



IRISH CATTLE BREEDING FEDERATION

Potential of Breeding Beef RoundTable (June 3rd 2014)



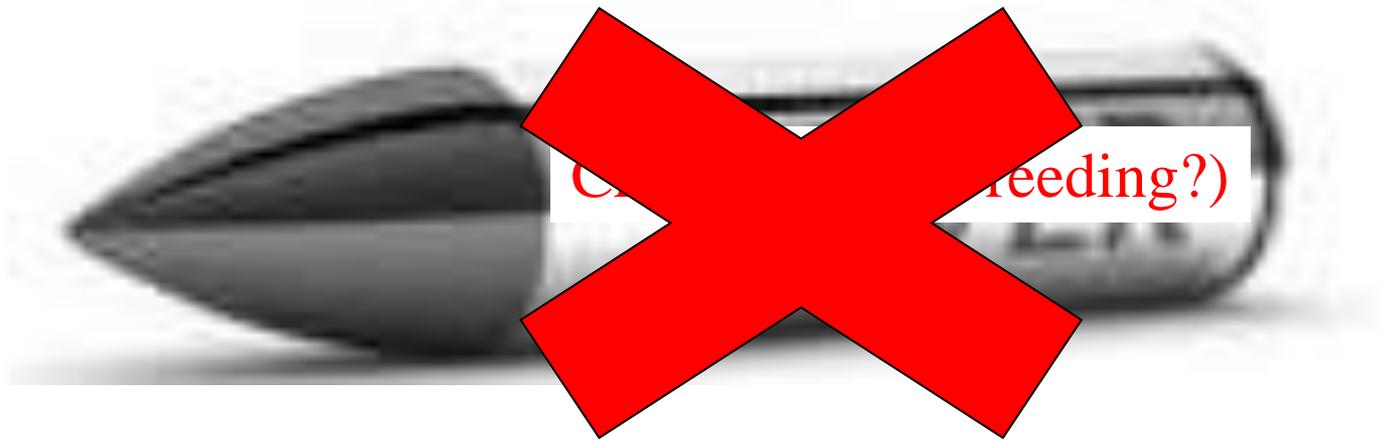
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National Development Plan

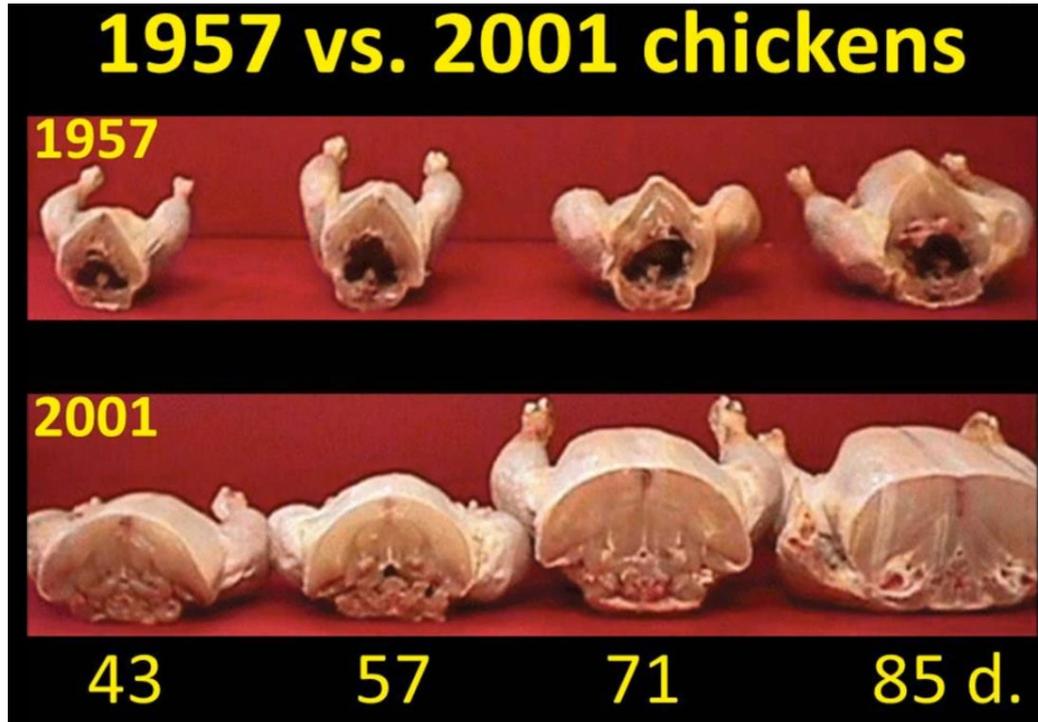
Transforming Ireland

The Elusive Silver Bullet



- Breeding doesn't offer it
- Chasing short-term solutions in a breeding context will be counter productive
- However, there is great medium term potential for genetics as a key component of the overall package

Genetic Improvement in Chickens

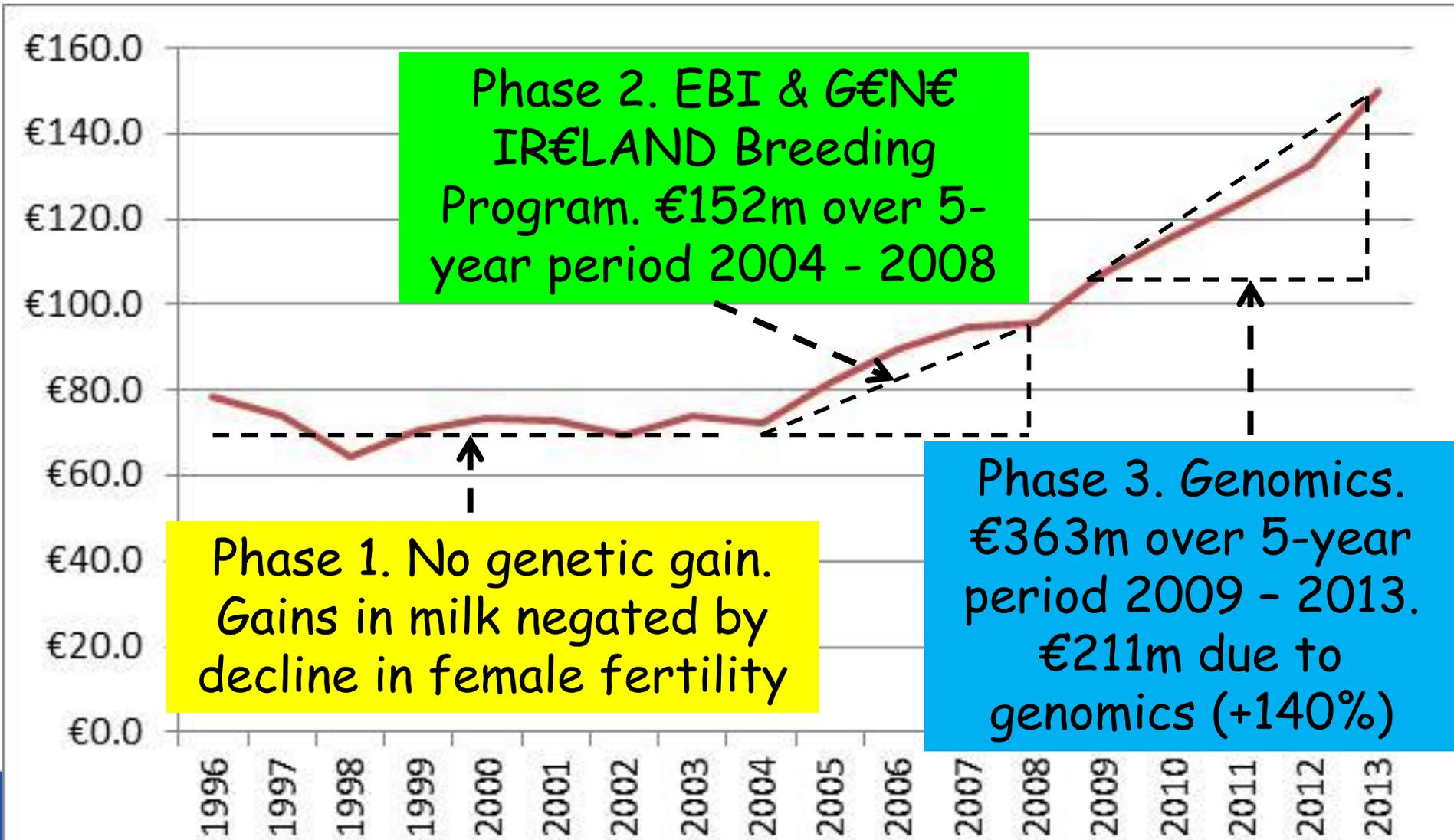


Genetic Improvement in Chickens

1957 vs. 2001 chickens

**Would you like to tell today's
chicken industry to work with
the same level of genetics as
20 years ago?**

Genetic Gain in Dairy EBI.



Genetic Gain in Dairy EBI.

€160.0

€140

€120

€100

€80

€60

€40

€20

€0.0

Phase 2. EBI & GEN€

Would you like to tell today's dairy industry to work with the same level of genetics as 20 years ago?

genomics (+140%)

1996

1997

1998

1999

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

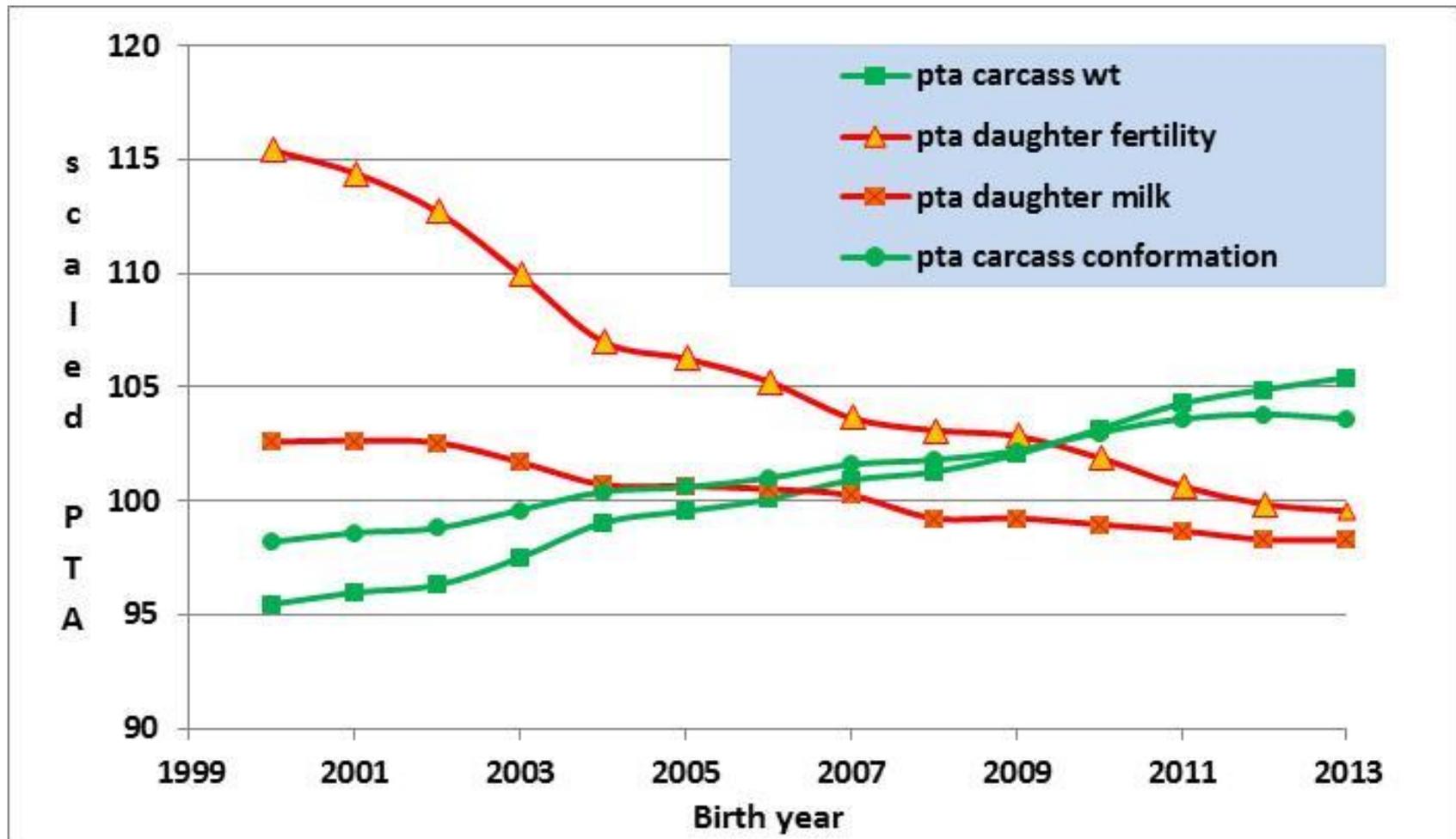
2010

2011

2012

2013

Today's suckler cow -> weight & muscle, but lacking milk & fertility.



Future suckler cow -> milk, fertility & with a decent calf

T1. Traits in maternal index.

Trait	Goal	Rel wt
Calving difficulty	Less	15%
Feed intake	Less	24%
Carcass wt (for age)	More	26%
Maternal milk	More	13%
Female fertility	More	18%
Docility	More	4%
Total		100%

T2. Traits in terminal index.

Trait	Goal	Rel wt
Calving difficulty	Less	29%
Feed intake	Less	20%
Carcass wt (for age)	More	32%
Conformation score	More	10%
Fat score	Less	6%
Docility	More	3%
Total		100%

€uro-star index work (undertaken in conjunction with Teagasc) has clearly identified attributes of the profitable Suckler Cow.

Do the indexes work; Suckler herd replacement strategy

- Analysis of data from Suckler Scheme herds.
 - Heifers born in 2008, from a known beef sire, that entered the suckler herd as a replacement heifer.
- How did they perform?
 - How many are still alive? Average number of progeny/cow? Average carcass weight (& age) of progeny?
- Were there breed or star differences?

5 star cows are most profitable

	Maternal Index			Cow fertility		Progeny slaughter performance.			
Stars	Index	Count	% Tot	% Alive	Calvings	C Wt	Age	Output/cow	Diff
5 star	€186	15,371	16.9%	79%	3.4	361.3	23.9	1228	16%
4 star	€142	16,919	18.7%	74%	3.2	354.1	24.5	1133	7%
3 star	€116	18,100	20.0%	71%	3.0	350.6	24.7	1052	-1%
2 star	€90	19,093	21.1%	68%	2.9	349.7	24.8	1014	-4%
1 star	€44	21,212	23.4%	64%	2.8	352.2	24.9	986	-7%
ALL	€110	90,695	100.0%	71%	3.0	353.4	24.6	1060	0%

- 5 stars cows; more calving's + better weight for age (+6%) = greater output/cow (+16%).
 - Critical link with sustainability (GHG emissions).
- Farmers are keeping the wrong cows (44% are 1 & 2 star). We must encourage change(€).

There are 5 star cows across all of the breeds

Breed	Num	% total
Angus	1790	12%
Blonde d'Aquitaine	102	1%
Belgian Blue	734	5%
Charolais	1474	10%
Hereford	156	1%
Limousin	6802	44%
Parthenaise	46	0%
Salar	1437	9%
Shorthoron	668	4%
Simmental	2012	13%
Overall	15371	100%

- ICBF strategy to exploit genetic variation within breeds -> maximise profitability.
 - GEN€LAND (10 breeding programs).
 - Suckler beef genomics & new RDP program.

There are 5 star cows across all of the breeds

Breed	Num	% total
Angl		
Blon		
Belg		
Char		
Here		
Limc		
Part		
Sala		
Shor		
Simr		
Overall	15371	100%

• ICBF strategy to exploit

Let's not throw the baby out with the bathwater (and leave farmers disillusioned) – all breeds have something to offer.

No breed can match the performance of 5 star cows

Breed	Maternal Index			Cow fertility		Progeny slaughter performance.			
	Index	Count	% Tot	% Alive	Calvings	C Wt	Age	Output/cow	Diff
AA	€135	6,519	7%	71%	3.1	322.9	25.0	985.1	-7%
BA	€85	1,362	2%	68%	2.9	360.5	23.6	1042.3	-2%
BB	€107	4,325	5%	65%	2.8	360.9	23.7	1027.2	-3%
CH	€83	25,507	28%	69%	3.0	358.0	24.9	1081.5	2%
HE	€86	2,972	3%	68%	3.0	320.1	25.3	950.6	-10%
LM	€120	34,264	38%	72%	3.0	358.2	24.5	1083.6	2%
PT	€111	319	0%	72%	3.0	367.8	23.0	1106.8	4%
SA	€197	1,811	2%	74%	3.2	356.8	24.1	1159.3	9%
SH	€132	2,534	3%	76%	3.1	333.2	24.9	1043.2	-2%
SI	€119	10,589	12%	71%	3.1	356.1	24.0	1116.4	5%
ALL	€110	90,695	100%	71%	3.0	353.4	24.6	1060.0	0%

No breed can match the performance of 5 star cows

Focusing on one or two breeds will not give us a quick fix.

Breed	Maternal Index			Cow fertility		Progeny slaughter performance.			
	Index	Cows	% Total	% Alive	Culling	CWU	Age	Output/ewe	Diff
AA									
BA									
BB									
CH									
HE									
LM									
PT									
SA									
SH									
SI									
ALL	€110	90,695	100%	71%	3.0	353.4	24.6	1060.0	0%

Same gains available on sire side.

Index	Num	Index*	Lwt start test (kg)	Lwt end test (kg)	Age at slau	ADG	DMI	C Wt	KO%	HVC	VHVC
Top 20 %	65	€100.7	482.5	691.1	16.2	1.94	11.9	418.5	60.6	115.0	28.3
Nxt 20 %	65	€86.3	474.4	686.7	16.4	2.05	12.12	410.6	58.8	111.9	27.5
Mid 20 %	65	€75.3	480.9	692.5	16.4	2.03	12.22	411.1	59.4	107.0	26.8
Nxt 20%	65	€63.7	483.9	702.3	16.5	2.16	12.63	413.3	58.9	110.0	27.3
Btm 20%	65	€41.0	480.6	695.9	16.6	2.21	13.11	402.1	57.8	107.0	26.0
ALL	325	€73.4	480.5	693.7	16.4	2.08	12.39	411.1	59.3	110.5	27.2

- ❖ Performance of 325 young bulls from Tully performance test station. All progeny from AI sires, including GENE IRELAND.
- ❖ Delivering ~€100 more profit/progeny through better carcass performance & better feed efficiency .

Same gains available on sire side.

Index	Num	Index*	Lwt start test (kg)	Lwt end test (kg)	Age at slau	ADG	DMI	C Wt	KO%	HVC	VHVC
Top 20											
Nxt 20											
Mid 20											
Nxt 20											
Btm 20											
ALL											

Everyone along the chain benefits from the better genetics

❖ F
S

❖ L... performance & better feed efficiency .

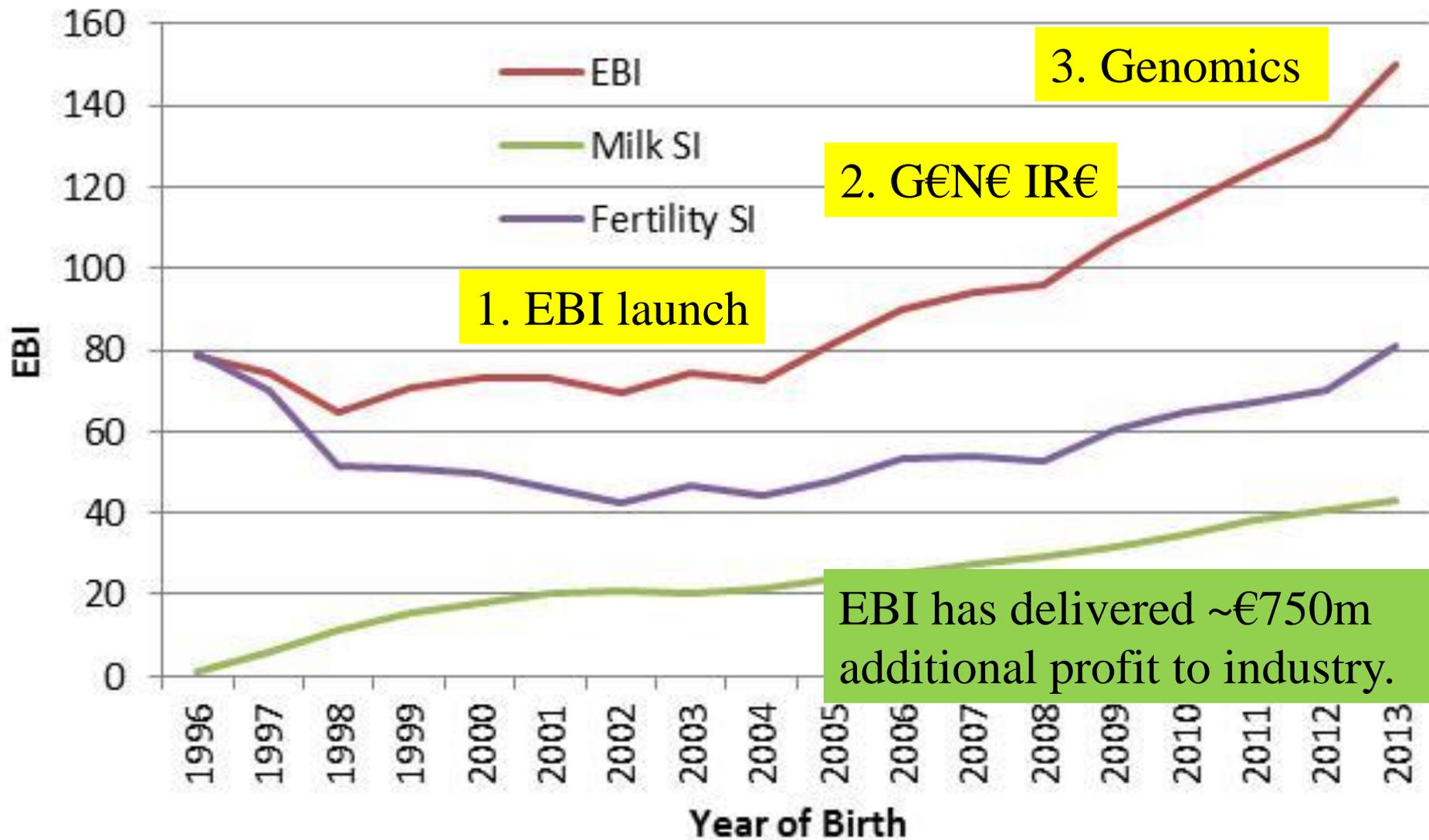
How do we get more 4 & 5 star cows into herds?

- Genotyping to find them and Incentivise the picking selection of 4 and 5 star replacements
- Bonuses must encourage long-term thinking in behaviour - Pay a bonus for progeny from genotyped cows &/or genotyped 4&5 star COWS.
- Ensure farmers can find them - Make stars available in marts.

How do we get more 4 & 5 star cows into herds?

- GENE IRELAND. Increase participation in new program -> accelerate genetic gain and ensure availability of more 4 & 5 bulls & females.

Change is possible but will take time -> EBI example.



Summary.

- Focus on 4 & 5 star Suckler cows.
- Industry alignment on this is critical in terms of a simple message to farmers
- Potential to add +€100/cow to suckler beef farmers (and don't forget the cumulative and permanent nature of the gains)
- Underlying infra-structure is in place. Now need clear implementation strategy