

1. Important Dates

✚ **Thursday 5th March 2009.** Sheep Ireland Board Meeting, Portlaoise. 14:00 – 16:30.

1 Summary of ICBF Dairy Industry Meeting.

Background.

ICBF held a dairy industry meeting yesterday in Moorepark to discuss the impact of genomic selection on breeding decisions this Spring, and specifically the potential inclusion of these bulls on the ICBF Active Bull List for Spring 2009. The meeting was well attended with some 40 people attending (15 AI, 8 Teagasc/UCD, 8 farmers & 10 ICBF, including board members). A copy of the presentation made to the meeting can be found in the publications section of our website (www.icbf.com).

In preparation for the meeting, a comprehensive analysis of 7 years of ICBF Active Bull lists was undertaken, from first inception in 2002 to the most recent list in Spring 2008. The key findings from the review were as follows;

- The introduction of the EBI and Active Bull Lists in 2002 has helped accelerate genetic gain from €2/cow/year in the period 1990 – 2002, to €5/cow/year for the last 5 years. However, this level of gain is still some way below the achievable target of €15/cow/year.
- The number of AI bred replacements has increased considerably over the past 3 years, from 107k in 2006 to 134k in 2008 (an increase of some 12%/year). However, this figure is still considerably lower than the target figure of 250,000 AI bred replacements per annum.
- Of the 133k dairy replacements born in 2008, only 60% were from sires on the equivalent ICBF Active Bull List (Spring 2007), with the remainder coming from AI sires outside the list.

ICBF Active Bull lists – Options.

For ICBF to achieve its targets (€15/cow/year genetic gain & 250k AI bred replacements), we must ensure that the ICBF Active Bull List is relevant and contains the highest EBI bulls that are available to Irish farmers, through widespread AI. With this in mind, the ICBF team developed 4 potential lists for 2009 for discussion at the industry meeting. These can be summarised as follows;

- *List 1. Daughter proven & 60% reliability.* Bulls must be daughter proven (Interbull milk & fertility proofs) and have a minimum reliability for EBI of 60%. The list is continuation of the current list, with a 2% increase in reliability compared to 2008 (increased to 60%).
- *List 2. Daughter proven & 35% reliability.* Bulls must be daughter proven (Interbull milk & fertility proofs) and have a minimum reliability for EBI of 35%. This list contains all potential bulls that have an Interbull milk & fertility evaluation.
- *List 3. Genomically selected teams.* Bulls must be either; (i) Daughter proven (Interbull milk & fertility proofs), or (ii) Genomically selected (i.e., with a genomic EBI & with a minimum reliability for calving performance of 50%). Again minimum EBI reliability for bulls on this list is 35%. Bulls on this list would be compiled and marketed as teams (6 bulls per team). Of the 75 bulls on this list, there were 8 teams.
- *List 4. Genomically selected bulls.* Bulls must be either; (i) Daughter proven (Interbull milk & fertility proofs), or (ii) Genomically selected (i.e., with a genomic EBI & with a minimum reliability for calving performance of 50%). Again minimum EBI reliability for bulls on this list is 35%. Bulls on this list would be identified as individual bulls. Of the 75 bulls on this list, 39 bulls were genomically selected.

A summary of each of the 4 lists is given in Table 1.

Table 1. Comparison of Options 1, 2, 3 & 4, for key genetic improvement parameters.

	2008 List	Option 1; Dtrs & 60% rel	Option 2; Dtrs & 35% rel	Option 3; GS Teams	Option 4; GS Bulls
EBI	€124	€127	€134	€138	€150
Milk	€52	€47	€52	€56	€69
Fertility	€60	€66	€65	€65	€64
Minimum EBI	58%	60%	35%	35%	35%
Average reliability	76%	77%	71%	69%	58%
Average DOB	Mar-98	Mar-99	Oct-99	Mar-00	Aug-02
Bulls with dtrs in Ireland	41	49	39	34	16
Domestic Bulls	17	24	18	23	37
New top bull (<=7 years)	11	15	17	23	48
Number GS bulls	0	0	0	8 (48)	39

Survey of Participants.

Based on the above listings and subsequent discussions, each participant at the meeting was asked to answer a number of key questions. The key questions, including results for each stakeholder group (AI, farmers & Teagasc/UCD) are given in the tables below.

Question 1. Based on the draft lists provided, please rate each of the lists for the following 5 questions (1=strongly disagree & 5 = strongly agree). Results are the average ratings.

Question – will this list:	AI Companies (n=15)				Farmers (n=8)				Teagasc/UCD (n=8)			
	List1	List2	List2	List4	List1	List2	List2	List4	List1	List2	List2	List4
Help increase the EBI of our National dairy herd?	2.4	2.7	3.6	3.9	2.5	3.3	3.6	4.6	2.3	2.4	4.0	4.6
Ensure farmers have access to new top bulls each year?	2.1	2.8	3.8	4.0	1.8	3.0	4.1	4.8	1.8	2.8	4.5	5.0
Promote the increased use of AI for breeding dairy replacements.	2.7	2.7	3.5	3.7	2.5	3.0	4.0	4.1	2.6	2.8	3.8	4.3
Be easy to assemble and update as more/new information becomes available?	3.3	3.1	2.8	3.5	3.9	3.4	2.3	4.1	3.8	3.5	2.6	4.4
Be easy for farmers/industry to use & interpret	3.4	3.2	2.8	3.4	3.9	3.6	3.0	3.1	4.6	3.6	2.4	3.3
Totals	13.9	14.6	16.5	18.6	14.5	16.3	17.0	20.8	15.0	15.0	17.3	21.5

Question 2. What should we call these selected 2-4 year old bulls with additional genomic data that will be on the ICBF Active Bull List. Score each on a 1-5 basis (1 = low preference & 5 = high preference).

Question 2	AI Companies	Farmers	Teagasc/UCD
Genomically Selected (GS) Bulls	4.8	3.8	4.8
Next generation.	1.7	3	2.1
Forward pack.	1.9	2.8	2.5
DNA proven.	2.3	2.4	4
Lay-off bulls.	2	1.5	1.5
Don't differentiate	0.9	1.1	0.6
Others	0.5	0.1	0.4

Question 3. ICBF are recommending that we reduce the reliability for bulls onto the Active Bull List to 35%. Bulls must be either;

- Daughter proven; Interbull milk & fertility proofs.
- Genomically selected; Irish genomic EBI & calving proof from country origin (50%).

Our goal is to review this upwards as more information becomes available. Does this seem reasonable as a first step (Yes/No)?

Question 3	AI Companies	Farmers	Teagasc/UCD
% Yes	73%	80%	93%

Question 4. In light of GS developments, ICBF will recommend to DAF that we create a new category for GS bulls (not test & not wide-spread proven) and that these bulls should be made available to Irish farmers in 2009 at 5,000 doses per bull. Does this seem reasonable as a first step (Yes/No)?

Question 4	AI Companies	Farmers	Teagasc/UCD
% Yes	75%	88%	100%

Question 5. For bulls of other breeds, we need to establish a GS key for Ireland. To help establish this we will look to include semen from these bulls in an expanded GENE IRELAND program. As a result we will review upwards the current 1,000 straw limit on these bulls to 3,000 doses per bull. Does this seem reasonable as a first step (Yes/No)?

Question 5	AI Companies	Farmers	Teagasc/UCD
% Yes	75%	100%	100%

Results & Implications.

The net effect of the above questions and subsequent discussions, was a clear preference within the industry stakeholder group of;

- An ICBF Active Bull List for Spring 2009 that would include both genomically selected (GS) bulls and daughter proven bulls, with a minimum reliability of 35%.
- An increase in the semen limit for GS bulls from the current 1,000 doses to 5-10,000 doses for Holstein-Friesian bulls and 3,000 doses for bulls of other breeds.

As a result of yesterdays meetings, Irish farmers are now well positioned to capitalise on the benefits of genomic selection. One of the key requirements will be the **use of GS bulls in teams**, to help reduce the potential risk of using bulls with lower reliability. Over the next few weeks ICBF will be working closely with Teagasc and the AI industry to develop a clear and coherent message to help support and promote the use of GS bulls this Spring.

On behalf of ICBF, we would like to thank all those that contributed towards a very successful meeting. As a result of yesterday's decisions we are confident of moving Irish dairy breeding to a new level over the next number of years.

2. Board Meeting – 19th February

The Board at its meeting on Thursday endorsed the recommendation arising from the Dairy Genetic Evaluation Consultation meeting held earlier in the day.

That the Active Dairy AI Bull List for 2009:

- *Be sorted on EBI and includes sufficient bulls with sufficient semen to more than meet the needs of Irish dairy herds to breed high EBI AI sired dairy replacements,*
- *Includes AI bulls for which semen is available to Irish dairy farmers that are either,*
 - **Genomically Selected (GS):** *i.e. have an EBI reliability of at least 35%, have genomic information available to ICBF, and have a progeny test for calving in the country of first proof with a reliability of at least 50%,*
 - or*
 - **Daughter Proven:** *i.e. have an EBI reliability of at least 35%, and have an Interbull evaluation for milk production and fertility traits.*
- *Be updated periodically to reflect the availability of semen and updated genetic evaluations, and*
- *The amount of semen from GS bulls be limited for Holstein Friesians to 5,000 inseminations for the lower reliability bulls (and an increasing limit for higher reliabilities) and for other breeds to 3,000 inseminations.*
- *That **Genomically Selected (GS)** be the terminology used to describe the bulls which have been selected on the basis of genomic information.*

This decision is another very important step in the development of cattle breeding in Ireland. It will result in a significant increase in the EBI of the dairy replacements bred in the Spring of 2009 and future years. The genomic selection technology has emerged very rapidly and Ireland can be proud that it has the capability of proving and delivering the benefits so rapidly.

The clear message that now needs to go to all dairy farmers is that **lower reliability bulls should always be used in teams**. While there is a greater risk of changes in EBI for a low reliability bull, by using a team of such bulls the risk for the average replacement can be kept low.

3. Tully

- ✚ Bulls are advertised in the Irish Farmers Journal and the advertisement will continue for the next 3 weeks.
- ✚ All bulls were washed and treated for lice this week as a result of the mild weather.
- ✚ Also a number of bulls are been trained to walk using a halter at present.
- ✚ The next weighting of bulls will take place on Friday 27th of February.

4. Lambplus[®]

Pedigree Flock Owners who have not yet logged in on-line, or returned their inventory sheets, will now be contacted to assist them in doing so.

- ✚ Further feedback was received during the week which is being acted upon. The issues raised were:

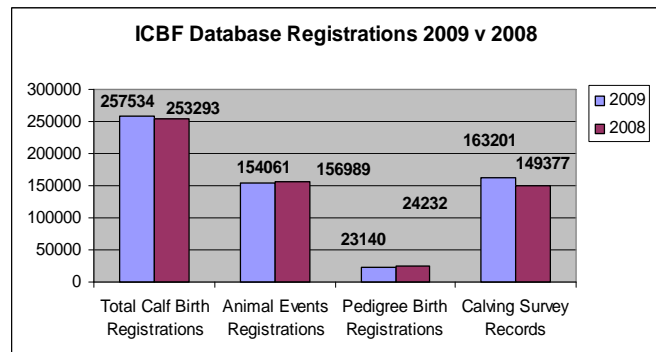
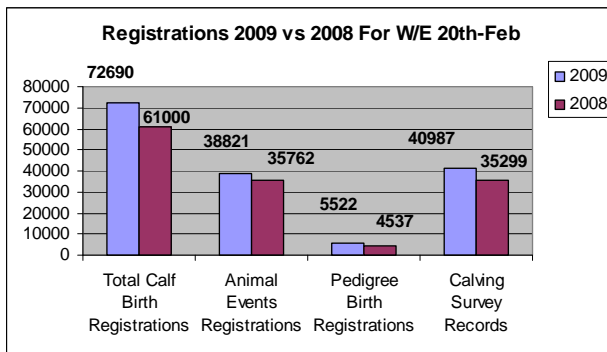
1. List of ewes confirmed by the Flockowner in the inventory section not being reflected across the Lambing, Mating & Rearing Sections.



2. Ordering of animals across the sections could be improved.
3. Facility for entering tattoos for lambs required.
4. Handling of Dead lambs in the Lambing section.

- ✚ MALP Flocks – The retrieval of NSIS tag numbers for ewes & rams is ongoing.
- ✚ The keying of NSIS tag numbers for ewes in the MALP flocks has begun.
- ✚ Lambplus Web Screens & Paper Recording Sheets Development Work is ongoing.

5. Database



- ✚ 25,180 inseminations have been received so far in 2009, compared with 25,161 in 2008 for the same period.
- ✚ The AI 2009 software migration with PG was finalised last week. Some final tweaks in preparation for the coming peak season are now being completed.
- ✚ All Animal Events notebooks have now gone out to the Suckler Scheme Participants. There also continues to be a lot of activity in relation to the 2008 born calves. The number of calves with a meal feeding introduction has increased to 744,000, with just over 644,000 of these having been weaned.
- ✚ The revamp of the Milk Recording system continues. Programming has continued this week, and it is planned that initial testing will take place in the first week of March.
- ✚ Work on the in-breeding check function has been completed and is now live. Work on Sire Advice 2009 is continuing.
- ✚ Development on the sheep application continues, with on-going updates being released.

6. GROW – Linear Scoring & Weight Recording

- ✚ The ICBF Team of Linear Scorers have started 2009 with tremendous Scoring & Weighing Statistics.
- ✚ The constant focus on weight recording has yielded a constant increase in the level of weight recording that is being achieved on farm.
- ✚ This is borne out for example by the figures below for what % of pedigree beef cattle were scored & weighed in the month of January for the last 3 years.

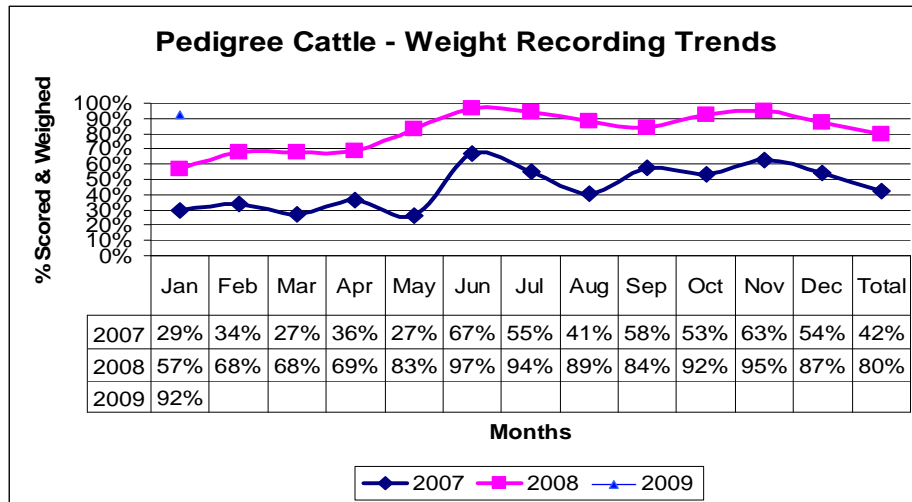


% Pedigree Cattle
Scored & Weighed
Jan 2007
29%

% Pedigree Cattle
Scored & Weighed
Jan 2008
57%

% Pedigree Cattle
Scored & Weighed
Jan 2009
92%

- ✚ The progress made to-date in GROW is also demonstrated in the following graph.



- ✚ As stated in previous updates, the main goal for 2009 is to ensure that all cattle are being scored & weighed at the correct age (150-300 days) and also in a big enough contemporary group (at least 5). The main method in which this will be achieved will be:
 - by constant communication by the Scorers, Breed Societies & ICBF, and by
 - explaining to Breeders through the new GROW report, the age profile of their cattle were at the time of scoring and size of the contemporary group.
- ✚ The new GROW report is awaiting final development work to be completed. It will then be sent out to all breeders following a visit from a Scorer. Crucially, it will show a Breeder how many of the animals that they put forward for scoring & weighing will have their own data included in their evaluations.
- ✚ This will depend on:
 1. Age – 150-300 days is desired age window
 2. Group size – Group of 5 is minimum required group size.
- ✚ A constant issue following a Scoring session is that a Breeder assumes that all data recorded is subsequently used in genetic evaluations. This is not always the case, however up to now this has not been clearly communicated to Breeders. The new GROW report will address this issue.
- ✚ This report will also be available on the web.

7. HerdPlus

EBI Reports- Spring 2009

3,600 HerdPlus Dairy clients were sent updated EBI reports this week. "Electronic" clients can access theirs on their personal web space while "paper" clients received hard copies in post.



€uro-Star Reports- Spring 2009

1,400 HerdPlus Beef clients were sent updated €uro-Star reports this week. "Electronic" clients can access theirs on their personal web space while "paper" clients received hard copies in post.

Herd Ahead Health Project

As of today, we have reached our target of 300 herds signed up to the project - a very good response to the scheme. In the 300 farmers we have a representative sample and a good national spread. Working with these farmers over the next 18 months, Riona Sayers will design a practical and worthwhile health statement applicable to Irish farms. Next week we will be communicating with the farmers on next steps.

What is the Herd Ahead Project?

ICBF and TEAGASC are collaborating in a research project with the goal of improving dairy farm profitability through better control of a range of diseases.

The 'HERD AHEAD' project, has been initiated to pilot and evaluate farm-specific health statements relating to infectious diseases.

The aim is to make these health statements available through ICBF's HerdPlus[®] service. At the end of the project we envisage a system which allows farmers to continuously monitor infectious disease on their farms and also allow farmers to trade safely with farmers of similar health status.

What is involved?

1. Farmers partaking in the programme will be visited at least once over the duration of the project (2009-2010) in order to facilitate completion of a biosecurity questionnaire and collection of samples.
2. At least 5 unvaccinated¹ weanlings between 9 and 12 months of age (approximately) should be available for blood sampling during the farm visit.
3. Milk samples will be used to determine the immune status of the lactating herd with regard to non-regulatory infectious diseases, to include but not limited to, BVD, IBR and Leptospirosis.
4. Sampling kits will be supplied to all participating farmers and each participant will be required to submit bulk milk samples to Moorepark on at least 4 occasions throughout the year. Samples may also be sourced from co-op and milk recording service provider.
5. Results will be made available to farmers on **COMPLETION** of the trial, as will a health statement specific to each farm. This statement will outline the health status of the herd with regard to non-regulatory infectious diseases over the trial period. Results will not be available during the trial period.

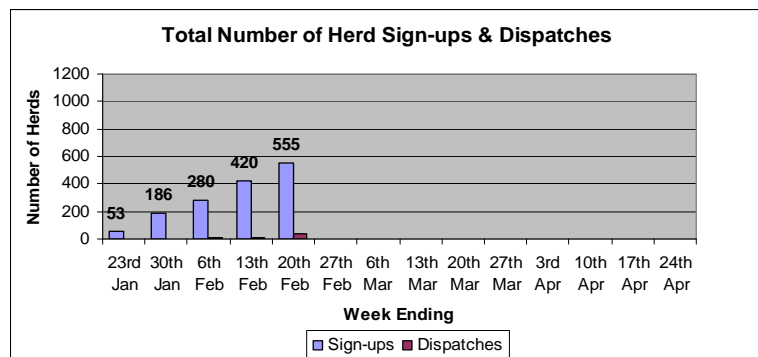
6. GENÉIRLAND[®]

Dairy

Sign-ups continue at a steady rate, with over 500 herds now requesting 24,000 doses (72% HOFR, 11% FR, 11% Xbred & 6% Mixed).

Dispatches commenced this week.

Outcome from the Dairy Consultation and Board meetings yesterday will see a number of Genomically Selected Jersey and Crossbred bulls from New Zealand being used in this spring's GENÉIRLAND[®] programme. This now puts us in a position of having 3 or 4 Xbred packs available.



¹ Unvaccinated = have not been vaccinated for BVD, IBR or Leptospirosis.

- ✚ With the review of additional genomic data a revised list of test bulls will hopefully be available end of next week.

Beef

- ✚ Sign ups have reached 177 herds taking an average of 18 straws each. 66 herds ahead of the same week last year.
- ✚ The Charolais bull AZA is now finished, becoming the 5th Charolais bull tested.
- ✚ The Belgian Blue bull ANX is also finished and is the first BB tested through Gene Ireland.
- ✚ Total straws sent out per bull currently on the panel are in the table below.

BREED	CH	LM	SI	SI	BB	PT	BA	BA	AA	AA	AA	HE	SH
CODE	KLU	CWI	SEV	SKU	RSA	KCP	WOA	CDK	RWB	FPG	LZE	BXD	CZB
# STRAWS	433	197	687	267	408	182	276	25	207	45	125	236	5

7. Genetic Evaluations

Beef

Docility test proofs were sent to the industry and discussed in detail at the beef industry meeting on Wednesday. More testing will be done and updated proofs will be presented to the industry before a decision is made on whether to make these proofs official.

Presentations were given by ICBF geneticists at two Limousin club meetings during the week. These meetings were useful to get feedback from breeders on the indexes while also offering the opportunity to answer specific breeder queries relating to genetic evaluations and indexes.

Genomics

We have now received the 96 samples from the lab in Denmark. We are currently running a new analysis and hope to have new Genomic EBI available early next week for feedback. Once we are satisfied with the proofs they will be uploaded to the database and made official. We will be in touch with AI companies about getting some more DNA for bulls that were not included in this run. It is anticipated a new run will be done next month.

Next Routine Run

The next routine dairy run is scheduled for March. Files will have to be submitted to Interbull for March 24th. We will receive files back from Interbull on April 7th and official publication will follow after this date. A more exact publication date will be given closer to the time.

Carcass Meat Cut Project

First results for the beef carcass cuts project have been presented to the beef industry on Wednesday this week. Strong heritability showed that selection on individual meat cuts is possible. The next and present step of the project is to derive regression equations to get the meat cut weights from the digital images taken after slaughter in order to get a routine supply of meat cut data into the genetic database.

8. Milk Recording

National Milk Recording Results by County - 10 day Period 10/02/09 to 20/02/09

	No. Herds Recorded	No. Cows Recorded	Average Herd Size	Average 24hr Milk kg/Cow	Average Fat %	Average Protein %	Average F + P kg	Average SCC
CARLOW	10	631	63	24.1	4.19	3.39	1.83	439
CAVAN	17	528	31	22.0	3.94	3.35	1.60	462
CLARE	1	71	71	26.3	4.25	3.36	2.00	354
CORK STH	145	6,972	48	24.2	4.10	3.38	1.81	343
CORK NTH	89	4,624	52	23.4	4.34	3.49	1.83	319
DUBLIN	4	140	35	25.7	3.59	3.32	1.78	431
GALWAY	6	332	55	23.8	4.07	3.30	1.75	371
KERRY	39	1,699	44	24.2	4.14	3.37	1.82	319
KILDARE	18	946	53	22.7	4.18	3.48	1.74	449
KILKENNY	16	796	50	24.4	4.02	3.52	1.84	341
LAOIS	21	1,086	52	21.9	4.40	3.65	1.76	397
LEITRIM	6	246	41	24.4	3.78	3.29	1.73	260
LIMERICK	41	1,917	47	24.3	3.96	3.39	1.79	427
LONGFORD	3	104	35	15.8	4.07	3.58	1.21	247
LOUTH	23	1,334	58	22.9	3.90	3.43	1.68	359
MAYO	17	586	34	22.6	3.57	3.37	1.57	391
MEATH	39	2,711	70	22.7	3.88	3.40	1.65	345
MONAGHAN	26	951	37	23.9	3.96	3.38	1.75	315
OFFALY	10	627	63	22.1	4.05	3.51	1.67	296
ROSCOMMON	2	142	71	23.7	4.62	3.64	1.96	240
SLIGO	5	206	41	21.9	3.43	3.21	1.45	309
TIPPERARY NTH	6	180	30	27.0	3.83	3.43	1.96	401
TIPPERARY STH	4	133	33	21.3	4.02	3.32	1.56	734
WATERFORD	15	1,015	68	21.1	4.09	3.33	1.57	308
WESTMEATH	12	493	41	20.9	4.09	3.38	1.56	391
WEXFORD	38	1,896	50	25.0	4.13	3.39	1.88	250
WICKLOW E	20	1,313	66	24.3	3.70	3.33	1.71	285
WICKLOW W	9	986	110	27.0	3.97	3.33	1.97	381
	No. Herds Recorded	No. Cows Recorded	Average Herd Size	Average 24hr Milk kg/Cow	Average Fat %	Average Protein %	Average F + P kg	Average SCC
National	642	32,665	52	23.3	4.01	3.40	1.73	363

National Milk Recording Averages by Province - 10 day Period 10/02/09 to 20/02/09

Provincial	No. Herds Recorded	No. Cows Recorded	Average Herd Size	Average 24hr Milk kg/Cow	Average Fat %	Average Protein %	Average F + P kg	Average SCC
Munster	340	16,611	49	24.0	4.09	3.38	1.79	401
Leinster	229	13,309	58	23.0	4.00	3.43	1.71	348
Connacht	36	1,512	42	23.3	3.89	3.36	1.69	314
Ulster	43	1,479	34	23.0	3.95	3.37	1.68	389

National Milk Recording Statistics - Herds, Cows & EDIY 20/02/09						
Milk Recording Organisation	Total Herds Recorded YTD 20/02/09	No. EDIY Herds YTD 20/02/09	% Herds EDIY	Total No. Cows Recorded YTD 20/02/09	No. EDIY Cows YTD 20/02/09	% Cows EDIY
Progressive	989	187	19%	58,670	11,486	20%
Dairygold	251	20	8%	13,899	1,388	10%
Kerry	213	2	1%	9,626	173	2%
SWS	334	7	2%	14,877	783	5%
Tipperary	17	2	12%	699	53	8%
Arrabawn	11	6	55%	490	291	59%
Connacht	56	0	0%	2,509	0	0%
Donegal	0	0	0%	0	0	0%
Total	1,871	224	12%	100,770	14,174	14%

Recorded Cows by Milk Recording Organisation - Year on Year Comparison			
Milk Recording Organisation	YTD 2008 Cows Recorded 01/01/08 - 20/02/08	YTD 2009 Cows Recorded 01/01/09 - 20/02/09	2009 vs 2008 Year on Year Difference (%)
Progressive	59,937	58,670	-2.2%
Dairygold	10,259	13,899	26.2%
Kerry	10,826	9,626	-12.5%
SWS	15,263	14,877	-2.6%
Tipperary	538	699	23.0%
Arrabawn	497	490	-1.4%
Connacht	3,342	2,509	-33.2%
Donegal	214	0	0.0%
Total	100,876	100,770	-0.1%

9. Change in our phone numbers

The ICBF phone numbers have changed. Our new numbers have “88” added to them after the area code (023). Please amend your files as soon as possible. The old numbers will continue to work until May of 2009.

Old Number (example)	New Number (example)
Phone: 023 20222	023 88 20222
Fax: 023 20229	023 88 20229

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