

IRISH CATTLE BREEDING FEDERATION

ICBF Beef Industry Meeting.

1st October 2009.

Agenda.

- New across breed linear proofs - Ross
- New across breed docility proofs - Ross
- New Euro-Star templates - Andrew
- Tully & GEN€ IRLAND open day - Stephen
- GEN€ IRLAND – Breed Development proposition - Andrew
- Latest proof run; Update & feedback – Andrew
- Access to Euro-Star data – Andrew
- Any other business.



IRISH CATTLE BREEDING FEDERATION

New Linear Type Evaluations

**Beef Industry Meeting 01/10/09
Abbeyleix**

Current situation

- **Within breed BLUPS for CH, LM, SI**
- **Pedigree animals only**
- **Certain known limitations**
 - **Rough adjustment for age**
 - **Small hys groups combined into “large herd”**
 - **Different herd visits in 6 monthly calendar period are combined**
 - **Unable to use crossbreds scored in same visit**
 - **Composite index breeding values only**
 - **Genetic parameters from France >7 years old**

New 16 trait evaluation

- 13 linear type scored traits

Muscle	Skeletal	Functionality
Width at withers	Length of back	Fore leg Front View
Width behind withers	Length of Pelvis	Hind leg side View
Dev Hind Quarter	Width at hips	Hind leg rear view
Thigh width	Height at withers	Locomotion
Loin Development		

- 3 predictor traits

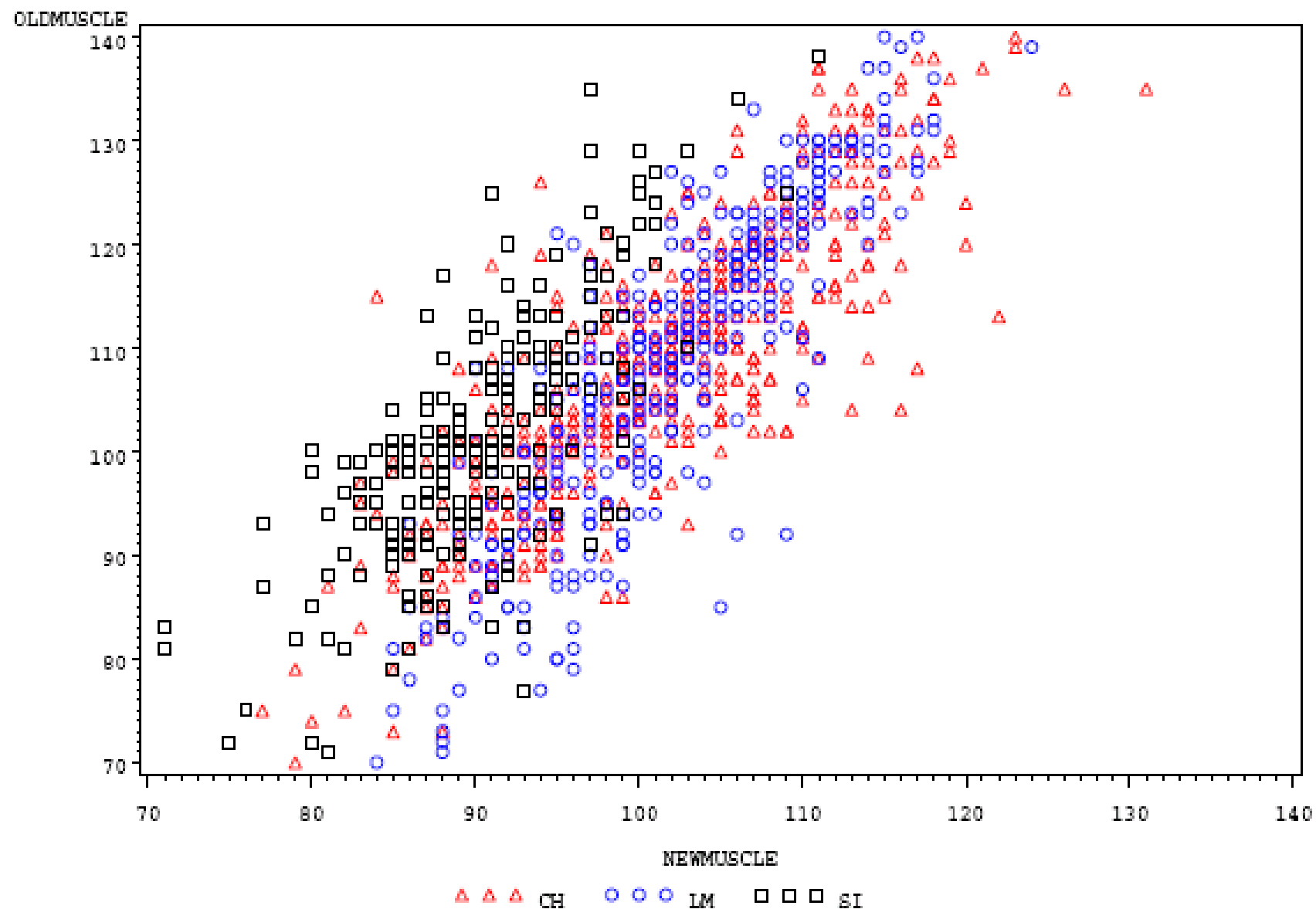
Weaning weight, liveweight and farmer scored calf quality

New evaluation

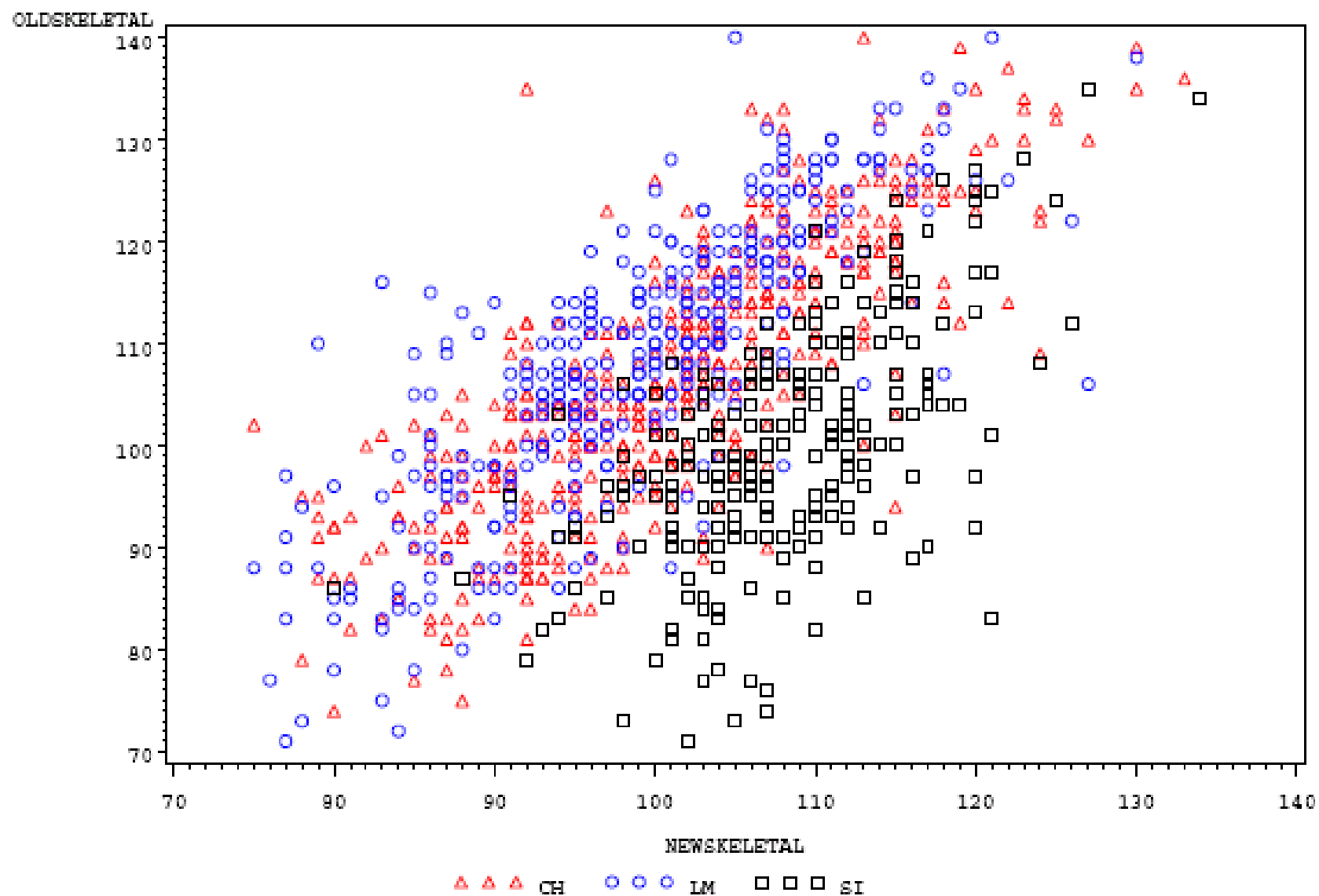
- Across breeds so inclusion of crossbreds
- All previous linear scores used if they met the criteria of 5 animals per hys contemporary group

Type of record	All animals	% crossbred
linear score	112,845	15%
weaning weight	134,832	62%
liveweight	124,552	54%
score calf quality	171,314	88%

ALL Alsires CURRENT WITHIN BREED MUSCLE BLUP v NEW



ALL Alsires CURRENT WITHIN BREED SKELETAL BLUP v NEW



Results

- **AI sires >80% reliability currently**
- **167 Limousine sires 0.91 for MUSCLE and 0.85 for SKELETAL**
- **123 Charolais sires 0.93 for MUSCLE and 0.88 for SKELETAL**
- **38 Simmental sires 0.88 for MUSCLE and 0.83 for SKELETAL**

New test proofs sent out

- Some Feedback from Simmental society
- Simmental bull in top 1% on old dropped to top 20% on new



Example of bull re-ranking

- **Current BLUP:** Animal in Top 1% (90% reliability)

195 progeny vs 4012 herdmates

Phenotypic MUSCLE score = 69 vs 68

- **New evaluation**

146 progeny and 897 herdmates meeting criteria from
above (75%), 69 vs 71

49 progeny dropped due to CG size restrictions

+ 15 cross bred progeny

width at withers: 8.9 vs 9.4 Rank Top 40% -Top 20%

width behind withers: 7.9 vs 8.4 Rank Top 40% -Top 20%

development of hind quarter: 8.8 vs 8.9 Rank Top 10%

thigh width: 8.1 vs 8.5 Rank Top 20%

loin development: 8.6 vs 8.8 Rank Top 20%

NEW MUSCLE = 111 Top 20% (95% reliability)

Example of bull re-ranking

- **Current BLUP:** Animal in Top 20% (55% reliability)

19 progeny vs 118 herdmates

Phenotypic MUSCLE score = 72 vs 72

- **New evaluation**

12 progeny and 55 herdmates meeting criteria from above (63%), 7 progeny dropped due to CG size restrictions

+ 41 cross bred progeny

width at withers: 8.9 vs 9.4 Rank Top 5%

width behind withers: 8.0 vs 7.5 Rank Top 5%

development of hind quarter: 9.3 vs 8.4 Rank Top 1%

thigh width: 8.3 vs 7.8 Rank Top 10%

loin development: 8.8 vs 8.4 Rank Top 5%

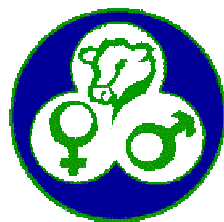
Weaning weight 312 vs 303

Liveweight 399 vs 382

NEW MUSCLE = 122 Top 5% (85% reliability)

Recommendation – Implement new across breed linears.

- **Old System.....**
 - Small HYS combined into one large herd.....
 - Composites only, purebred only, crude model.....
 - Can ICBF stand-over?.....Ballydownan Simone (BLUP Muscle = 180!)
- **New System.....**
 - Includes all available data (pure-bred & commercials).
 - Old data – minimum contemporary group of 5.
 - New data – minimum contemporary group of 5 & only animals scored 150-300 day age bracket.
 - Includes additional data as predictors.
 - Weaning weight, live-weight & calf quality
 - More accurate model, e.g., herd & age corrections....
 - Provides important additional data for breeders.
 - Individual traits on a within and across breed basis.
 - Composites – if so desired by relevant breed.
 - Data available on website & in catalogues.



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New Docility Evaluations

**Beef Industry Meeting 01/10/09
Abbeylax**

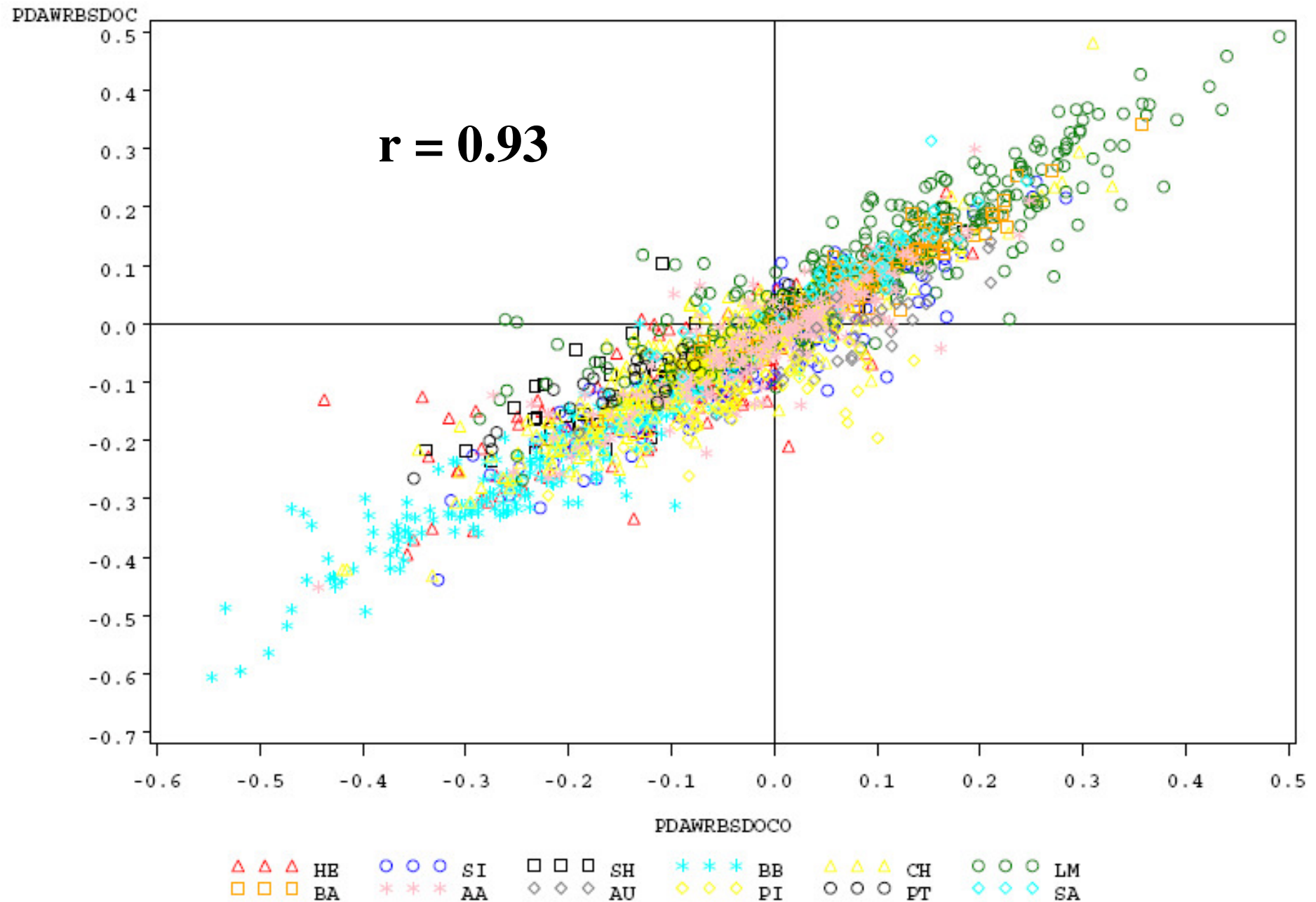
New test proofs sent out

- 50,000 extra FARMER and 6,551 extra LINEAR records since previous
- Stronger adjustment for age
- Linear score records adj. for condition scr
- FARMER scores omitted if LINEAR available
- Contemporary group size up to min of 7

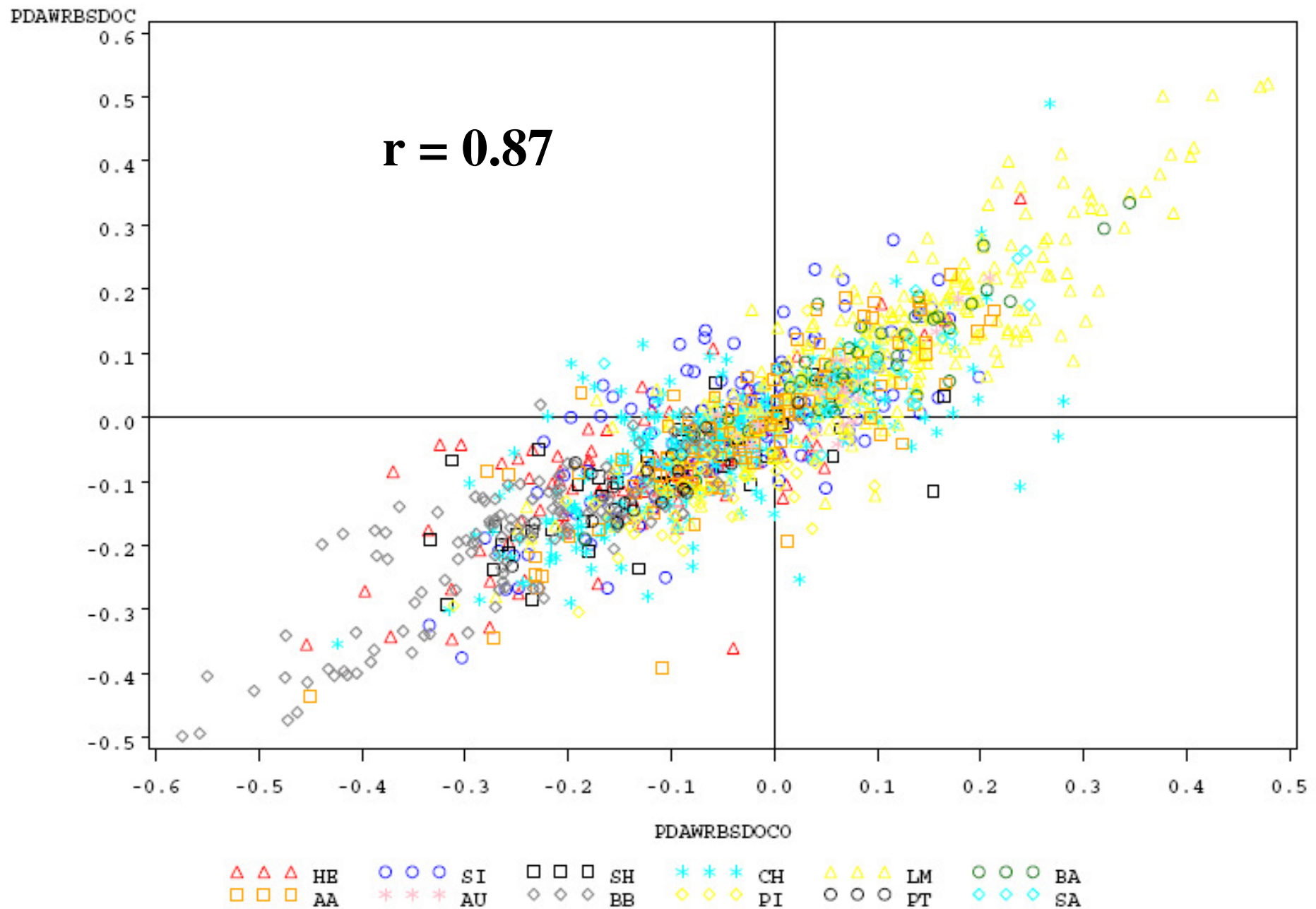
Records in evaluation

Primary breed	Total anims	FARMER Scored	FARMER scored Pedigree	FARMER scored xbred	LINEAR Scored	LINEAR scored Pedigree	LINEAR scored xbred
AA	6,983	5,274	427	4,847	1,709	1,055	654
AU	1,134	358	88	270	776	676	100
BA	2,144	1,325	40	1,285	819	394	425
BB	8,722	6,092	21	6,071	2,630	248	2,382
CH	48,461	31,752	1,066	30,686	16,709	11,691	5,018
HE	4,203	2,111	320	1,791	2,092	1,932	160
LM	60,230	24,496	790	23,706	35,734	30,227	5,507
PI	470	255	4	251	215	175	40
PT	435	212	7	205	223	142	81
SA	1,891	1,120	44	1,076	771	675	96
SH	1,008	747	89	658	261	129	132
SI	12,270	5,999	396	5,603	6,271	4,659	1,612

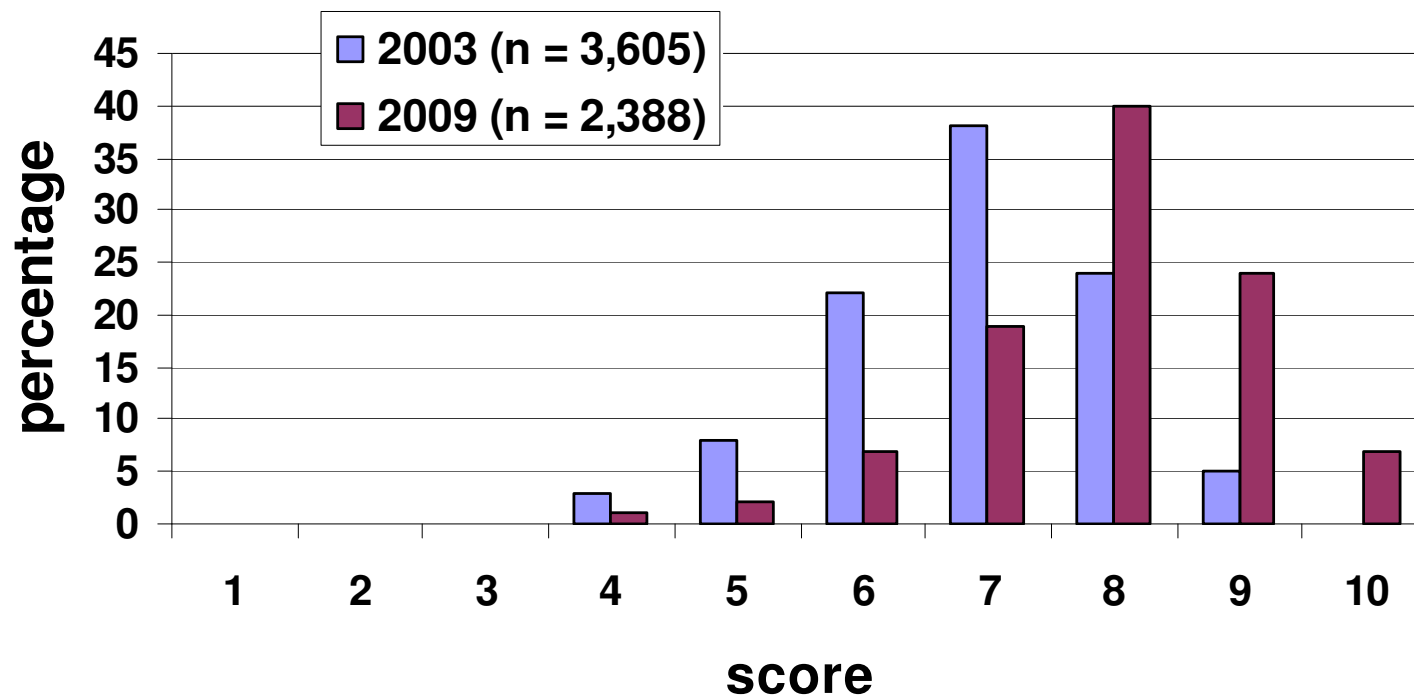
Effect of correction for condition score on linear score records



Effect of omitting animal welfare where linear score available



Distribution of pedigree linear scores 2003 vs 2009

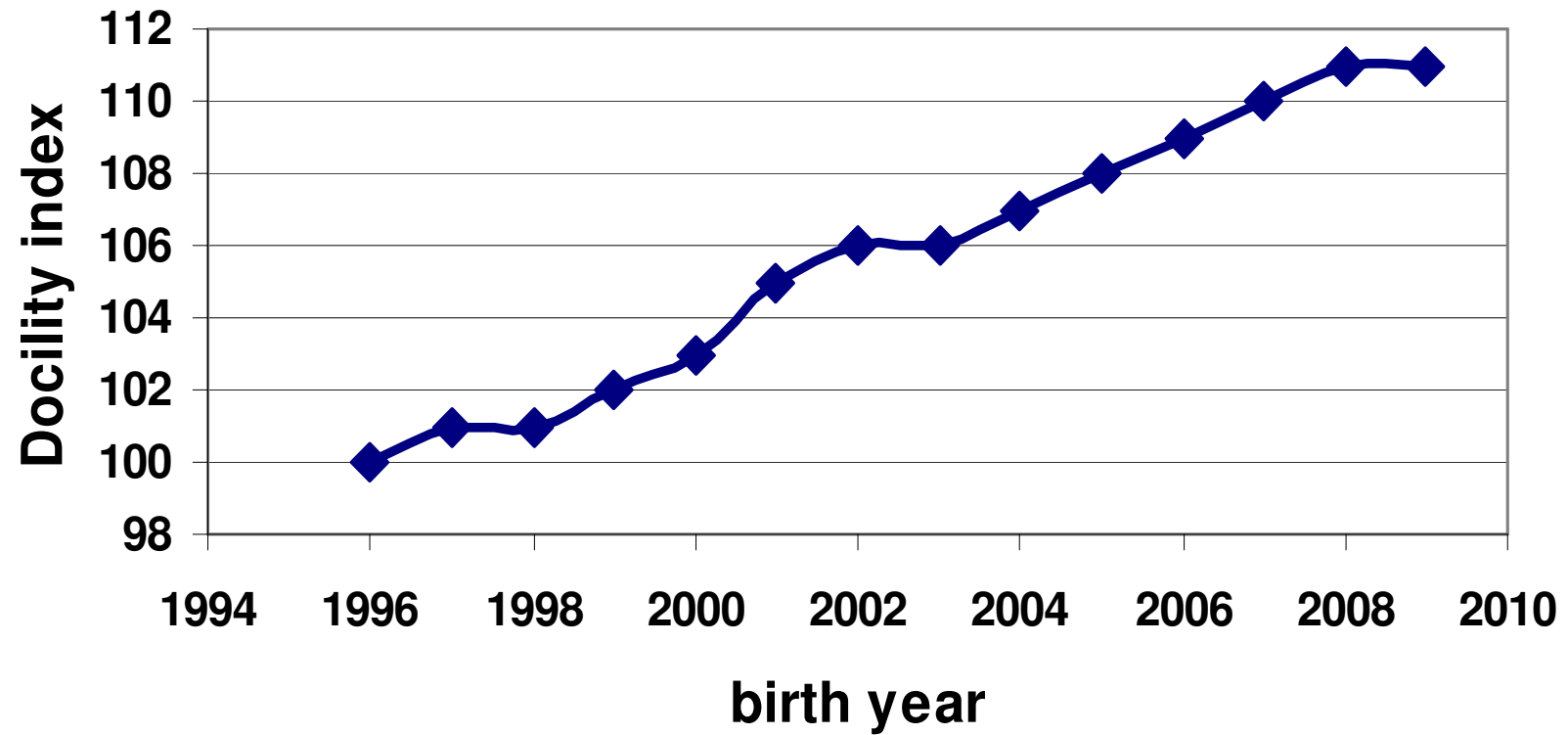


More variation when scoring crossbreds

(avg = 6.85 in 2003 vs 7.97 in 2009)

~2,500/9,872 born in 2008 = only 30% of population measured

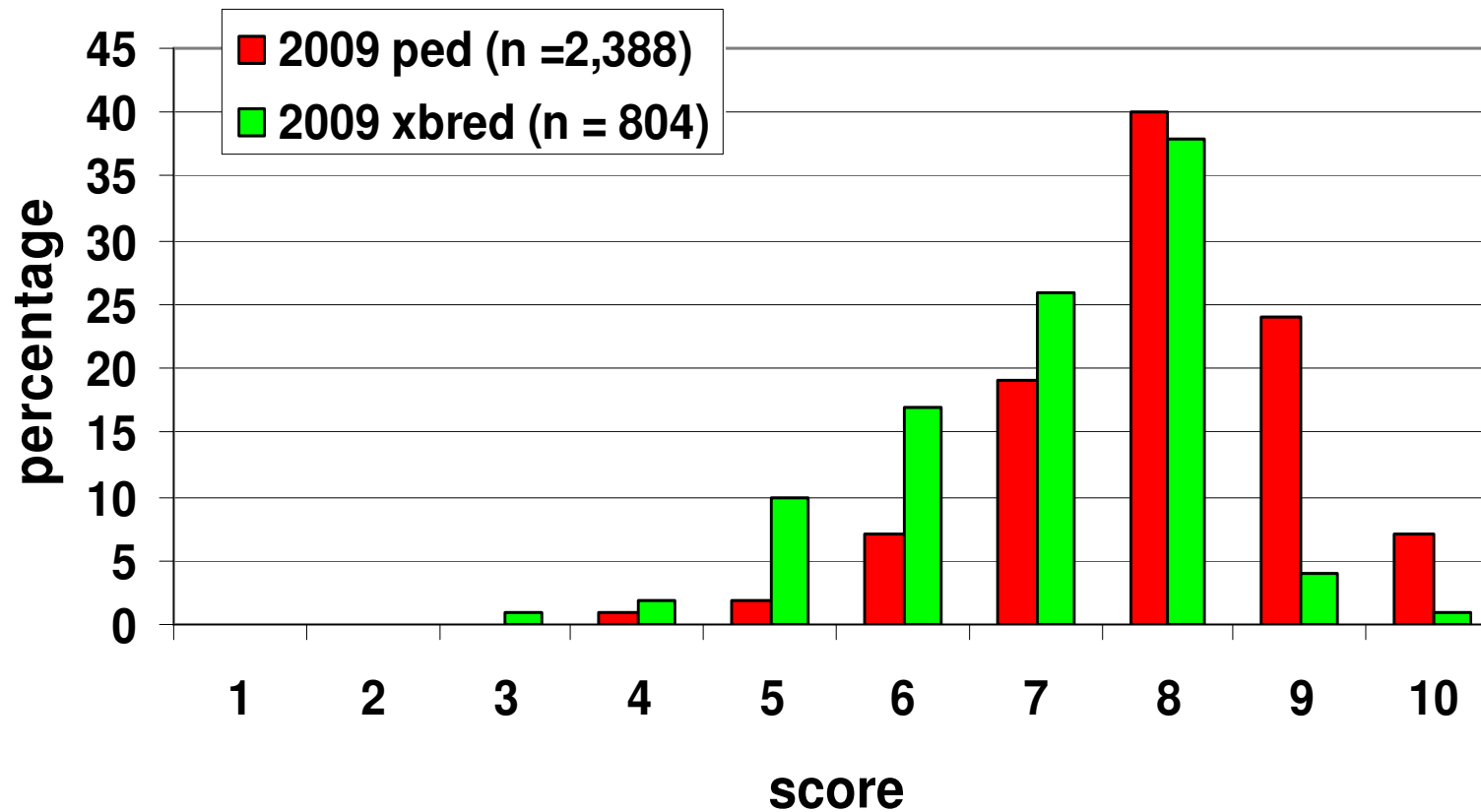
Genetic trend by birth year for pedigree animals on OLD BLUP



Problem case

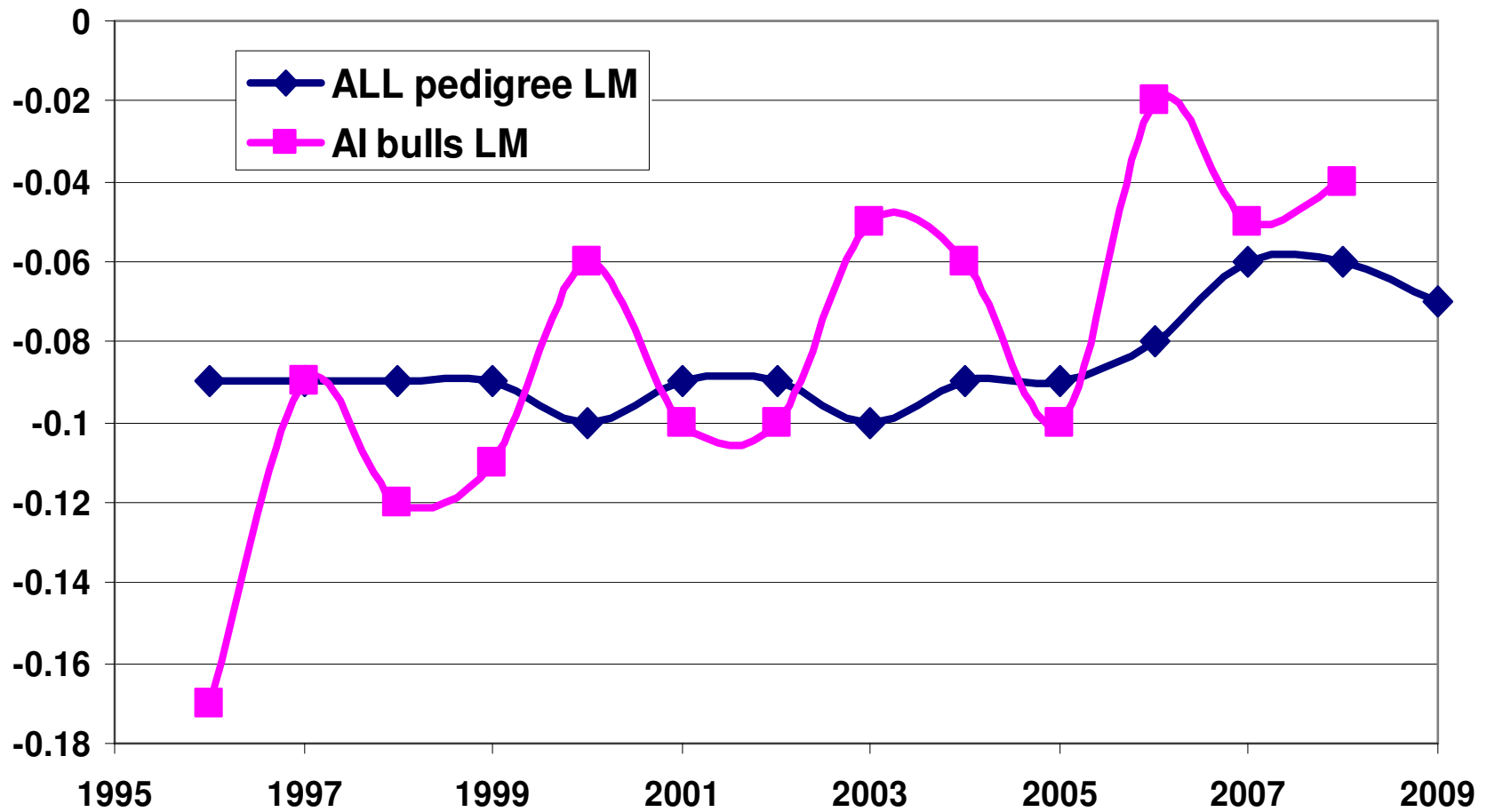
Animal	Animal docility score	Animals index pre scoring	Animals index post scoring	Sire index pre scoring	Sire Rel pre scoring	Sire index post scoring	Dam index pre scoring	Dam index post scoring
1	9	101	102	88	79%	89	114	114
2	9	93	96	105	92%	106	82	82
3	8	106	93	103	1%	92	108	106
4	8	103	91	103	1%	92	104	102
5	10	114	122	123	98%	123	105	108
6	9	108	109	105	39%	104	112	113
7	10	127	130	127	95%	127	127	129

Distribution of linear scores pedigree vs xbred 2009



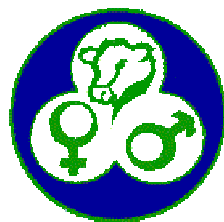
More variation when scoring crossbreds
(std = 1.24 for xbreeds vs 1.13 for pedigrees)

NEW docility genetic trends for all pedigree and AI bulls



Recommendation – Implement new across breed docility.

- Old system.
 - Limousin only.
 - Crude model, “good system for well proven AI sires”newer animals.....dams???
 - Can ICBF stand-over?
- New system.
 - All breeds, includes cross-bred linears & commercials.
 - More accurate model (e.g., CG of 7 or more, correction for CS...)
 - Trait of growing importance for industry.



IRISH CATTLE BREEDING FEDERATION

New Euro-Star Templates.

1st October 2009.

Proposition.

- Catalogue page in five distinct sections.
 - Section 1 – Ancestry
 - Section 2 - Euro-Star Indexes (within & across breed).
 - Section 3 – Individual linears (within breed)
 - Section 4 – Linear composites (within breed)
 - Section 5 – Additional comments.
- A number of menu options for creating catalogue.

Ancestry

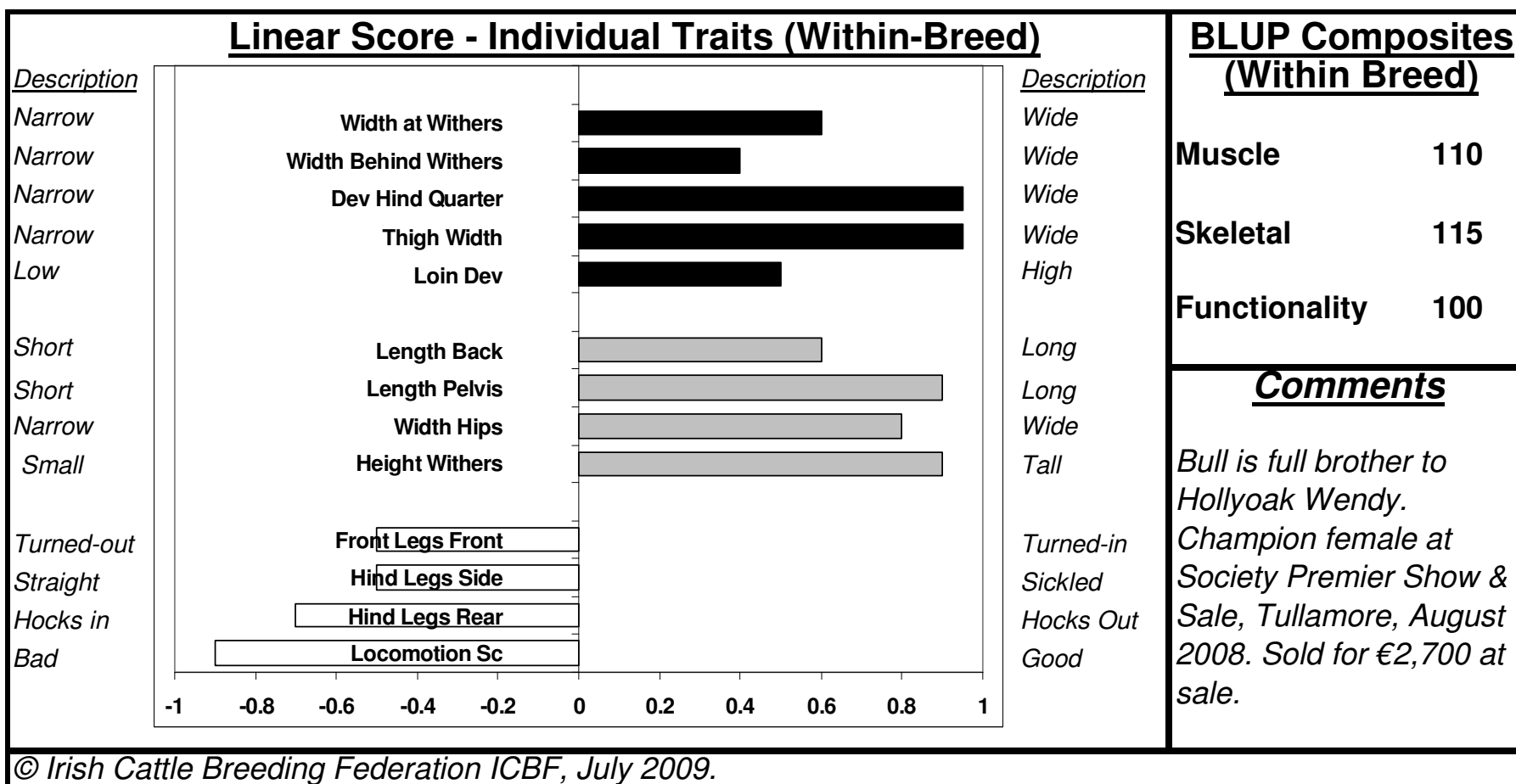
Lot 52 Hollyoak Watson Breed: Blonde d'Aquitaine
IE211088670230 **DOB: 01-Oct-2005** **Male**
 Owner: Daniel O'Sullivan - Ahenure Callan Co. Kilkenny

Sire: Fallou (FLL) BA8177132385 SBV = €120 (40%)	Nestor SBV = €97 (60%)	Etain
		Gaufrette
	Tigresse SBV = €43 (23%)	Iguskia
		Leontine
Dam: Stonehouse Sabrina VHB396585 SBV = €80 (40%)	Whistley-Dollar SBV = €97 (60%)	Abricot
		Wharfedale Uberta
	Newcastle Leah SBV = €45 (22%)	Kilboy Frank
		Abbey Triona

Euro-Stars

Within Breed		Euro-star traits			Across Breed	
% Rank	Star rating		Index	Data Rel %	Star rating	% Rank
81%	★★★★★	Suckler Beef Value (SBV)	€108	37%	★★★★★	85%
		<u>Beef Value (per calf born)</u>				
19%	★	Calving Traits	-€4	34%	★★★	56%
90%	★★★★★	Weanling Export	€30	41%	★★	36%
88%	★★★★★	Beef Carcass	€58	42%	★★★	48%
		<u>Replacement Value (over daughters lifetime)</u>				
50%	★★★	Daughter Fertility	€140	6%	★★★★★	89%
57%	★★★	Daughter Milk	€20	6%	★★★	50%
		<u>Other key traits (per calf born)</u>				
50%	☆☆☆	% Difficult Calving	6%	46%	☆	52%
50%	☆☆☆	Docility	104	47%	☆	48%

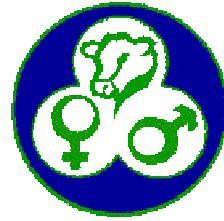
Linear's + Comments



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Creating catalogue – Menu Options.

- Number of options (examples);
 - ALL available information (default).
 - All information (5 sections) available for ALL animals.
 - Drop composites – ALL animals.
 - All information (except composites) available for ALL animals.
 - GROW animals.
 - All information available for GROW animals only.
 - Animals with no GROW record = Just Ancestry + Comments.
 - Shortened catalogue.
 - Ancestry + Euro-Star Indexes
 - Sale of bulls for commercial users.



IRISH CATTLE BREEDING FEDERATION



Beef Open Day Update

Stephen Conroy, ICBF

1st October 2009

Date

Saturday, 10th October 2009

10:30 am to 3:00 pm

Objectives

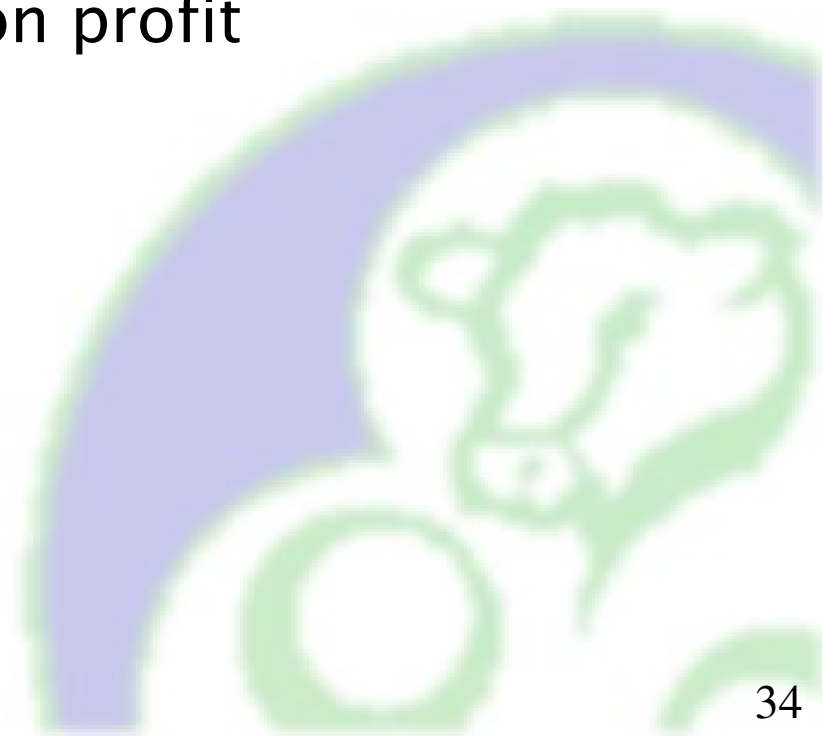
1. Inform beef farmers on recent developments in beef breeding
2. Promote Tully



Key Topics & Layout

6 presentation stands (~15 mins)

- Welcome & Overview
- Euro-Star indexes focused on profit
- Managing Herd Health
- Tully & GENE IRELAND
- HerdPlus & GROW services
- Genomics



Key Topics & Layout (cont'd)

General area

- Livestock (35 in total), Beef Herdbooks, AI Companies, Teagasc (BETTER farm program), FBD (sponsors)
- Information for display must be in Tully by Tuesday, 6th October.

Livestock

- Bulls involved in the current intake will be on display
- Finished test on 22nd September
- Performance figures now available
- Potential AI bulls
 - Photo's displayed on the day
- Bulls are for sale by private treaty
- Preparation costs covered by ICBF

Launch and Invitations

1. Launch in IFJ – 17th September
2. Invitations
 - Distributed within the industry, (e.g. HerdBooks, Teagasc, AI companies)
3. Details of layout & topics covered were sent to those participating on the day

4. Advertising

Trade Stands.

- All of the major beef cattle breeding companies will be present on the day, including herdbooks, AI companies, Teagasc & ICBF.
- Each will have tailored information to support your breeding and management needs. For example;
 - Information on latest AI bulls within each breed.
 - Information on how to get your bull into Tully & GENE IRELAND, including advice on sires of sons and health testing requirements (for cows and young calves).
- Each of these organisations will be located in one central area, to facilitate interaction and discussion on the day.

Don't Miss this Important Event.

- This is a critical event for all pedigree breeders and commercial beef farmers. It will provide you with;
 - Cutting edge tools that will help improve the breeding and management of your beef herd.
 - An understanding of the critical role that Tully & GENE IRELAND provide in driving profit within our National beef industry.
- Complimentary tea and sandwiches will be provided on the day, with donations in lieu of COPE foundation. We look forward to seeing you, your friends and family at Tully on Saturday 10th October.

For more information on the open day, please contact Stephen Conroy or Niall Kilrane at 045 521573.

GENE IRELAND[®] AUTUMN 2009

The following are the list of bulls on the current GENE IRELAND Autumn 2009 program.

RWB (SBV 645)



by Wedderburn Network

OWB (SBV 620)



by Colleton Victor

WGA (SBV 652)



by Oubou

RHF (SBV 455)



by Rensselaer

RWV (SBV 433)



by Rensselaer King

CZB (SBV 484)



by Buffalo Lake Bloodstock

PPG (SBV 458)



by Green Precision

RH (SBV 6184)



by Nelson

KOP (SBV 6185)



by Boley Haze Ulysses

PL25 (SBV 681)



by Muzken

SHU (SBV 6123)



by Muz

BHU (SBV 6168)



by Rensselaer

Tully & GENE IRELAND[®] Breeding future Profits

Beef Open Day

Saturday, 10th October 2009

Tully Bull Performance Test Station, Kildare
(beside National Stud)
10.30 AM – 3 PM.



An important day in the calendar for pedigree and commercial breeders that will provide the relevant information, to allow you make the best breeding decisions for your herd, in order to maximise profit.

The day will include;
A series of stands that will help give you the edge in beef breeding including; New Beef Euro-Star Indexes, Herd Health Advice, Tully & GENE IRELAND program, HerdPlus & Grow Services & Genomics.

A display of livestock from the current Tully intake. These young bulls will be available for purchase on the day.

Trade stands from all of the major beef breeding companies, including herdbooks, AI companies, Teagasc & ICBF.

Don't miss this important day for beef breeding!

Leaflet

- . 11,000 produced in total
 1. Distributed at ploughing (3500) through Herdbooks
 2. Clients participating in GEN€€ IRELAND HerdPlus & GROW
 3. Beef breeders with bulls in Tully over the last 5 years
 4. Any herd with 5 or more pedigree animals
 5. Breeders with eligible bulls (1700 in total) for the Autumn intake

Additional advertising

- Media
 - Irish Farmers Journal
 - Advertisement (24th Sept, 1st & 8th Oct)
 - Feature
 - Farming Independent
 - Advertisement (29th Sept, 6th October)
 - Northern and Scottish newspapers
 - Advertisement
 - Texts & e-mails
- Booklet

Other preparations

- Facilities
- Catering
 - Complementary refreshments
- Signs giving directions to the event
- Car parking & attendants
- Toilet facilities

Next Intake

- Enter Tully on 21st November 09
- 1762 bulls were identified
 - 5 Star SBV, 3 Stars M&F and born between 1st Dec 08 and 31st April 09.

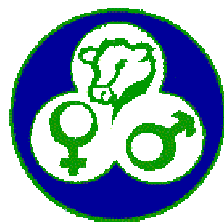
Table 1. Eligible bulls for the Autumn 09 Tully GENE IRELAND program

Breed	AA	AU	BB	BA	CH	LM	PT	PI	SA	SI	SH	HE
Number of bulls	121	45	25	8	528	645	14	3	26	136	24	187

- Applications forms sent out on 30th September 09
- Returned on 15th October 09

Thank You!





IRISH CATTLE BREEDING FEDERATION

Breed Development Proposition

1st October 2009.

Overview

- ICBF objectives; Increase genetic gain (€) for Irish beef farmers and industry.
- Genetic Gain – 3 key elements.
 - Database = Animal Events & Suckler Scheme...
 - Euro-Star Indexes = Science-based, profit-focus....
 - GEN€ IRELAND = Focused breeding program...
 - These systems are now in place.
- Must promote engagement with these systems – breed development proposition.
 - A key part of ICBF's strategy for next 5 years.

Trends in Number Records – Main Breeds.

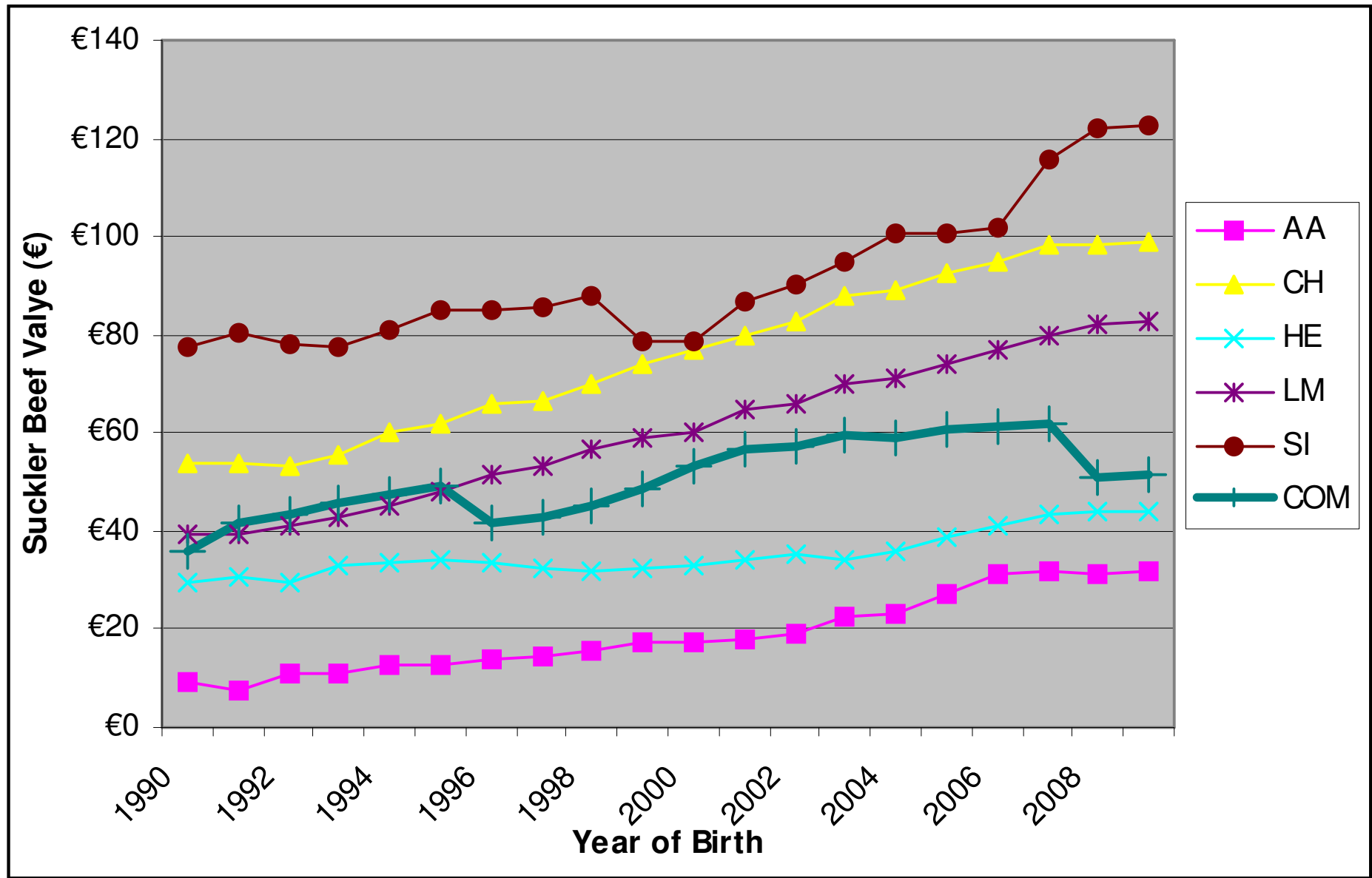
Year of Birth	AA	CH	HE	LM	SI	COM
1999	3,093	8,595	3,736	4,532	3,945	13,144
2000	2,788	10,068	2,767	5,625	3,790	13,998
2001	2,951	11,181	2,610	6,308	3,268	16,296
2002	3,080	11,576	2,596	6,915	3,069	21,293
2003	3,282	10,786	2,603	7,305	2,781	29,436
2004	3,718	11,799	3,116	8,256	3,228	71,860
2005	4,282	11,879	3,290	9,056	3,562	96,017
2006	4,739	11,778	3,512	9,808	3,732	126,093
2007	3,773	11,389	3,514	10,105	3,275	139,589
2008	5,468	14,553	4,150	12,863	3,819	738,746
2009	2,811	8,514	2,344	7,261	2,234	498,140

G€N€ IRELAND – Bulls tested

Code	Name of Bull	Brd	SBV	% Rk	M&F	% Rk	Straws	Insems	Births	Scores
ANX	Ross Anon	BB	€52	7	-€260	4	700	515	46	0
RSA	Ross A	BB	€128	91	-€125	65	700	301	8	0
CF61	Alex	CH	€173	100	-€12	100	700	450	274	65
CF85	Balthazar*	CH	€152	99	-€115	90	700	848	520	68
MVO	Mandela Veron*	CH	€87	33	-€98	95	700	1960	1130	75
CF71	Balthazar	CH	€124	10	-€189	51	700	374	169	8
AZA	Dovea Alcazar	CH	€109	68	-€178	47	700	471	155	3
KLU	Kilbline Cupidon	CH	€184	100	-€174	49	700	541	0	0
AIZ	Arti	LM	€98	80	-€57	21	700	435	408	88
FL21	Arita - Ben	LM	€108	89	€15	91	700	571	356	93
CVV	Castlevew Virulent	LM	€132	99	€4	84	700	830	440	69
MBV	Milbrook Vic	LM	€121	96	-€45	32	700	425	455	15
FL24	Bibao	LM	€70	36	€74	100	700	450	309	5
FL23	Ambiteux	LM	€49	9	-€5	76	700	449	101	0
RBV	Roundhill Botan	LM	€142	100	€57	100	700	496	4	0
CWI	Castlevew Casino	LM	€120	96	€38	98	700	474	1	0
RKZ	Celtic Rock	SI	€165	97	€122	50	700	440	286	93
DRU	Derrough Samual*	SI	€159	95	€77	17	700	1705	939	76
IS4	Seepa Tee Jay*	SI	€111	45	€63	12	700	1297	557	17
SEV	Seaview Tommy	SI	€145	87	€179	95	700	973	364	1
Average			€121	72		64	14000	14005	6522	676

* bulls also tested outside G€N€ IRELAND program

Genetic Trends – SBV (€)



Increasing Genetic Gain.

- Current rate of gain = $\sim \text{€}5/\text{cow}/\text{year}$.
- Optimal rate of gain = $\text{€}20/\text{cow}/\text{year}$.
- Difference of $\text{€}15/\text{cow}/\text{year}$
- Worth $\text{€}100$ million to Irish beef farmers by 2020.
- How do we get to $\text{€}20/\text{cow}/\text{year}$?

Optimal Breeding Programs

Meuwissen et al 2006

	Main breeds	Smaller breeds
Optimal genetic gain (€/cow/year)	€20	€15
Active pedigree females	5,000	500
Selected elite AI sires.	20	7
Selected elite bull mothers	200	100
Performance test young bulls (Tully)	100	50
Progeny test young bulls (G€N€ IRE€)	20	10
Daughters per bull (G€N€ IRE€).	100	100
Proven bulls returned to AI/year.	2	1

G€N€ IRLAND Beef Advisory Group.

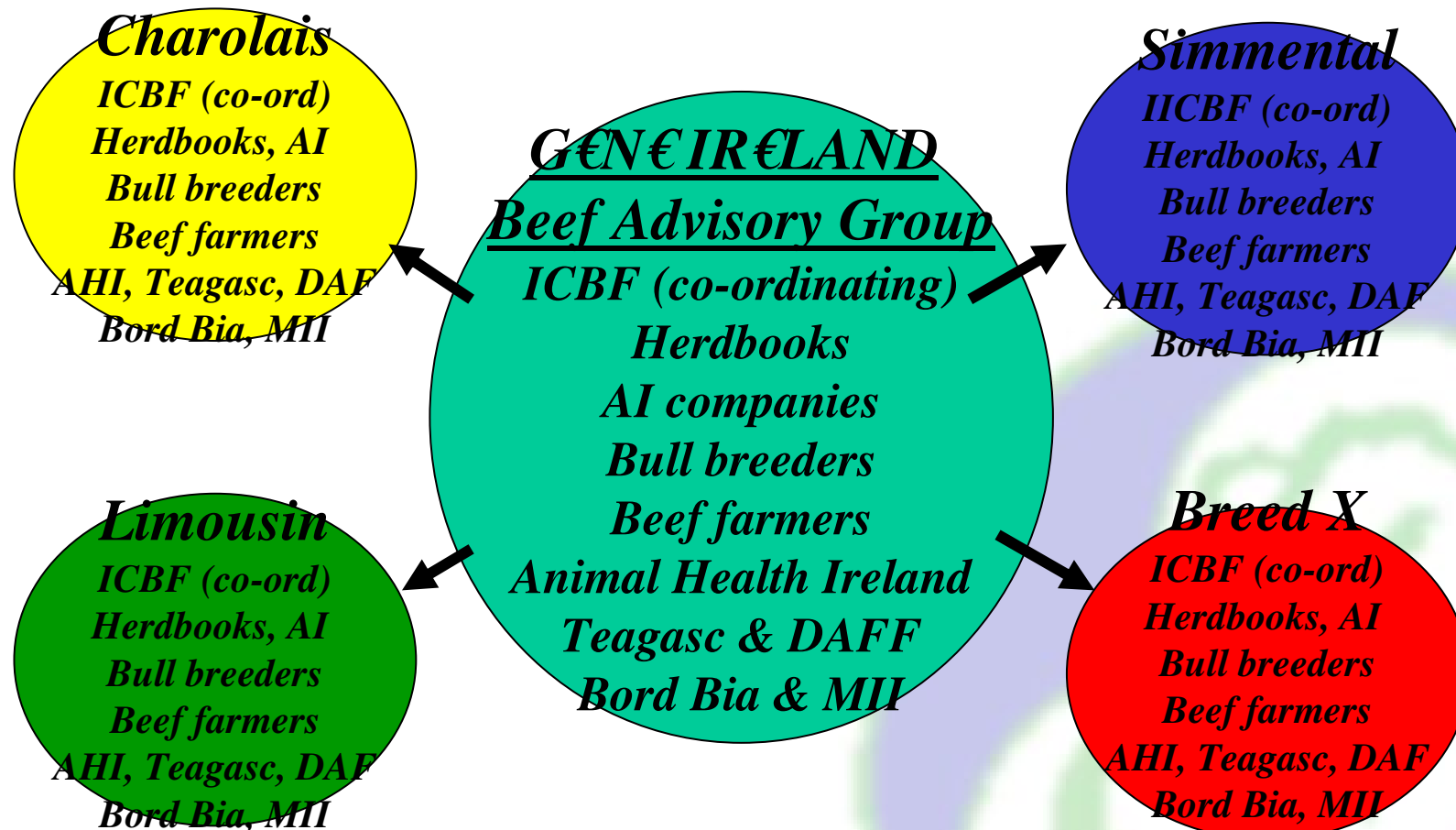
- Establish a new G€N€ IRLAND Beef Breeding Advisory Group.
 - Expand terms of reference for “Tully Advisory” group.
 - Replace current beef industry “consultation” meetings.
- Include all key stakeholders;
 - ICBF (co-ordinating role).
 - Herdbooks
 - AI companies
 - Bull breeders
 - Commercial beef farmers
 - Animal Health Ireland
 - Teagasc & DAFF
 - Bord Bia & Meat Industry Ireland



Beef Breeding Improvement Terms of Reference

- Develop framework for beef breeding improvement.
 - Industry level – National beef herd.
 - Breed specific level – Sub-groups for each breed.
- Set targets & monitor progress relative to defined targets for breed improvement.
 - Optimal breeding programs (Meuwissen et al)
- Provide a central forum for development, discussion and dissemination of key research & advice to beef breeding industry.
 - Genetic evaluations, animal health, advice.....

Breeding Advisory Groups & Sub-groups.



Operations - Example

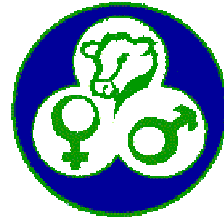
- Industry group – propose to meet 2-3 times per year.
 - Define template, set targets, monitor progress, update knowledge, receive feedback....
- Breed specific sub-groups – propose to meet 2-3 times per year.
 - Periods between industry group meetings.
 - Implement plans, monitor progress, disseminate knowledge, provide feedback.....
- Core of key people on both groups.
 - ICBF, herdbook, AI, breeders, farmers, Teagasc...

Tools to get started.

- Key reports developed from database;
 - Industry & breed fact sheets.
 - Births, strengths & weaknesses.
 - List of **active** elite sires.
 - High SBV sires & number progeny.
 - List of **enthusiastic** bull breeders
 - HerdPlus, herd size, weighed & scoring in correct age range & Tully participant.
 - List of **elite** females in these herds.
 - High SBV cows in bull breeder herds.

What next?

- Call meeting of GENE IRELAND Beef Advisory Group.
 - ICBF, herdbooks, AI companies, bull breeders, commercial users, Animal Health Ireland, Teagasc, Bord Bia & Meat Industry Ireland.
- Develop terms of reference for program.
- Establish “sign-in” by stakeholders.
 - Commitment to initiative.
- Roll out program to industry including beef breeding sub-groups.



IRISH CATTLE BREEDING FEDERATION

Latest Proof Run Feedback.

1st October 2009.

Key Questions

- 1. On average how much did the average Suckler Beef value fall?
- 2. Has the re-valuation of SBV's changed the rankings of bulls?
- 3. What was the reason for the proofs falling?
 - *(i) Access to information on each herd of slaughter for all animals in the evaluation.*
 - *(ii) Increase in number of new records.*
- 4. Did the SBV's fall by the same level across all breeds?
- 5. Was there any change in how SBV's are calculated?
- 6. Are we likely to see the same re-calibration of SBV's when more data comes on board?
- 7. Do you think the recent major recalibration over SBV's will make farmers more cautious of using the figures?
- 8. Should ICBF not have flagged to breed societies and farmers that these major changes were coming down the line?

Example Bulls.

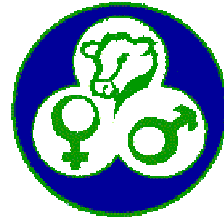
	CF52		LWF	
	March	August	March	August
Average progeny carcass weight (kg)	405	406	332	328
Herd-mate carcass weight (kg)	344	381	347	338
Estimated sire difference (kg)	61	25	-15	-10

Drop in Proofs.

	Old - May 09	New - August - 09	Difference
Angus	€53	€29	€24
Aubrac	€121	€62	€59
Blonde Aquitaine	€136	€58	€78
Belgian Blue	€162	€88	€74
Charolais	€183	€92	€91
Hereford	€71	€43	€28
Limousine	€150	€79	€71
Piemontese	€93	€41	€52
Parthenaise	€113	€66	€47
Saler	€131	€63	€68
Shorthorn	€83	€43	€40
Simmental	€184	€116	€68
Commercial cows	€110	€60	€50

Key Learnings.

- Expect changes.
- We do not expect them to be as large in the future.
 - Access to slaughter herds – major recalibration.
 - What about maternal traits....?
- Need for clear communication and feedback regarding all proposed changes.



IRISH CATTLE BREEDING FEDERATION

Herdbook Access to data on commercial animals.

1st October 2009.

Access to data?

- What access to herdbooks have to Euro-Star data in members herds?
 - Now: All pedigree animals in that herdbook.
 - Currently can access all males through ICBF bull search.
 - Future: All commercial animals in that herd?
 - Where the sire is from that breed?
 - Does a member need to grant access to this data on his commercial animals?
 - New “on-line” approach to manage access.