



UPDATE for period 25th June – 1st July 2005

1 Important Dates

- **Thursday 7th July.** Beef Genetic Evaluation Consultation meeting in Abbeyleix Manor Hotel.
- **Wednesday 7th September.** Beef & Dairy Genetic Evaluation Consultation meetings in Abbeyleix Manor Hotel.
- **Thursday 15th September.** ICBF Board Meeting.
- **Tuesday 27th, Wednesday 28th & Thursday 29th September.** Ploughing Championships, Midleton, Co. Cork.

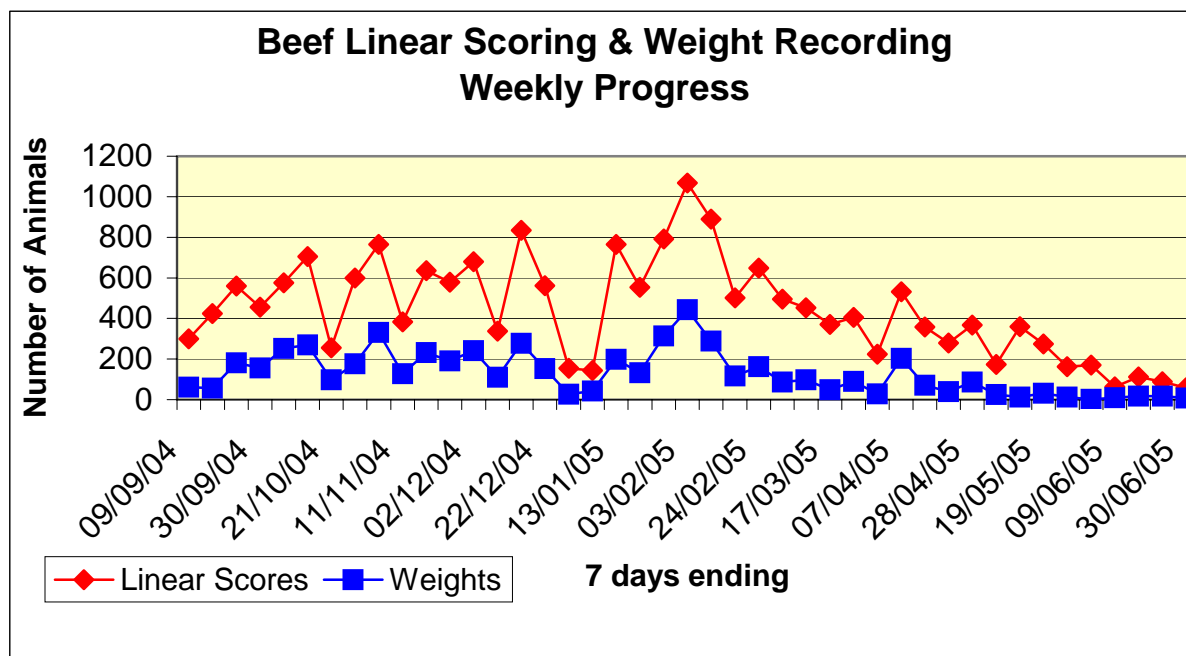
2 Dr Victor Olori - thanks

Today Victor finished working for ICBF and he starts working in a Poultry breeding company based in Edinburgh on Monday.

Over the last six years Victor has made a major contribution to Irish cattle breeding. Initially he was responsible for developing the lactation curves that are at the heart of the milk recording system used in Ireland. He then took over the dairy genetic evaluation system for dairy cattle and over a number of years played a key role in establishing the system that operates today for both dairy and beef. That our systems are able to provide valuable breeding information as and when required by the Irish breeding industry is in no small part due to Victor's dedication and skills.

We thank Victor for his magnificent contribution.

3 Beef Linear Scoring & Weight Recording



4 Tully

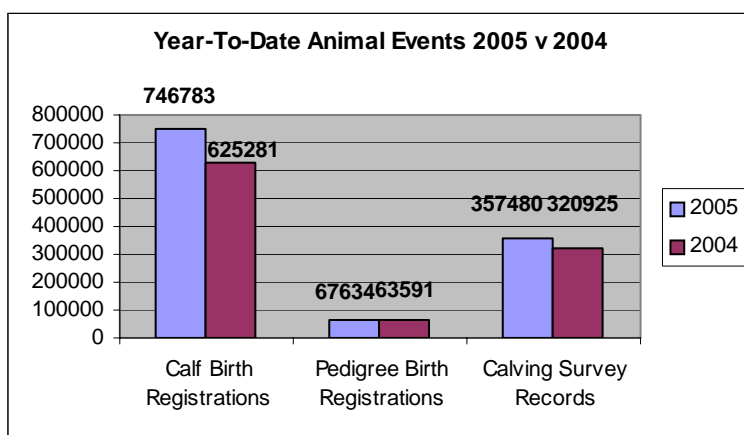
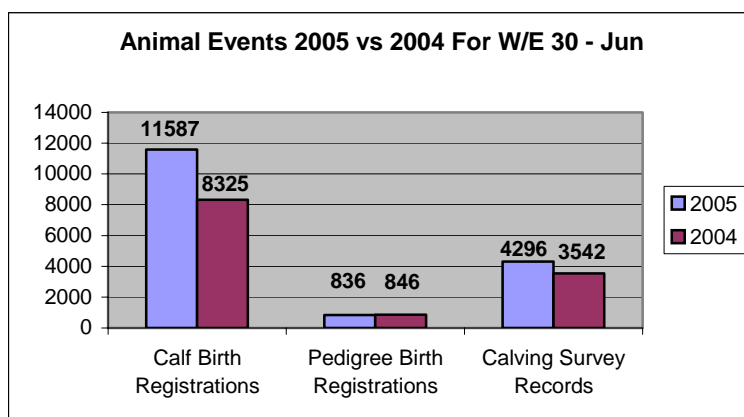
- Applications for the next intake of bulls to Tully will be sent out to breeders from the 11-7-05. This intake is for bulls born from the 1-11-04 to the 29-1-05, which will be offered for sale on the 4-3-05. A decision will be made at the Tully meeting on the 7-7-05 as to which evaluations the bulls will be selected on.



- FBD have again kindly agreed to sponsor all sales in 2006.
- A meeting will be held with the Department of Agriculture on the 5-7-05 to sort out the future health testing of bulls entering Tully.
- A group of 6 vets from France visited Tully on the 30-6-05.

5 Database Update

- 83 New Herds added to the database in the past week.
- Comment from the staff in the Animal Events (AE) office: *"Calf registrations are down at the low levels one would expect at this time of year. New herd permission forms were up this week, with Dairygold AI returning quite a few forms."*
- 4964 Teagasc ICBF permission forms have now been returned by Teagasc clients.
- Testing is progressing on the new linear scoring application, and Clive Jennings has taken a handheld for testing in the field.
- Work on the generation of Sales and Show Catalogues from the database is on-going. The pilot show will be Dunmanway Agricultural Show next week and they have used some of the functionality to support the preparation for the show.



- The returned feedback forms on the beef calving reports have indicated that 90% of those receiving the reports found them Useful (4) or Extremely Useful (5).
- The Norwegian Red herdbook details for those animals participating in the Moorepark trials have been loaded to the database.
- Work on a female 'Lifetime Performance Sheet' has been completed for the Limousin society and testing will be finalised early next week.
- The re-design of the ICBF website is continuing, which will incorporate a new and improved 'bull search' function.

6 Genetic Evaluations

Over the last three weeks the main focus of the animal evaluation team has been to ensure Ross Evans and Francis Kearney have the knowledge needed to ensure the evaluation systems run smoothly after Victor Olori leaves. Today is Victor's last day with ICBF. The handover process has gone very smoothly and our focus is now on the work that needs to be completed over the next two months.

Attached is a report prepared by Ross and Francis into the reason why a number of Dutch bulls had lower EBIs in May than in February.



At the animal evaluation team review today the following plan was agreed:

Key Dates:

Beef Industry Meeting	7 th July 2005.
Interbull routine run	26 th July 2005.
Domestic proof run	19 th August 2005.
Interbull test run	1 st September 2005.
Beef & dairy industry meetings	7 th September 2005.

Beef production traits:

- Prepare beef performance proofs for beef industry meeting. Specific focus on;
 - Average, ranges & bull listings (AC)
 - Comparison “old sire model” vs. “new animal model” (RE)
 - Genetic trends for beef performance traits - within and across breeds (FK)
- Load latest proofs and assist in development of beef production reports for distribution to herds (including new linear type proofs)

Linear Type traits:

- Extract linear type data.

Milk, fat & protein yield traits:

- Forward Interbull files for milk production traits.

Udder health traits (SCC):

- Sign-up for Interbull linear services for Udder Health (and calving performance & fertility)
- Forward dairy production file to CR Delta.
- Develop genetic evaluation model and estimate genetic parameters.
- Complete BLUP run and load SCC proofs to Iris.
- Prepare domestic files and files for Interbull test run.

Calving Interval & Survival traits:

- Complete work for “foreign sires” (blending of proofs) & repeat for new countries.
- Prepare files for publication.
- Prepare files for Interbull test run. Test run to consider the following changes to routine evaluations for CIS traits; (i) Across Breed, (ii) Lifespan, (iii) Linear type traits, (iv) HYS, (v) CI edits (300-800 days), (vi) Heterogeneity of variance, and (vii) New genetic parameters.

Calving Performance:

- Confirm date of last “official run”.
- Prepare calving performance files for Interbull test run.

Genetic Conservation:

- Irish Draught Horses;
 - Survey draft horse breeders
 - Repeat “conservation” analysis including US and UK studbooks.
- Kerry Cattle
 - Migrate Kerry herdbook into Iris
 - Conduct inbreeding analysis for candidate bulls for AI.



7 Milk Recording

Milk Recording Organisation	2005 Herds Recorded Week 24/06/05 - 01/07/05	2004 Herds Recorded Week 24/06/04 - 01/07/04
Progressive	379	477
Dairygold	364	301
Kerry	222	209
SWS	136	173
Connacht	25	30
Arrabawn	2	30
Tipp	21	34
Others (Donegal, OAD)	0	N/A
Total	1,149	1,254

Milk Recording Organisation	HERD Count		COW Count	
	2005 No. Herds Owners Year to Date Jan 01st - Jul 01st	2004 No. Herd Owners at Year End	2005 No. Cows Year to Date Jan 01st - Jul 01st (All)	2004 No. Cows at Year End (Min 2 tests)
Progressive	2,065	2,231	140,484	145,976
Dairygold	1,507	1,620	92,292	95,817
Kerry	1,062	1,098	64,454	63,995
SWS	934	964	52,564	53,970
Tipperary	141	147	8,951	8,851
Connacht	110	121	6,799	7,120
Arrabawn	107	120	6,652	7,005
Others (Donegal/OAD)	27	N/A	2,756	N/A
Total	5,953	6,301	374,952	382,734



8 Breeds

Breed of Sire	Number of calves born in 2005
FR	253,914
AA	81,278
CH	64,713
LM	63,829
HE	49,299
BB	22,043
SI	21,725
MO	8,247
JE	3,877
SH	3,568
RB	3,522
HEX	2,711
SA	2,267
BA	1,769
AAX	1,752
LMX	1,523
CHX	1,305
AU	1,186
BS	1,148
MY	966
BBX	912
SIX	710
FRX	672
HO	535
NR	524
SR	470
MOX	321
PT	262
AY	242
PI	209
NO	152
JEX	151
GS	133
MYX	123
RBX	116
KE	58
SHX	19
Total	596,251

- 2005 is the second year in which Animal Events has been widely available to both dairy and beef farmers in Ireland.
- These two tables show a breakdown of the breed codes farmers have used for the breed of sire (table on left) and breed of dam (table on right) for the 596,251 calves born in 2005 and registered on the ICBF database so far.
- Holstein Friesians (breed code FR) continue to dominate accounting for 74% of dams and 42% of sires.
- The number of calves from Beef breed dams is now substantial at over 20% with beef sires accounting for over 47% of calves.
- There are a large number of crossbred dams on the database.
- The breed composition of the Irish dairy and beef herd is unique with the high percentage of cross bred animals. It is this feature of the Irish cattle population which enables ICBF to readily provide genetic evaluations that are comparable across all breeds.

Breed of Dam	Number of calves born in 2005
FR	439,298
CH	20,846
LM	18,135
LMX	15,089
CHX	12,123
SI	11,422
SIX	9,774
AA	8,912
HE	8,188
HEX	6,944
AAX	6,443
MOX	5,295
MO	4,721
SH	4,135
FRX	3,922
BBX	3,887
BB	2,823
RBX	1,532
SHX	1,445
HO	1,310
RB	1,246
JE	1,172
JEX	1,013
MY	966
SA	863
MYX	779
SAX	639
BAX	539
BA	473
BS	402
AY	357
BSX	292
AU	266
SRX	194
NOX	193
NO	166
NRX	107
KE	58
NR	51
RMX	49
RDX	46
PI	35
PT	31
PTX	26
PIX	20
SR	14
RM	10
Total	596,251

Brian Wickham Chief Executive Irish Cattle Breeding Federation Soc. Ltd, Highfield House, Shinagh, Bandon, Co. Cork, Ireland, Phone office +353 (0)23 20222, mobile +353 (0)86 826 9911 Fax office +353 (0)23 20229 E-Mail bwickham@icbf.com ICBF Web site www.icbf.com Assistant: Mary Madden. © Irish Cattle Breeding Federation Society Limited 2005.

Changes to the Genetic Evaluation of Fertility in the Netherlands

When fertility was introduced originally in the Netherlands in 1995 it was based on a single trait sire model for non-return within 56 days (NR56) and the interval from calving to first service (CFI). The need for more accurate proofs led to a new genetic evaluation system for fertility, which was introduced in February 2005. The new evaluations are based on a multivariate animal model for NR56, CFI *and* calving interval (CI) using body condition score (BCS) and milk production traits as predictors.

Effect on bull reliability

The new system has improved the reliability of bull proofs for fertility considerably. Based on 100 daughters in the first lactation maximum reliability reached for any trait in the single trait analysis was 0.58. With the multiple trait analysis and including BCS and milk production as predictors the reliability was increased to 0.79. It is clear that a more accurate proof can be obtained for fertility using the new system.

Effect on genetic trend

Genetic trends were compared for both models and are summarized in Table 1. For both non-return with 56 days (NR56) and calving to first service (CFI) the genetic trend was larger with the animal model. The estimated genetic trend for both NR56 and CFI is underestimated when using the sire model.

Table 1. Genetic trend for traits using the sire and animal model in the Netherlands

Model	NR56 (%)	CFI (days)	CI (days)
Sire	-0.28	0.23	N/A
Animal	-0.40	0.65	1.45

Effect on bull proofs in Ireland

For bulls without daughters in Ireland, a set of conversion equations (calculated after each evaluation) are used to express bulls' breeding values for fertility on the Irish scale. Due to the time lag in the availability of data from the Netherlands, the converted Irish proofs represent the breeding values of the Dutch bulls from the previous evaluation. For example, Irish proofs for Dutch bulls in the May '05 evaluations are based on the proofs from the Dutch Feb '05 evaluation. The new Dutch fertility proofs were introduced in the Netherlands in Feb '05. However, the net effect of the new evaluation system in the Netherlands did not appear in their Irish proofs until May '05.

The new evaluation for fertility has resulted in a decrease in bull breeding values for fertility. However, the reliability of these bulls has increased. A summary of the change in Dutch bulls with no daughters in Ireland as a result of the new evaluation is given in Table 2. The average EBI dropped by €3.2. There was little difference in terms of milk production, but calving interval *increased* and survival *decreased* on average. Some bulls changed more than the average as indicated by the minimum and maximum changes between the two evaluations (Table 2). These changes reflect the re-ranking of the bulls in the Netherlands as a result of the change. The reliability of fertility increased by almost 12%.

Table 2. Summary of changes for Dutch bulls with no daughters in Ireland based on the proofs from Feb '05 to May 05.

	Feb-05	May-05	
EBI	22	18.8	
Milk (kg)	241.8	240	
Calving Interval (CI)	0.78	1.09	
Survival (SURV)	-0.22	-0.29	
Fertility Reliability	25.2	41.2	
	Min	Max	Average
Change in EBI from Feb to May	-62.5	117.3	-3.2
Change in Milk (kg) from Feb to May	-455	488	-1.3
Change in CI from Feb to May	-3.86	5.02	0.31
Change in SURV from Feb to May	-2.09	1.87	-0.07

To determine how much a bull changed in the Netherlands as a result of the new evaluation it is necessary to compare the Dutch proofs from the Dutch Nov '04 and Feb '05 evaluations. An example of two such bulls is given below. Both of these bulls' proofs for fertility and durability in the Netherlands reduced dramatically (Table 3). A change of 4 units represents a change of almost one genetic standard deviation.

Table 3. Summary of change in bulls' proofs for two bulls between the Nov '04 and Feb '05 Dutch evaluations.

	Durability	Female Fertility
Genus Matfen (GUF)		
Nov '04	103	101
Feb '05	102	97
Doolhof 12 (DLF)		
Nov '04	104	100
Feb '05	101	97

Summary

The effect of the change in the evaluations for fertility in the Netherlands is an increase in calving interval and a decrease in survival, with the net effect of decreasing bulls' EBI on average. As with any evaluation change, a certain amount of re-ranking will occur. This results in some bulls' proofs changing more than the average. The new evaluations have improved the reliability of the proofs for fertility considerably.

1st July 2005