COF

Teagasc/ICBF Discussion Groups Dec 2021

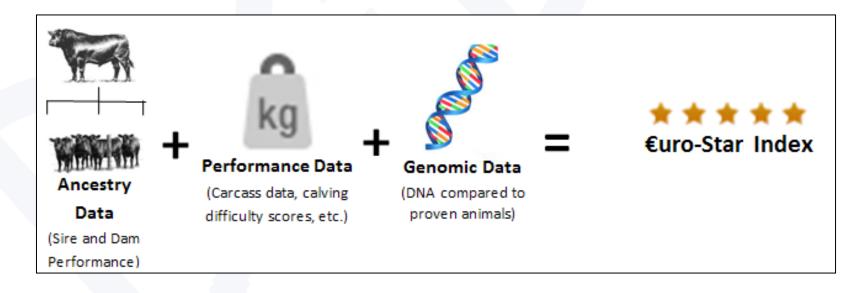


Agenda

- Survey responses
- What is the Euro-Star Index
- Validation of Euro-Star Indexes
- Interpreting the indexes and applying to your herd
- Discussion Group Data

What are they?

- A tool for selection of more profitable animals
- Estimation of an animal's genetic potential
- Based on data collected on an animal + relatives
- More data = higher reliability

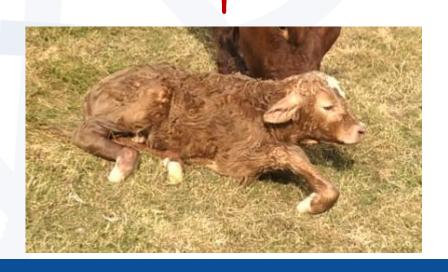




Where does it start for an animal?









Where does it start for an animal?

















Parent Average



As the animal gets older







Performance Data









Genomics – Improved selection of breeding animals



Which ones will I keep?!?!



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

Good quality data is vital

VG		
	VG	G
VG	VG	G
VG	VG	G
VG VG		G
VG	VG	G
	VG VG VG VG VG	VG

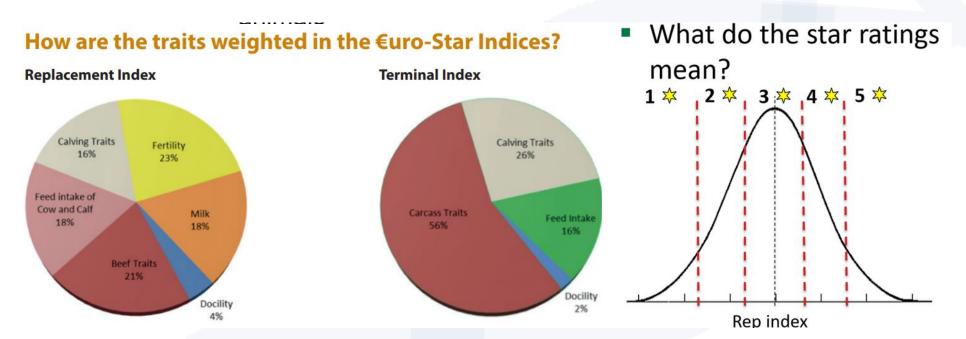


All of my cows calve on their own!!!!





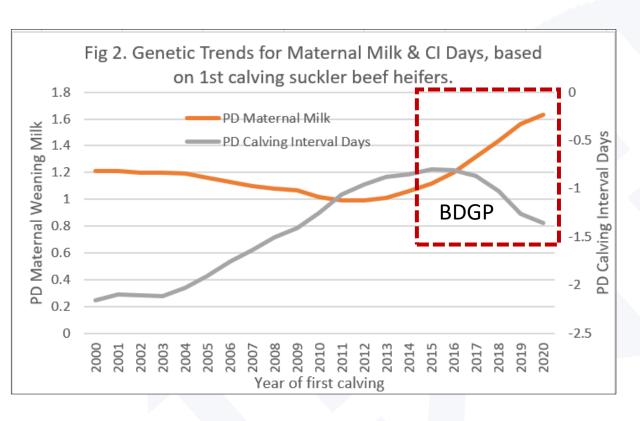
Genetic Improvement within the Irish Suckler Beef Herd.

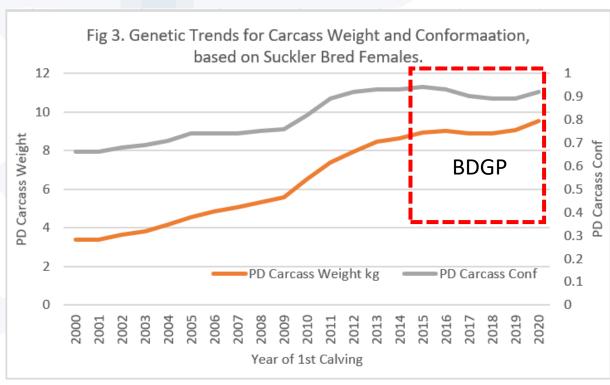




- Past focus on terminal traits => deterioration of maternal traits.
- Replacement index introduced in 2014 to improve maternal traits & maintain terminal traits.

Genetic Trends within the Suckler Beef Herd.





• Impact of BDGP most pronounced => now accelerating gains in milk and fertility traits, whilst holding carcass weight and conformation traits constant.



Indexes are moving us in the right direction.

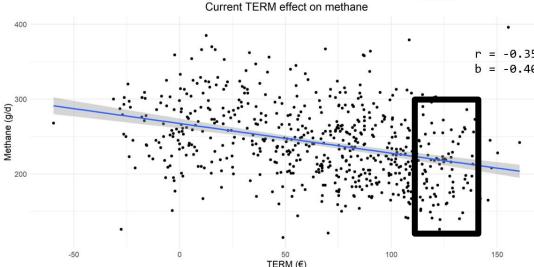
T1. Impact of Herd Replacement Index on key performance & sustainability metrics*								
		Replacement Index €urostars						
Herd Average Trait	Source	SD	Btm 20%	Btm 21-40%	Average	Top 21-40%	Top 20%	
Average Replacement Index	ICBF/BDGP		€42	€63	€80	€96	€122	
Cow Liveweight (All parities; kg)	BEEP	56.0	688.8	669.5	664.3	655.5	651.6	
Calf 200 day Liveweight (kg)	BEEP	34.8	279.7	280.1	284.9	286.3	287	
Weaning Efficiency (%)	BEEP	5.5	40.8	42.0	43.0	43.9	44.3	
Calving Interval (days)	ICBF	28.7	399.1	394.2	389.8	384.6	387.7	
Calves/cow/year	ICBF	0.12	0.85	0.88	0.89	0.91	0.91	
Profit/livestock unit	Teagasc		€207	€219	€238	€244	€262	
Carbon Footprint (GHG/kg)	Bord Bia	1.82	13.16	12.97	12.82	12.42	11.91	
David Kelly, PhD, Teagasc.								

 Analysis based on 3,150 herds with valid carbon footprint, BEEP, and genetic merit data from 2020 for analysis



Where next for indexes/breeding direction.





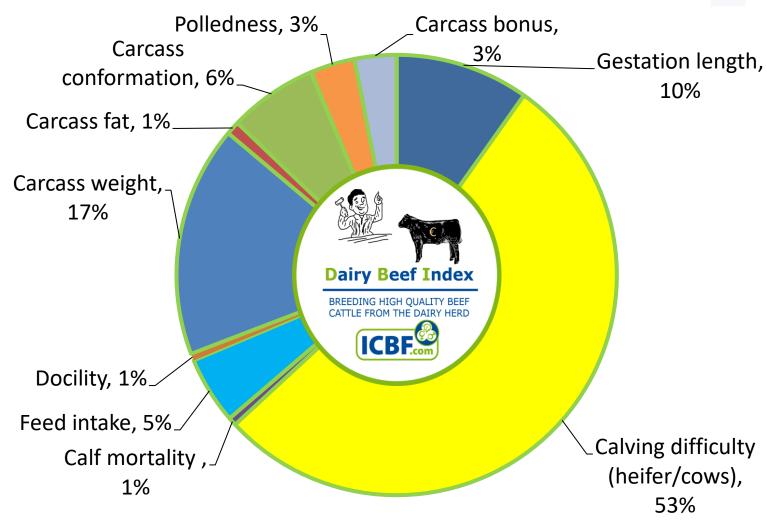
- Climate/environment => Increasing focus on efficiency traits.
 - Cow costs (CI, survival, age at 1st calv, weight, milk...)
 - Quicker days to finish at target carcass weight.
- Direct selection for methane.
 - Animals that will produce less methane for a given level of performance.
- DNA calf registration.
 - All animals genotyped at birth.
- Suckler cow herd is now moving in right direction => more profitable & more carbon efficient.
- Confident that we can increase further in the future.







Dairy Beef Index (DBI)



- Breed bulls suitable for use in the dairy herd.
- Only applicable to pedigree breeders producing bulls for dairy market.
- Not applicable to commercial suckler farmers

Background

How can I tell the good from the bad?!?!



Farmers need a tool which gives them an insight into the genetic merit of an animal to help them make more informed purchasing decisions



I'm 25% JE and my

I have 0% JE and my daddy is a high carcass merit HE bull.



What is it?



- Terminal Index less the calving traits (calving diff, gestation and mortality).
- Carcass weight, conf and fat, feed intake and docility.



What animals will receive it?



Commercial suckler males and uncalved females



Dairy males



Dairy x beef males and uncalved females

- The following will not have a CBV available:
 - Pedigree beef males and females
 - Dairy females
 - Calved females



Where will it be visible?

- Online profile for HerdPlus herds.
- Plan to roll out to mart boards >>> 2022
- Report to be developed for HerdPlus herds.

	Commercial Beef Value										
Value €	Star Ranking (Across Breed)	Carcass Weight (kg) ^	Carcass Conformation ^	Carcass Fat (1-15 scale)	Feed Intake (kg DM/day)	Docility (1-5 scale)					
317	****	70.6	4.26	-1.14	-0.58	0.02					
283	****	63.2	4.30	-0.80	-0.38	0.02					
277	****	67.6	3.62	-0.96	0.02	0.26					
275	****	58.8	3.76	-1.32	-0.52	0.26					
274	****	66.4	3.78	-0.74	-0.04	0.14					
268	****	59.2	4.00	-1.14	-0.34	0.06					
262	****	58.0	4.04	-0.70	-0.28	0.22					
259	****	66.8	2.78	-1.06	0.02	0.04					
254	****	50.4	4.50	-0.80	-0.54	0.12					
247	****	61.0	2.66	-1.16	-0.14	0.08					
246	****	65.6	3.66	-0.70	0.56	0.12					
246	****	60.6	2.92	-0.62	-0.22	-0.08					





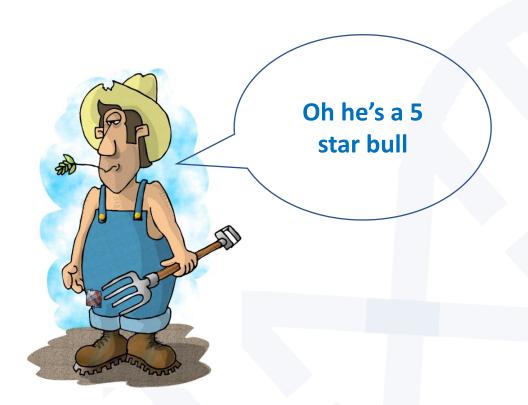
Are higher CBV animals generating higher value carcasses?

Dairy x Beef Animals

	Count	CBV	PD Cwt kg	Cwt kg	n Spec Con	In Spec Fat	Price	€-value	Age Slau
- 5 stars - Top 20%	716	€95.5	8.7	378.0	95%	91%	€4.23	€1,601.3	31.3
- 4 stars - 21-40%	383	€13.9	3.1	356.1	84%	92%	€4.23	€1,507.3	31.3
- 3 stars - 40-60%	437	-€9.5	0.3	352.4	77%	94%	€4.20	€1,479.0	31.3
- 2 stars - 21-40%	515	-€24.4	-1.9	347.2	72%	91%	€4.17	€1,446.8	31.5
- 1 star - Btm 20%	678	-€49.8	-5.9	335.7	69%	93%	€4.15	€1,393.3	31.6
- No Sire = No stars	2571			350.4	81%	92%	€4.23	€1,481.3	31.1



Interpretation is critical



- 5 stars for what?
- Is that the current evaluation?
- Is the bull performance recorded?
- Is the bull genotyped?
- Is the bull parentage verified?

Star Rating (within Simmental breed)	Economic Indexes	Purpose	€uro value	Index reliability	Star Rating (across all beef breeds)	
****	Replacement (per daughter lactation)	To breed future cows for the suckler herd	€210	93% (V High)	****	7
****	<u>Terminal</u>	To breed beef animals from the suckler herd that are destined for slaughter	€100	96% (V High)	****	1
****	Dairy Beef	To breed beef animals from the dairy herd that are destined for slaughter	€51	93% (V High)	****	

Calving Difficulty (births requring considerable assistance; % 3 & 4)						
When Mated With:	Value	Reliability				
Beef Heifers Breed avg: 8.97%, All breeds avg: 8.17%	8.5%	97% (V High)				
Beef Cows Breed avg: 3.60%, All breeds avg: 3.79%	3.5%	99% (V High)				

Star Rating (within Simmental breed)	Key profit traits		Trait reliability	Star Rating (across all beef breeds)
	Expected progeny p	performance		
****	Docility (1-5 scale) Breed avg: 0.08, All breeds avg: 0.02	0.09 scale	99% (V High)	****
****	24.9kg	(V High)	****	
****	Carcass conformation (1-15 scale) Breed avg: 1.38, All breeds avg: 1.42	1.63 scale	99% (V High)	****
	Expected daughter breed	ding performance		
	Daughter calving difficulty (% 3 & 4) Breed avg: 5.47%, All breeds avg: 5.37%	4.72%	93% (V High)	
★ 資 資 資 富 Breed avg: 8.17kg, All breeds avg: 2.39kg		3.90kg	98% (V High)	****
****	<u>Daughter calving interval (days)</u> Breed avg: -0.44 days, All breeds avg: -0.90 days	-8.24days	80% (V High)	****

exes

? 1. Start with the overall index

- Replacement
- Terminal
- Stars tell you where bull ranks

2. Look at the traits you need

- Easy calving for heifers?
- High carcass?
- Milk + Fert?

3. Watch reliability

- Especially on calving diff for heifers.
- Low rel > multiple bulls

An	Animal Details Replacement Index								
Jumbo	Animal Tag Date Of Birth Breed	Sire ID Dam Tag	Calvings	Index Value (€)	Rel %	Carcass Weight (Kg)	Daught. Milk (Kg)	Daught. Calving Interval (Days)	
	Breed			Across Breed Glars	Rank	Across Breed	Across Breed	Across Breed	
	IE141461060205	CQA		€170 🐰	69%	+43.9	+4.9	-1.99	Too high on carcass.
205	31-JAN-2013 SI(50%),LM(44%)	IE141461010076	7	€170 <u>&</u>	15	****	****	****	Cows too heavy!
	372224667880300	ZLL		£105 @	54%	+23.1	+7.8	-4.41	
300	26-JAN-2018 AA(50%),SA(25%)	IE141461040260	2	€185 <u>&</u>	9	****	****	****	
	372224667810392	AA4315			29%	+13.5	+9.85	-3.39	Balanced indexes
392	09-FEB-2021 AA(50%),LM(44%)	372224667890326		€157 ★★★★★	25	**	****	****	with varying degrees of carc, milk and fert.
	372224151291012	ZAG		£422 ⊌	48%	+6	+11.1	-2.44	mink drid reft.
1012	03-FEB-2018 LM(50%),HO(41%)	IE141877611850	1	€132 <u>\</u> ★★★★★	71	*	****	****	
	IE241293141428	IE241282520749		£125 @	62%	-13.9	+14.7	-3.45	Too low on carcass.
1428	04-APR-2012		7	€135 🙎					Imbalanced towards
	AA(38%),HO(38%)	IE151326870820		****	62	*	****	****	milk + fert.



Should I just

	Star Rating (within Simmental breed)	Economic Indexes	Purpose	€uro value	Index reliability	Star Rating (across all beef breeds)	
-	★☆☆☆☆	Replacement (per daughter lactation)	To breed future cows for the suckler herd	€23	98% (V High)	★音音音音	erall index?
	★会会会会	<u>Terminal</u>	To breed beef animals from the suckler herd that are destined for slaughter	€46	95% (V High)	★☆☆☆☆	
	*****	<u>Dairy Beef</u>	To breed beef animals from the dairy herd that are destined for slaughter	- €50	94% (V High)	*****	

Calving Difficulty (births requring considerable assistance; % 3 & 4)							
When Mated With:	Value	Reliability					
Beef Heifers Breed avg: 8.97%, All breeds avg: 8.17%	11.9%	95% (V High)					
Beef Cows Breed avg: 3.60%, All breeds avg: 3.79%	5.5%	99% (V High)					

Star Rating Key profit traits (within Simmental breed)		Index value	Trait reliability	Star Rating (across all beef breeds)
	Expected progeny p	performance		
****	Docility (1-5 scale) Breed avg: 0.08, All breeds avg: 0.02	0.08 scale	99% (V High)	****
★ ☆ ☆ ☆ ☆ Breed avg: 21.95kg, All breeds avg: 16.78kg		13.1kg	99% (V High)	**☆☆☆
★ ☆☆☆☆	Carcass conformation (1-15 scale) Breed avg: 1.38, All breeds avg: 1.42	0.99 scale	99% (V High)	**☆☆☆
	Expected daughter breed	ding performance		
	Daughter calving difficulty (% 3 & 4) Breed avg: 5.47%, All breeds avg: 5.37%	5.52%	98% (V High)	
★★★☆☆ Breed avg: 8.17kg, All breeds avg: 2.39kg		8.30kg	99% (V High)	****
****	<u>Daughter calving interval (days)</u> Breed avg: -0.44 days, All breeds avg: -0.90 days	5.88days	98% (V High)	****



//	T	h	a	t

Star Rating (within Limousin breed)	Economic Indexes	Purpose	€uro value	Index reliability	Star Rating (across all beef breeds)	
★ 育育育育	Replacement (per daughter lactation)	To breed future cows for the suckler herd	- €48	96% (V High)	★ 育育育育	gures?"
★官官官官	<u>Terminal</u>	To breed beef animals from the suckler herd that are destined for slaughter	€90	94% (V High)	****	
****	Dairy Beef	To breed beef animals from the dairy herd that are destined for slaughter	- €72	85% (V High)	*****	

Calving Difficulty (births requring considerable assistance; % 3 & 4)								
When Mated With:	Value	Reliability						
<u>Beef Heifers</u> Breed avg: 8.47%, All breeds avg: 8.17%	26.4%	94% (V High)						
Beef Cows Breed avg: 3.72%, All breeds avg: 3.79%	18.0%	99% (V High)						

Star Rating (within Limousin breed)	Key profit traits	Index value	Trait reliability	Star Rating (across all beef breeds)							
	Expected progeny performance										
****	Docility (1-5 scale) Breed avg: -0.06, All breeds avg: 0.02	0.01 scale	99% (V High)	****							
****	Carcass weight (kg) Breed avg: 23.65kg, All breeds avg: 16.78kg	31.3kg	99% (V High)	****							
****	Carcass conformation (1-15 scale) Breed avg: 2.15, All breeds avg: 1.42	2.71 scale	99% (V High)	****							
	Expected daughter breed	ding performance		,							
	Daughter calving difficulty (% 3 & 4) Breed avg: 4.82%, All breeds avg: 5.37%	3.99%	95% (V High)								
★ 育育育育	<u>Daughter milk (kg)</u> Breed avg: -0.52kg, All breeds avg: 2.39kg	-5.20kg	99% (V High)	★ ☆☆☆☆							
****	<u>Daughter calving interval (days)</u> Breed avg: 1.16 days, All breeds avg: -0.90 days	7.45days	90% (V High)	★ ☆☆☆☆							



Applying to your herd

1. Know what you are trying to produce

- Many different systems on Irish suckler farms
- Focus on index and traits of importance to your system
- Calving difficulty and docility applicable to all







Applying to your herd

2. Identify where your cow herd is weak

- Use HerdPlus Euro-Star report
- Overall Replacement Index of herd
- Individual traits e.g. carcass, milk, calving interval, etc.

Example Herd - Breeding replacements and males for slaughter

		Replacement Index						
Group	Number of Cows	Index Value (€)	Across Breed	Carcass Weight (Kg)	Daught Milk (Kg)	Daught Calving Interval (Days)		
Cows								
Total Cows	28	€82		+27	+2.1	+2.17		
Missing Stars*	0	_	****	****	***	*		



HerdPlus €uro-Star report summary page



Applying to your herd

How can we bring about genetic improvement?

3. Sire Selection

- Sires should be genetically superior to cows
- Maternal & Beef Traits → Replacement Index
- Beef traits only → Terminal Index
- Al 'Active Bull List'
- Stock bull finder





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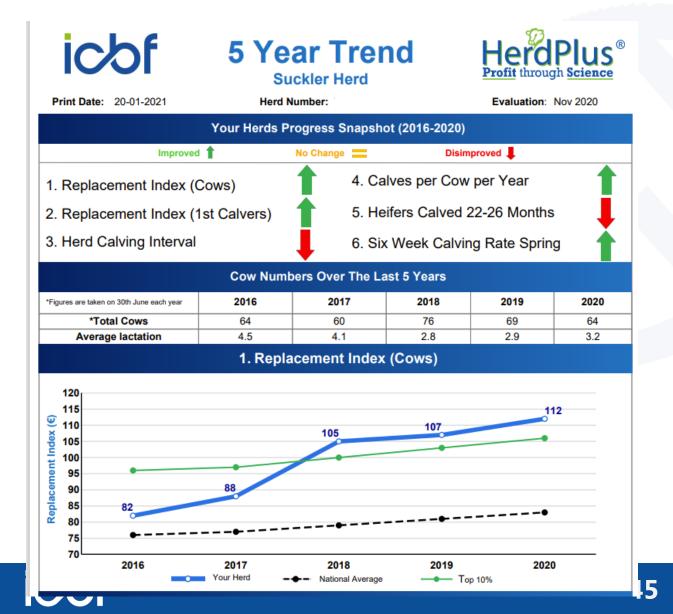
Suckler Beef Discussion Group Data

Dec 2021





5 year Trend Report Report.



- Taking herd 5 year trend reports (2017-2021).
- Individual members data.
- Accessible via HerdPlus accounts.
- Compiled into group report, for further analysis & discussion.
- Focus on 2017 versus 2021 for trend comparisons.

5 year Trend; Group Performance.

NAME HERD_NUM	Rep Index Cows Rep Index Heifers			fers	Calving Interval			Calves/cow/year			Heifers Calved 24 Mts					
	2021	2017	Diff	2021	2017	Diff	2021	2017	Diff	2021	2017	Diff	2021	2017	Diff	
		106	86	20	98	106	-8	350	359	-9	1	0.97	0.03	0	0	0
		118	80	38	117	79	38	414	372	42	0.88	0.94	-0.06	83	0	83
		93	93	0	86	106	-20	387	374	13	1.02	0.86	0.16	0	14	-14
		101			99			469			0.78			100		
		95	76	19	125	68	57	371	362	9	0.97	0.98	-0.01	100	72	28
		91	83	8		100		407	374	33	0.81	0.93	-0.12		67	
		83	69	14	93	78	15	381	397	-16	1.01	0.92	0.09	9	0	9
		77	67	10		64		387	387	0	0.94	0.88	0.06		100	
		107	109	-2	91	100	-9	367	370	-3	0.99	0.96	0.03	100	100	0
		118	97	21	128	114	14	372	362	10	0.91	0.97	-0.06	33	86	-53
		73	70	3		65		347	418	-71	0.74	0.71	0.03		67	
		104	90	14	94	95	-1	386	419	-33	0.83	0.77	0.06	0	0	0
		120	80	40	126	113	13	418	400	18	0.77	0.88	-0.11	0	14	-14
		60	82	-22	23	82	-59	377			0.81	0.8	0.01	0	80	-80
		82	85	-3	18	79	-61	462	430	32	0.47	0.85	-0.38	0	33	-33
		56	46	10	44	61	-17	368	391	-23	0.98	0.71	0.27	84	50	34
		110	89	21	104	83	21	376	381	-5	0.87	0.87	0	13	40	-27
		49	52	-3		45		367	397	-30	0.83	0.73	0.1		100	
		76	85	-9	66	28	38	487	380	107	0.67	0.78	-0.11	25		
		90	80	10	87	81	2	394	387	4	0.86	0.86	0.00	36	48	-5

- Heifers should really be ahead of cows on Rep Index =>> Genetic gain
- Heifers calved at 24 months at 36%. Can this be improved? Reasons why people don't do it?



Weanling Efficiency Report.





Weaning Performance Report

Animals born between 01/07/2019 - 30/06/2020

Print Date: Herd Owner: Herd Number:

1. Summary Data - Overview of weight performance of calves born in your herd and their dams.

A. Calf Performance

All Calves

	Born In Period*	No. Weighed**	ADC (kg)	Avg. 200 Day Weight (kg)		
	Born in Period	No. Weighed	ADG (kg)	Your Herd	Target	
All	70	55	1.6	364	N/A	
Males	36	22	1.68	381	300	
Females	34	33	1.54	352	250	

B. Cow & Sire Performance

All Cows

	Calved in	No.	Avg. Weight	Weaning Efficiency (Calf 200 Day Weight as % of Cow Weight)			
	Period	Weighed*	(kg)	Your Herd	Target		
All	67	49	637	58%	42%		
1st Calvers	17	15	575	64%	42%		
2nd Calvers	16	12	621	57%	42%		
3rd + Calvers	34	22	688	56%	42%		

- Based on cow & calf weight data recorded on farm during period 1 July 2020 to 30 June 2021.
- Access report via ICBF HerdPlus.
- Available for all herds as part of BEEP-S.



Discussion Group Reports

5-Year Trend Report



ΑII

Males

Females

All Cows

ΑII

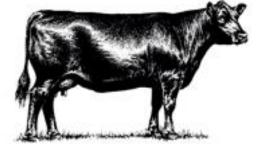
1st Calvers

2nd Calvers

3rd + Calvers



Calf 200 Day Weight = 335 kg



Cow Weight = 680 kg

300
250

Target

N/A

200

Day Weight (kg)

rd

335 kg = 49% of 680 kg

Weaning Efficiency % = 49%

27 20 802 41%

s % of Cow Weight)							
	Target						
	42%						
	42%						

42%

42%



Weanling Efficiency; Group Performance.

NAME HERD_NUI	M Calves	ADG All Calves	ADG Males	ADG Females	200 day wt All calves	200 day wt males	200 day wt females	Cow weight	Weanling Eff %
	27	1.59	1.61	1.57	365	369	358	758	49
	24	1.1	1.11	1.08	263	267	259	536	49
	28	1.27	1.36	1.18	298	318	279	689	44
	33	1.05	1.11	0.99	253	266	239	612	42
	49	1.25	1.28	1.23	294	300	288	610	49
	6	1.24	1.19	1.31	291	282	304	574	51
	65	1.06	1.12	0.99	256	269	241	661	39
	28	1.17	1.31	1.04	279	309	252	606	46
	21	1.18	1.25	1.13	280	296	268	738	38
	11	0.91	0.95	0.87	226	237	213	699	36
	21	1.16	1.26	1.12	277	298	268	680	41
	27	1.17	1.24	1.12	277	292	265	674	42
	17	1.19	1.23	1.1	282	290	262	626	45
	14	1.15	0.81	1.2	253	205	261	569	45
	32	1.4	1.43	1.35	314	324	295	722	44
	54	0.92	0.99	0.89	227	243	220	581	39
	90	1.18	1.23	1.13	280	291	269	591	48
	77	1.12	1.13	1.1	268	273	263	638	43
Average	35	1.17	1.20	1.13	277	285	267	642	44

- Average Weanling Efficiency for the group is 44% (42% Nationally).
 - Generally a lighter cow relative to other groups.
- Big variation in this figure within group members.. Area for discussion?



Some Take Home Messages.

- Well done. Some good performance in the group
 - Rep Index Cows & Heifers => Slightly above average (€85).
 - Definite room for improvement (Top 10% €111)
 - Weanling efficiency => Top 20%.
 - CI Days => Below average. Avg. Increase of 4 days since 2017
 - Calves/cow/year => Above average. Possible to increase >0.90?
- Increasing the Replacement index of the herd => using teams of high replacement index AI bulls when generating herd replacements (min €25 ahead of cow herd).
 - Know where you herd is at re: milk/fertility vs. beef merit.
- Best wishes for the 2022 calving + breeding season. And for the years ahead!



Our Farmer & Government Representation







Our Al & Milk Recording Organisations









Our Herdbooks



Ireland









IRISH





























Norwegian Red Cattle Society



AYRSHIRES*

Meuse Rhine Issel -- Milk & Muscle!

Acknowledging Our Members