PG Technicians Tully Visit
24th/25th Oct 2017

Agenda

- Euro-Star indexes

- G€N€ IR€LAND

- Tully

- View the cattle on site

Euro-Star Indexes

Where do they come from?

ICBF.com

Euro-Star Indexes

Every calf starts with a parent average

Sire
⭐ ⭐ ⭐ ⭐ ⭐

+

Dam
⭐ ⭐ ⭐ ⭐ ⭐

÷ 2

=

⭐ ⭐ ⭐ ⭐ ⭐

Parent Average

Euro-Star Indexes

As the animal gets older – Commercial Animals

Euro–Star Indexes

As the animal gets older – Breeding Animals

Calving difficulty (% 3 & 4) ⓘ Breed ave: 7.65%, All breeds ave: 4.99%	9.80%	99% (V High)

Docility (1-5 scale) Breed ave: 0.04, All breeds ave: 0.00	0.15 scale	99% (V High)

Carcass weight (kg) Breed ave: 32.63kg, All breeds ave: 22.88kg	42kg	99% (V High)
Carcass conformation (1-15 scale) Breed ave: 1.92, All breeds ave: 1.84	2.16 scale	99% (V High)

Daughter calving difficulty (% 3 & 4) Breed ave: 4.98%, All breeds ave: 5.19%	4.7%	99% (V High)
Daughter milk (kg) Breed ave: -6.65kg, All breeds ave: 0.15kg	-9.18kg	99% (V High)
Daughter calving interval (days) Breed ave: 0.11 days, All breeds ave: -0.41 days	5.83days	98% (V High)

Genomics

A tool for improved selection

Which ones will I keep?!?!

- Higher reliabilities on young animals → less risk
- Confirm parentage & prevent inbreeding.
- Identify genetic defects

ICBF.com

Euro–Star Index

What is it?

- Index is a tool for selection.

- Estimation of an animal's genetic potential.

- Based on data collected on an animal + relatives.

- The more data available – the higher the reliability.

Ancestry Data (Sire and Dam Performance) **+** Performance Data (Carcass data, calving difficulty scores, etc.) **+** Genomic Data (DNA compared to proven animals) **=** €uro-Star Index
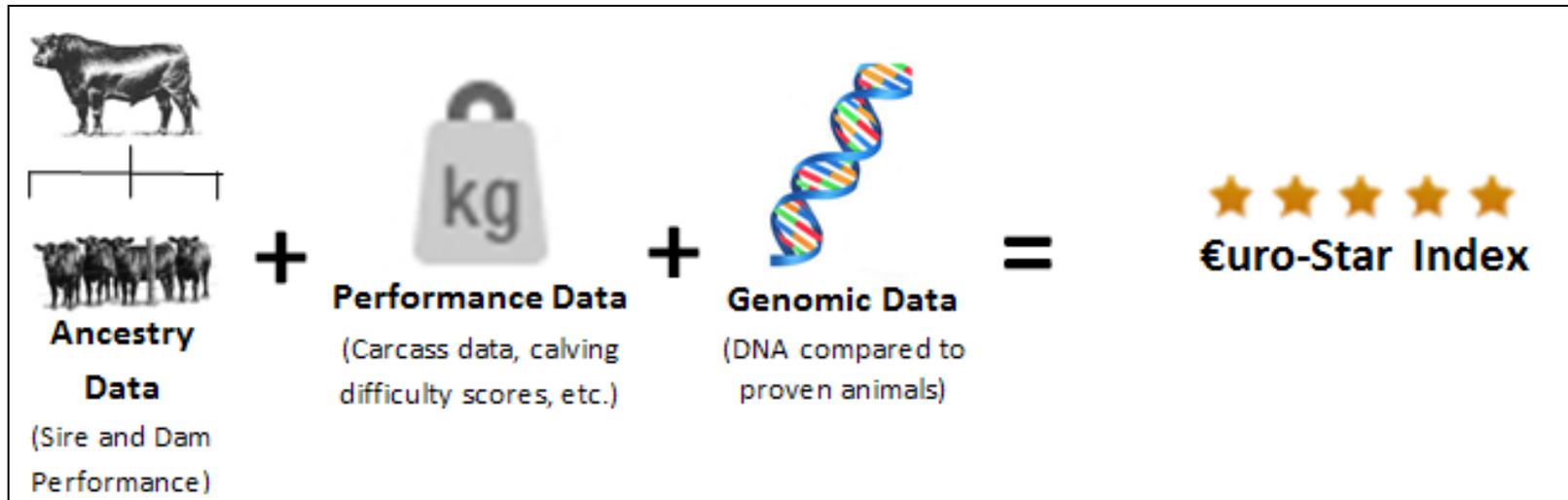
Euro-Star Indexes

What is reliability?

Calving difficulty (% 3 & 4) ⓘ Breed ave: 4.99%, All breeds ave: 4.49%	4.70%	97% (V High)
Docility (1-5 scale) Breed ave: 0.05, All breeds ave: 0.01	0.09 scale	95% (V High)
Carcass weight (kg) Breed ave: 19.88kg, All breeds ave: 14.99kg	31kg	62% (High)
Carcass conformation (1-15 scale) Breed ave: 1.28, All breeds ave: 1.33	1.67 scale	53% (Average)

The confidence that a trait will not change significantly as more data is recorded.

Trait	Approx. Number of Progeny Records Required to Reach 90% Reliability
Calving Difficulty	350
Carcass Weight	90
Milk	90
Calving Interval	1200

ICBF.com

Euro-Star Indexes

How to minimize risk?

- Don't overuse low reliability bulls

    - ZAG 10,916 calves born in 2016

    - ADX 5,241 calves born in 2016

    - FTY 3,449 calves born in 2016

- Record as much data as possible

- Ensure animals are genotyped

- Record weights on suckler calves

Euro-Star Indexes

Better Farm Phase II herds (2012-2016)

Cow Performance by Euro-Star Rating					
Star Rating	**No. Cows**	**Avg. Rep Index (€)**	**Age 1st Calving (Days)**	**Avg Calving Int. (Days)**	**ADG of Progeny (kg)**
5 Star	1218	134	866	379	1.25
4 Star	579	86	892	384	1.17
3 Star	428	64	903	386	1.14
2 Star	449	44	908	385	1.13
1 Star	495	8	941	387	1.05
Difference 1-5 Star		**€126**	**-75 Days**	**-8 Days**	**+0.2 kg**

But maybe the 5 star cows were mated to better bulls?

Euro–Star Indexes

Better Farm Phase II herds (2012-2016)

Dam & Sire Terminal Index & Carcass Merit

Progeny Details							
Dam Star Rating	ADG of Progeny (kg)	Dam Terminal Index (€)	Dam Carcass PTA (kg)	Sire Terminal Index (€)	Sire Carcass PTA (kg)	Carcass Weight (kg)	Age at Slaughter (months)
5	1.24	62	12	118	29	377	20.9
4	1.16	63	11	118	29	370	21.5
3	1.13	65	12	118	30	362	21.3
2	1.1	64	13	115	28	360	21.4
1	1.03	66	14	119	30	367	21.7
Diff	**+0.21 kg**	**-4**	**-2**	-1	-1	+10	-0.8

- **5 star cows were not mated to higher growth merit sires**

- **Progeny slaughtered younger with heavier carcass weights**

- **Replacement Index driving performance**

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Euro-Star Indexes

Genetic trends

Replacement Index

Replacement Index Makeup

Pie chart segments:
- Calving 16%
- Fertility 23%
- Milk 18%
- Feed Intake (Cow and Calf) 18%
- Docility 4%
- Carcass 21%
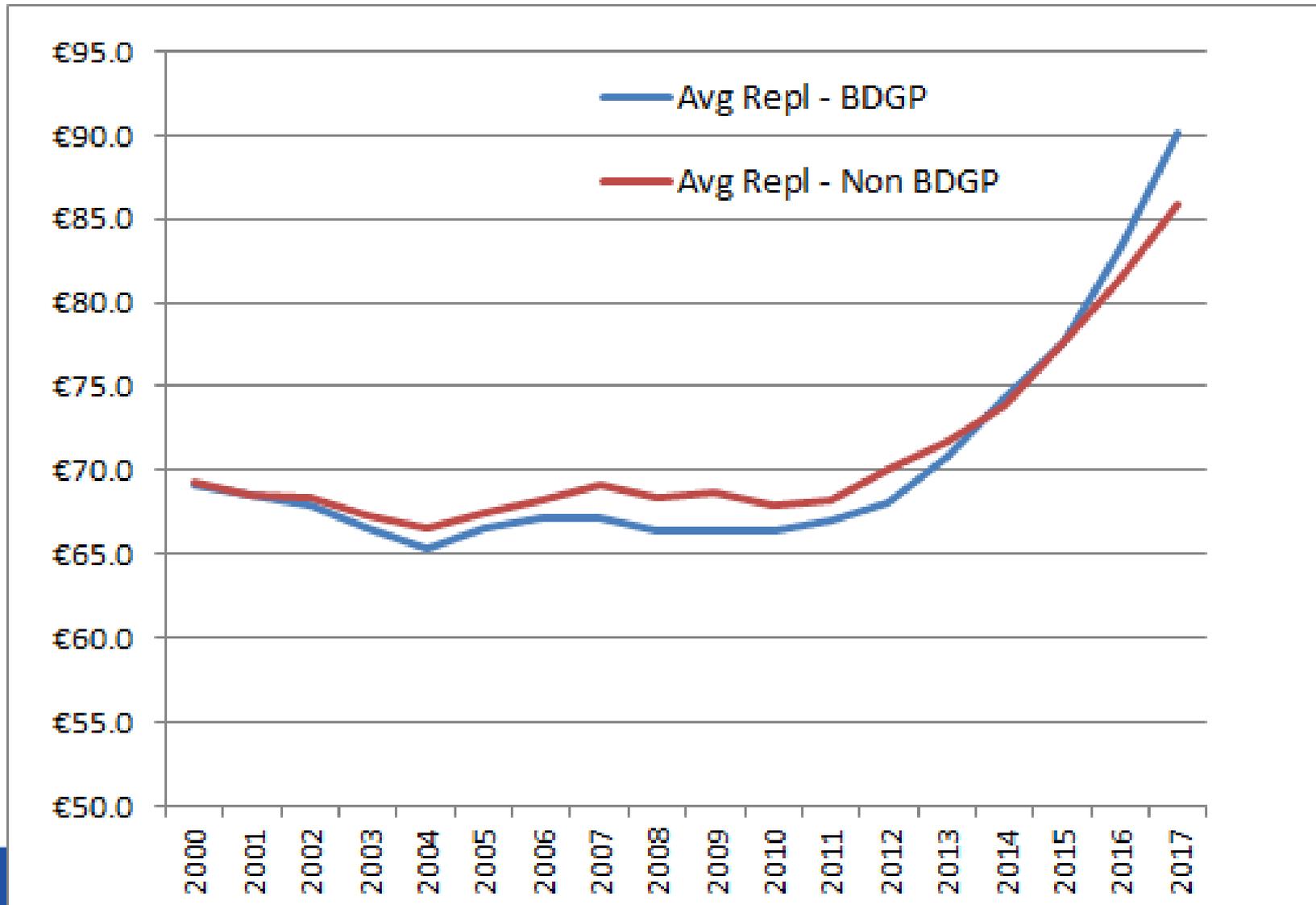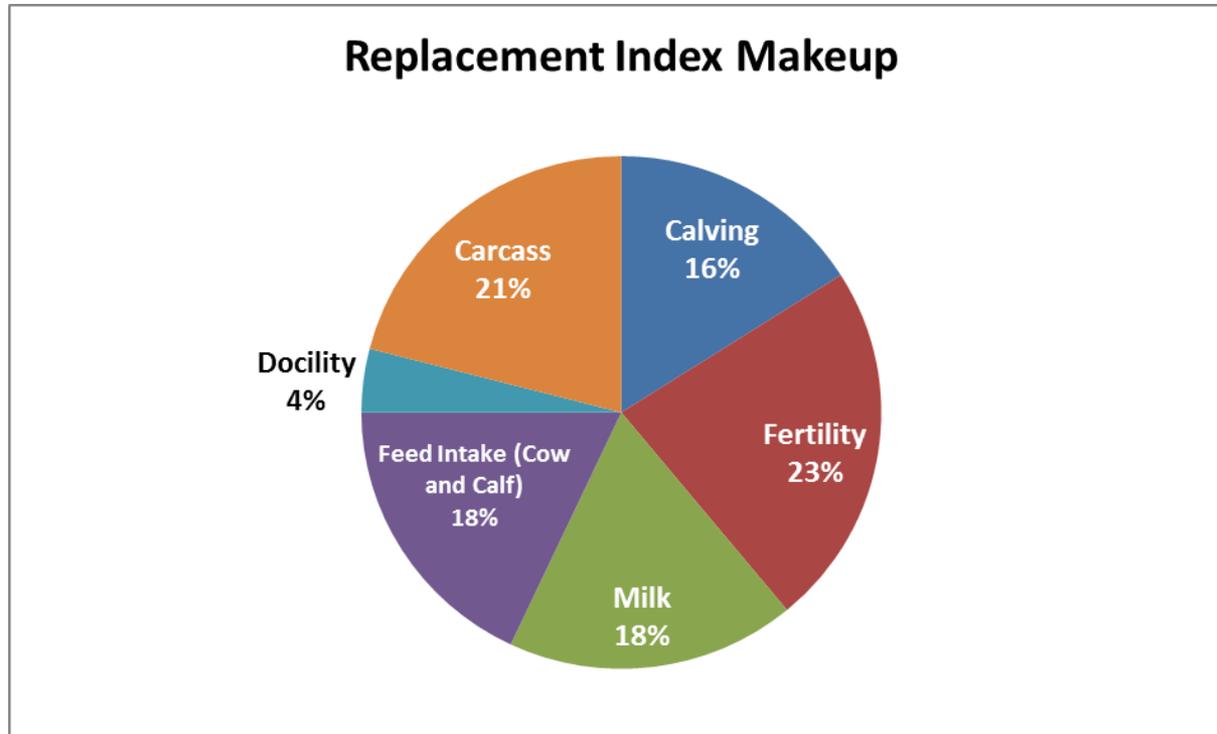
- **Breed efficient suckler cows balanced between maternal and beef traits.**
- **Made up of 17 individual traits.**
- **Should be used where females are intended as replacements.**

ICBF.com

Terminal Index

Terminal Index Makeup

- Calving 25%
- Docility 2%
- Feed Intake 16%
- Carcass 57%
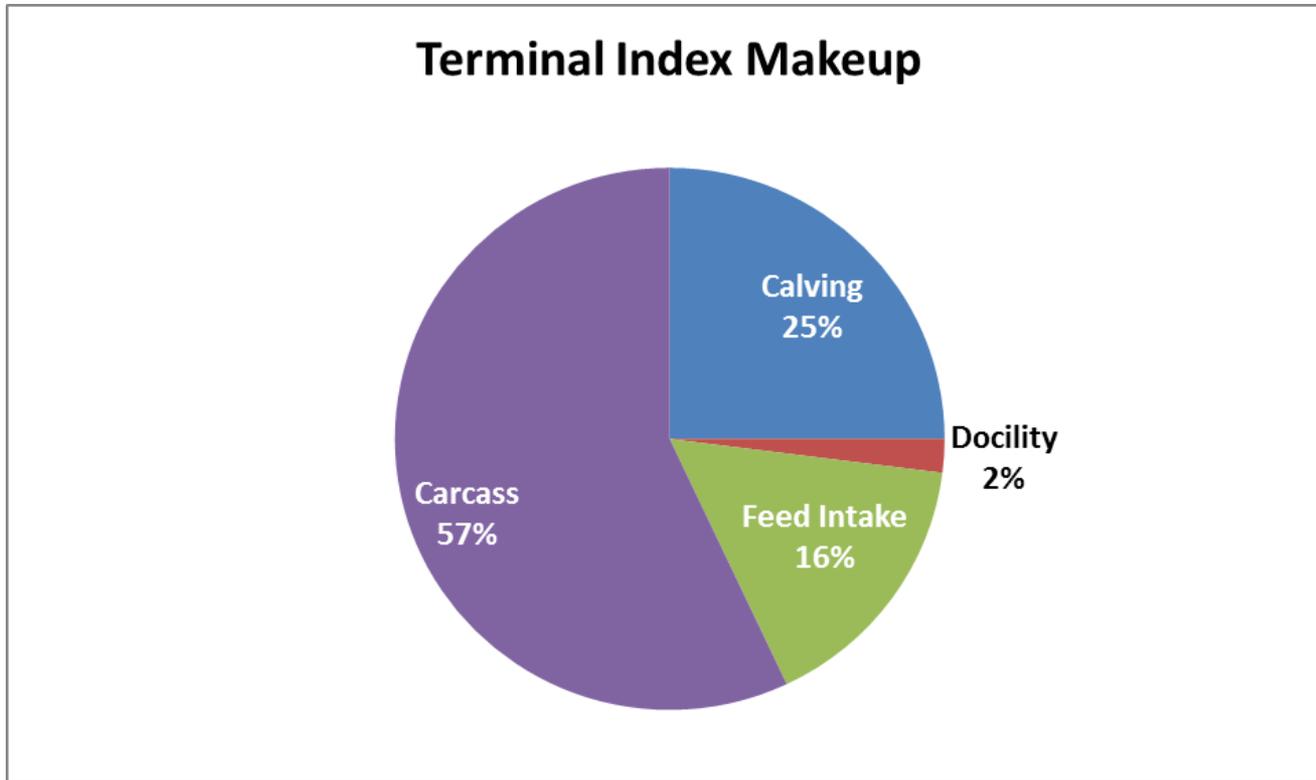
- **Breed efficient, high growth animals for slaughter.**
- **Made up of 8 individual traits.**
- **Should be used where all progeny are intended for slaughter.**

Euro-Star Indexes

What do the numbers mean?

Star Rating (within Simmental breed)	Economic Indexes	€uro value	Index reliability	Star Rating (across all beef breeds)
★ ★ ★ ★ ★	Replacement (per daughter lactation)	€168	97% (V High)	★ ★ ★ ★ ★
★ ★ ★ ★ ★	Terminal	€104	96% (V High)	★ ★ ★ ☆ ☆

Daughters of this bull will leave €168 more per calving over the base animal.

- **Age 1st calving**
- **Calving Interval**
- **Calf weight gain (milk)**
- **Carcass weight**

Progeny (males and females) will leave €104 more when slaughtered over the base animal.

- **Calving difficulty**
- **Feed Intake**
- **Carcass weight**
- **Carcass Conformation**

Euro–Star Indexes

But where do these figures actually come from?

- Each trait has a unit value (€ economic weight).
- Desirable traits have positive values e.g. milk
- Undesirable traits have negative values e.g. calving difficulty

Gringo (GWO)

Replacement (per daughter lactation)	€144

Vs

Gizmo (RGZ)

Replacement (per daughter lactation)	€139

ICBF.com

GWO vs RGZ

Trait by trait breakdown

		Calving Difficulty **% of difficult calvings** ***Base is 6%***		
6.3% 6.3 – 6 = 0.3% 0.3 x -5.12 = -€1.54	**-€1.54**		**+€17.41**	**2.6%** 2.6 – 6 = -3.4% -3.4 x -5.12 = €17.41

		Docility **1-5 scale**		
-0.08 -0.08 x 14.72 = -€1.18	**-€1.18**		**-€0.59**	**-0.04** -0.04 x 14.72 = -€0.59

		Carcass Weight **kg**		
26kg 26 x 2.10 = €54.60	**+€54.60**		**+€16.80**	**8kg** 8 x 2.10 = €16.80

		Carcass Conf. **1-15 scale**		
2.27 2.27 x 10.22 = €23.20	**+€23.20**		**+€7.87**	**0.77** 0.77 x 10.22 = €7.87

GWO vs RGZ

Trait by trait breakdown

GWO		Daughter Calving		RGZ
4.1%	**+€9.46**	**% of difficult calvings** *Base is 6%*	**-€6.97**	**7.4%**
4.1 – 6 = -1.9%				7.4 – 6 = 1.4%
-1.9 x -4.98 = €9.46				1.4 x -4.98 = -€6.97

-2.9	**-€16.18**	**Daughter Milk** kg	**+€45.76**	**8.2**
-2.9 x 5.58 = -€16.18				8.2 x 5.58 = €45.76

-5.38	**+€27.28**	**Calving Interval** days	**+€36.40**	**-7.18**
-5.38 x -5.07 = -€27.28				-7.18 x -5.07 = €36.40

Similar Replacement Index but very different bulls!!!

Other traits

	Trait	Value	Rel%	Chart
★★★★★	Replacement index €	144	84	
	(a) Calving difficulty	−2	99	
★★★★☆	(b) Gestation	−9	99	
★★★☆☆	(c) Mortality	0	99	
★★★☆☆	(e) Docility	−1	99	
★★★★★	(f) Feed intake	17	77	
★★★★☆	(g) Carcass weight	55	99	
★★★★★	(h) Conformation	23	99	
★★★☆☆	(i) Carcass fat	−1	99	
	(j) Meat Quality ❶	0		
	(k) Pollness ❶	0		
	Calf contribution (sum of a to k)	82	96	
★★★★★	(l) Age 1st Calving	29	95	
★★★★★	(m) Maternal calving	9	81	
★★☆☆☆	(n) Milk	−16	87	
★★★★★	(o) Calving interval	27	60	
★★★★★	(p) Survival	36	57	
★☆☆☆☆	(q) Cow Liveweight	−51	82	
★★★☆☆	(r) Cow docility	−6	99	
★★☆☆☆	(s) Cull cow weight	34	73	
	Cow contribution (sum of l to s)	62	79	

Chart axis: −150, −100, −50, 0, 50, 100, 150, 200

© Irish Cattle Bree

Euro-Star Indexes

Why do they change?

Evaluations run 4 times per year

Number of Progeny Records included in Evaluation

Date	Calving			Weanling and Carcass records						
	Calv Diff	Gest	Mort	150-250 day Wgts	250-350 day Wgts	Linear	Docility	Farmer Calf Qual	Mart pperkg	Carc Wgt
Aug 2017	1494	781	1574	117		*				0
May 2017	899	514	819	26	0	*	32	18	2	0
Feb 2017	528	276	449	0	0	0 *	6	8	0	0
Jan 2017	214	136	166	0	0	0 *	1	1	0	0
Aug 2016	4	1	4	0	0	*		0	0	0
May 2016	1	0	1	0	0	*		0	0	0

Euro-Star Indexes
Herd Level

		Replacement Index				
Group	**Number of Cows**	**Index Value (€)**	**Across Breed**	**Carcass Weight** (Kg) Across Breed	**Daught Milk** (Kg) Across Breed	**Daught Calving Interval** (Days) Across Breed
Cows						
Total Cows	109	€115	★★★★★	+9	+10.2	+0.03
Missing Stars*	0			★★★	★★★★★	★★
National Avg. Cows		€77		+9	+4.99	-1.14

C. Cows — Average Beef Euro-Star Values for cows on your farm

- **High Replacement Index herd (Top 5%).**

- **Very high on milk (Top 1%)**

- **Average for Carcass**

- **Below Average for Calving Int.**

How can we improve our cows?

Euro-Star Indexes
Herd Level

	Breed	Sire Type	Rep Index	Calv Diff (%)	Carcass (kg)	Milk (kg)	Calv Int (Days)
Ulsan (SA2189)	SA	AI	€195	1.2	23	9.7	-2.09
Tomriland Kestrel	LM	Stock Bull	€160	6.7	45	-0.3	-0.87
Castleview Gazelle (ZAG)	LM	AI	€152	4.5	18	1.3	-4.52
Cloondroon Calling (QCD)	SI	AI	€149	7.1	28	5.1	-2.79
Auroch Deuter (AHC)	SI	AI	€145	5.6	22	10.3	-1.29
Newtown Luke 2	LM	Stock Bull	€143	7.7	48	-3.2	-0.89
Doonowney Noel	AA	Stock Bull	€96	2.3	13	6	-3.03
Average			**€149**	**5.0**	**28**	**4.1**	**-2.21**

- **High Replacement Index team of bulls (+€34 on cows)**
- **Higher than cow herd on carcass (+19 kg) and calving interval (-2 days)**
- **Lower on milk (-6.1 kg) but still positive.**

Key Points

1. **What are the traits of importance for your herd.**
2. **Look at where your herd ranks for these traits (ICBF €uro-Star report)**
3. **Select sires to improve on these traits.**
4. **Aim is to breed balanced cows (beef traits + maternal traits).**

Euro-Star Indexes

Stay up to date

- New €uro-Star Indexes out on 10th Jan 2018.

- Be mindful of dates on catalogues!!!

- New animal search app for smartphones.

BDGP
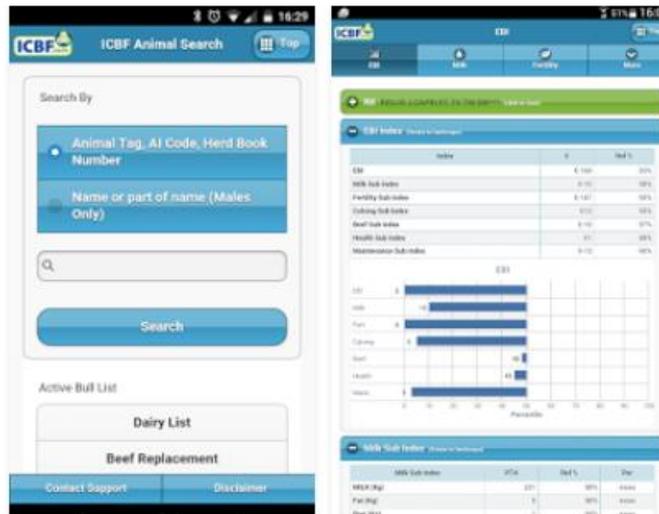
AI Requirement

"A minimum of 80% of the AI used after 30th June 2016 must be from 4 and 5 star bulls on the Rep and/or Terminal Index, within and/or across breed."

- On any evaluation since May 2016.

- Genomic or non genomic

How will the figure be calculated?

- Will be based on calves born.

- An annual count beginning 1st Apr 17 – 31st Mar 18.

- Min 80% of calves must be sired by AI bulls that meet the above criteria.

BDGP

AI Requirement

Listing of all beef AI bulls which are registered as sires of progeny born in your herd from 1st Apr 2017 - 31st Mar 2018

AI Code	Name	Breed	BDGP Eligible	Reason Code*	Number of Progeny Born since 1st May 2017	Number of Eligible AI Progeny
SA2153	Highfield Odran	SA	Yes		12	12
SI2152	Curaheen Earp	SI	Yes		9	9
ZLL	Lanigan Red Deep Canyon ET	AA	Yes		7	7
ICO	Starline Decision	SI	Yes		5	5
ZAG	Castleview Gazelle	LM	Yes		3	3
ERE	Elite Erasmus	LM	No	8	4	ERE not an eligible AI bull
SGO	Sang D'Or	CH	No	8	2	SGO not an eligible AI bull
			Total		**42**	**36**
			Percentage of AI Sired Progeny by Eligible AI Bulls			**86%**

Summary

- Indexes are working on the ground.

- Always exceptions "My best cow has only 1 star".

- Think of the bigger picture.

- Try to spread usage over more bulls particularly at low reliabilities.

- Get a better picture of the customers herd (Euro-Star report).

- Try to look at the individual traits.

- Make sure indexes up to date.

Who am I?

Star Rating	Economic Indexes	€uro value	Index reliability	Star Rating (across all beef breeds)
★★★★★	Replacement (per daughter lactation)	€167	97% (V High)	★★★★★
★★★★★	Terminal	€103	95% (V High)	★★★☆☆

Star Rating	Key profit traits	Index value	Trait reliability	Star Rating (across all beef breeds)
	Expected progeny performance			
	Calving difficulty (% 3 & 4) ⓘ Breed ave: 2.35%, All breeds ave: 4.49%	2.30%	99% (V High)	
★★★☆☆	Docility (1-5 scale) Breed ave: -0.09, All breeds ave: 0.01	-0.11 scale	99% (V High)	★☆☆☆☆
★★★★☆	Carcass weight (kg) Breed ave: 14.75kg, All breeds ave: 14.99kg	17kg	99% (V High)	★★★★☆
★★★★★	Carcass conformation (1-15 scale) Breed ave: 1.03, All breeds ave: 1.33	1.20 scale	99% (V High)	★★☆☆☆
	Expected daughter breeding performance			
	Daughter calving difficulty (% 3 & 4) Breed ave: 5.73%, All breeds ave: 5.88%	6.32%	98% (V High)	
★★★☆☆	Daughter milk (kg) Breed ave: 5.38kg, All breeds ave: 2.09kg	5.50kg	99% (V High)	★★★★★
★★★☆☆	Daughter calving interval (days) Breed ave: -3.31 days, All breeds ave: -0.77 days	-3.45days	97% (V High)	★★★★★

ICBF.com

Questions

Our Farmer & Government Representation

Our AI & Milk Recording Organisations

Our Herdbooks

Acknowledging Our Members

Gene Ireland Maternal Breeding Program

- Overview

- Progress to Date

- Gene Ireland in Action

- Whole Herd Performance Recording

What is a Breeding Program?

- It is the planned breeding of a group of animals over several generations to achieve a certain <u>goal</u>.

- Breeding programs are commonly employed where humans want to change the characteristics of their animals.

CASTLEVIEW GAZELLE ZAG

How do we generate more 4&5 cows?

Beef Data Genomics Program.

Earlier and more accurate identification of profitable pedigree and commercial beef animals for breeding.

Replacement AI Bulls

Test

G€N€ IR€LAND Maternal Breeding Program

Suckler Beef Herd.

Data for genomics.

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.

- 93 bulls tested to-date.

- First graduates with daughters calving now.

  - Commercial progeny tested here at Tully.

Gene Ireland Usage & Stats

Year	2014	2015	2016	2017 ytd
# Herds Involved	712	669	664	334
Straws dispatched	11,262	10,793	8,715	4,732
Straws/herd	16	16	13	14
Bulls Tested	22.5	21.6	17.4	9.5

Only ~ 10% of AI Users have ever ordered GI straws

2014 GI Bulls – then & now

	Avg Repl Star Across	Avg Repl Rel %	Avg CD %	Avg CD Rel %	Avg Milk Kgs	Avg Milk Rel %
2014 Eval	4.1	23.1	5.4	28.5	3.6	22
2017 Eval	4.5	59	6.9	88.5	3.7	46

ICBF.com

Progress has started – and will

Trends in Replacement Index for 1st calving suckler females and G€N€ IR€ AI bulls

Legend:
- 1st calving suckler replacements
- G€N€ IR€LAND Bulls

Y-axis: Replacement Index (30 to 130)
X-axis: 2007 to 2017
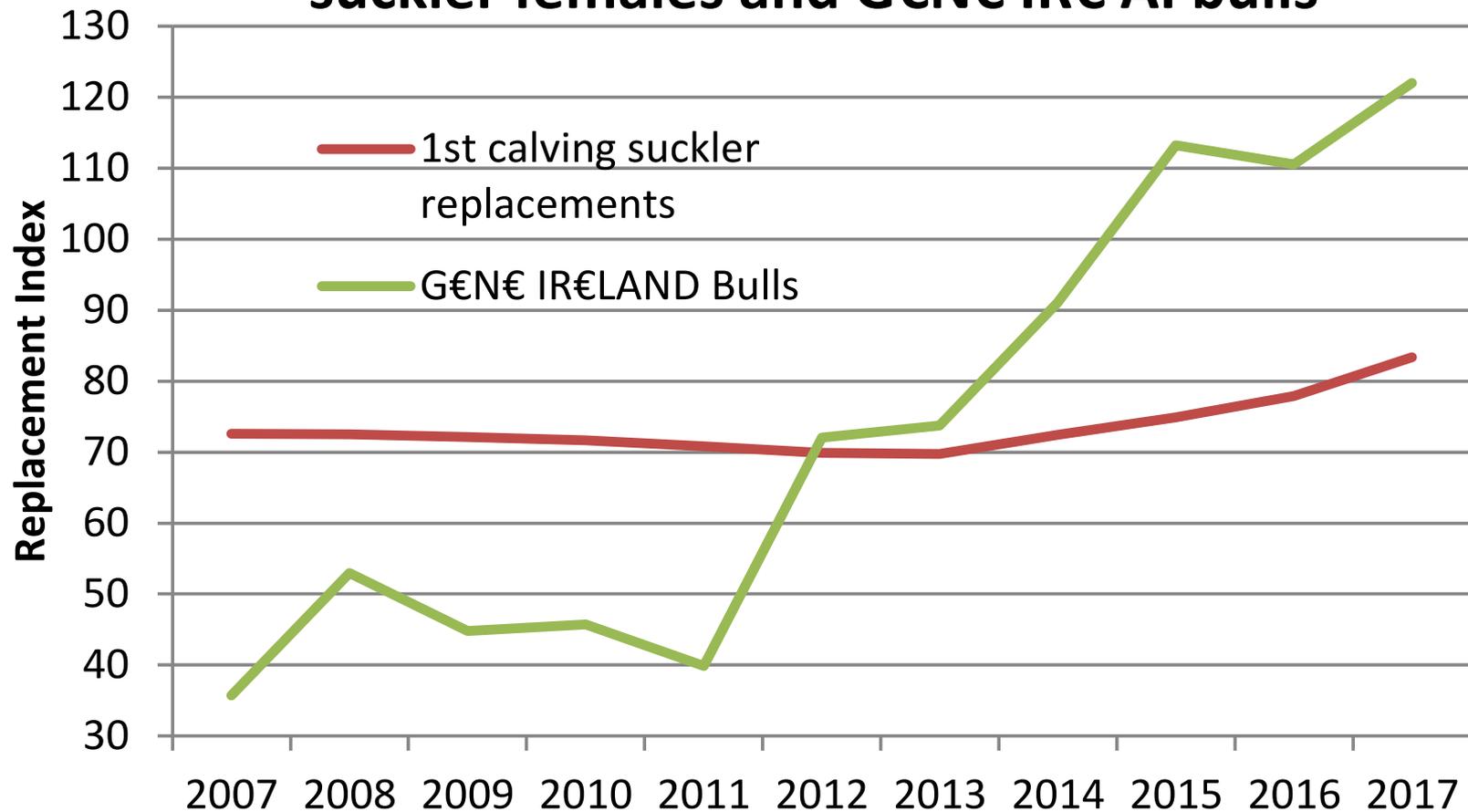
Survey Results

662 AI Users that never Ordered Gene Ireland Straws

When deciding which AI bull to use, where do you go for advice

The Story of ZAG

CASTLEVIEW GAZELLE ZAG
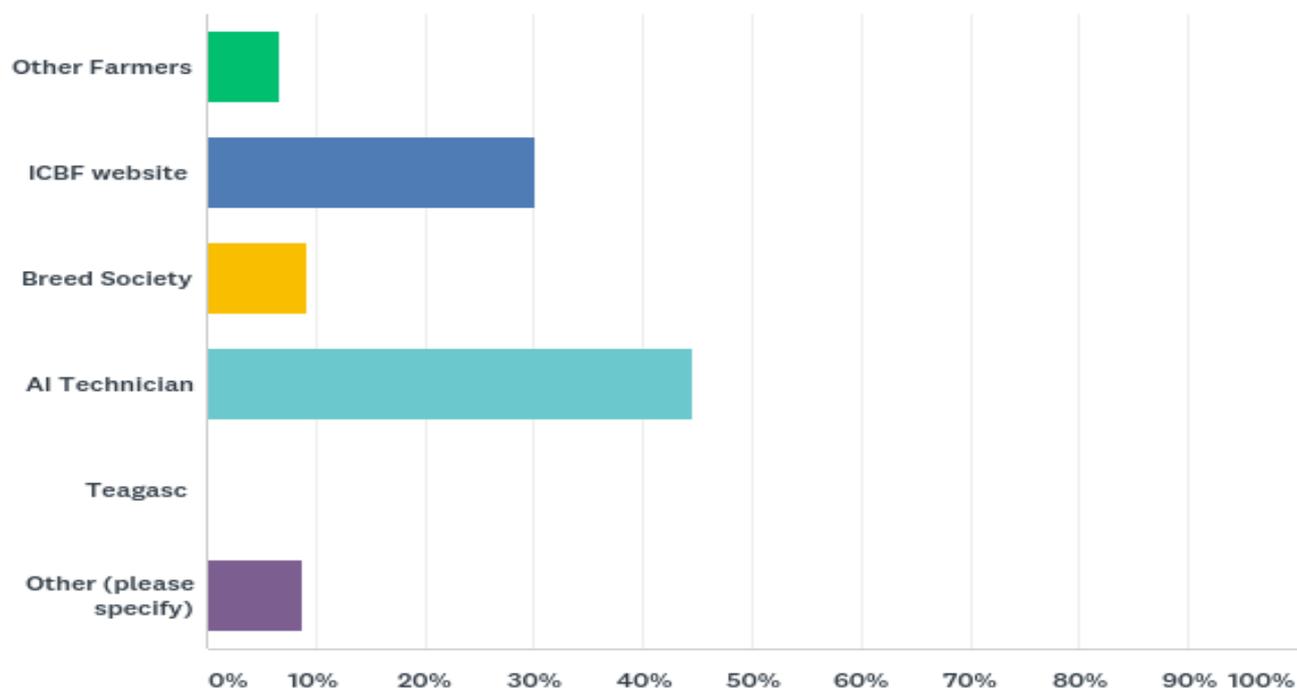
CASTLEVIEW GAZELLE ZAG

- Identified via Gene Ireland & purchased by NCBC in 2014

- Current Repl Index of €173 @ 71% rel

- Initial CD = 4.9% @ 33% rel

- Current CD = 4.5% @ 99% rel (+20k Calving Records)

The final piece of the jigsaw will be his daughters performance

➢ 16 Bulls

➢ 9 from NCBC

➢ 9 Breeds

➢ Avg Repl Index = €111

Every Bull Starts Out as a Test Bull

Whole Herd Performance Recording

Why record more data on pedigree animals?

Pedigree Cows

Need to know what's happening here!!

Pedigree Bulls

To improve this

Commercial Suckler Cows

Whole Herd Performance Recording

Animals

- All pedigree animals must be presented.
  Different information will be recorded, depending on the animal's age.

Animal Type	Action
Under 150 days old	Weighed
150 – 700 days old	Scored & Weighed
Cow with calf suckling	Scored & Weighed (If Cow was scored & weighed previously she is just weighed this time)
Cow with no calf	Checked (no cost/cow) 1. Whether in milk or not 2. Evidence of C-Section

Cost

Cost	
Callout	€45 (Excl. VAT) €51.08 (Incl. VAT)
Animal	€5 (Excl. VAT) (€5.68 Incl. VAT) *up to 31st Dec. 2017* €6 (Excl. VAT) (€6.81 Incl. VAT) *from 1st Jan. 2018*

Herds Participating
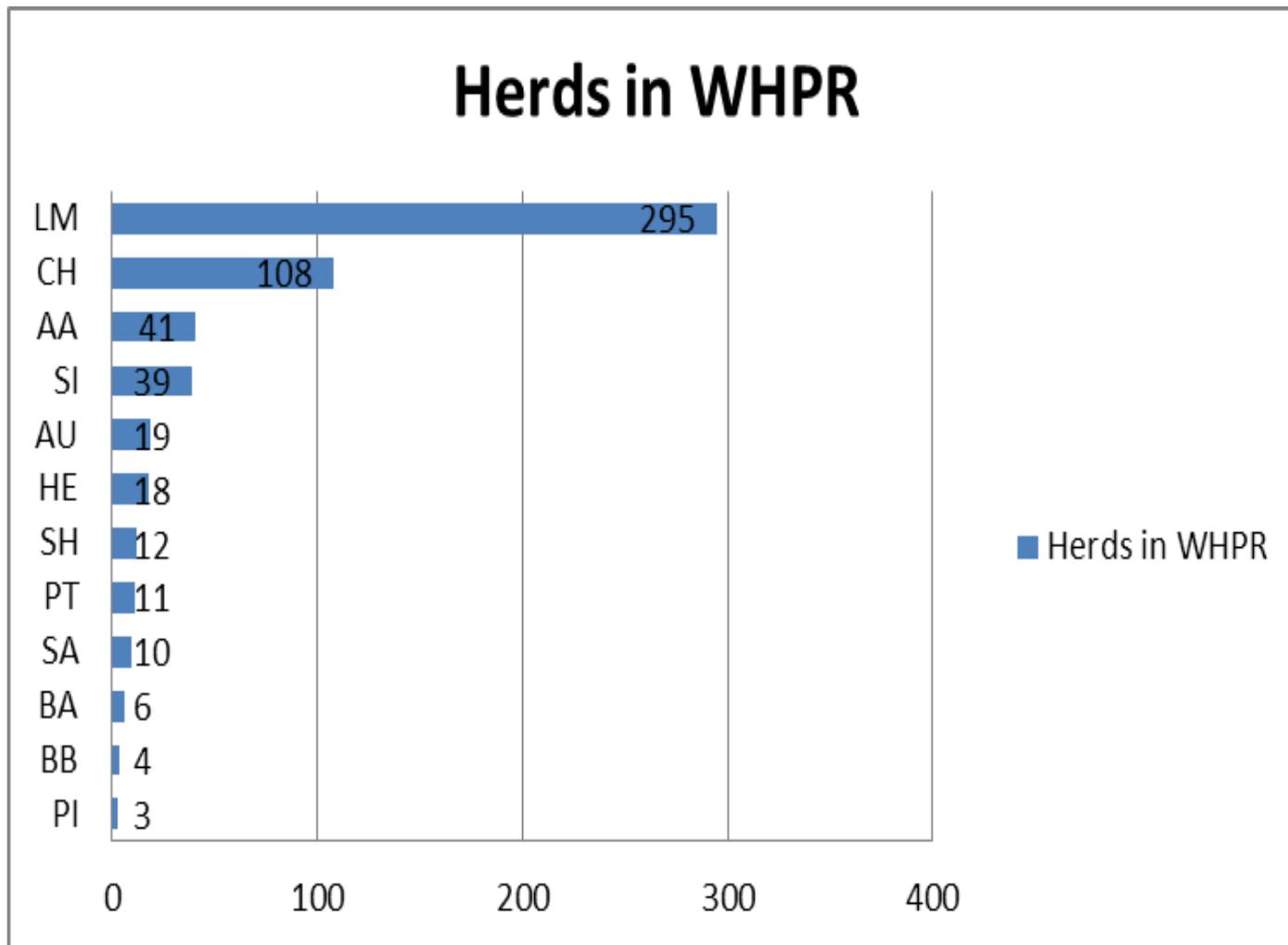
Benefits

Bull Finder

Click here or scroll down to see your search results

Region
Click on counties to limit search to those counties [Select all]
[Deselect all]
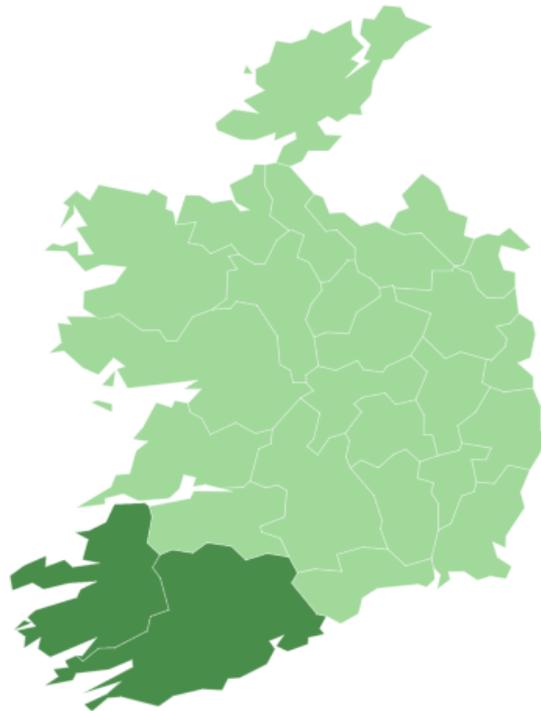
Breed
Click on bars to limit search to those breeds

- Limousin
- Charolais
- Aberdeen Angus
- Simmental
- Hereford
- Aubrac
- Salers
- Blonde d'Aquitaine
- Belgian Blue
- Piedmontese
- Parthenaise
- Shorthorn

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 "Stock 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 10 months – 3 years old & have been at least weighed by ICBF.

8 selected out of 1,593 records

[Reset All]

Showing 8 records sorted by Replacement Index. *Click to download Excel file.*
Click on "DOB", "Stars Across", or "Genomic Eval." to sort table by these columns.
Your search narrowed to Charolais Bulls.

Benefits

Catalogue 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.			

Summary.

- Gene Ireland is delivering on its core objectives of

    - Increasing the profitability of the National suckler herd

    - Driving genetic gain

    - WHPR will help to identify the next ZAG

- Need to start increasing use of Gene Ireland bulls by commercial beef farmers => increased genetic gain.

AI Technicians have a key role to play

Our Farmer & Government Representation

Our AI & Milk Recording Organisations

Our Herdbooks

Acknowledging Our Members

Tully Performance Test.
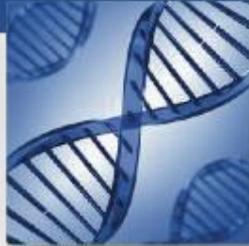
Tully Beef Performance Test Station, 24-25th Oct 2017.
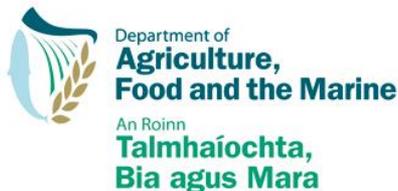
G€N€ IR€LAND progeny test program

- **Background:** Progeny testing allows for increased accuracy in genetic evaluations.

- **Aim:** Collect information on commercial progeny from AI sires.

- Selection Process:
  - ICBF Database: G€N€ IR€LAND 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.

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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.

Bull 1

Bull 2

Feed Intake Comparison.

Tag	Sire	Dam breed	Current weight kg	DMI	ADG	Feed Eff
Bull 1 (2249)	YHB	AA*HF	676 kg	12.9	1.68	7.68
Bull 2 (1139)	AHZ	LM*BB	664 kg	9.7	2.05	4.52

Difference in feed cost over 100 days = €85.

Sire Data..	YHB	AHZ
Replacement Index	€56	€56
Terminal Index	€104	€132
Feed Intake € (rel)	€14 (72% rel)	€ 37 (73% rel)
Feed intake (wb stars)	1 star	5 stars

Slaughter data.

Tag	Sire	Dam breed	Carcass weight (kg)	KO %	Carcass grades	Animal Term index
Bull 1 (2249)	YHB	AA*HF	380	56.2	U+ 4=	€77.97
Bull 2 (1139)	AHZ	LM*BB	410	61.7	E= 3-	€135.94

Our Farmer & Government Representation

Our AI & Milk Recording Organisations

Our Herdbooks

Acknowledging Our Members