



IRISH CATTLE BREEDING FEDERATION

Making Greatest Use of Beef Breeding Indexes. Sire & Dam information.

*Irish Cattle Breeding Federation.
Teagasc National Beef Conference.
6th April 2011.*



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Overview.

- Cattle breeding numbers.
- Achieving Genetic Gain
 - Accurate data on which to select best animals – the ICBF database.
 - Profit indexes which rank these animals - Euro-Stars.
 - A breeding program that ensures best bulls are available in AI (for breeding stock bulls) - GEN€ IRELAND
- Developments for 2011.



Cattle Breeding Numbers.

	2007/2008	2008/2009	2009/2010	Change/yr
Beef cows with a calving during 12 mths	1,009,212	968,660	885,647	-4.1%
Beef heifers with a calving during 12 mths	188,026	166,939	135,665	-9.3%
Beef cows culled during 12 mths	133,303	161,797	186,865	13.4%

- Suckler herd is on decline.
- Latest trends for year to date:
 - Suckler beef births=236k (-2% compared to 2010)
 - Dairy births=539k (+10% compared to 2010).
- Important indigenous resource.
- Breeding has huge potential.

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1. The ICBF Database



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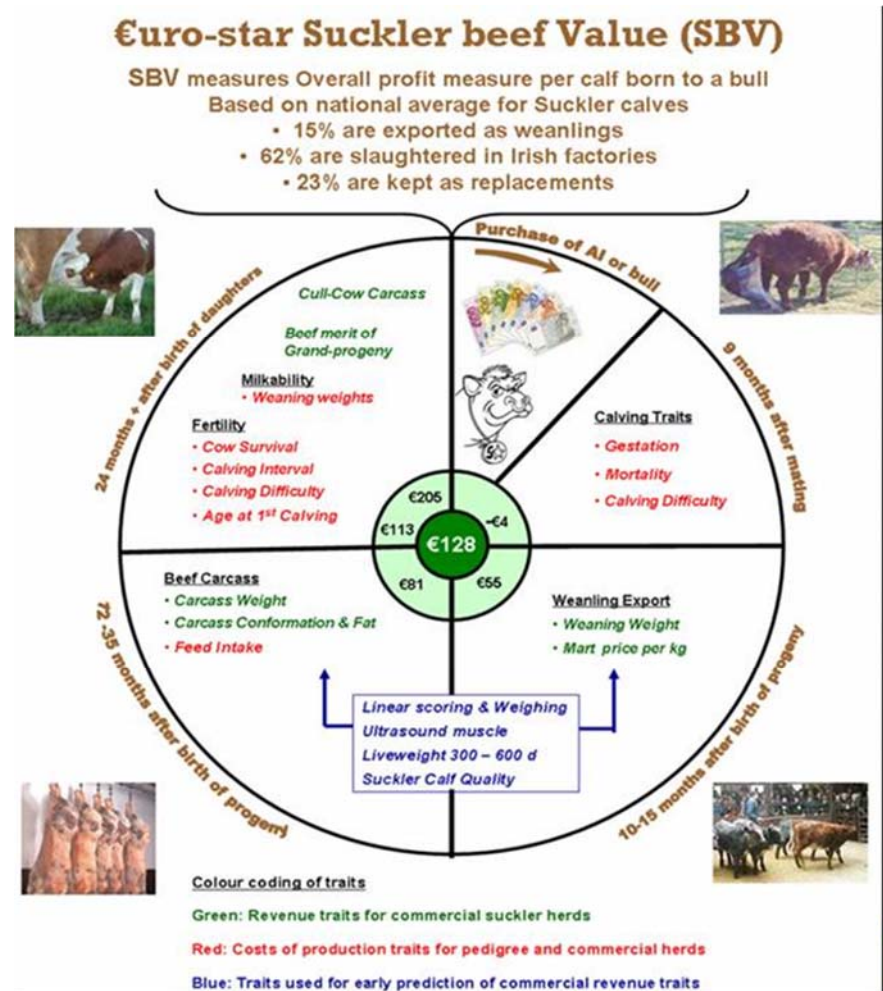
Data for Genetic Evaluations – Example: Limousin Breed.

- 8.5k/year registrations across 1600 herds.
 - Average = ~5 pedigree registrations.
 - Only 65 herds with greater than 20 registrations.
 - Very difficult for genetic evaluations (esp maternal)
- 400k/year LM sired calves in commercial herds (*ICBF key data focus is in these herds*).
 - 1 million calving records in GE (5.6m total)
 - 240k carcass records (1.3m total)
 - 100k weaning records (350k total).
 - 50k maternal records (200k total).
- On-par with milk recording (~300k recs/year)
- Critical role of SCWS.⁵



• 2. Profit Indexes The Suckler Beef Value.

- Launched in 2007.
- Focused on key profit traits.
- €-value (profit difference).
- Star system (5 stars are good).
- Difference of €100/progeny between 1 star & 5 star.



Charolais

Bull Details		SBV			Weanling			Carcass			Fertility			Milk			Calv Diff%			Docility		
Code	Bull Name	€-val	Rel	Star	€-val	Rel	Star	€-val	Rel	Star	€-val	Rel	Star	€-val	Rel	Star	Ind	Rel	Star	Ind	Rel	Star
TOP SUCKLER BEEF VALUE BULLS																						
SDA	SINNDAR	€181	66	****	€122	77	*****	€193	73	*****	€12	19	***	€93	27	*	12.1	83	*	0.32	79	*****
CF85	BALTHAZAR	€150	88	*****	€106	92	*****	€141	93	*****	€52	7	*****	€79	9	**	9.7	98	**	0.12	95	*****
CF61	ALEX	€146	83	*****	€100	89	*****	€150	91	*****	€13	9	*****	€25	14	*****	8.3	95	***	0.04	89	***
TUT	NOSTRADAMUS	€146	67	*****	€75	68	**	€136	77	*****	€64	11	*****	€38	10	*****	7	89	****	0.08	51	*****
PNZ	PANAMA	€146	57	*****	€90	76	****	€173	63	*****	€21	7	***	€102	38	*	11.6	82	*	-0.09	72	*
MYI	IMPECCABLE	€141	77	*****	€106	84	*****	€152	87	*****	€73	25	*	€18	41	*****	10.6	89	*	-0.06	78	*
KLU	CUPIDON	€140	76	*****	€107	85	*****	€162	71	*****	€32	12	*****	€76	20	***	13.8	96	*	0.18	90	*****
HWN	NICKOLAS	€135	97	*****	€103	99	*****	€150	98	*****	€10	75	***	€50	74	*****	8.6	99	***	0.11	99	*****
BOTTOM SUCKLER BEEF VALUE BULLS																						
VAK	BANKER	€78	81	**	€90	91	****	€122	87	****	€14	0	***	€78	18	**	15.9	97	*	-0.04	92	*
OSI	SINDURAIN	€72	96	**	€63	99	*	€79	98	*	€21	61	*****	€87	53	*	5.5	99	*****	0.15	98	*****
VHC	VICHY	€70	64	**	€93	73	*****	€127	74	****	€1	7	****	€47	17	*****	19.4	79	*	0.11	73	*****
CF60	LTINTIN	€67	89	**	€99	96	*****	€131	95	*****	€54	20	*	€69	13	****	15.3	98	*	0.14	97	*****
UNV	UNIVERSE	€57	80	*	€70	83	**	€108	89	***	€37	16	**	€57	8	*****	13.7	95	*	0.03	87	***

- €124 difference between top & bottom CH bulls. Similar differences for other breeds.

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Do Euro-Stars work – Carcass traits?

	1 Star	3 Star	5 Star	Diff (1-5)
Age (months)	29	30.7	28.8	-0.2
Carcass weight (kg)	343.6	396.1	417.5	73.9
EU Grade & Fat Score	O+3+	R=3=	R+3=	3 pts
Price (€/kg)	3.31	3.44	3.45	0.14
Lifetime Gain (kg/day)	0.34	0.38	0.43	0.09
Value (€)	€1,137	€1,362	€1,439	€301
Carcass Sub Index (€)	-€16	€37	€77	€93

- Based on animals slaughtered in Feb11.
- 5 star animals versus 1 star.
 - Higher lifetime gain (+.09 kg) = €301 more profit.
- Yes, the Euro-Stars work.
 - Rem: ave net margin of €-110/ha – target of €5 by 2018

Do Euro-Stars work – Fertility Traits?

Fertility Index	1 star	3 star	5 star	Diff (1-5)
% calved at ~24 mths	23%	34%	48%	25%
Average age at 1st calving	31.9	30.3	28.8	-3.1
% with CI<390 days (1-2)	26%	39%	51%	25%
Average CI Days	435.1	414.5	397.7	-37.4
% alive & with 3 calves	11%	25%	42%	31%
Average number calvings	1.77	2.06	2.27	0.50

- $\frac{3}{4}$ bred beef heifers born Spring 2006.
 - % calved at 24 month?
 - % recalved within 390 days?
 - % still on farms with 3 calves to date?
- Similar results for $\frac{1}{2}$ bred beef heifers.
- Yes, the Euro-Stars work – even at low reliability.



ICBF Active Beef Bull List - Jan 2011



Charolais

Bull Details		SBV			Weanling			Carcass			Fertility			Milk			Calv Diff%			Docility		
Code	Bull Name	€-val	Rel	Star	€-val	Rel	Star	€-val	Rel	Star	€-val	Rel	Star	€-val	Rel	Star	Ind	Rel	Star	Ind	Rel	Star
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UNV	UNIVERSE	€57	80	*	€70	83	**	€108	89	***	€37	16	**	€57	8	*****	13.7	95	*	0.03	87	***

- Selecting AI sires – key advice.
 - Use SBV and relevant sub-indexes.
 - Use teams of bulls, especially for maternal traits.



Lot 5		Glenwood Donald		Breed: Blonde dAquitaine	
IE341052740894		DOB: 28-Sep-2009		Male	
Owner: John O'Halloran - Glenwood Mullinahone Thurles Co Tipperary					
Sire: Ballygowan Vision (UK933022408162) SBV = € 87 (64%)		Glenvale Tarzan	SBV = € 37 (22%)	Droit Ocean	
				Bromfield Leonie	
		Ballygowan Mandy	SBV = € 70 (18%)	Carn Gordon	
				Ballygowan Fortune	
Dam: Glenwood Sinead IE341052740291 SBV = € 86 (41%)		Ballycraddock Neptune	SBV = € 80 (81%)	Fallou	
				Ballycraddock Linda	
		Glenwood Primrose	SBV = € 71 (32%)	Gillet Imperial	
				Paulyard Deldre	
€uro-Star Indexes					
% Rank	Star Rating (within breed)	Indexes & Traits	€uro-Value	Data Reliability	Relative Data Reliability Comment
97%	★★★★★	Suckler Beef Value (SBV)	€ 98	34%	High
9%	★	Weanling Export	€ 40	41%	High
95%	★★★★★	Beef Carcass	€ 129	44%	High
72%	★★★★★	Daughter Fertility	€ -25	2%	Medium
61%	★★★★★	Daughter Milk	€ -95	9%	Medium
		Other Key Traits			
48%	★★★	Calving Difficulty	5.7%	41%	High
85%	★★★★★	Gestation Length		15%	Medium
86%	★★★★★	Dociility		43%	High

Selecting Stock Bulls - key advice.

- Use SBV and relevant sub-indexes.
- Example of a suitable bull if taking animals to slaughter and breeding own replacements

You can afford to pay more.



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3. GENE IRELAND Beef.

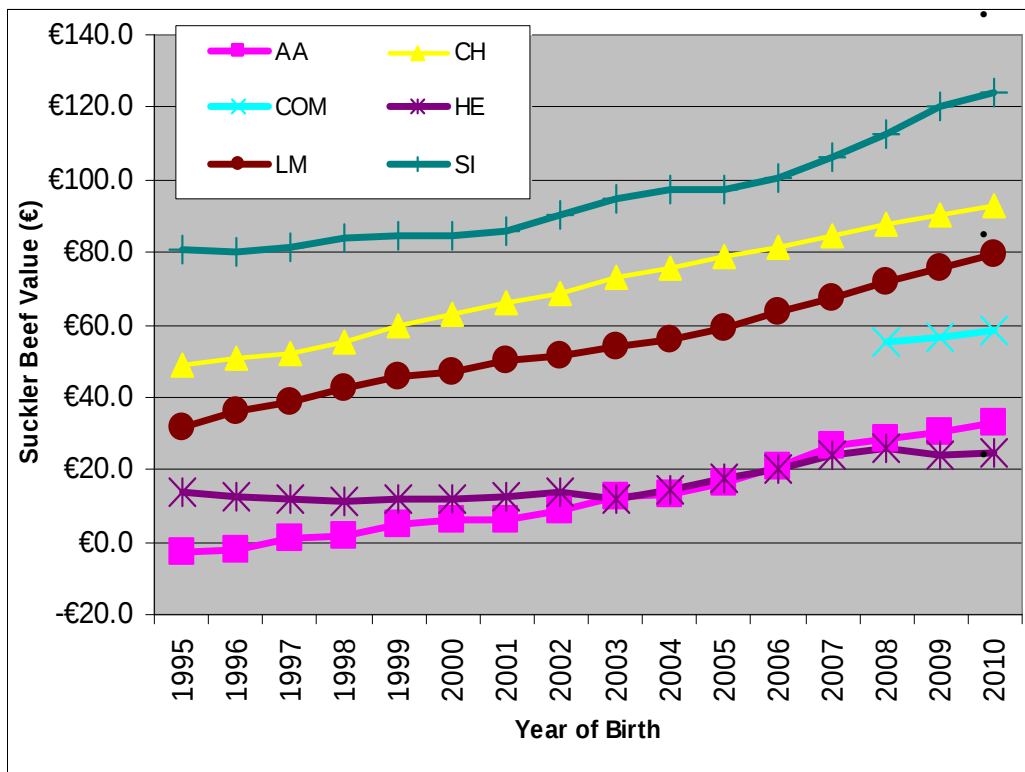
	2007	2008	2009	2010	ALL
Number Bulls	6	11	17	9	43
Average SBV	€138	€109	€100	€120	€112
Within breed rank - SBV	97	71	71	80	76
Average Milk Sub Index	€8	€29	€31	-€4	€20
Within breed rank - Milk	57	54	64	55	59
Straws dispatched	2920	7956	12343	8860	8020
Herds	146	468	726	491	458
Straw/herd	20.0	17.0	17.0	18.0	17.5

- Primary objective of GENE IRELAND is to identify AI bulls for breeding stock bulls in pedigree herds.
 - RWB (AA), CF61, CF85, KLU (CH), CWI, AIZ (LM), DRU (SIM)
 - Only 60% of pedigree registrations are by AI sires.
- We need more bulls & of higher index.

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Genetic Trends in SBV.



Current gain = ~€5 per cow per year.

Dairy = €20, due to GENE IRE & genomics

Beef potential = €20m per year for €1m investment



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Developments for 2011.

- New indexes for commercial beef farmers.
 - New Suckler Cow Value - Index to select maternal replacements (*20 heifers, which are for breeding?*)
- Improvements to maternal evaluations.
 - Maternal milk weight & cow milk score.
- Research and demonstration farms.
 - Increased focus on maternal traits (Derrypatrick & BETTER farms program).
 - High & low Suckler cow value animals.
 - Including $\frac{3}{4}$ bred & $\frac{1}{2}$ bred animals.

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Suckler Cow Report

Animal Details			Ancestry Details					Euro-Star Index									
Jumbo:	451		Sire's Sire:	DFV		Within Breed		Index		Rel%	Across Breed						
Official Tag:	IE211298830451			DOVEFIELDS GALLANT		★★★★★	Suckler Beef Value		€ 146	42%	★★★★★						
Animal Name:			Sire's Dam:	F039572		Beef Value											
Date of Birth:	04/02/2006			KILBRIDE FARM EUNICE D29		★★★★★	Weaning Export		€ 49	51%	★★★★★						
Breed:	HE (6.25%), LM (25%), SI (62.5%), UN (6.25%)		Sire:	KFY		★★★★★	Beef Carcass		€ 70	49%	★★★★★						
Herdbook:				KILBRIDE FARM NEWRY		Replacement Value											
Scored:	30/09/2006		Dam:	IE211298840130		★★★★★	Daughter Fertility		€ 89	★★★★★							
Weighed:	30/09/2006					★★★★★	Daughter Milk		€ 154	33%	★★★★★						
BLUP Index (Reliability 58%)			Dam's Sire:	IENVVW0075T		Other Key Traits											
MUSCLE	SKELETAL	DOCILITY		FARRAHY MAX		★★★★★	Mat Calving Diff %		€ 6.12	37%	★★★★★						
102	103		Dam's Dam:	IEDFTM0019X		★★	Gestation Length		€ 1.95	37%	★★★★★						
						★★★★★	Docility		0.02	49%	★★★★★						
Calving & Fertility Performance										Weanling & Carcass Performance							
												€					
Calving Date	Tag Number	Calving Survey	Calving Interval	Sex	Current Status	Sire	Breed	Age days	Weight Kg	Growth Kg/Day*	Price/Kilo	Calf Quality	Docility	Age at Slaughter (months)	Carcass Conf. & Fat	Carcass Weight	
1	19/01/2008	IE211298820558	Normal	M	Dead	HGR	LM	162	345	1.31		Average	Quiet	20	R3	453	
2	03/12/2008	IE211298830600	Normal	318	F	In herd	FL21	LM	355	1.07		V.Good	Quiet				
3	07/12/2009	IE211298840675	Normal	368	M	Exported	BYU	BB	197	425	1.32		V.Good	Quiet			
4	12/12/2010	IE211298850738		369	F	In herd	CWI	LM									

* Birthweight of 40kgs is assumed and is subtracted from the Weaning Weight when calculating Growth Kg/day.

**Docility - If animal is Linear Scored then this value is printed instead of the Suckler Cow Welfare Scheme value.

Developments for 2011.

- Use of VIA data.
 - Genetic evaluations of animals based on high, medium and low kg of product.
- New weight recording services & reports.
 - Promote weight recording on farms, e.g., DIY, EDIY, technician.
 - New management reports for farmers.
 - Post Slaughter/weaning (including weight gain & finish).
 - Pre Slaughter/weaning (including weight gain & "when to finish (e.g., weight....).
 - Available through ICBF HerdPlus and through initiatives with beef processors (*pilot with AIBP*).

Table 5. Individual Slaughter Performance details (Bought in Heifers) (animals grouped by slaughter date, alternating shaded and non-shaded rows)

Animal Details											Factory performance					KPI		
IE Tag number	Breed Sire X Dam	Carcass Index (€)	€uro-Star Rating	Sire ID	Age (Months)	Purchase Price (€)	Wgt When Purchased (KG)	Days On Your Farm	Predicted Wgt Live Wgt At Slaughter	(KG) Birth Wgt	Slaughter Date	Carcass Cold Wgt (KG)	Grade	Fat	Price Cents Per KG	Overall Price (€)	Predicted Avg Daily Gain On Your Farm (KG)	Value Per Day On Your Farm (KG)
IE251077960172	CH X BB	€68	5 Star ****	BVX	23	€680	460	160	608	47	24/02/10	326	R+	4-	€2.91	€951	0.93	€1.69
IE251101060171	CH X SH	€87	5 Star ****	HWN	21	€675	440	153	534	40	24/02/10	286	R+	2+	€2.91	€834	0.62	€1.04
IE251105670259	CH X LM	€121	5 Star ****	IE251025970074	20	€650	430	153	592	43	24/02/10	331	U-	3+	€3.03	€1,003	1.06	€2.31
IE251176210208	AA X LM				20			137	509	41	24/02/10	275	R+	3+	€2.97	€818		
IE251277760220	CH X HO	€51	4 Star ****	IE321322270119	21			151	611	45	24/02/10	319	O+	3+	€2.80	€894		
IE251366520278	CH X CH	€76	5 Star ****	IE121704640014	20	€636	420	181	602	44	24/02/10	327	R+	4+	€2.97	€972	1.00	€1.86
IE251366530279	CH X LM	€69	5 Star ****	IE121704640014	20	€736	440	181	546	44	24/02/10	296	R+	3+	€2.97	€879	0.58	€0.80
IE251389310171	LM X SH				16			152	533		24/02/10	278	R-	3+	€2.91	€811		
IE251389320172	LM X AA				20			152	511	38	24/02/10	270	R+	3+	€2.91	€785		
IE271696470106	LM X CH	€143	5 Star ****	ORO	19	€705	390	168	607	48	24/02/10	352	U+	3+	€3.14	€1,105	1.29	€2.38
IE311263680355	LM X LM	€89	5 Star ****	IE311285850153	18	€732	445	131	566	44	24/02/10	310	R+	3+	€2.97	€920	0.92	€1.43
IE311266810126	CH X LM	€42	3 Star ***	IE231227160110	24	€836	506	131	592	45	24/02/10	319	R+	3+	€2.91	€931	0.66	€0.73
IE311336270139	CH X CH	€74	5 Star ****	IE181869980144	25			165	628	41	24/02/10	348	R+	3+	€2.97	€1,033		
IE311368380246	SA X LM	€23	2 Star **	IE161402970040	23	€682	420	131	534	35	24/02/10	291	R+	3+	€2.97	€866	0.87	€1.39
IE321149680179	CH X SH	€30	2 Star **	IE231142540023	22			172	593	40	24/02/10	319	R+	3+	€2.91	€928		
IE321262120204	CH X SI				34			142	> age range		24/02/10	368	U-	4+	€2.97	€1,092		
IE321290690108	LM X SI	€82	5 Star ****	SIK	22			134	589	48	24/02/10	323	R+	3+	€2.97	€961		
IE321376340499	CH X LM	€85	5 Star ****	IE321310560192	23			137	588	42	24/02/10	324	R+	2+	€2.97	€964		
IE321536750317	LM X CH				19			114	553	40	24/02/10	315	U+	2+	€3.08	€970		
IE361013750992	LM X LM	€46	3 Star ***	IE141637460338	22	€640	400	160	531	48	24/02/10	287	R+	3+	€2.97	€853	0.82	€1.33
IE361029590223	LM X LM	€76	5 Star ****	IE311260860223	21	€646	460	131	578	45	24/02/10	318	R+	3+	€2.97	€943	0.90	€2.28
IE361073770601	LM X SI	€55	4 Star ****	IE361073710430	21	€686	420	188	569	42	24/02/10	309	R+	4+	€2.97	€917	0.79	€1.23
IE361073790603	LM X CH	€110	5 Star ****	IE361073710430	21	€746	460	188	635	43	24/02/10	356	U-	3+	€3.03	€1,077	0.93	€1.77
IE361112970290	CH X LM	€101	5 Star ****	IE251054920374	23	€730	455	160	607	42	24/02/10	341	U-	3+	€3.03	€1,033	0.95	€1.89
IE361114430494	LM X HE				34			118	> age range		24/02/10	306	R+	3+	€2.91	€891		
IE361114460530	LM X CH	€51	4 Star ****	IE311414290266	24			118	568	46	24/02/10	308	R+	4+	€2.97	€914		
IE361135840348	LM X SI	€106	5 Star ****	IE361161950088	17			187	564	42	24/02/10	320	U+	3+	€3.08	€988		

Explanatory Notes: ICBF Live weight predictor uses the carcass wgt, grade, conformation as well as age, sex and breed of the animal. Predictions are only done for animals within following ranges; Females < 30 months, Steers < 36 months, Bulls < 24 months. ICBF Birth weight predictor uses factors such as gender, breed and parity of dam to predict a birth weight for the animal.

Table 4. Summary by €uro-star Ratings (Bought in Heifers)

Animal Details								Factory performance					KPI	
€uro-star Rating	No. Of Animals	Avg €uro-Star Carcass Index (€)	Avg Age (Months)	Avg Purchase Price (€)	Avg Wgt When Purchased (KG)	Days On Farm	Avg Predicted Live Wgt At Slaughter (KG)	Avg Cold Wgt (KG)	Grade	Fat	Price Cents Per KG	Overall Price (€)	Predicted Avg Daily Gain On Your Farm (KG)	Value Per Day On Your Farm (€)
5 Star ****	37	€90	22	€724	452	152	589	323	R+	2+	€3.01	€975	0.95	€1.72
4 Star ****	19	€59	23	€700	450	168	563	302	R+	3-	€2.99	€904	0.87	€1.59
3 Star ***	10	€39	23	€694	434	159	550	296	R+	3+	€3.00	€887	0.84	€1.43
2 Star **	18	€22	24	€681	373	148	539	285	O+	3+	€2.95	€842	1.12	€1.26
1 Star *	3	€-9	24	€675	430	172	524	273	O+	4-	€2.95	€804	0.80	€1.03
Without Carcass Index	34		29	€696	496	136	553	311	R+	3+	€3.00	€932	0.83	€2.32

Explanatory Notes: ICBF Live weight predictor uses the carcass wgt, grade, conformation as well as age, sex and breed of the animal. Predictions are only done for animals within following ranges; Females < 30 months, Steers < 36 months, Bulls < 24 months.

- Performance of 5 star versus 1 & 2 star heifers.
 - Purchase price €724 versus €680 (+€44)
 - Days on farm = 150 days.
 - Factory price €975 versus €840 (+135).
 - Difference of €91 (61 cents/day).

- Future – buying, selling & slaughtering animals based on €uro-Star index values

Genomics – The future.

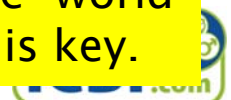
- Potential to double rates of gain.
 - Parent average + DNA = ~15-20 progeny.
- What is required?
 - Accurate genetic evaluations.
 - Store of DNA.
 - ~800 AI sires + ~4000 stock bulls at Weatherbys.
 - People with required skills.
 - Infra-structure to channel uptake.
- Opportunity to become 1st in world to launch genomics in National beef evaluations.
- Work underway, but need more DNA.
 - €1m investment to deliver €20m for industry



Summary



- Clear strategy; data, indexes & breeding program.
- Focus on 5 star animals this Spring (+€100 profit)
- Information is there. Are we making best use of it?
- Additional improvements underway (maternal, gen..)
- Systems now in place. Opportunity to become “world leaders” in beef breeding. Kick-start funding is key.



HerdPlus® Beef Products



CALVING REPORT



NITRATES REPORT



SLAUGHTER
REPORT



INBREEDING
CHECKER



€URO-STAR REPORT



€URO-STAR
CATALOGUE



SUCKLER COW
REPORT



DIRECT HELPLINE TO
ICBF STAFF

Herd Management Tools For Increasing Profit

