



IRISH CATTLE BREEDING FEDERATION

***The importance of cow type in
increasing the viability of the
Suckler herd – A Southern
Ireland perspective.***

*Dr. Andrew Cromie.
IGA, UGS & IFJ Conference.
19th July 2011.*



Overview of talk.

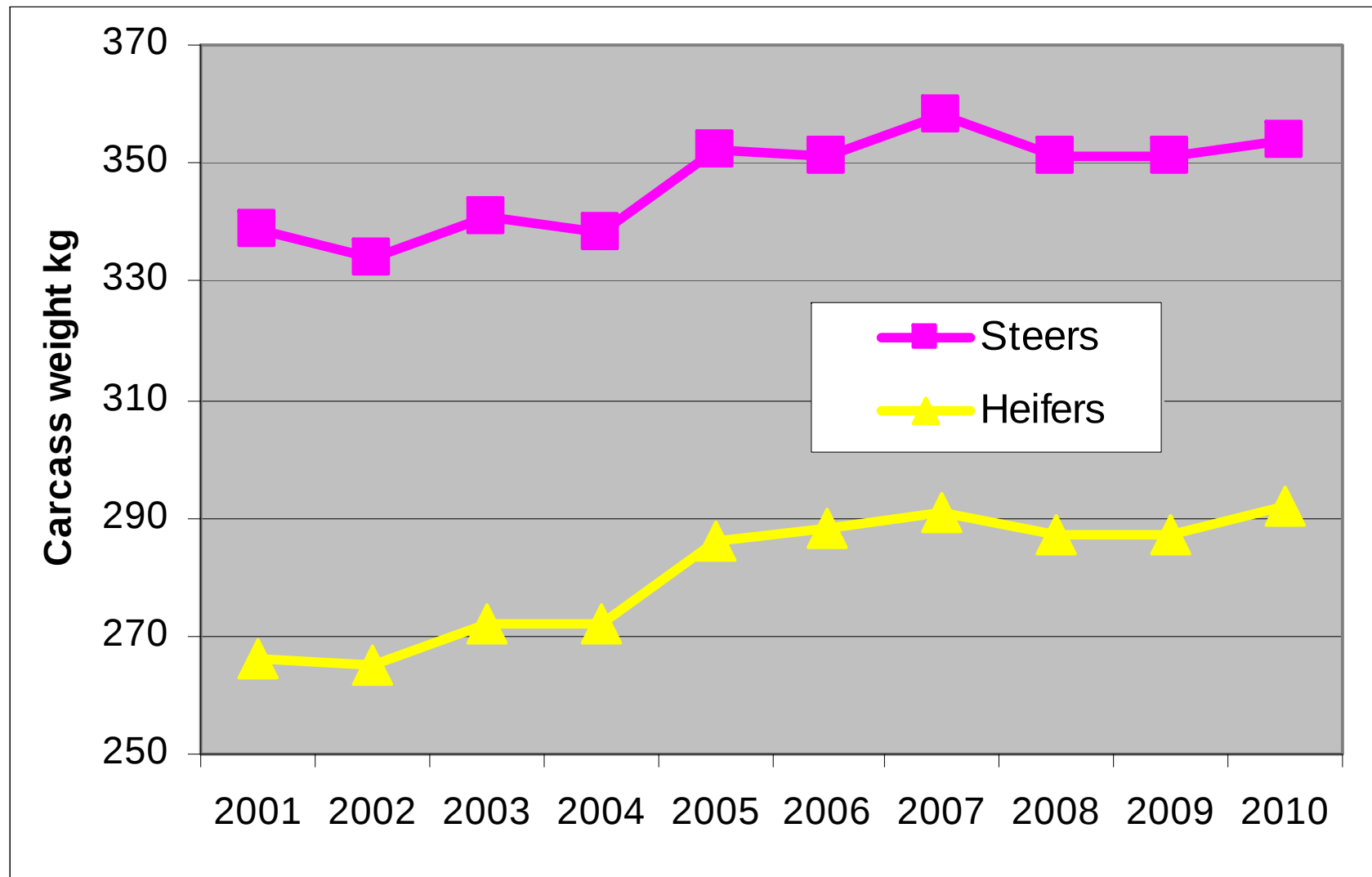
- Background.
- How do we increase viability (or profitability) of our suckler herd?
 1. Suckler herd replacement strategy.
 2. Performance of different breeds.
 3. Use of genetic index and economic index data.
 4. Importance of breeding programs.
 5. Other developments.
- Key messages.

Suckler cow numbers.

Year	Number	% change from previous year
2006/2007	1,039,565	
2007/2008	1,090,831	4.9%
2008/2009	1,046,346	-4.1%
2009/2010	950,910	-9.1%
2010/2011	935,564	-1.6%

- Numbers are declining (-5%/year for past 3 years.
- **Why this decline in numbers?**

Trends in Carcass Weight (kg) (2001-2010)



Trends in Female Fertility (2006-2010)

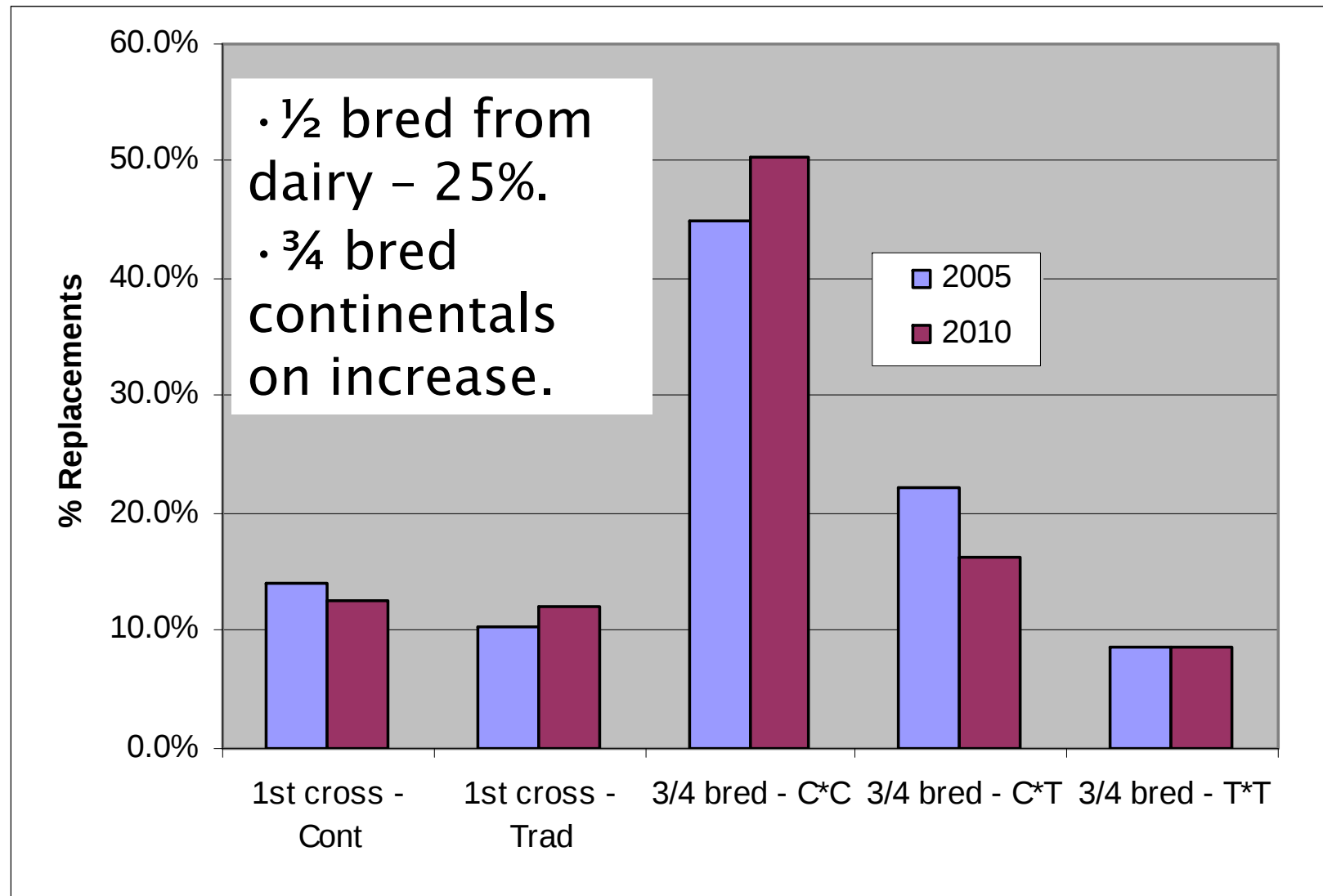
	2006	2007	2008	2009	2010
Calves/ cow/ year	0.82	0.86	0.81	0.81	0.80
Calving Interval Days	399	399	398	399	406
Age at first calving	30.5	31.2	31	31.4	32

- Carcass weight & price increasing.
- Female fertility decreasing.
- No increase in suckler farm profit.

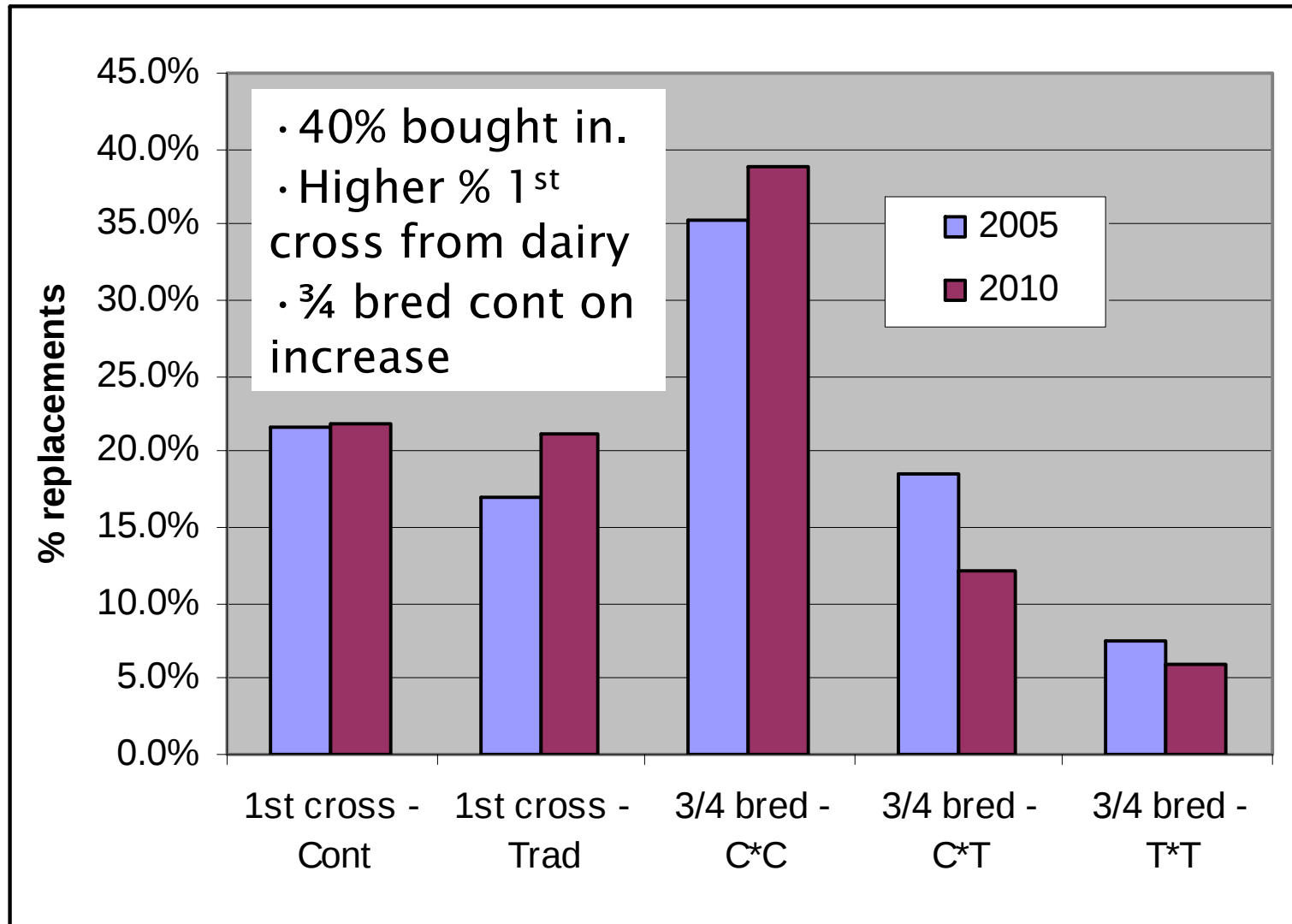
Overview of talk.

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- How do we increase viability (or profitability) of our suckler herd?
1. Suckler herd replacement strategy.

1. Replacement Strategy – Which breeds?



1. Replacement Strategy – Bought In Replacements?



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- How do we increase viability (or profitability) of our suckler herd?
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 2. *Breed performance.*

2. Breed performance

(i) ICBF phenotypic data.

	Terminal Traits			Maternal Traits			
Breed of Sire	wean weight (kg)	carc weight (kg)	carc grade (EUR)	age 1st calv (mths)	calv interval (days)	surv to 2nd parity (%)	mat wean wt (kg)
Angus	285	310	O+	29.2	392	79%	308 (+23)
Belgian Blue	332	354	R	29.1	399	77%	326 (-28)
Charolais	320	369	R+	30.1	401	77%	323 (+3)
Hereford	287	313	O+	29.8	390	79%	303 (+16)
Limousine	308	355	R	30.6	402	80%	309 (+1)
Shorthorn	282	333	R-	29.8	389	83%	298 (+16)
Simmental	324	353	R	29.4	393	80%	331 (+7)

**Based on 1.21m terminal & 562k maternal records.*

- Large differences between breeds.

2. Breed performance

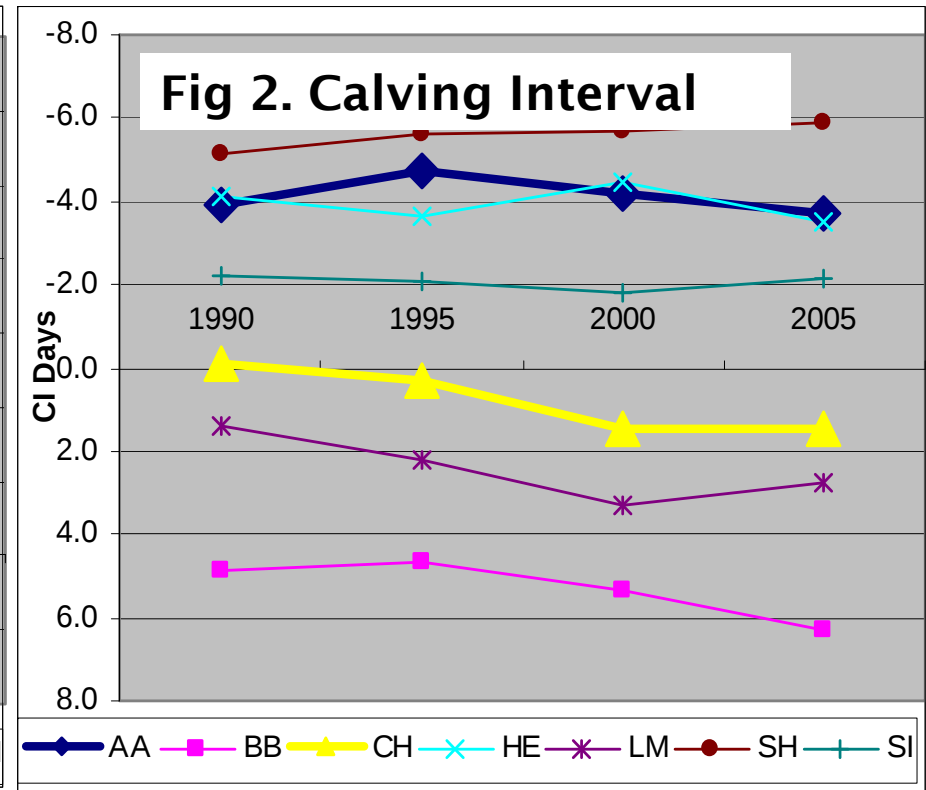
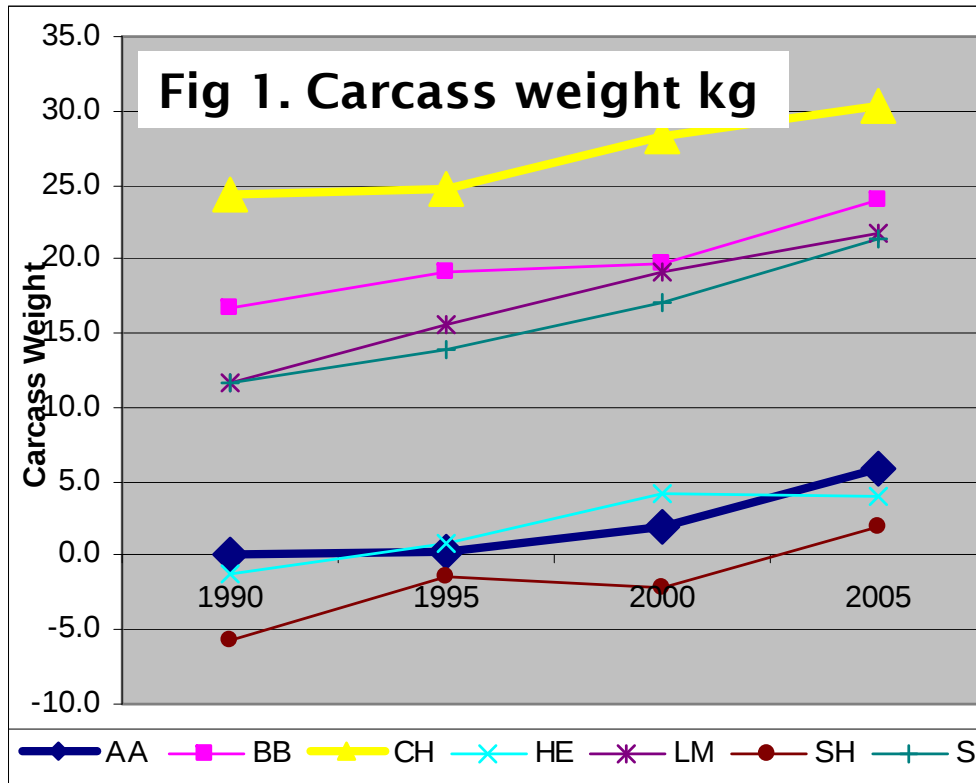
(ii) Teagasc Derrypatrick data

	Breed Combination			
	LM * FR	LM * SI	CH * LM	CH * SI
Birth weight (Mar 2010)	45.7	43.1	45.1	45.4
Live weight at housing (Nov 2010)	316	283	264	284
Live weight at grass (May 2011)	440	401	382	408

- Exceptional performance of LM * FR.
- But shift away from 1st from dairy herd?

2. Breed performance

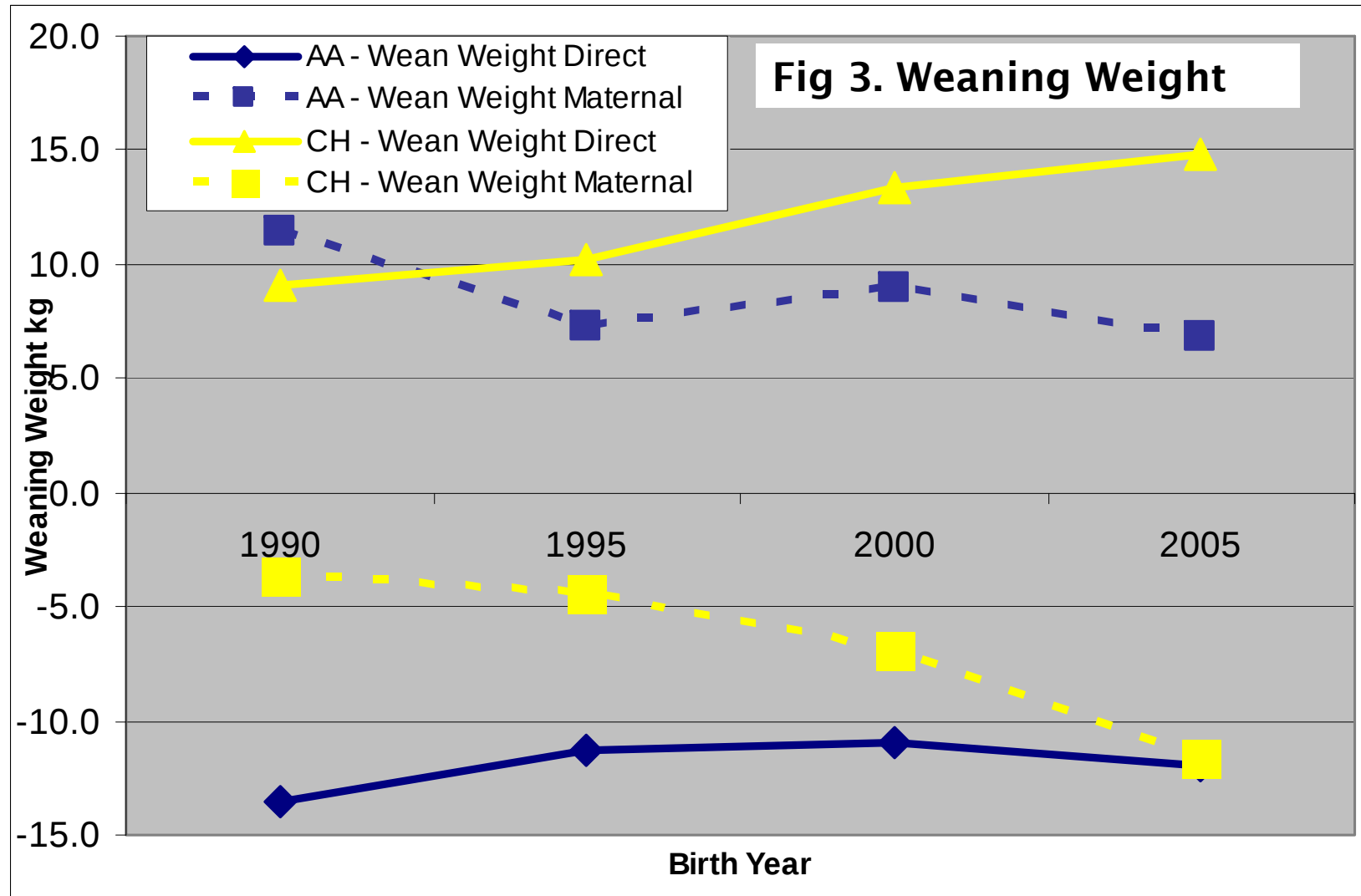
(iii) ICBF Genetic Trend Data.



- Genetic trends are negative.
- Same trends for all breeds.

2. Breed performance

(iii) ICBF Genetic Trend Data.



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 3. *Use of genetic index and economic index data.*

3. Which breed & bull?

Use of genetic indexes.

Traits	Data	Breed						
		AA	BB	CH	HE	LM	SH	SI
Weaning weight	Number AI Sires	102	104	259	76	216	38	121
	Average	-12	1.6	11.1	-4.3	-2.9	-11	7.8
	Across breed rank	7	3	1	5	4	6	2
	Standard Dev	8.8	6.8	7.4	5.5	6.8	3.6	7.3
	Top1% in breed	11.8	25.1	32.4	12.2	18.6	-1.2	30.1
Maternal milk kg	Number AI Sires	102	104	259	76	216	38	121
	Average	8.5	0.6	-5.4	5.1	-1.8	7.3	3
	Across breed rank	1	5	7	3	6	2	4
	Standard Dev	5.9	6.1	6.6	4.8	5.6	3.8	6.3
	Top1% in breed	23.2	13.9	12.4	17	12.3	15	19.8

3. Which breed & bull?

Use of Euro-Star Indexes

Beef Euro-Star Flow Diagram 2011

Source		Traits	Economic Values	Traits % Weighting		Sub - Index	% Weighting		★
Animal Events	➔	Calving Difficulty	-2.96	62%	➔	Calving	7%	➔	★
AI Handheld & Web		Gestation Length	-2.12	28%					
DAF-AIM		Calf Mortality	-5.34	10%					
Marts & On-Farm	➔	Weaning Weight	1.55	34%	➔	Weanling Export	14%	➔	★
Linear Scores		Calf Quality	2.58	66%					
SCWS									
Marts & On-Farm	➔	Weaning Weight	1.29	8%	➔	Beef Carcass	52%	➔	Overall Suckler Beef Value ★
Factories		Carcass Weight	2.5	30%					
		Carcass Conformation	14.77	9%					
		Carcass Fat	-7.86	5%					
Tully		Feed Intake	-0.1	48%					
DAF-AIM	➔	Cow Survival	16.19	12%	➔	Daughter Fertility	20%	➔	★
Animal Events		Calving Interval	-7.51	49%					
		Age at First Calving	-1.38	16%					
		Maternal Calving Difficulty	-9.98	23%					
On-Farm Weights	➔	Maternal Weaning Weight	9.9	100%	➔	Daughter Milk	7%	➔	

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3. Developments in Euro-Star indexes.

- Suckler Beef Value - is there enough weighting on maternal traits?
 - Review of economic values (Teagasc).
 - Separate maternal and terminal indexes?
 - New index for selecting female replacements.
- Target completion – Nov 2011.

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4. GENRE IRELAND Breeding Program.

- Genetic gain; (i) data, (ii) indexes & (iii) widespread use of best bulls, to breed stock bulls (80% of beef calves by stock bulls).
- Objective: to ensure a new top beef bull each year for main beef breeds.
- Developments for 2011;
 - Working directly with bull breeders.
 - Target 50 bulls/annum (currently 15).
- Which breeds & breeders will respond quickest to the “new requirements”?
- What will your legacy be as a breeder?

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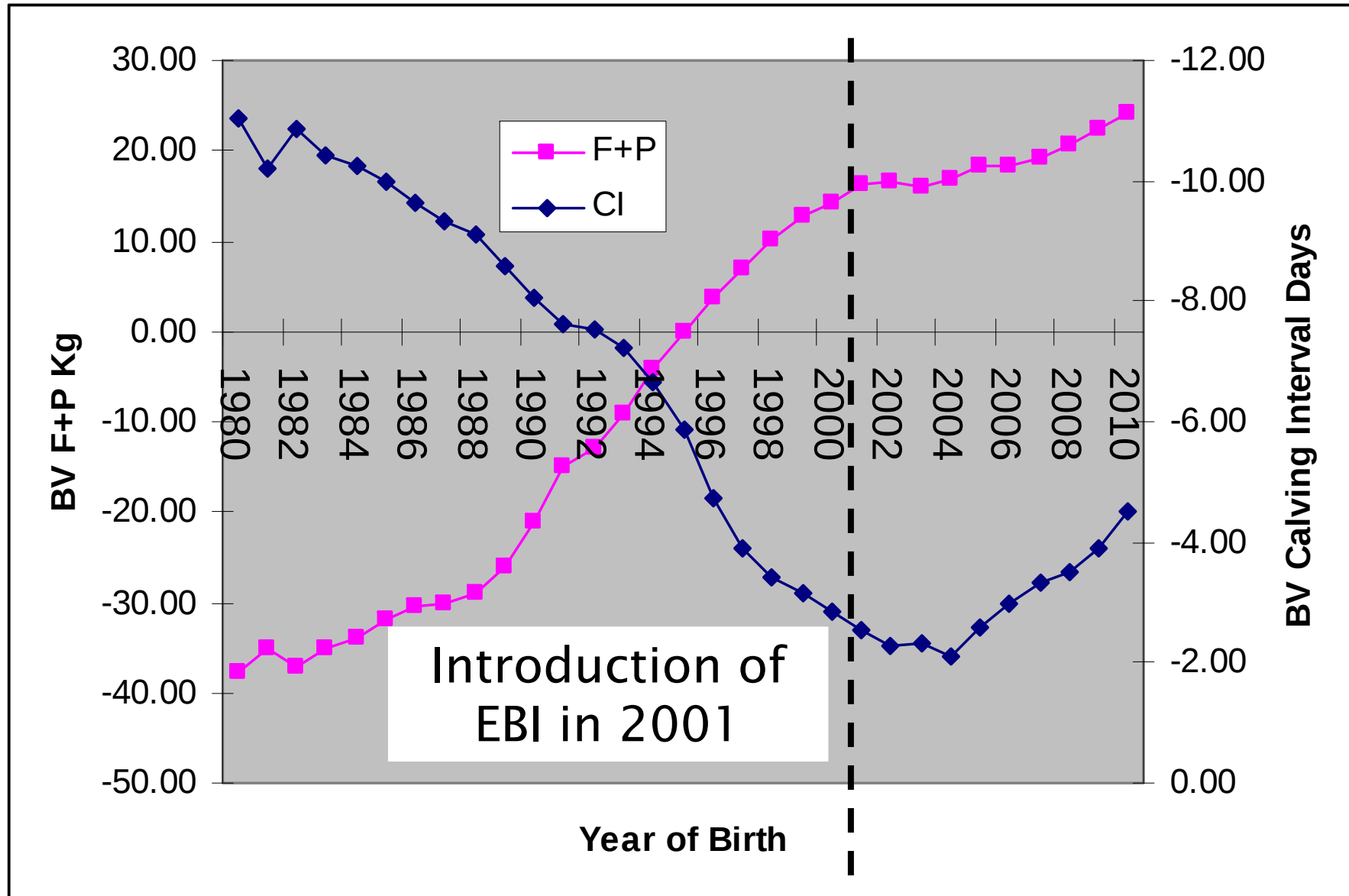
5. Other developments.

- Research & demonstration farms.
 - Additional breeds + new cow indexes.
- Improvements to maternal evaluations.
 - Maternal milk, fertility, calving....
- New weight recording services.
 - Birth & 3 times/year. Low cost & high value service for “committed” beef farmers.
- Genomics.
 - Potential to double rates of genetic gain.
- Sexed semen.

Key messages.

- Negative relationship between terminal and maternal traits.
- Past – shift towards continental. Future shift back towards traditional, unless continental breeds can respond to new requirements.
- As much variation within breeds as across breeds.
- Always use genetic and economic indexes when selecting breeds, bulls & cows for breeding.
- **Profitable** future for beef breeding.

Genetic trends in F+P yield & CI Days.



Phenotypic trends in F+P kg & CI Days (Heifers).

