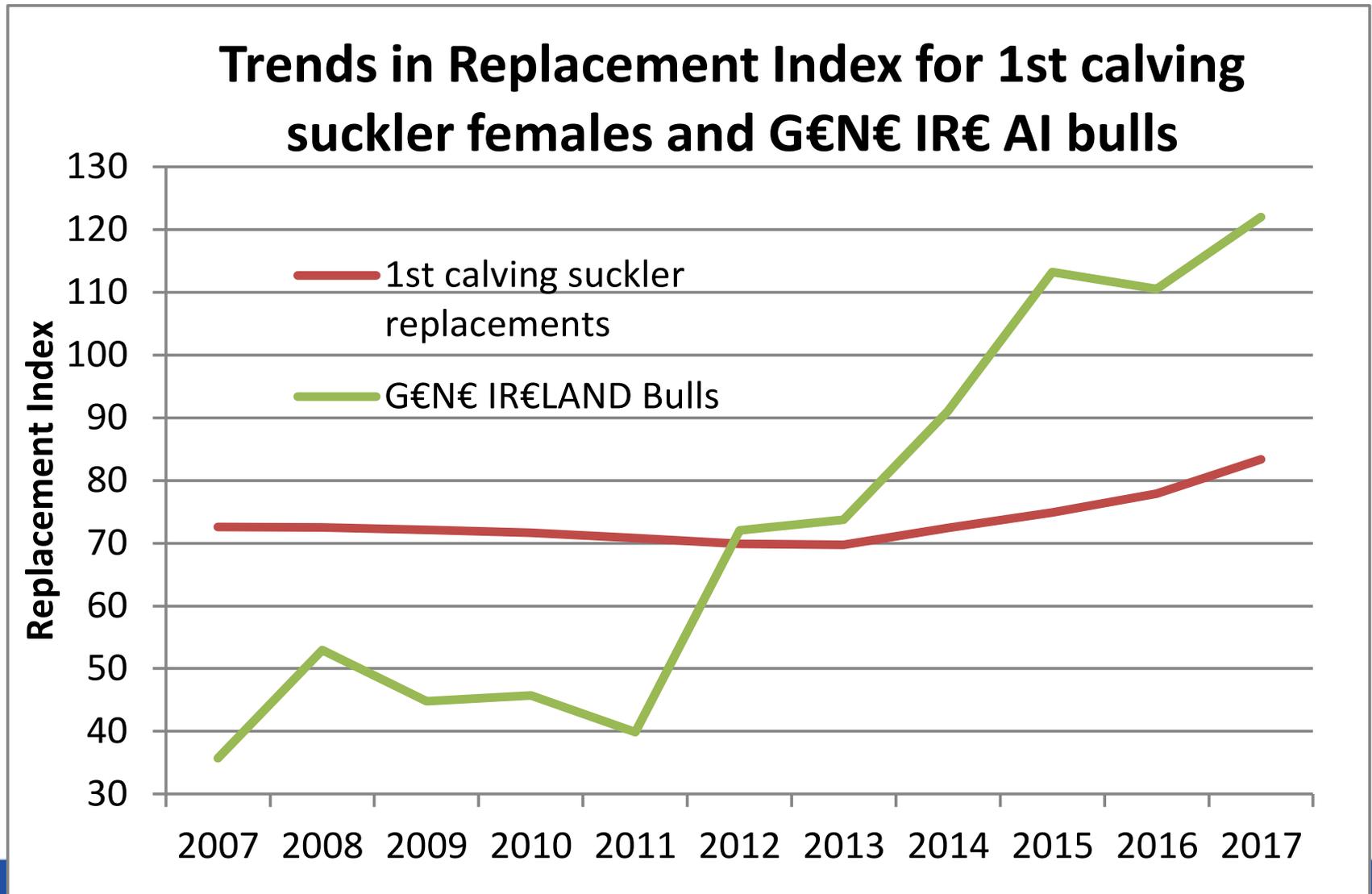
GENE IRELAND Maternal Breeding Program.

- Launched in 2014 involving ICBF, AI companies, herdbooks & farmers.
- 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.
- 92 bulls tested to-date.
- First graduates with daughters calving now.
 - Commercial progeny tested here at Tully.

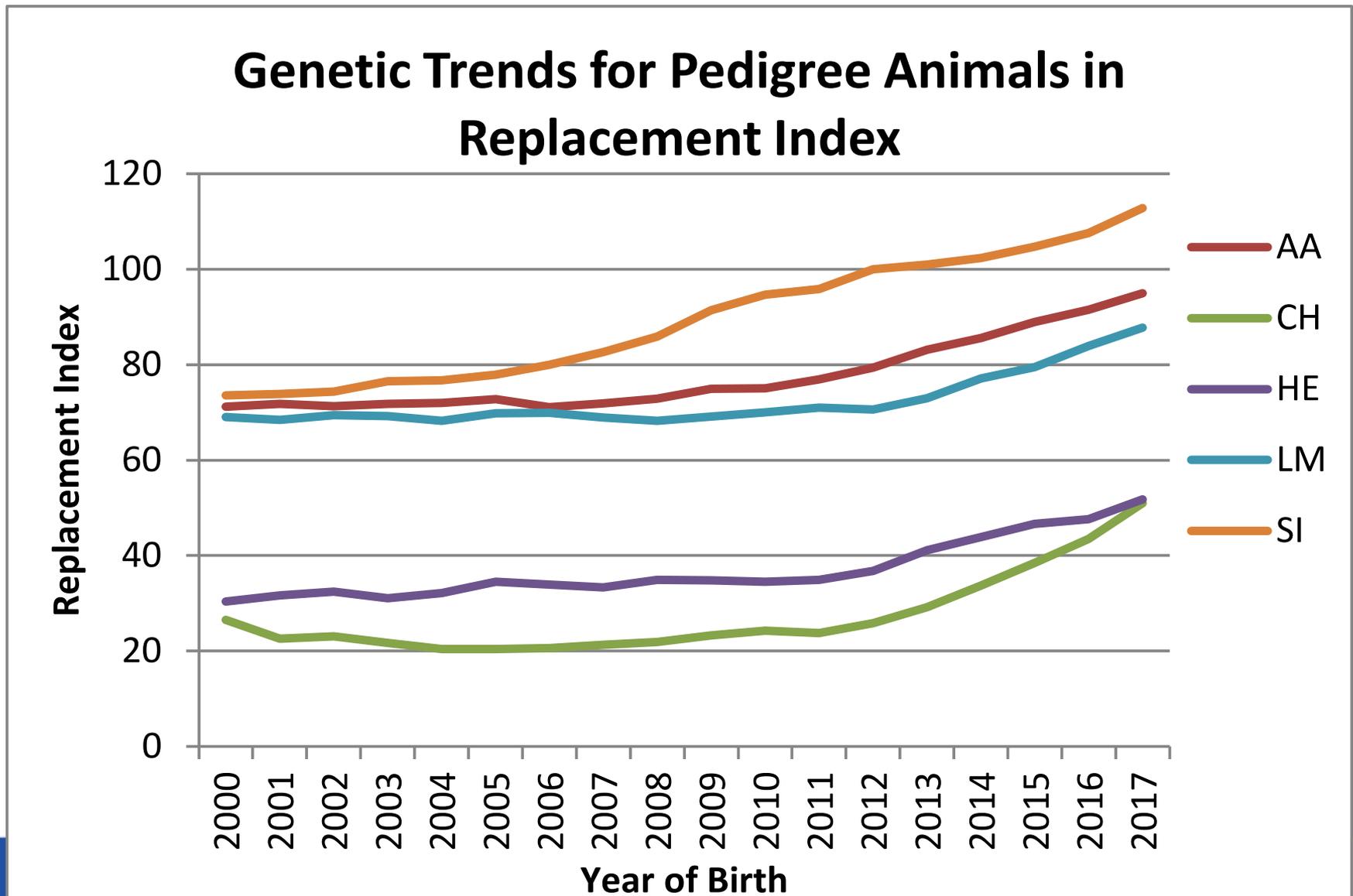
Are we making progress?

- Already 5 of the top 20 bulls on the ICBF Active Bull List for Replacement Index have come through GENE IRELAND.
 - A further 6 were purchased by GENE IRELAND and have semen available for bull breeders.
 - 11 bulls from 49 with Rep rel \geq 50% \Rightarrow 22% success.
- All 17 bulls from the Spring 2014 program now have daughters calved as 2-year olds (ave 14/bull).
- 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.



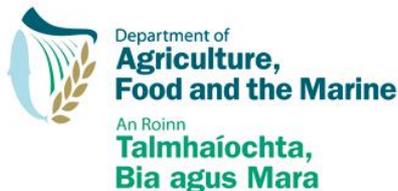


IRISH CATTLE BREEDING FEDERATION

Tully Performance Test.



Tully Beef Performance Test Station, 19th May 2017.



GENE IRELAND progeny test program

- **Background:** Progeny testing allows for increased accuracy in genetic evaluations.
- **Aim:** Collect information on commercial progeny from AI sires.
- Selection Process:
 - ICBF Database: GENE IRELAND AI sires (15-20 progeny), Sire & MGS recorded, age & gender (bulls & steers)
 - On-Farm: Parentage verification, weight & health.
- 1508 animals (1168 bulls and 340 steers) slaughtered to date.
- Aim is to slaughter 500 progeny per annum.



Measurements obtained

- Acclimatisation period: (30 days).
 - Vaccination IBR, BVD, RSV, PI3, Blackleg & other clostridia diseases.
- Diet
 - Bulls (ad-lib concentrates); Steers (10 kg concentrates & 3 kg hay fresh-weight)
- Performance test measures (90 day testing period).
 - Average daily gain (g/day), Feed conversion efficiency (DMI/ADG), Linear Scores, Scanned muscle and fat depth and intramuscular fat (mm) & Scrotal circumference (cm).
- Health & disease traits.
 - Recording lameness, genetic defects, pneumonia and other illnesses.
- Genomics.
 - Genotyped using customised chip.
- Age at slaughter
 - Bulls (15-18 months)
 - Steers (17-23 months of age)

Measurements obtained at the factory

Meat quality

- Carcass wt, fat and conformation
- Primal yields
 - British spec
 - 19 different cuts
- pH
 - Hourly and ultimate



Measurements obtained cont'd

Meat eating quality

- Colour of loin
- Visual marbling of the loin
- Composition analysis
 - Intramuscular fat %, protein % & moisture %
- Cook loss and shear force
- Sensory analysis



Summary Performance*

Performance	Young Bulls	Steers
Number	1021	350
ADG on test (kg/day)	2.02	1.30
Final Live-weight (kg)	677	660
Carcass weight (kg)	399.4	370.0
Carcass grade & fat score	U+ 2+	R+ 3=
Kill-out %	58.9%	56.0%
DMI (kg/day)	12.7	12.5
Total meat (%)	317.1 (79.4%)	284.9 (77%)
HVC kg (Strip-loin, fillet, Cube Roll & % of total meat)	43.1 (13.6%)	39.7 (13.9%)
Ave Tenderness	6.06	6.85
Ave Juiciness	6.10	6.85
Ave Flavour	5.95	5.95

* Data from all animal at Tully is posted on the ICBF website.

Comparison of Young Bulls*

Performance	1 Star	3 Star	5 star
ADG on test (kg/day)	2.01	2.03	2.01
Final Live-weight (kg)	678	674	677
Age Slaughter (Days)	494	484	479
Carcass weight (kg)	394	398	408
Carcass grade & fat score	U+ 2+	U+ 3=	U=3=
Kill-out %	58.1%	59.0%	60.2%
DMI (kg/day)	12.73	12.69	12.35
Total meat (%)	314.1	314.7	323.6
HVC kg (Strip-loin, fillet, Cube Roll)	42.9 (13.6%)	43.0 (13.7%)	44.1 (13.6%)
Ave Tenderness	5.87	6.15	6.24
Ave Juiciness	5.91	6.20	6.28
Ave Flavour	5.74	6.07	6.08

* Based on Terminal Index of the animal as a weanlings.

Feed Intake Comparison.

Tag	Sire	Dam breed	Current weight kg	DMI	ADG	Feed Eff
2249	YHB	AA*HF	652 kg	13.0	1.62	8.03
139	AHZ	LM*BB	644 kg	9.3	2.07	4.51

Difference in feed cost over 100 days = €85.

Sire Data..	YHB	AHZ
Replacement Index	€67	€37
Terminal Index	€108	€127
Feed Intake € (rel)	€14 (71% rel)	€ 35 (73% rel)
Feed intake (wb stars)	1 star	5 stars

Carcass Index Comparison

Tag	Sire	Sire C.D	Sire Carc Wt pta	Current Wt Kg	ADG	DMI	Pred Carc Wt Kg
646	RGZ	2.6%	8 kg	680	2.34	11.2	401
655	KYA	0.7%	-1 kg	520	1.52	9.61	307

94 kg Difference in Carcass Wt = €376 Difference in Value



Gene Ireland Male Progeny



Curaheen Dickens (KDZ)
Bred by the late David Wall
Replacement Index €109 @ 61 % rel
5 Star Across Breed for Carcass Weight
5 Star Across Breed for Milk
13 Daughters have now Calved

Tag	DOB	Calving	Dam Breed	Current Wt	ADG	Feed Eff
1824	8/1/2016	Unassisted	SI x BA	768	1.86	6.26
1837	29/1/2016	Unassisted	SI x BA	712	1.65	7.12



IRISH CATTLE BREEDING FEDERATION

Whole-Herd Performance Recording.



Tully Beef Performance Test Station, 19th May 2017.

WHPR Background

- WHPR – Whole Herd Performance Recording
- Data recording program for Beef Pedigree Breeders
- Voluntary Program
- Strong Breed Society involvement & guidance

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

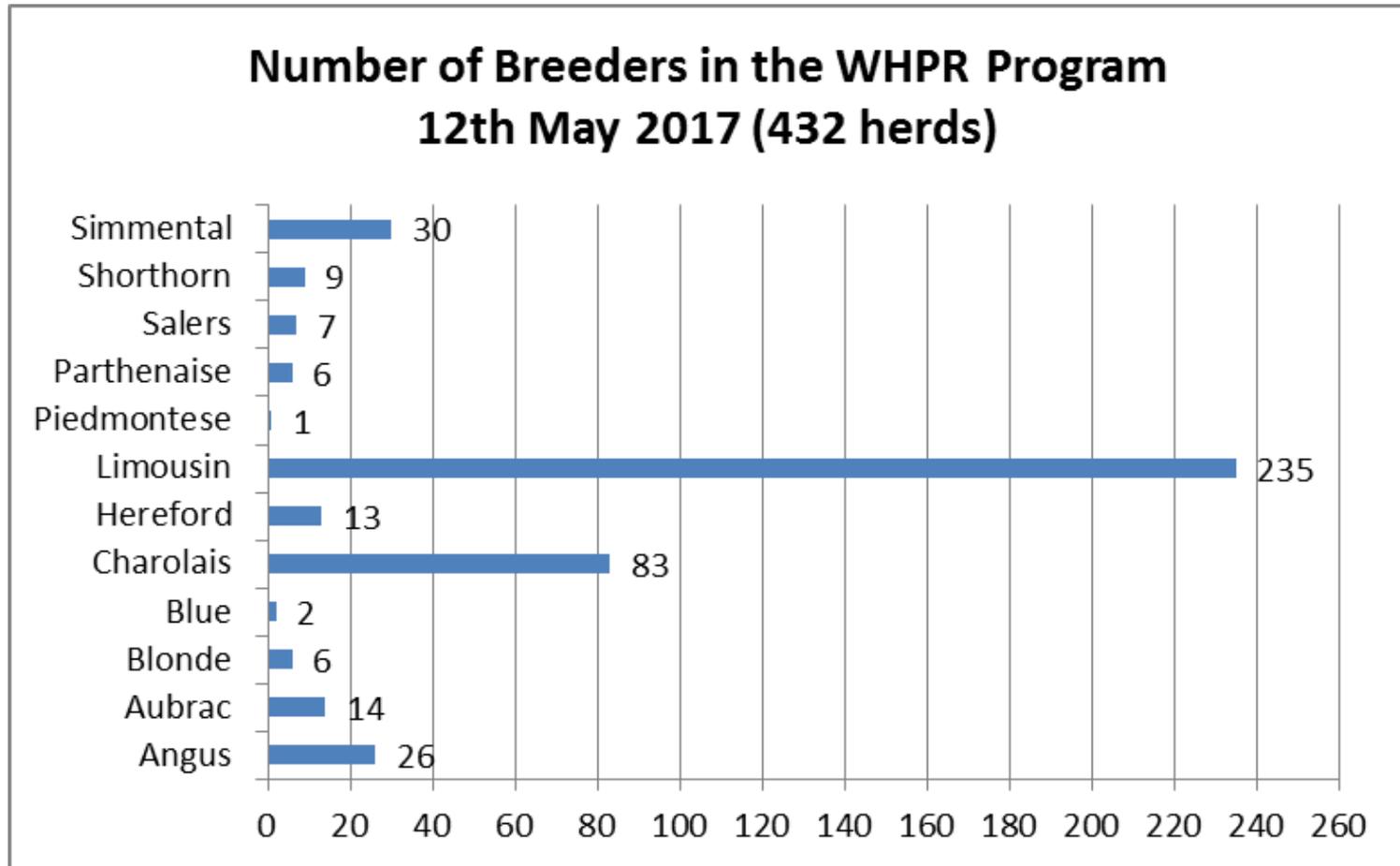
WHPR Background

- Calves, Heifers, Bulls & Cows weighed & inspected.
- Average cost of €100-€200, once per year.



WHPR Progress

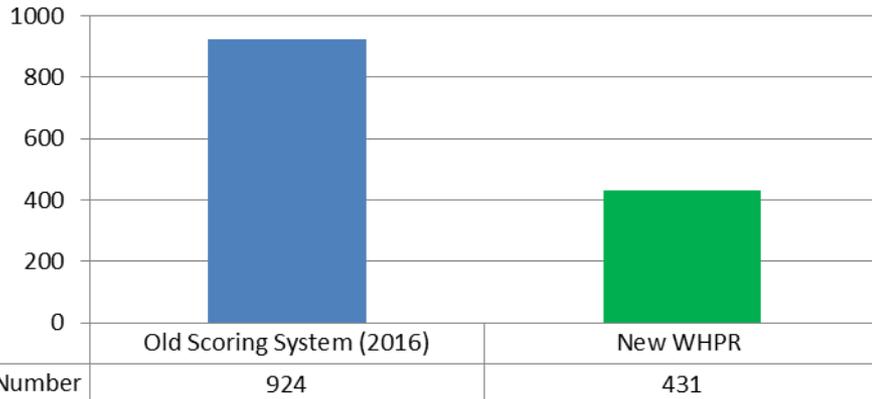
- 432 Pedigree Breeders joined to date
- Minimum promotion in start up phase.



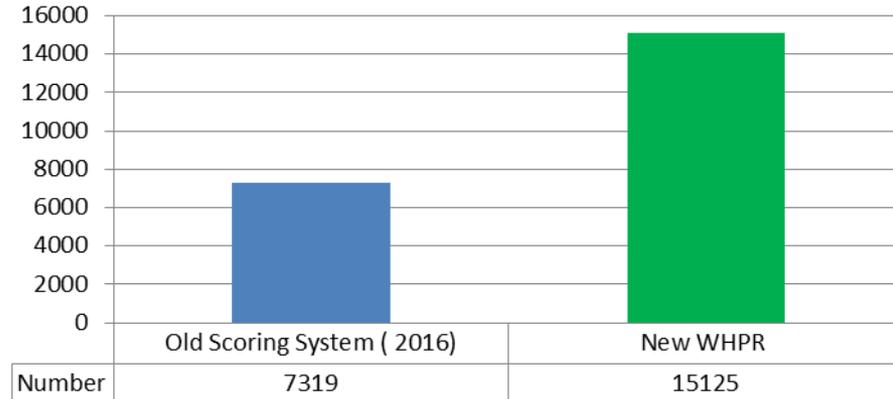
WHPR Progress

- New system is far more efficient than old recording system
- Far more animals to be recorded in far less herds

Number of Pedigree Herds Performance Recording

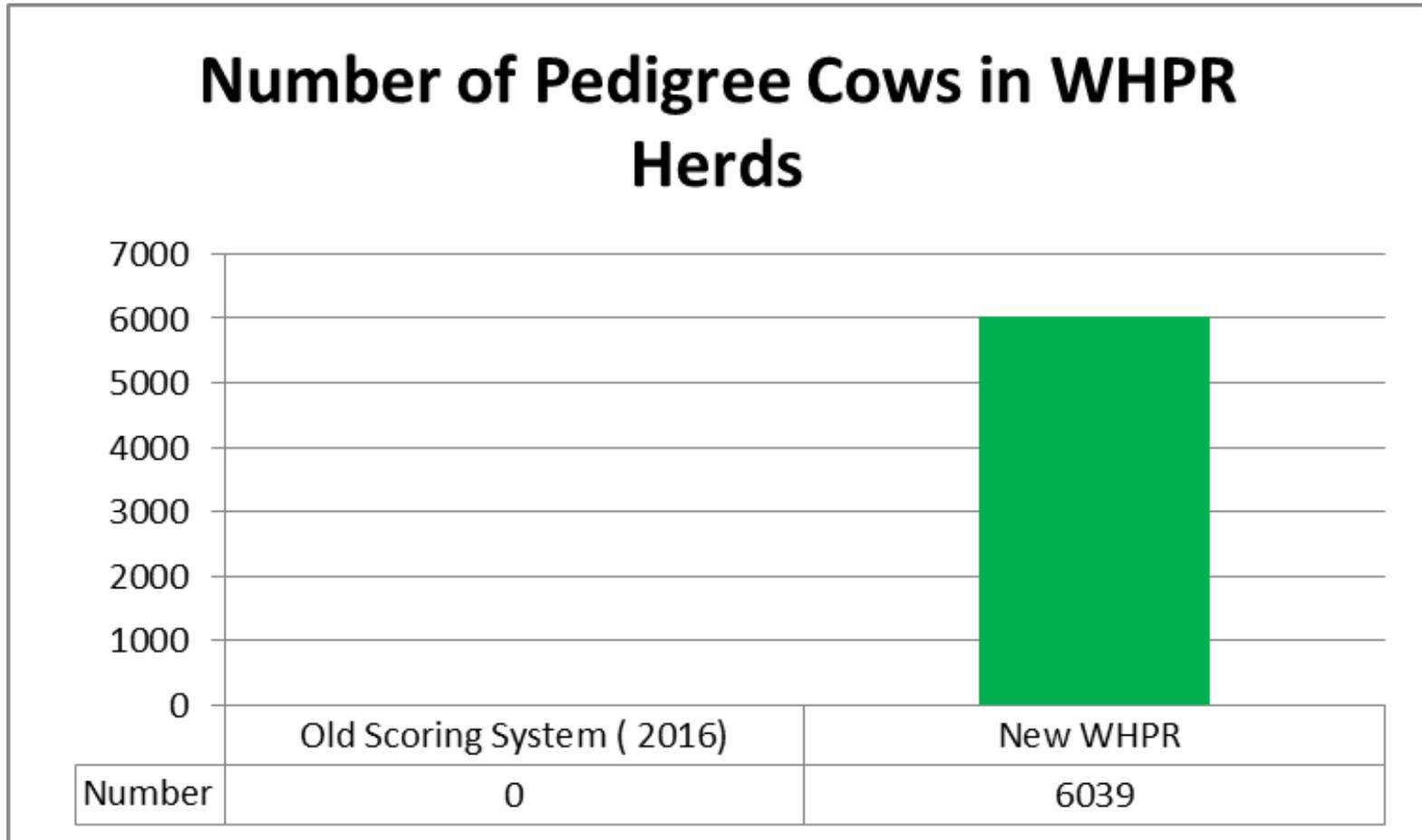


Number of Pedigree Animals to be Performance Recorded

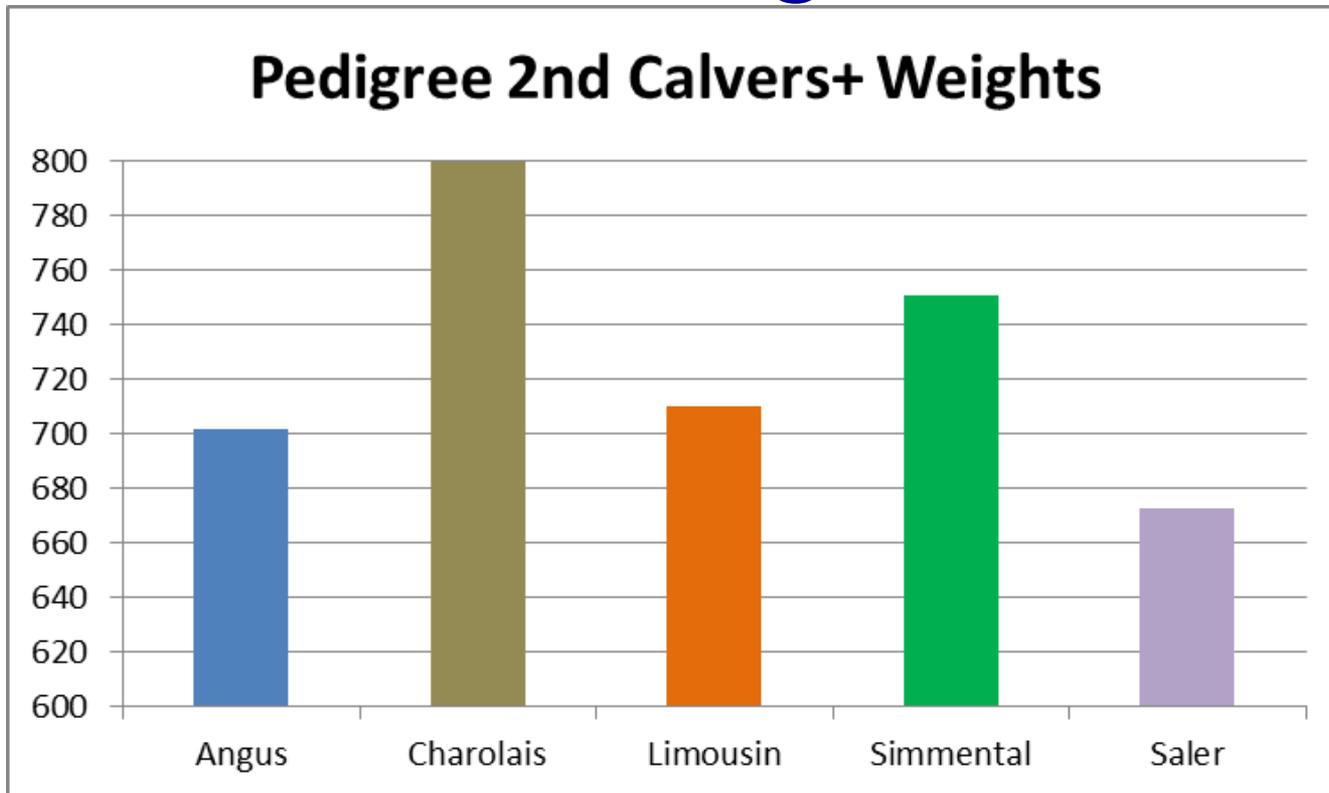


WHPR Progress

- Huge amount of cow weights now being recorded compared to the old system



WHPR Progress



Pedigree 2nd Calvers+ Weights					
	Angus	Charolais	Limousin	Simmental	Saler
Number	270	199	667	117	121
Avg Weight	702Kgs	800Kgs	710Kgs	751Kgs	673Kgs

Benefits of the WHPR Program

1. Increased Buyer Confidence

- Voluntary programme where Breeders receive 'Spot Check' Visits.
- All data is publically displayed.



2. Euro-Stars & Reliability %

- Euro-Stars of your pedigree will come more in line with what you would expect them to be.
- Scoring & Weighing will increase the reliability % of your animals Euro-Stars.
- The Euro-Stars of low reliability animals are more likely to change.

Pedigree Bulls	Average Reliability %	
	Terminal Index	Replacement Index
Genotyped, Weighed & Scored	45%	42%
Not Genotyped, Weighed or Scored	21%	18%

Benefits of the WHPR Program

3. Bull Finder

Region
Click on counties to limit your search to those counties



Breed

- Limousin
- Angus
- Charolais
- Hereford
- Simmental
- Aubrac
- Salers
- Shorthorn
- Parthenaise
- Piedmontese
- Belgian Blue
- Blonde Daquaine
- Red Poll

Replacement Index
(Across Breed)



From: 0
To: 5

Terminal Index
(Across Breed)



From: 0
To: 5

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

Extra Criteria

- Genotyped *
- Birth Weight

Bull Details				Replacement Index			Terminal Index			Performance Data				Genotyped*	Owner	Photo
Tag	Breed	DOB	Sire	€	Rel %	Stars Across	€	Rel %	Stars Across	Birthweight	Age (Days)	ICBF Weight (Kgs)	Growth (Kg/Day)			
IE123456789562	CH	22/01/2015	MZT	€145	35	★★★★★	€70	35	★★★	52	271	502	1.6*	Yes	John Clarke	
IE185625874528	LM	03/04/2015	AGB	€120	38	★★★★★	€20	38	★	48 (m)	250	478	1.7*	No	Doreen Corridan	
IE236598745269	SI	01/02/2016	DRU	€112	20	★★★★★	€112	20	★★★★★		100	155	1.1	Yes	Tony O'leary	

Benefits

4. Stamp



Birth Weight	Age (Days)	ICBF Weight	Growth (Kg/Day)
34 kgs	210	194 kgs	0.9
Actual Birth Weight used.			

Birth Weight	Age (Days)	ICBF Weight	Growth (Kg/Day)
45 kgs*	180	205 kgs	1.1*
*Birthweight is estimated.			

WHPR Summary

- **WHPR program is more efficient than previous system in terms of data collection.**
- **It is built on Data accuracy & transparency.**
- **Pedigree Breed Societies are heavily involved in rolling out this program to their Breeders.**
- **Benefits of the program must make a difference to Pedigree Breeder selling a Bull/Heifer.**
- **The program must also make a difference to a Suckler farmer looking to buy a new Stockbull, safe in the knowledge that all of the data has been recorded by his Breeder as accurately as possible.**
- **WHPR Programme will be widely promoted coming into the Autumn, as cattle are housed.**

Overall Summary.

- GENE IRELAND and Tully are delivering on their core objectives off;
 - Increasing the profitability of the National suckler herd.
 - Providing key data on hard to measure traits linked to profit,
 - Validating the Euro-Star Indexes.
 - Demonstrating the value of better genetics.
- WHPR has made a positive start.
- Need to start promoting greater use of GENE IRELAND graduates by bull breeders and commercial beef farmers => increased genetic gain.
- We welcome your comments and feedback.