



IRISH CATTLE BREEDING FEDERATION

ICBF Database & Management Reporting



Kevin Downing



Introduction

- Background & Role of ICBF
- The National Database & Industry Links
- Data Recording
- Dairy EBI at work
- Benefits of good breeding
- HerdPlus[®] & Management Reports

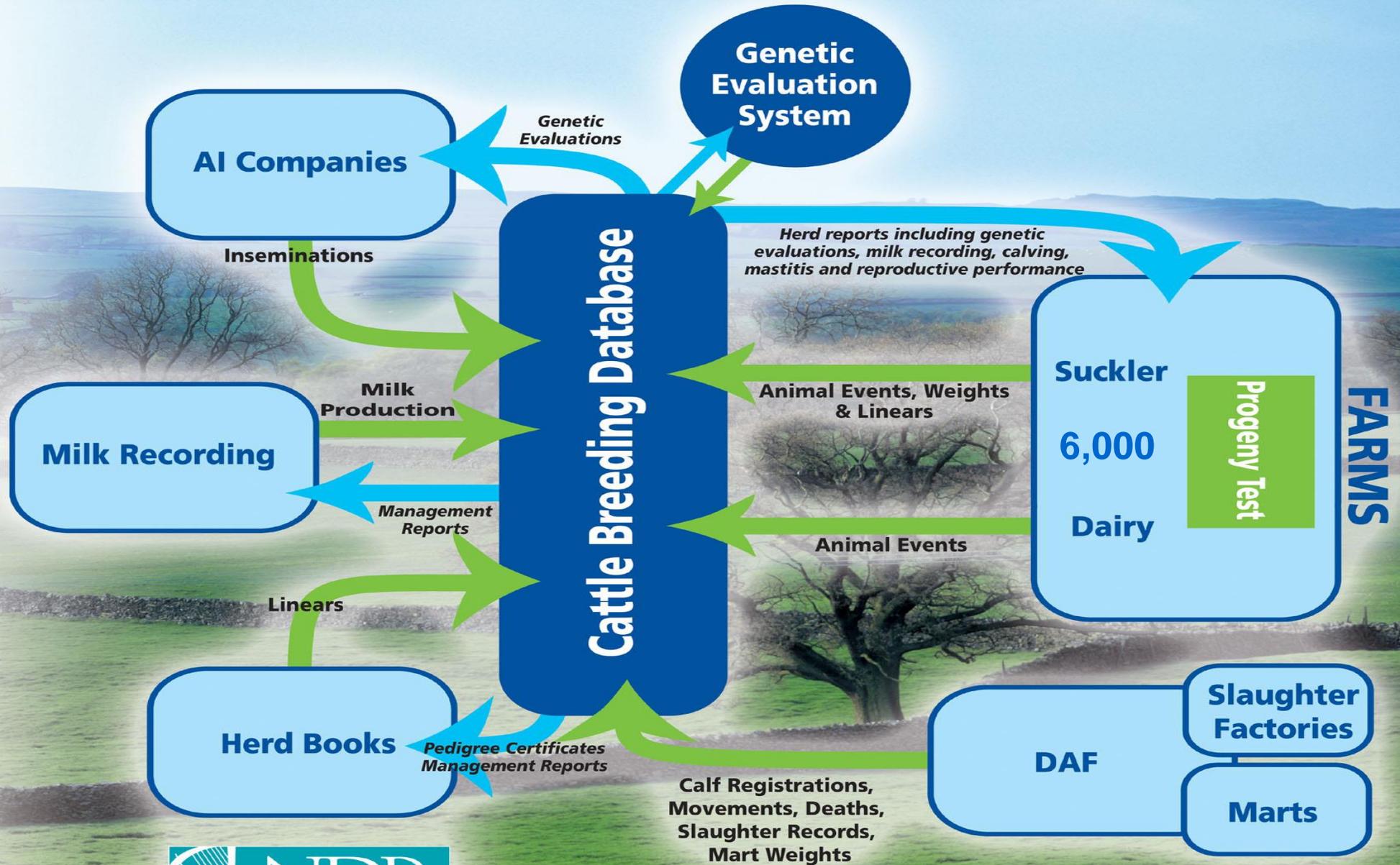
ICBF Background

- ICBF Formally Established in 2000.
- Membership/Board: AI companies (18%), Milk Recording (18%), Breed Societies (18%) & Farmer Organisations (46%).
- Stakeholders in cattle breeding control decision making.
- Mission: *To achieve the greatest possible genetic improvement in the national cattle herd – Dairy & Beef.*

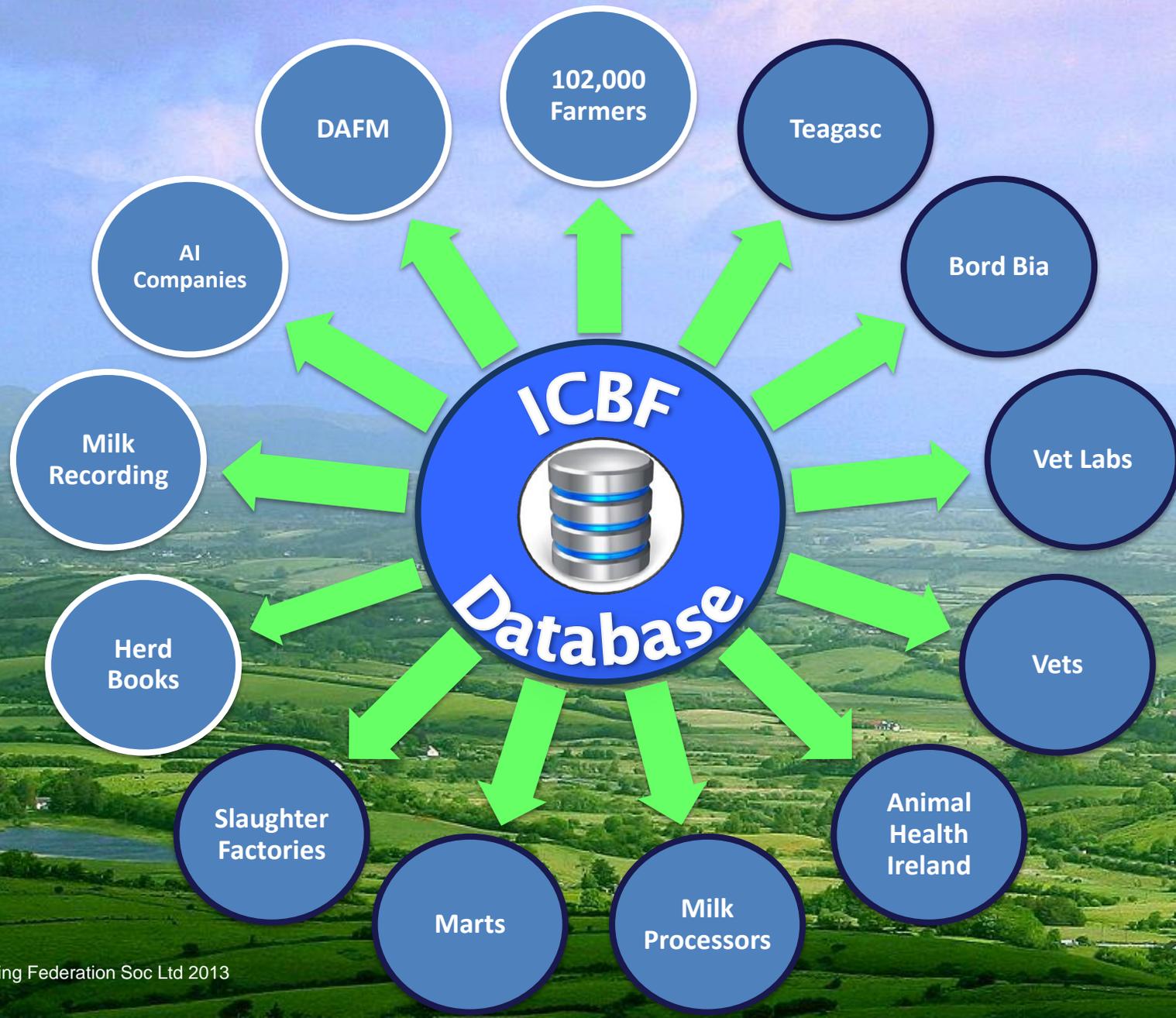
Role of ICBF

- Focus on genetic improvement as a tool for improving future profit on Irish cattle farms.
- Establish & maintain a central database of performance data.
- Define a breeding goal and selection index (e.g. EBI & Euro-Star Index).
- Provide routine genetic evaluations for all relevant breeds and traits.
- Ensure a breeding scheme of optimal design is operating in Ireland (e.g. Gene Ireland).
- Ensure continuous improvement base on science.

ICBF Database - 2000



ICBF Database - 2014

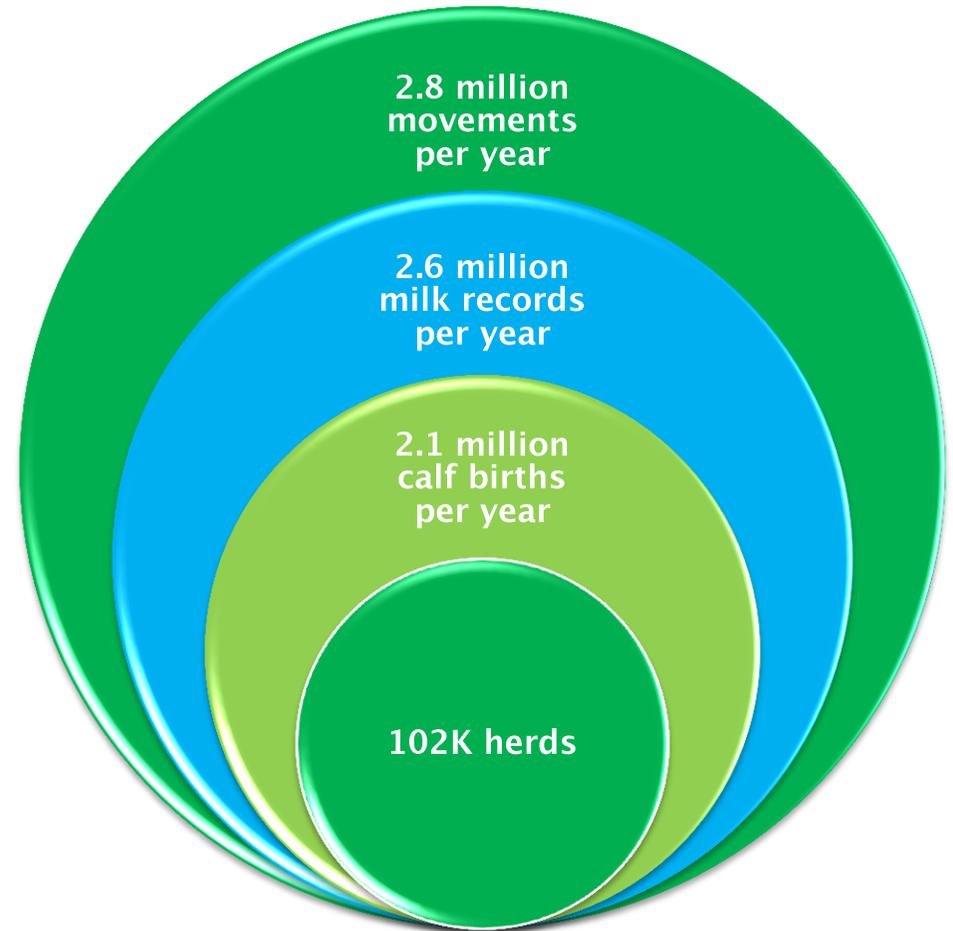


What data do farmers record on ICBF

- Birth Registration
 - Sire, Calving Ease, Pedigree Name, Birth Weights
- Fertility Data
 - Heats, AI & Natural Serves, Pregnancy Diagnosis
- Dry-offs
- Health Events
 - Mastitis, Lameness, Scour, Pneumonia, etc.
- Liveweights
- Milking Speed (Tru-Test meters)
- Dept. of Agri. Schemes
 - Calf Docility & Quality
 - Dam Temperament, Docility & Milkability
 - Stock Bull Docility & Functionality

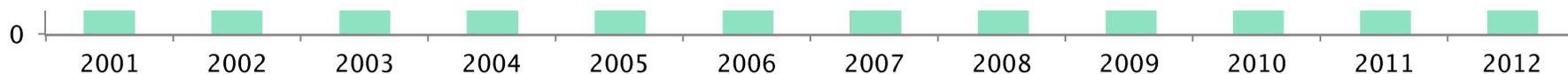
Data in the ICBF Database

- Herds: 102k
- Live Animals: 6.2m
- Calving Records: 2.1m/yr
- Milk Recording: 2.6m/yr
- Farm Movements: 2.8m/yr
- AI Inseminations: 700k/yr
- Slaughter Data: 2m/yr
- BVD records: 2.1m/y
- Genomics: 8.6 billion



Increase in Data recording

- 90% of the worlds data was created in the past 2 years
 - Mobile devices account for 17% - 27% by 2020
 - IOT accounts for 2%
- Volume of data in the world will double every 2 years
- ICBF examples:
 - Tully Feed Sensors
 - Health data – Liver Fluke, TB, Johnes
 - Spectra Data (OptiMir)
 - Genomics



How do farmers record data on ICBF

- ICBF web site
- DAFM web site
- Farm software companies
- Animal Events Sheets
- Mobile Phones - Text Messages & Apps
- Handhelds:



AI & Linear Scoring



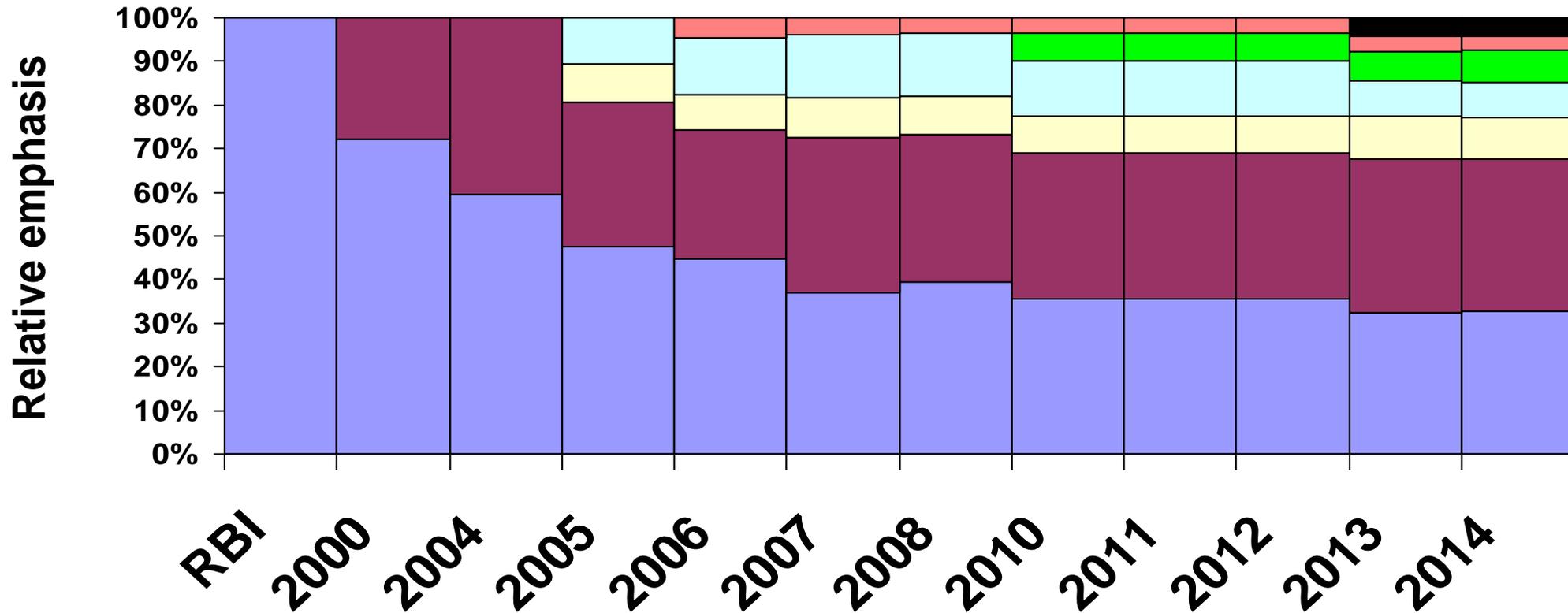
Scanning Data



Electronic Weighting Scales



Evolution of EBI in Ireland (2000-2014)



Milk

Fertility

Calving

Beef

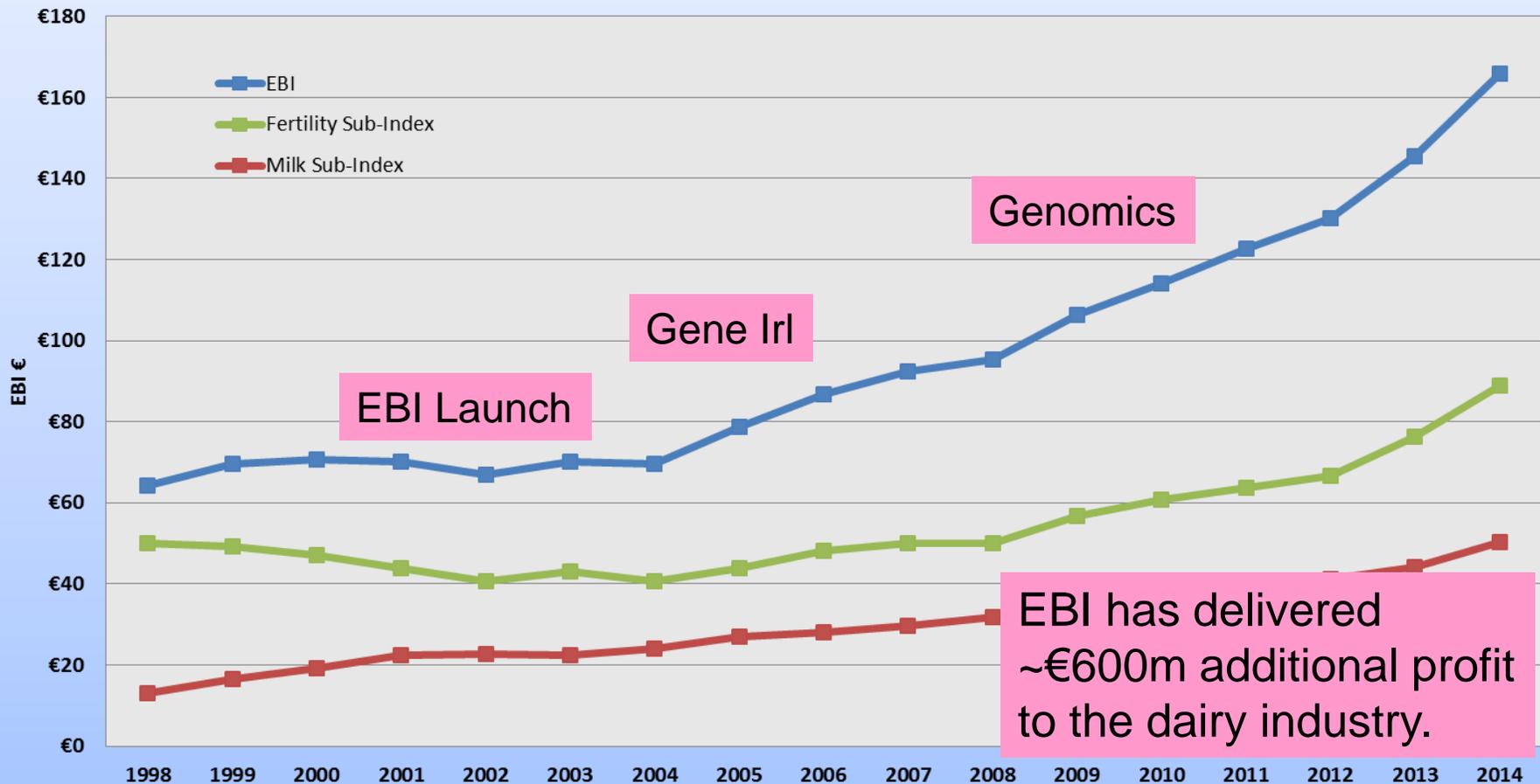
Maintenance

Health

Management

Genetic Trend in EBI

EBI Trend based on year of birth (1998 - 2014)



Teagasc Next Generation Herd

- Genetic Potential

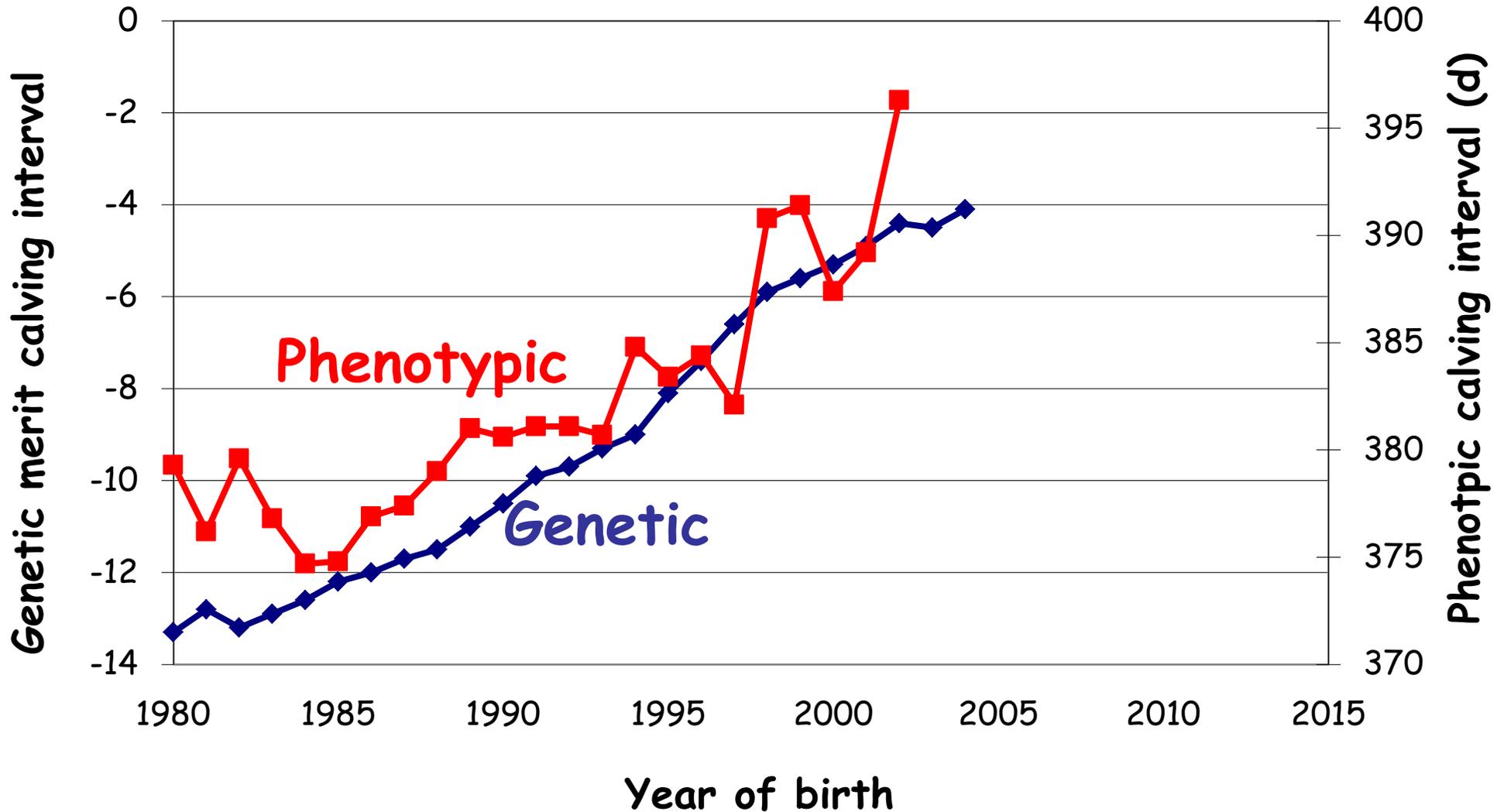
	Elite (n=90)	Average (n=45)
EBI	€244	€133
Milk Sub-Index	€67	€48
Fertility Sub-Index	€169	€63



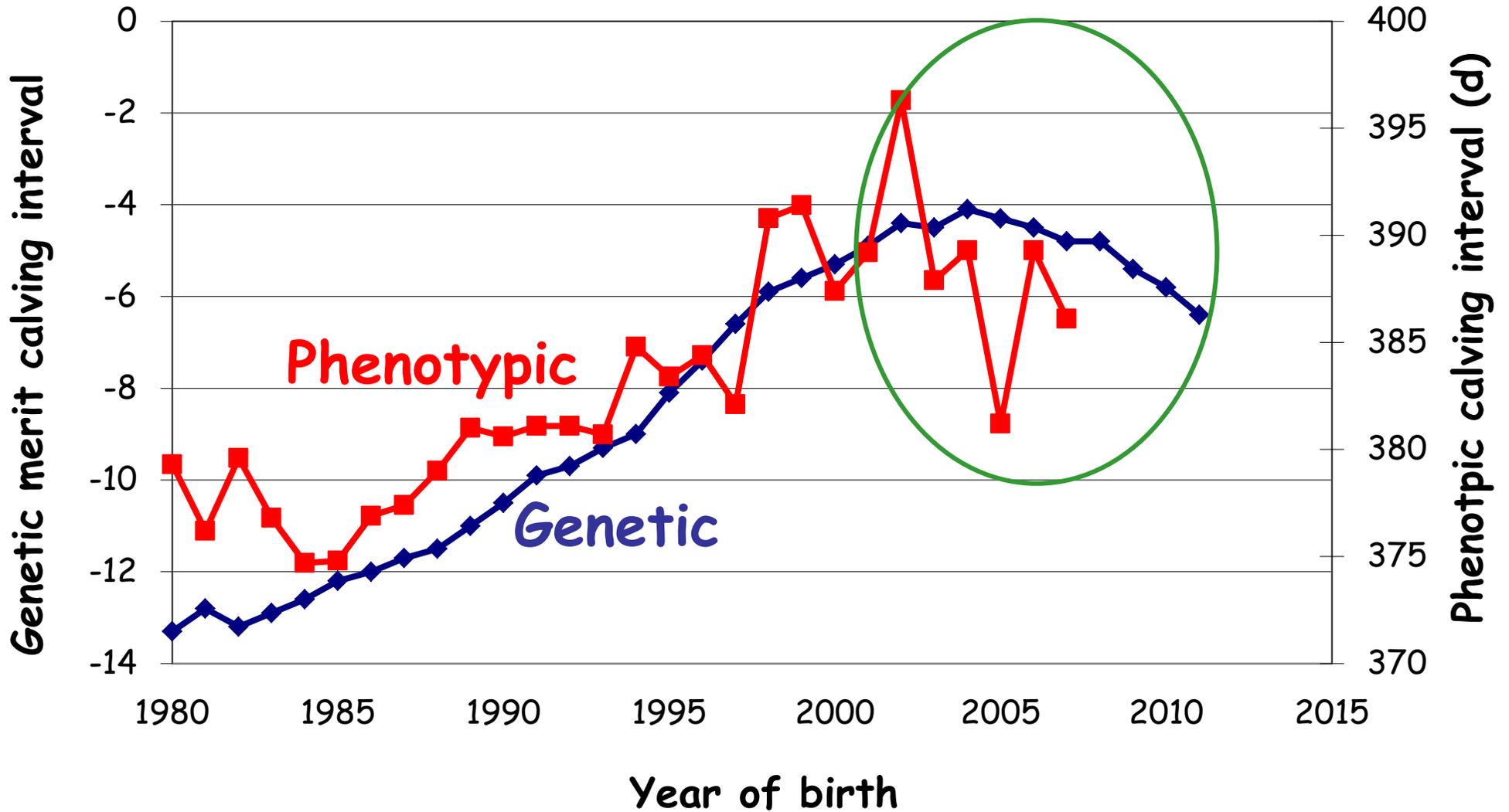
- Actual Performance

	Elite (n=90)	Average (n=45)
Milk Solids Yield	391 (kg/cow)	365 (kg/cow)
3 wk submission rate	92%	82%
6 wk in-calf rate	77%	60%
12 wk in-calf rate	95%	78%

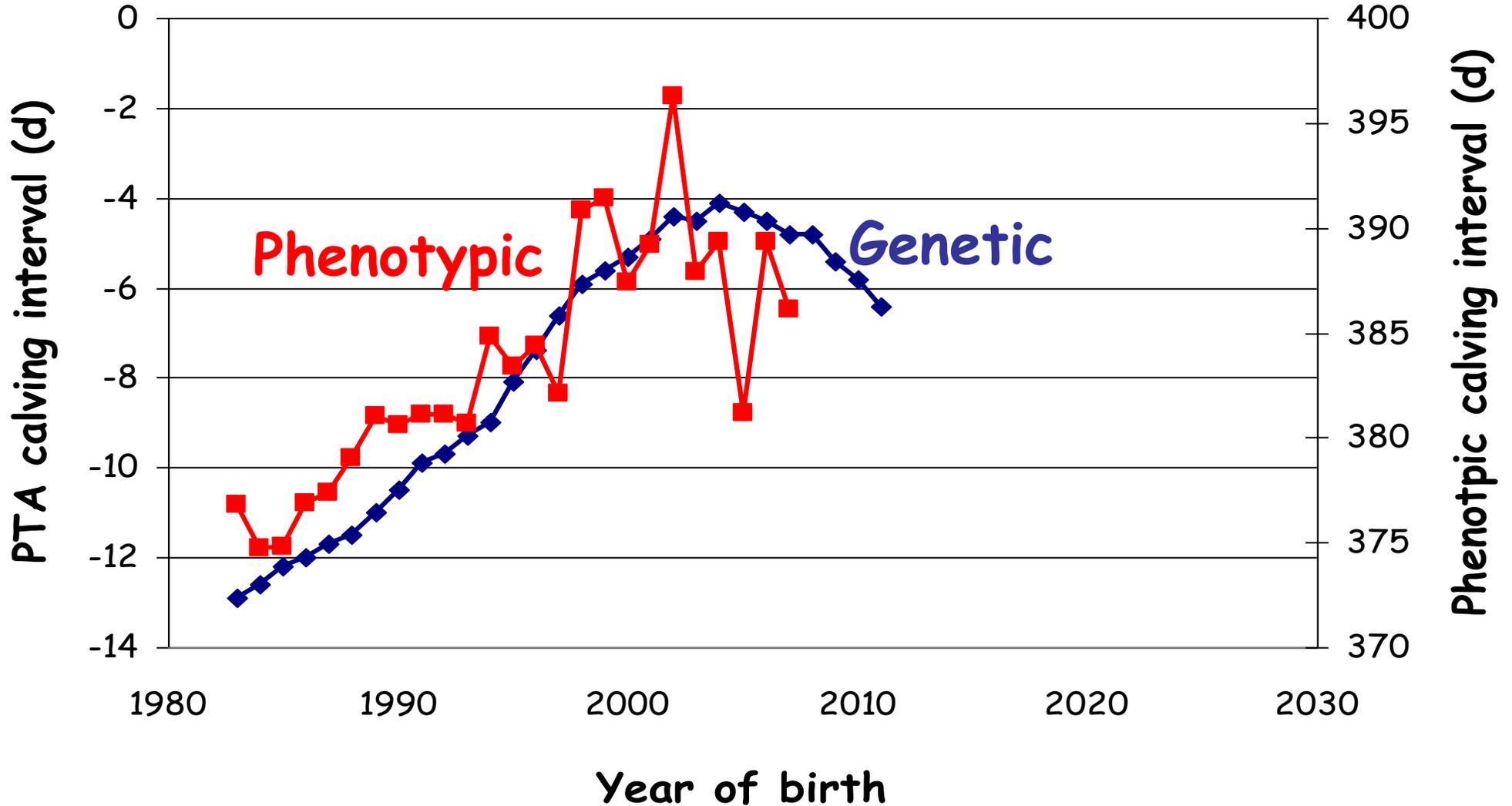
The Power of Breeding – Bad Genetics



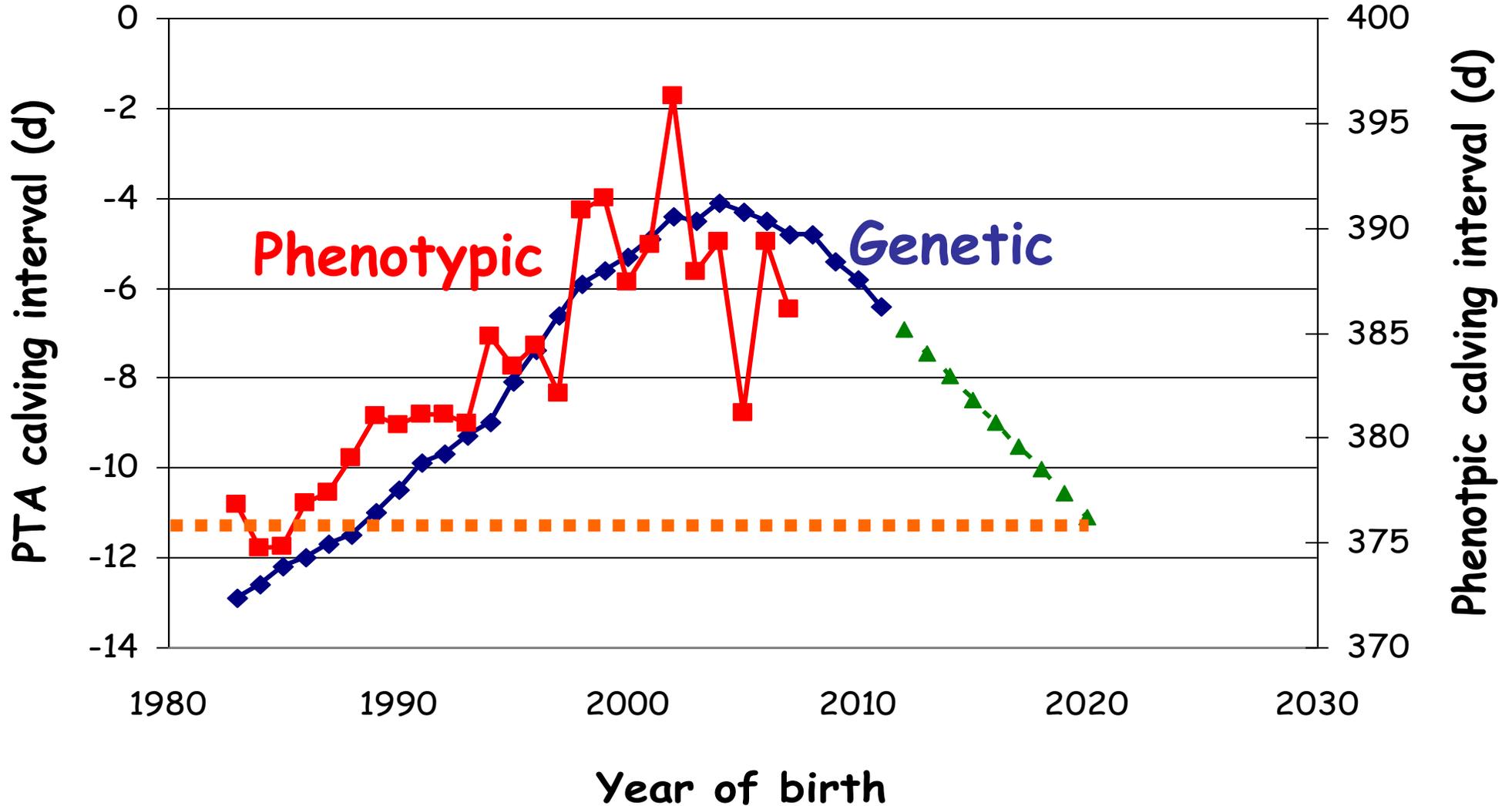
The Power of Knowledge



Crystal Ball Gazing



Crystal Ball Gazing



What is HerdPlus®

- Breeding information service which provides farmers with various reports and profiles on the performance of their stock
- These reports allow farmers gauge themselves against national averages and top performing herds e.g. Top 10%
- Other applications also available such as Dairy Sire Advice, Inbreeding Checker, Stock Reports
- 7,000 Dairy Herds, 10,500 Beef Herds.
- Cost - €60/year



HerdPlus[®] Products

- Dairy HerdPlus

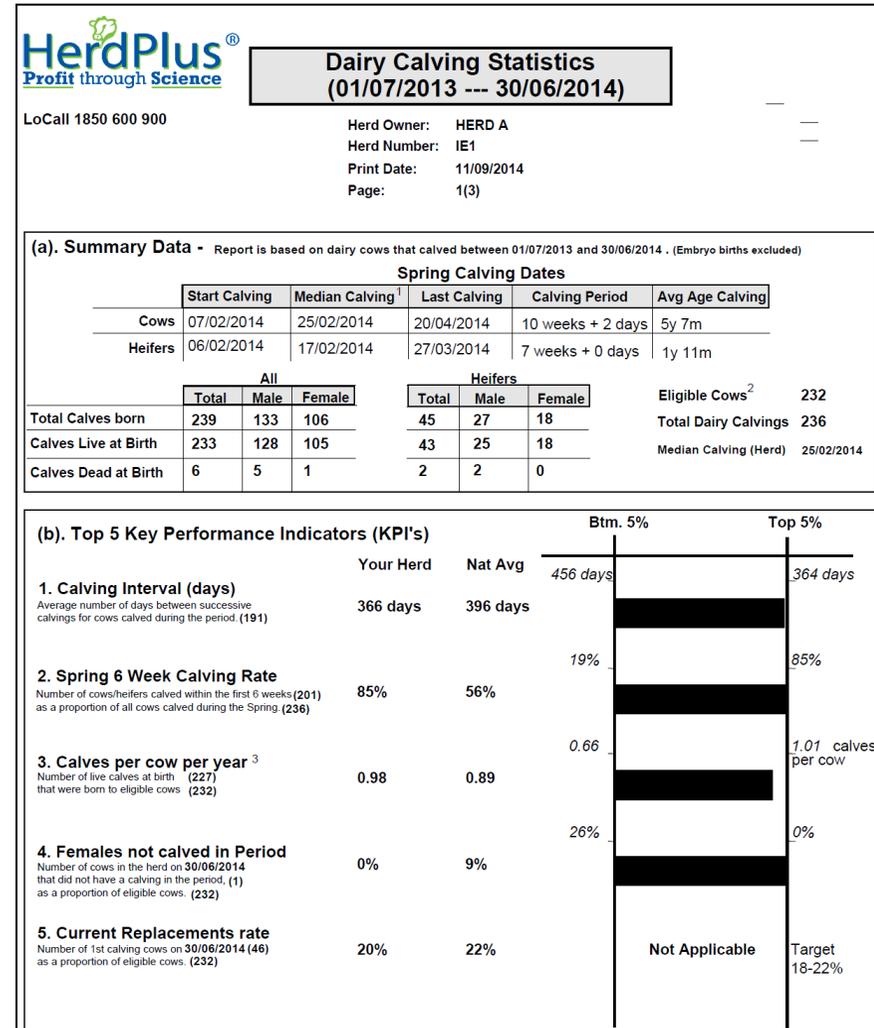
- EBI Report ✓
- Sire Advice ✓
- Breeding Chart ✓
- Calving Report ✓
- Fertility Report
- Dairy Cow Report
- Pocket Notebook
- Herd Catalogue
- Stock Reports
- 5 Year Trend Report
- Discussion Group Reports ✓

- Beef HerdPlus

- Euro-Star Report
- Calving Report
- Suckler Cow Report
- Bull Tracker Report
- Pocket Notebook
- Herd Catalogue
- Stock Reports
- Weighing Report
- Slaughter Report
- Discussion Group Reports
- Beef Journal

HerdPlus[®] Management Reports

- Allows farmer and/or adviser to summarise the herds performance and also benchmark against the national figures e.g. Dairy Calving Report;
- Allows performance of a herd to be assessed and identify areas for improvement;
- Key tool to allow a fast & cost-effective assessment of current performance;
- Provides a standardised approach to calculating the KPI's (Calving Interval, 6 week calving rate, calves/cow/year).
- Text reminders when reports are ready!



Teagasc Discussion Group Reports

- Group report allows Teagasc advisors compare individual herds performance with group average and the group top performer;
- Major reduction of workload for advisor;
- More accurate data for constructive discussion.



Discussion Group Dairy Calving Report

Group Name: MONITOR FARMS
Group Advisor: AN Other

Chairman: AN Other
Secretary: -

Name	Herd Id	Total No. of Calvings	Calving Interval (Days)	6 Weeks Calving Rate(%)	Calves per Cow per Year(%)	Females Not Calved(%)	Dead at Birth(%)
Farmer 1	IE1517166	187	374	82	0.98	2	0
Farmer 2	IE1514192	154	407	69	0.85	7	0
Farmer 3	IE1510137	122	373	68	0.98	0	2.4
Farmer 4	IE1418809	168	376	79	0.99	0	1.8
Farmer 5	IE2411956	166	373	86	0.98	0	4.7
Farmer 6	IE1510038	236	366	85	0.98	0	2.5
Farmer 7	IE2411030	100	377	67	0.95	2	3
Farmer 8	IE3415524	178	369	75	0.99	0	1.1
Farmer 9	IE1416542	329	370	77	0.98	0	3.9
Farmer 10	IE1512116	114	375	68	0.92	1	6.1
Group Average:		182	374	76	0.96	1	2.6
Group Top:			365	87	0.99	0	0
Group Target:							

HerdPlus[®] Dairy Sire Advice

Which bulls should I choose to improve any weaknesses in my herd?

HerdPlus Dairy Sire Advice will help you to choose the most suitable bulls



HerdPlus[®] Dairy Sire Advice

Traits		My Herd	Select Trait	
Dairy EBI	EBI	€ 200	<input checked="" type="checkbox"/>	Top 10% (267 Euros) ▾
	EBI Rel%		<input type="checkbox"/>	
Sub Index	Milk	€ 64	<input type="checkbox"/>	
	Fertility	€ 104	<input checked="" type="checkbox"/>	Top 25% (124 Euros) ▾
	Calving	€ -5	<input type="checkbox"/>	
	Beef	€ 29	<input type="checkbox"/>	
	Maint	€ 0	<input type="checkbox"/>	
	Management	€ 3	<input type="checkbox"/>	
	Health	€ -1	<input type="checkbox"/>	
Milk Production PTA	Milk (Kg)	172 Kg	<input type="checkbox"/>	
	Fat (%)	0.12 %	<input type="checkbox"/>	
	Prot (%)	0.08 %	<input checked="" type="checkbox"/>	Top 50% (.07 %) ▾
	Fat (Kg)	13.00 Kg	<input type="checkbox"/>	
	Prot (Kg)	10.00 Kg	<input type="checkbox"/>	
Fertility PTA	Calving Int	-5.50 days	<input type="checkbox"/>	
	Survival %	2.90%	<input type="checkbox"/>	

HerdPlus® Breeding Chart



Dairy Herd Breeding Chart

HerdOwner PAT CRONIN

NID IE14176

2008



Cow Tag	Cow FB	Cow EBI (E)	Milk (E)	Fert (E)	Cow Details		Lact No.	Date Calved	Calv Ease	T/A	Proposed Bulls			PreServe Heat	Information					Preg Test Result				
					Cow's Sire	Mat Grand Sire					Bull 1	Bull 2	Bull 3		Date	Date	Bull	Date	Bull		Date	Bull		
IEFFT0054R	54	120	47	56	MAU		9	26-MAR-08	1		BWZ	RDU	GIO											
IEFFT0055P	55	94	20	59	LEW	OMR	9	16-MAR-08	1		BWZ	CZO	CBH											
IEFFT0068E	68	121	43	64	MAU	RSG	8				BWZ	RDU	GIO											
IEFFT0090M	90	93	59	19	JOS	KEM	9	01-MAR-08	2		WUZ	BWZ	CBH											
IE141763820127	127	138	45	76	LEW	WYT	7				BWZ	CZO	RDU											
IE141763880157	157	116	53	44	LEW	ARN	6				BWZ	CBH	WUZ											
IE141763860188	188	107	16	76	MAU	RSG	7	19-FEB-08	2		CZO	RDU	BWZ											
IE141763810217	217	84	13	71	AHD	ARN	5	12-FEB-08	1		CZO	RDU	GIO											
IE141763830219	219	80	37	51	AHD	ARN	6	05-FEB-08	1		RDU	CZO	GIO											



Animal ID, Ancestry & EBI, calving data

Suggested Matings

Record Heats & Serves

Printed on A3 Sheets and put on the wall of the dairy/office

Case Study - EBI at work on farm

- Herd A : High Milk (€60) and High Fertility (€97) Sub-Index



Economic Breeding Index (EBI) Herd Summary - Aug 2014

LoCall 1850 600 900

Herd Owner: HERD A

Herd Number: IE1

Data Extracted: 30/09/2014

1. EBI Herd Summary

Average EBI for all dairy cows with; (i) a known sire (or milk recorded progeny with a known sire) and (ii) are currently on your farm.

* Number of animals that are missing an EBI result

Animal Group	Num of Cows	Milk Kg Fat % Prot %	Surv% CI Days	Milk % Cont	Fertility % Cont	Calv % Cont	Beef % Cont	Maint % Cont	Mgmt % Cont	Health % Cont	EBI €
Cows with EBI	231	-20		€ 60	€ 97	€ 26	€ -26	€ 31	€ 2	€ -4	€ 186
Missing EBI*	0	13.1 0.28	2.2	24.2%	39.4%	10.7%	-10.4%	12.6%	0.9%	-1.7%	
Total Cows	231	6.7 0.15	-5.7								

Case Study - EBI at work on farm

- Herd B : High Milk (€60) and Low Fertility (€18) Sub-Index



Economic Breeding Index (EBI) Herd Summary - Aug 2014

LoCall 1850 600 900

Herd Owner: HERD B

Herd Number: IE2

Data Extracted: 30/09/2014

1. EBI Herd Summary

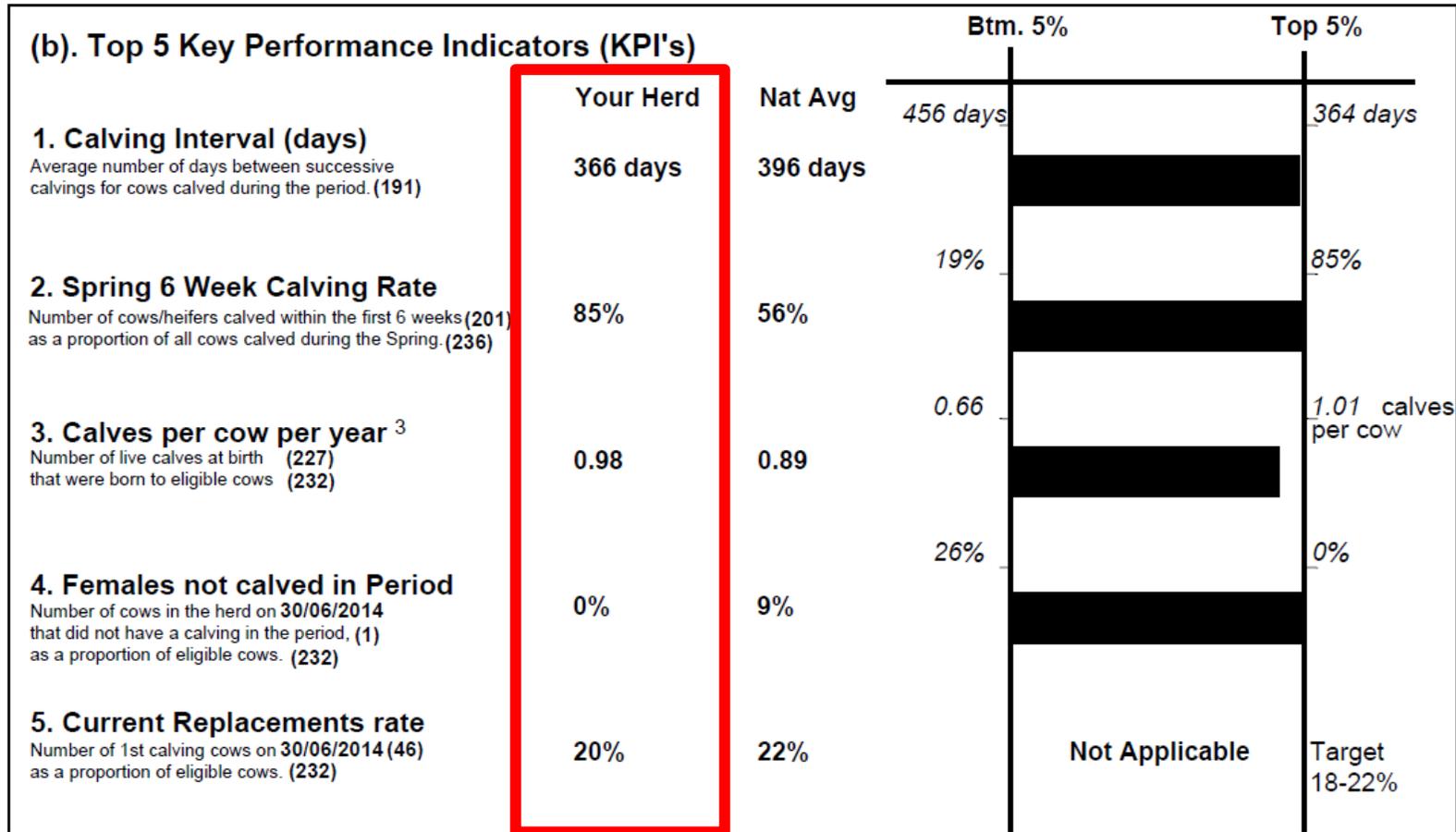
Average EBI for all dairy cows with; (i) a known sire (or milk recorded progeny with a known sire) and (ii) are currently on your farm.

* Number of animals that are missing an EBI result

Animal Group	Num of Cows	Milk Kg		Surv% CI Days	Milk	Fertility	Calv % Cont	Beef % Cont	Maint % Cont	Mgmt % Cont	Health % Cont	EBI €
		Fat %	Prot %		% Cont	% Cont						
Cows with EBI	211	366			€ 60	€ 18	€ 23	€ -4	€ -4	€ 1	€ 2	€ 97
Missing EBI*	0	10.7	-0.06	0.9	53.4%	16.4%	20.7%	-3.3%	-3.9%	0.4%	1.9%	
Total Cows	211	12.4	0.01	-0.6								

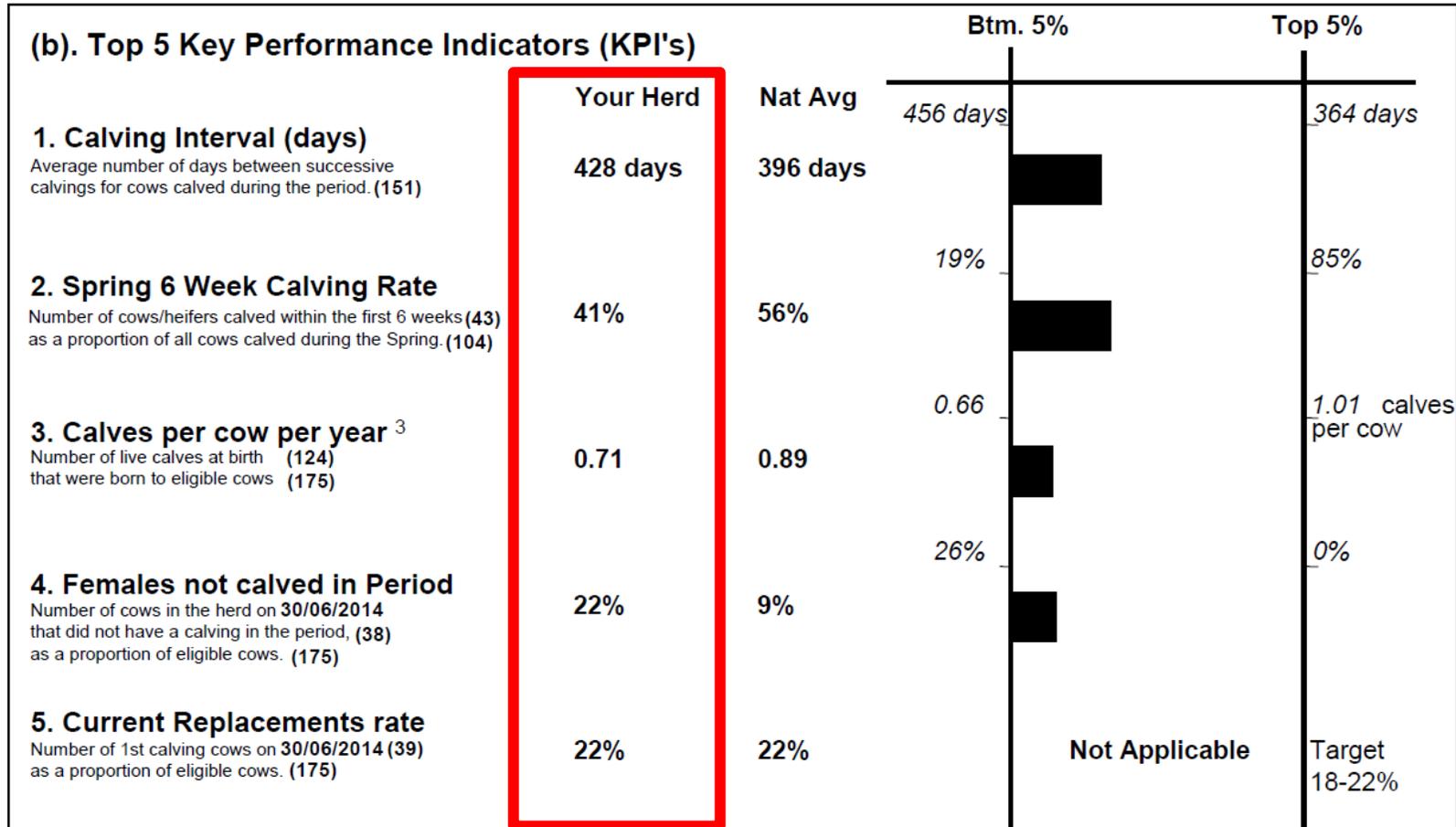
Case Study - EBI at work on farm

- Herd A : High Milk (€60) and High Fertility (€97) Sub-Index



Case Study - EBI at work on farm

- Herd B : High Milk (€60) and Low Fertility (€18) Sub-Index



Summary

- The ICBF database is one of the most integrate cattle breeding databases in the world.
- Data is the lifeblood of ICBF – the more data; the higher the reliability.
- Collaboration is a key aspect of success in cattle breeding.
- EBI is a proven technology, delivering cows that have increased milk solids and better fertility performance.
- EBI has delivered ~€600m in additional profits to Irish Dairy farmers.
- HerdPlus is enabling Irish farmers make more profitable and efficient breeding decisions.

Thank you for your attention



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