Utilization of the Dairy Beef Index to secure a strong calf market

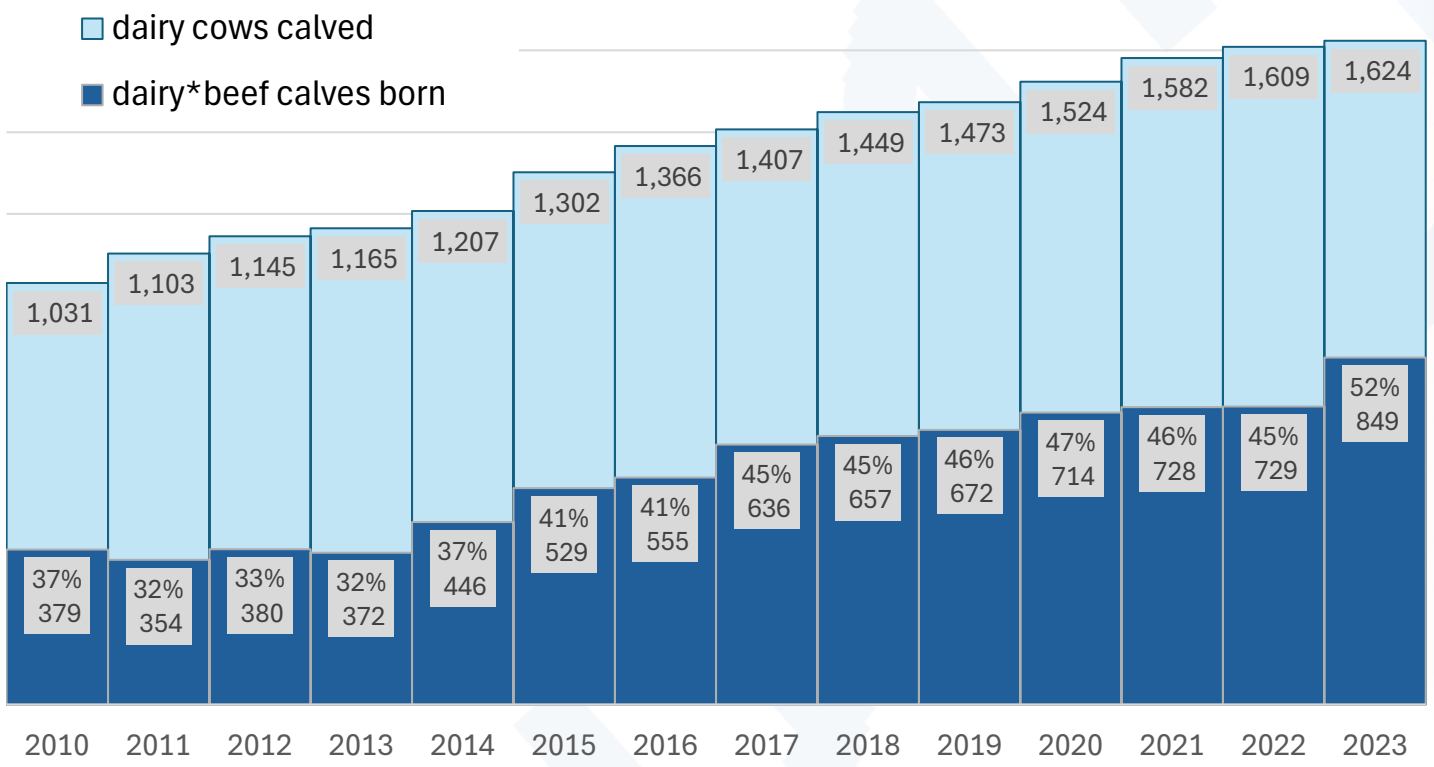
ICBF dairy Conference,
Corrin Mart, 11th December 2024

AgTech - it's in our DNA

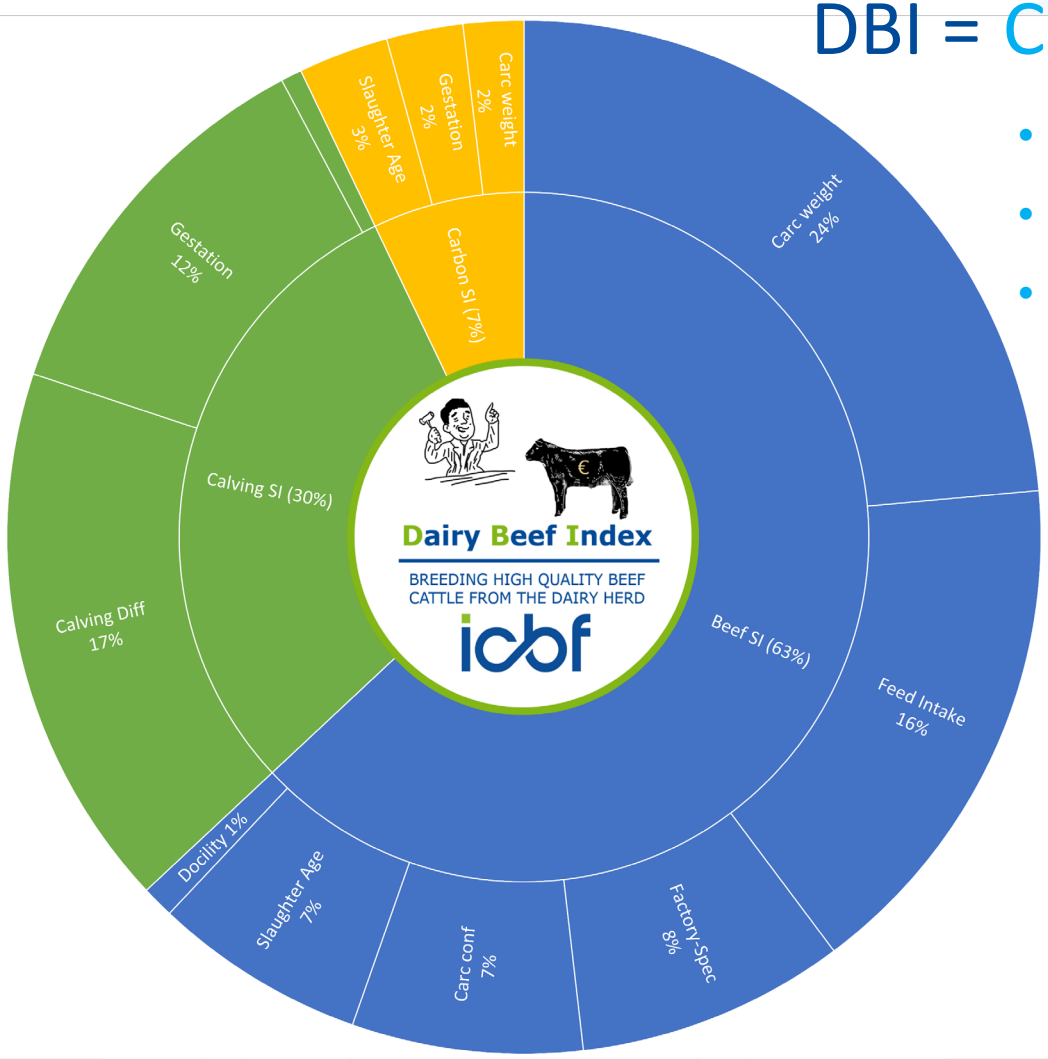
An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

The Irish Dairy Industry

Dairy Cow Calvings and Dairy*Beef Births (‘000)



The Dairy Beef Index (DBI)



DBI = Calving Merit + Beef Merit + Carbon Merit

- **Dystocia**
- **Gestation**
- **Stillbirth**

- **Feed intake**
- **Docility**
- **Carcass weight**
- **Carcass conformation**
- **Age at slaughter**
- **Factory-specification**
- **Polled**
- **TB**

- **Carcass weight**
- **Age at slaughter**
- **Gestation**

DBI = Traits relevant to breeder & rearer/finisher

What's needed when using beef sires

HerdPlus® Profit through Science

Herd EBI Scorecard

icbf

Herd Number:	Your Herd	National Average	National Top 10%	Your National Rank	Star Rating[1]
Herd EBI	**€190**	€181	€235	66%	★★★★
Milk Sub-Index *(Milk, Fat & Protein)*	**€ 51**	€53	€69	53%	★★★
Fertility Sub-Index *(Calving Interval & Survival)*	**€ 83**	€79	€115	61%	★★★★
Carbon Sub-Index	**€ 8**	€7	€14	51%	★★★
Calving Sub-Index *(Gestation, Calving Difficulty, Mortality)*	**€ 38**	€30	€39	86%	★★★★★
Beef Sub-Index *(Carcass Weight, Conformation & Fat)*	**€ -13**	€-7	€1	21%	★★
Maintenance Sub-Index *(Cow Liveweight)*	**€ 14**	€13	€20	53%	★★★
Management Sub-Index *(Milking speed & Temperament)*	**€ 2**	€1	€2	76%	★★★★
Health Sub-Index *(SCC, Mastitis, Lameness & TB)*	**€ 8**	€7	€10	71%	★★★★

[1] Star Rating: ★ = 1 - 20% ★★ = 21 - 40% ★★★ = 41 - 60% ★★★★ = 61 - 80% ★★★★★ = 81- 100%

Knowledge of your herd

Ability of your cows to calve

Ability to generate a good beef calf

Cow Calving SI and 2024 performance

Calving SI category	Alive Cows in eval with 2024 calf	Index and PTAs				Phenotypic performance 2024		
		Calving Subindex	Dairy Cow PTA %	Dairy Cow Maternal PTA %	Sire of calf PTA%	Normal Calving %	Some Assistance %	Difficult/Vet %
Top 20%	121,674	€49	2.3%	4.6%	3.1%	97%	2.9%	0.4%
Top 40%	115,503	€38	2.4%	4.6%	3.1%	95%	4.3%	0.7%
Top 40-Btm 40%	95,106	€31	2.6%	4.7%	3.2%	93%	5.7%	1.0%
Btm 40%	95,106	€31	2.6%	4.7%	3.2%	91%	7.7%	1.4%
Btm 20%	96,070	€3	3.2%	4.8%	3.4%	85%	12.5%	2.5%

Calving Sub index also includes heifer calving, gestation and mortality

Highly reliable (>90%) AI sires: PTA versus lifetime performance

PTA Dairy Cow Diff %	Sires	eval progeny	normal calving %	Some assistance %	Difficult %	% Dairy sires	% Angus	% Hereford	% Continental
1%	62	884	94%	5%	1%	84%	16%	0%	0%
2%	1,108	1,795	91%	7%	1%	95%	4%	0%	0%
3%	1,425	1,402	86%	12%	2%	92%	5%	2%	1%
4%	631	836	76%	19%	4%	81%	5%	7%	8%
5%	245	724	72%	22%	6%	71%	2%	12%	16%
6%	109	769	69%	25%	6%	42%	4%	14%	40%
7%	65	911	67%	26%	7%	28%	0%	18%	55%
8%	48	1,854	67%	26%	7%	10%	0%	6%	83%
9%	23	1,028	66%	26%	8%	13%	0%	4%	83%
10%	43	1,132	60%	29%	10%	7%	0%	5%	88%

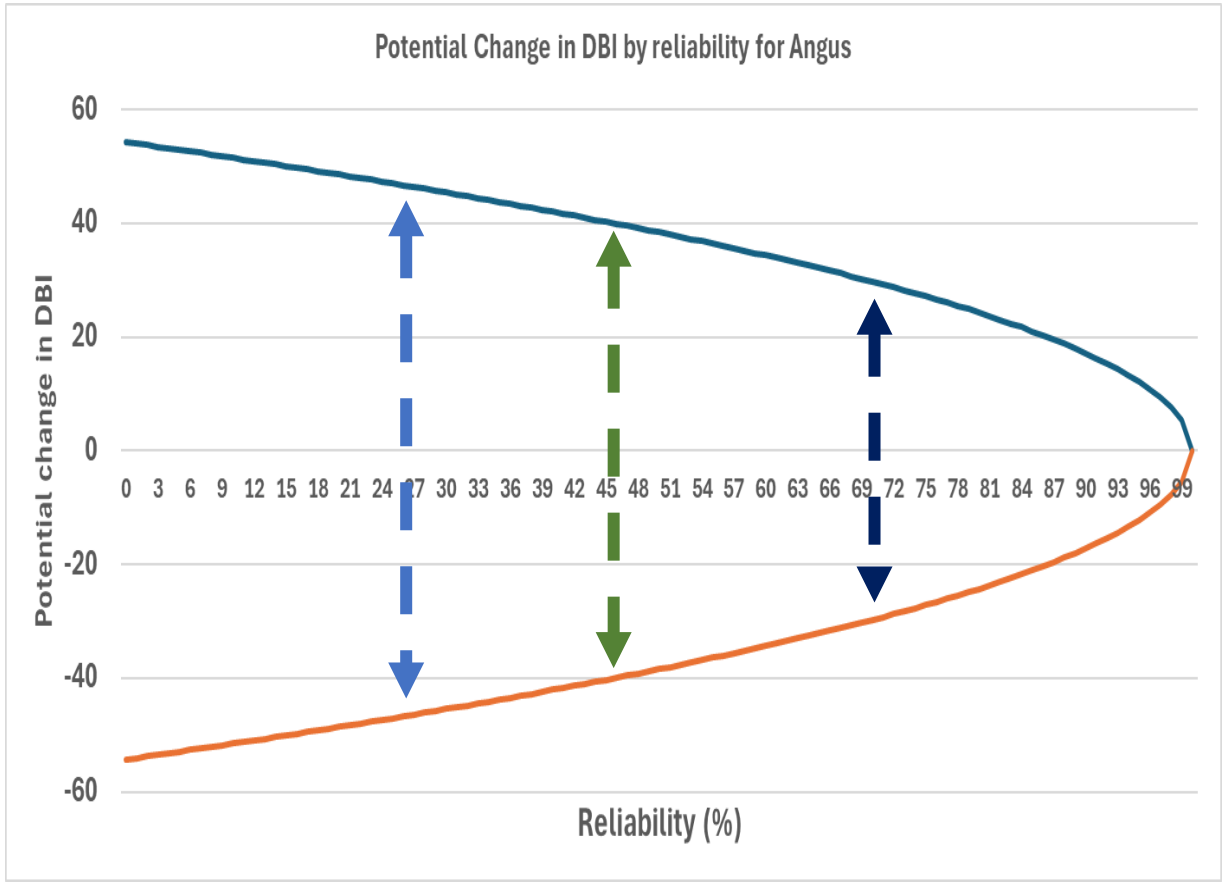
Decide on what level of assistance and difficulty you are comfortable with in your herd

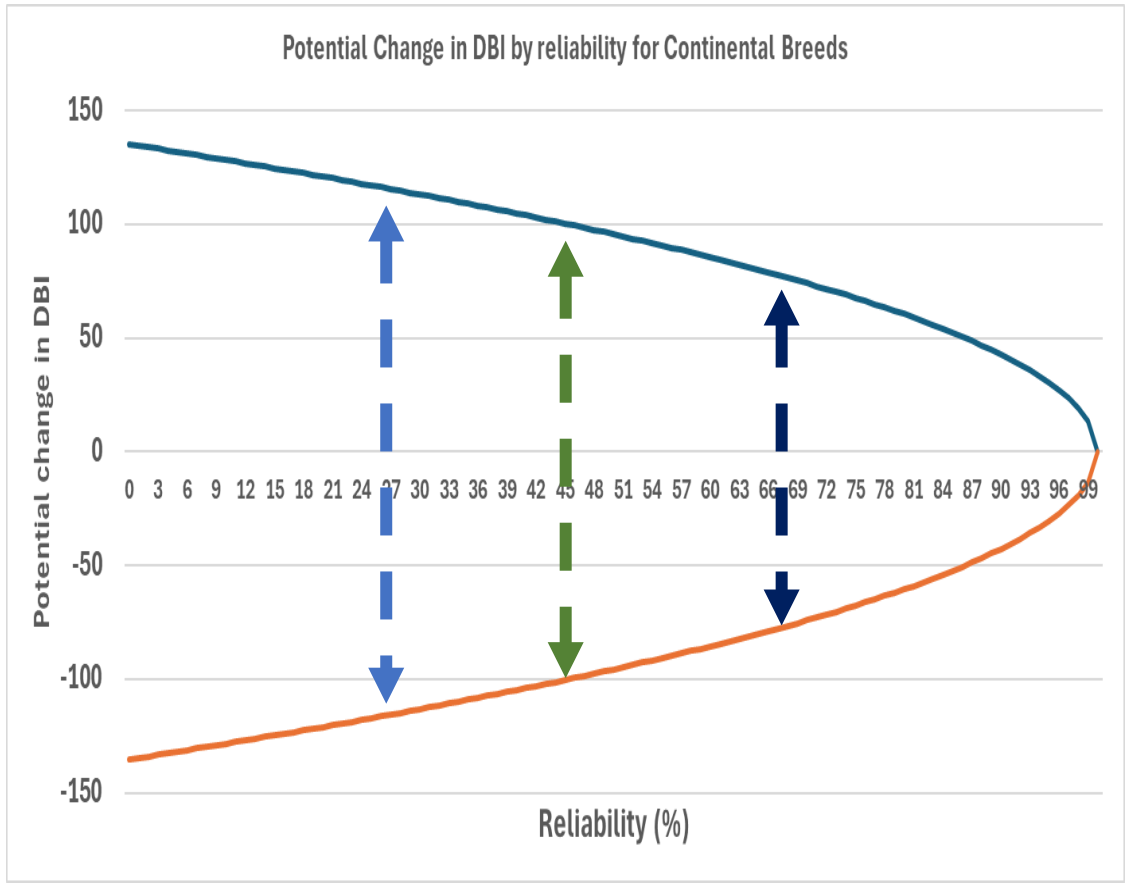
What's available? - Current Active Beef AI sires

PTA Dairy Cow %	Sires	DBI	DBI rel %	Calving SI	Beef SI min	Beef SI avg	Beef SI max	Cwt PTA avg
1%	1	€131	80	€47	€78	€78	€78	1
2%	46	€148	70	€48	€58	€94	€136	7
3%	123	€143	71	€33	€39	€106	€175	11
4%	110	€124	73	€1	€51	€125	€193	15
5%	109	€114	67	-€31	€74	€154	€213	24
6%	130	€96	70	-€55	€86	€159	€222	27
7%	96	€77	67	-€82	€88	€169	€225	31
8%	88	€62	67	-€106	€97	€178	€221	32
9%	62	€34	65	-€138	€122	€183	€223	34
10%	53	-€33	76	-€204	€106	€181	€263	32

Significant variation in DBI Beef Beef Sub-index at each level of calving difficulty

Level of potential DBI change



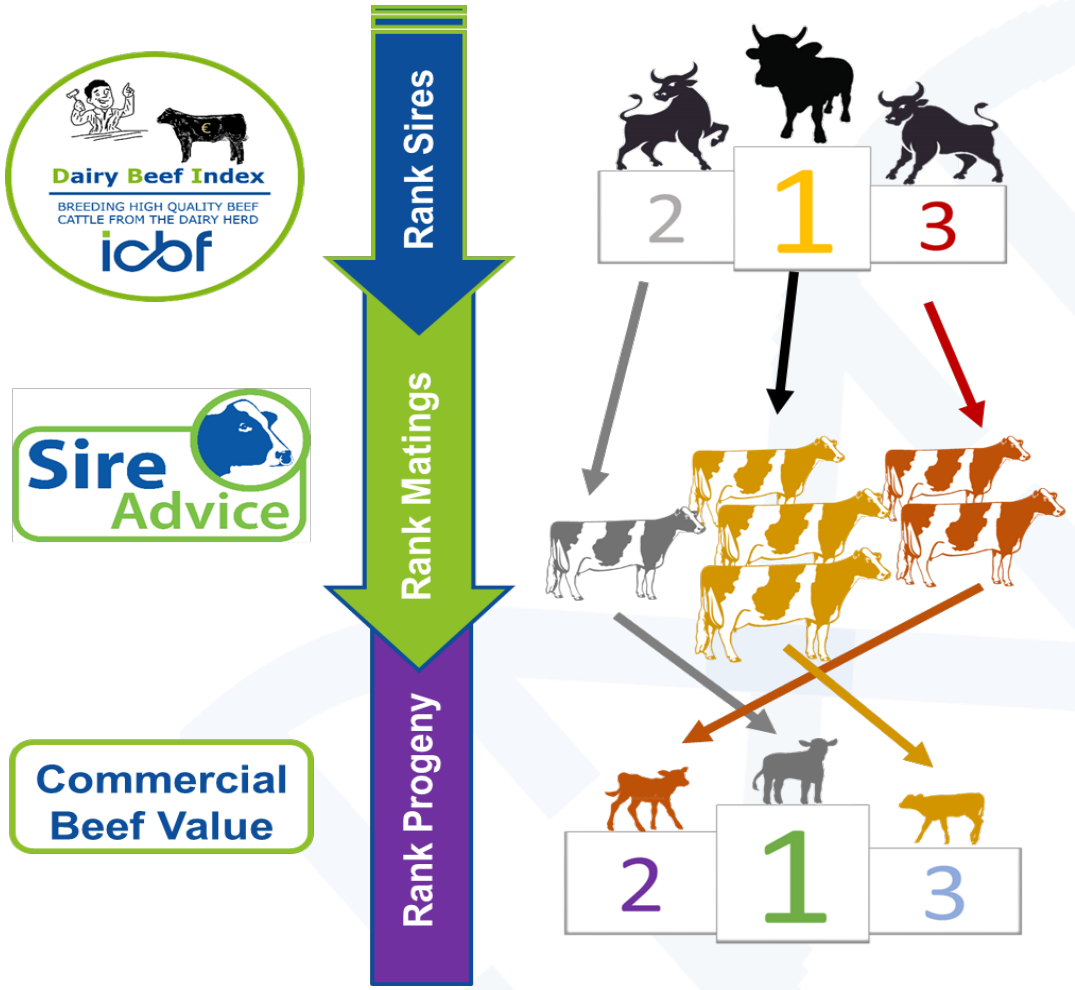


Ungenotyped 2023 born male

Genotyped 2023 born male

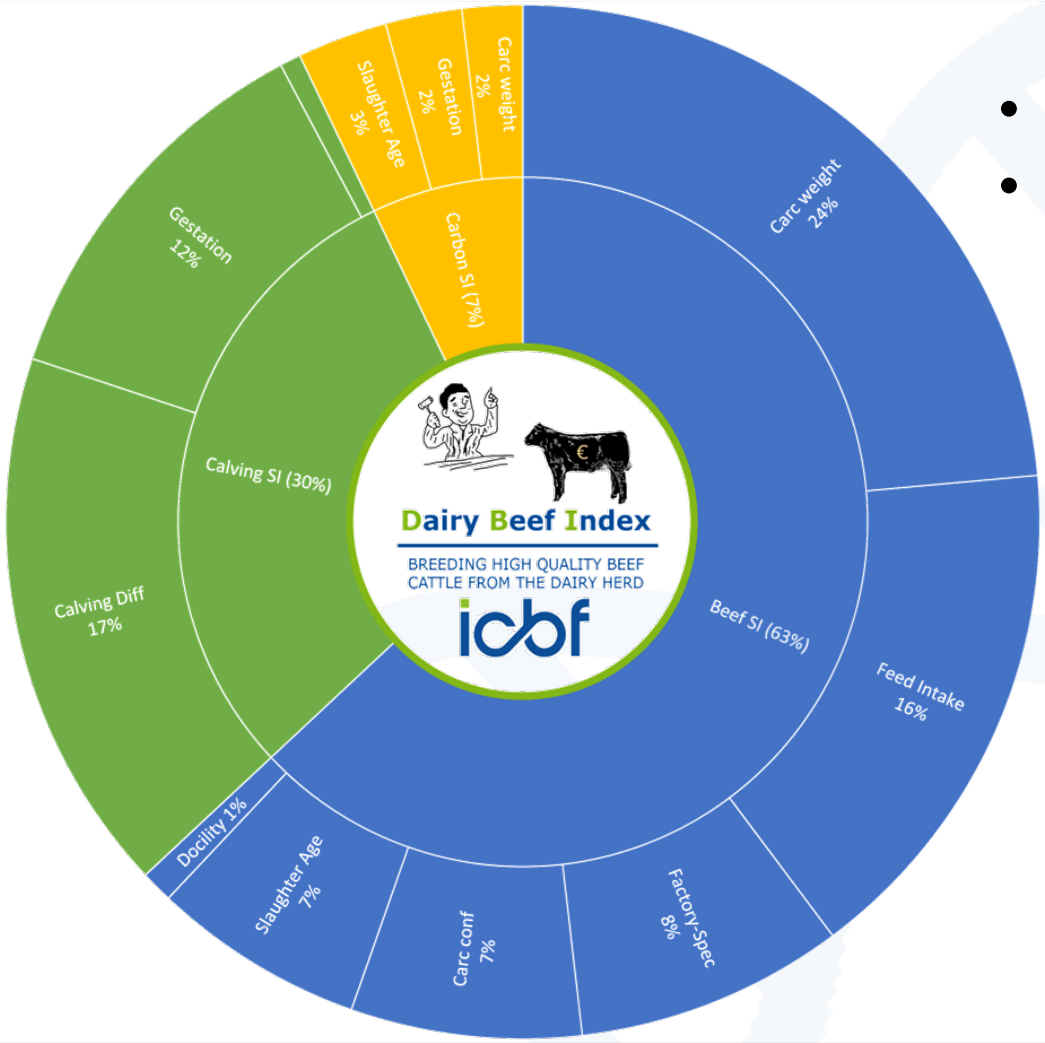
Active AI sires

Sire Advice

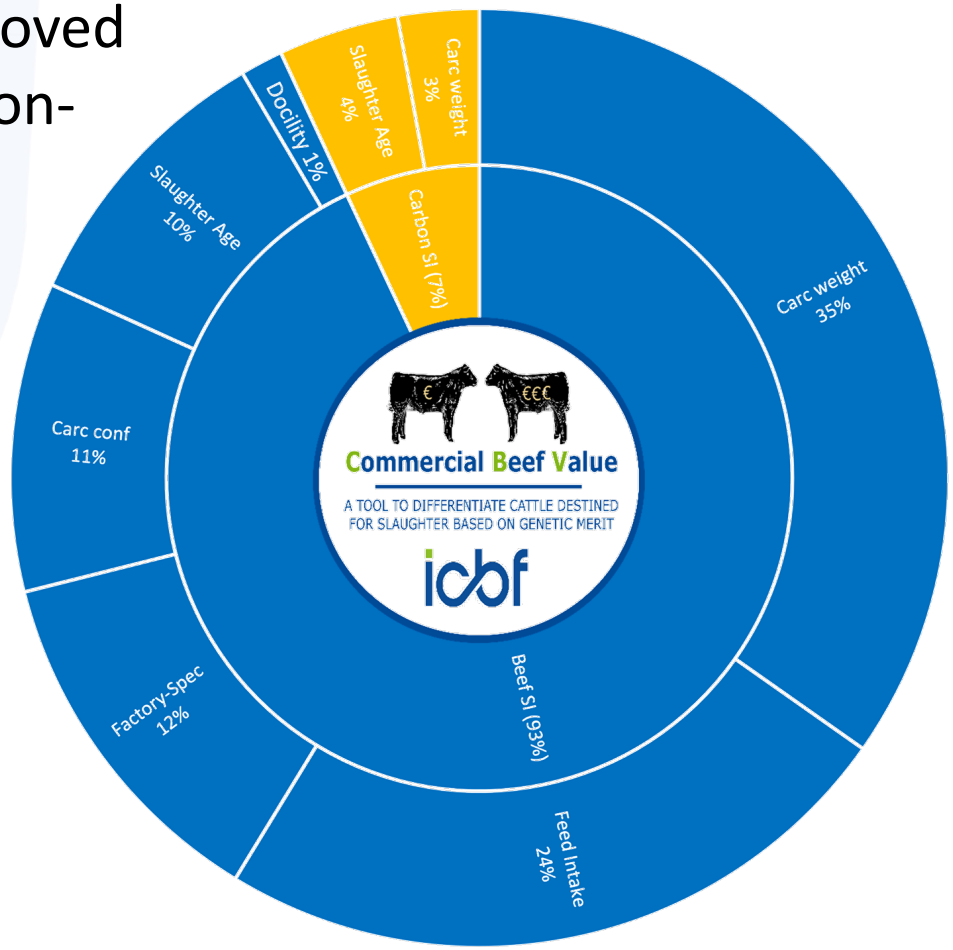


1. **Farmer chooses sires and usage rates**
   - Farmer choses females for dairy, beef, culling, crossbreeding….
2. **algorithm factors in:**
   - Female predisposition to difficult calving + sire's calving difficulty genetic merit
   - Matching beef merit
3. **Farmer can save on database and send to technician handheld**
4. **42% of cows were put through Sire Advice in 2024**

Calf on the ground: Commercial Beef Value (CBV)



- Calving traits removed
- Not needed for non-breeding animal



Does CBV work?

62k AA*HF steers finished so far in 2024
Association with CBVs generated Dec 2023

Star Rating	count	Genetic prediction Prior to slaughter (EBVs)				Phenotypic Performance			Price	
		CBV (€)	Age at Finish (days)	Carcass weight (kgs)	Conf (1-15)	Age at Finish (days)	Carcass weight (kgs)	Conf (1-15)	Calf price (€)	Factory Price (€)
5	12,495	€119	1.1	6	0.49	794	320	5.46	€215	€1,738
1	12,507	€36	3.4	-9	-0.10	821	308	5.04	€170	€1,657
5 v 1		**+€83**	**-2.31**	**+15**	**+0.59**	**-26**	**+12**	**+0.42**	**+€45**	**+€82**

Additional benefit from 26 days reduced age at Finish @€1.66 day (Teagasc) = €43

Herds Beef merit and DBI beef SI needed

Significant Variation in EBI Beef Sub-index

Rank on EBI Beef SI	EBI Beef SI	Minimum DBI Beef SI required to produce a	
		4* CBV calf	5* CBV calf
Bottom 20% herds	-€18	>€90	>€138
Bottom 40% herds	-€9	>€82	>€120
Average	-€5	>€78	>€116
Top 40% herds	-€2	>€75	>€113
Top 20% herds	+€2	>€71	>€110

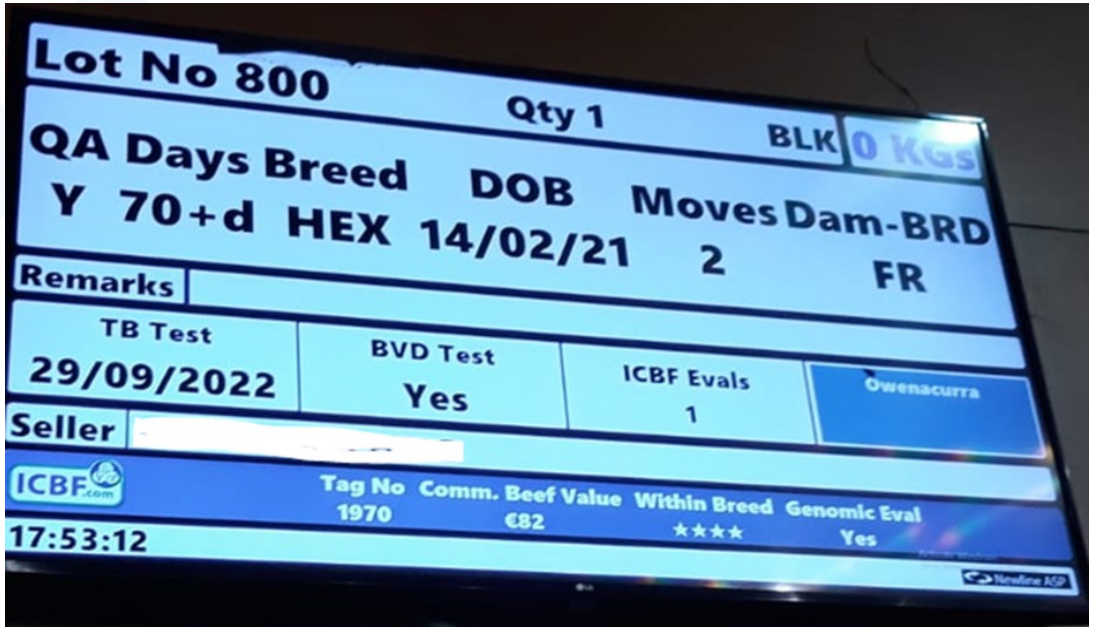
Commercial Beef Value (CBV)

Where can I find it?

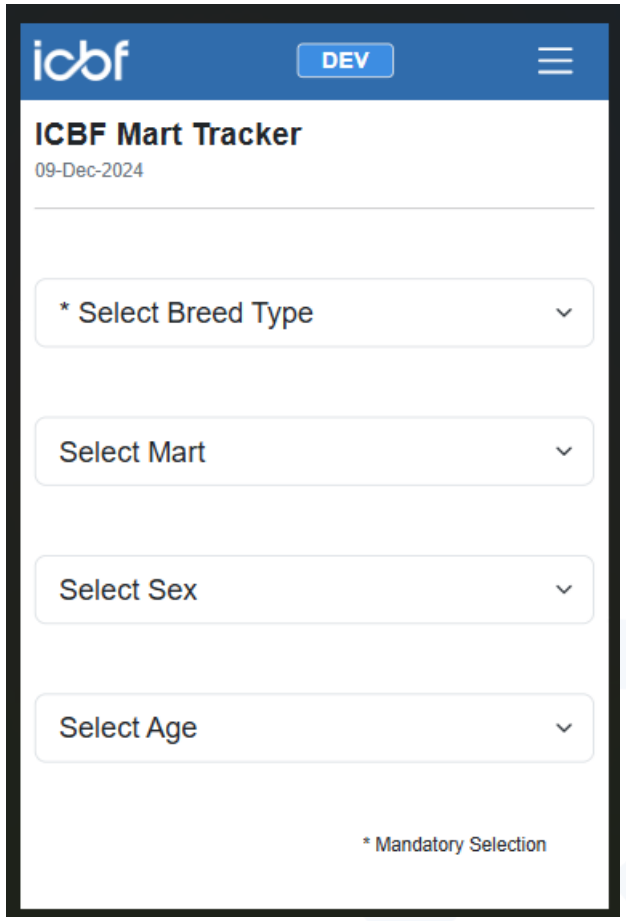
- Online profile for HerdPlus herds – all animals with sire recorded.
- Available on mart boards.
- Animals must be genotyped to appear on mart boards – sire verified.

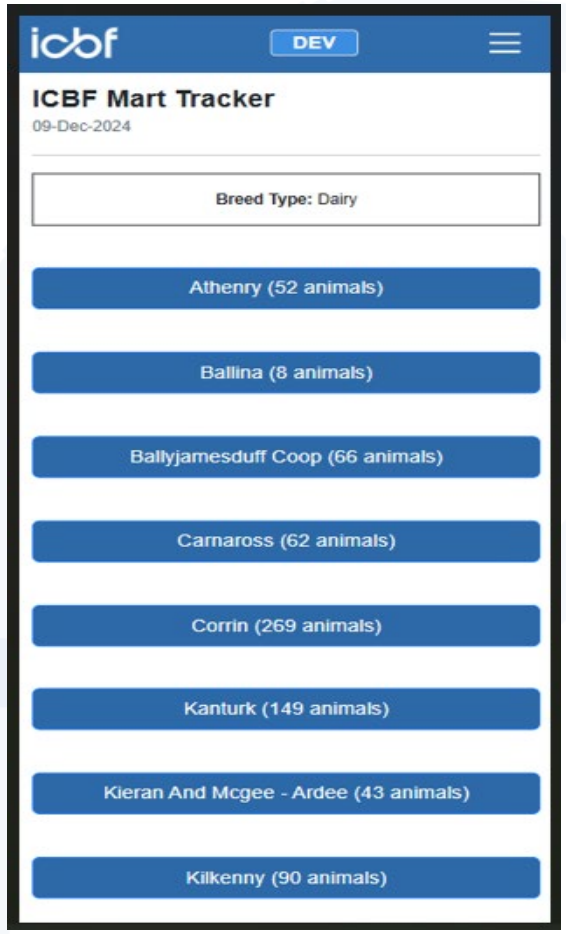
Commercial Beef Value

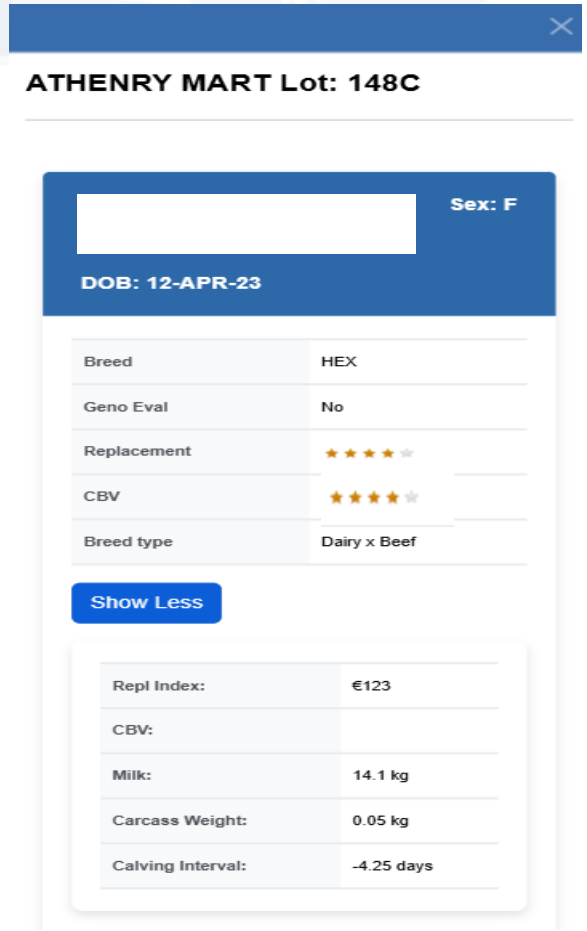
Breed Type	Value €	Star Ranking (Across Breed)	Star Ranking (Within Breed Type)	Carcass Weight (kg)	Carcass Conformation (1-15 scale)	Carcass Fat (1-15 scale)	Feed Intake (kg DM/day)	Docility (1-5 scale)
Dairy x Beef	110	★★★☆☆	★★★★☆	8.1	0.29	0.07	0.39	0.12
Dairy x Beef	102	★★★☆☆	★★★★☆	6.2	0.18	0.01	0.29	0.08
Dairy x Beef	90	★★★☆☆	★★★★☆	4.3	-0.18	-0.23	0.23	0.12
Dairy x Beef	87	★★★☆☆	★★★★☆	4.4	0.14	0.12	0.32	0.10
Dairy x Beef	81	★★★☆☆	★★★★☆	0.8	0.19	-0.08	0.11	0
Dairy x Beef	80	★★★☆☆	★★★★☆	-0.3	0.19	0.00	0.06	0.08
Dairy x Beef	76	★★☆☆☆	★★★☆☆	2.1	0.13	0.11	0.22	0
Dairy x Beef	67	★★☆☆☆	★★★☆☆	-1.3	0.21	0.06	0.11	0
Dairy x Dairy	65	★★☆☆☆	★★★★★	3.9	-0.65	-0.38	0.32	0
Dairy x Dairy	62	★★☆☆☆	★★★★★	3.2	-0.55	-0.10	0.34	0.11
Dairy x Dairy	55	★★☆☆☆	★★★★★	1.5	-0.75	-0.09	0.24	0.15
Dairy x Dairy	51	★★☆☆☆	★★★★★	0.3	-0.88	-0.30	0.20	0.17
Dairy x Dairy	48	★★☆☆☆	★★★★★	-1.5	-0.40	-0.26	0.16	0
Dairy x Beef	46	★★☆☆☆	★★☆☆☆	-2.7	-0.13	0.06	0.17	0.07
Dairy x Dairy	44	★★☆☆☆	★★★★★	-0.2	-0.77	-0.26	0.26	0.14



New search option for buyers







Financial Incentive to Use Better DBI Bulls

Objective:

- Improve genetic merit of beef sires used

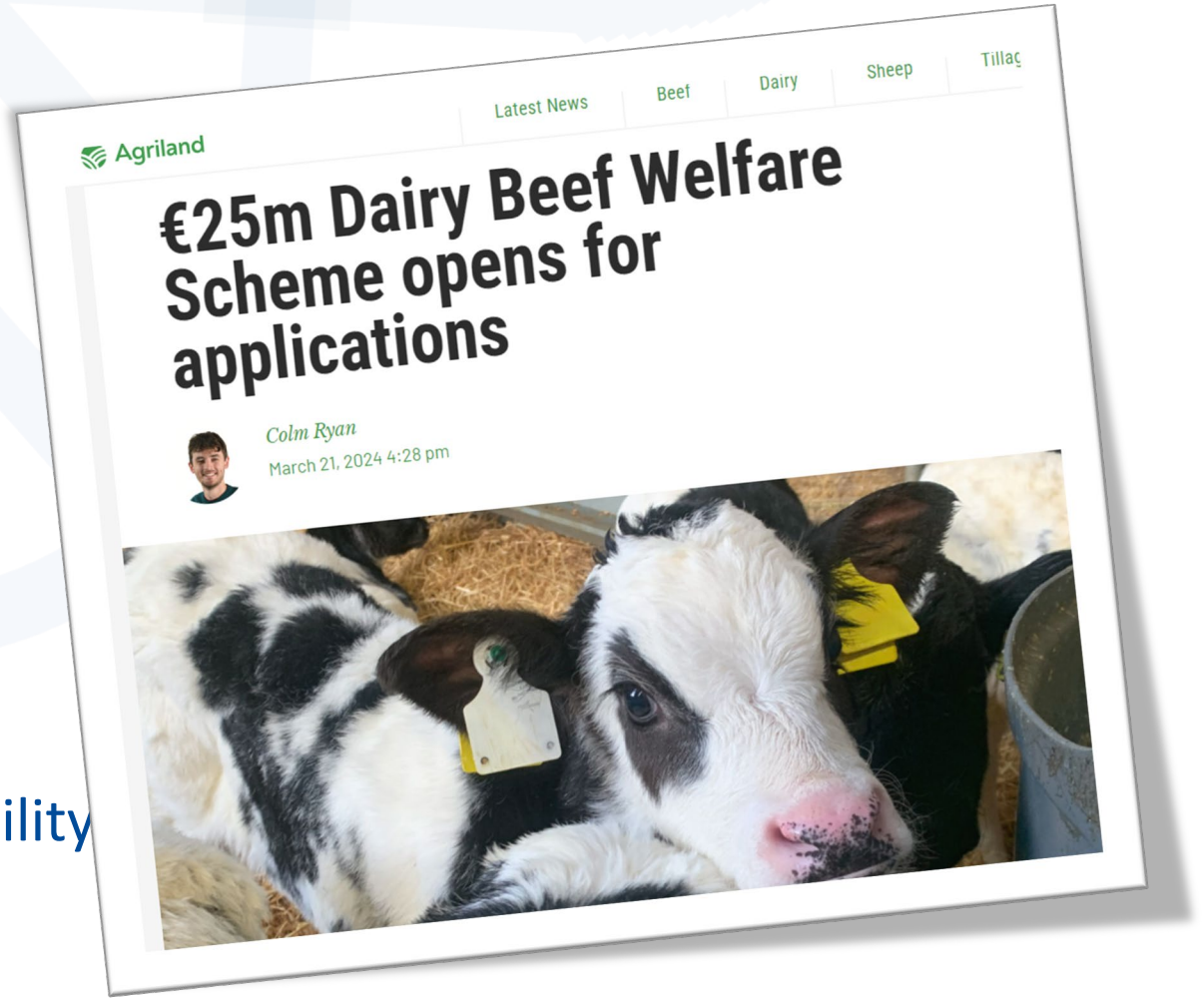
Requirement:

- Use a beef bull that is:
  At least 3* on Dairy Beef Index
  and
  At least 3* on Beef Sub-Index of the DBI

Payment:

- €20 per eligible calves (max. 50 calves)
- Some Coops now factoring DBI into Sustainability

  Bonus



Summary

- Use the DBI to identify suitable beef bulls
- Easy calving bulls, with short gestation and high beef merit are available
- New scheme launched to financially incentivise use of superior beef bulls
- Trading now influenced by CBV on mart boards
- Steps to achieving the best beef bulls for your herd, and maximise CBV of calves
    1. Choose an acceptable calving difficulty range for the right cows (1st calvers vs mature)
    2. Maximize the Beef Sub-Index of the DBI

Our Farmer & Government Representation

An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

Irish Creamery Milk Suppliers Association

Feirmeoirí Aontaithe na hÉireann – The Irish Farmers' Association – IFA

Our AI & Milk Recording Organisations

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MUNSTER BOVINE
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Irish Limousin Cattle Society

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EASBB

The Irish Moiled Cattle Society

Jersey Cattle Association of Ireland

Parthenais

Blonde D'Aquitaine

IHFA Irish Charolais Cattle Society

Irish Belgian Blue

Irish Shorthorn Society Ltd.

Droimeann Cattle Society

ISP

Salers Cattle Society of Ireland

Irish Hereford Breed Society

Irish Aubrac

Montbeliarde

Ireland's native dairy breed

Norwegian Red Cattle Society

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