ICBF Application for ICAR Certificate of Quality 2010.

Irish Cattle Breeding Federation

Martin Burke, ICBF

Issued – 15th December 2009.

Amended – 18th May 2010.

Application for
the ICAR Certificate of Quality.

Applying organisation (give full name and address):

Irish Cattle Breeding Federation (ICBF)
Highfield House,
Bandon,
Co. Cork,
Rep. of Ireland.

Contact Name: **Martin Burke**
Position in organization: **HerdPlus (Breeding Information Services) Manager**
Contact Telephone No: **+353 23 88 20216**
Contact Fax No: **+353 23 88 20229**
Contact email address: **mburke@icbf.com**

State which areas of activity are to be considered for the ICAR Certificate of Quality;

a. The identification system of dairy cattle
b. The identification system of beef cattle
c. The identification system of sheep (meat) *
d The recording of production of dairy cattle
e. The recording of production of beef cattle
f. The recording of production of sheep (meat) *
g. The genetic evaluation of dairy cattle
h. The genetic evaluation of beef cattle
i. The genetic evaluation of sheep (meat) *

*** Note for secretariat: Those activities denoted with an asterisk* are new options for consideration by ICAR (were not on original list of options provided by ICAR.)**

State which other certificates of Quality or service held, if any, such as ISO 9000, Investors in people, laboratory certifications, etc ;

Currently ICBF hold no other quality or service related certificates. We are however developing our Quality manual and system, in line with ISO 9001:2008 with a view to submittal for registration to NSAI (National Standards Authority of Ireland) in next 24 months.

State if the organisation applied to the ICAR Benchmarking service during the last two years, and add details;

Not in last two years but in 2005 ICBF, as an umbrella group, coordinated submittals for the two largest Milk Recording Organisations at the time, namely Progressive Genetics and Dairygold.

Questions relating to the Organisation:

1. Does the organisation itself carryout the work for which certification is requested or is it an "umbrella" or national coordinating organisation?

Formation

The Irish Cattle Breeding Federation Society Limited (ICBF) was formed in July 2000. Its formation was the culmination a long series of protracted and often difficult negotiations following the creation of an interim Board in 1997 and the appointment of a Chief Executive in 1998. In the formation process there were many political hurdles to overcome as a lot of vested interests needed convincing it was in the greater national interest to combine into one federation. Our CEO Dr. Brian Wickham was pivotal in this regard, key in the getting the different parties to the table. ICBF is owned by the organisations that make up the cattle breeding industry in Ireland with 46% of shares held by farmers unions, 18% by herd books, 18% by milk recording organisations and 18% by artificial insemination cooperatives. ICBF's Board of sixteen directors are appointed for four-year terms by shareholders; six by farmers unions, three by herd books, three by milk recording organisations and three by artificial insemination co-operatives and one by the Department of Agriculture and Food (DAF). ICBF is funded by a combination of DAF grants, a payment on all ear tag sales and service fees. It has also received capital grants from EU Structural Funds and more recently from Ireland's National Development Plan.

Structure

Four categories of member – Herd Book, Milk Recording, Artificial Insemination, Farmer Body (IFA & ICMSA). Detailed list of the service organisations and allotted share representation is on our website at http://www.icbf.com/aboutus/members.php. Members are allocated shares in proportion to their level of activity within each group - registrations, milk recorded cows, and inseminations respectively for Herd Book, Milk Recording and Artificial Insemination. (See also question 3 below)

Objectives

The rules of ICBF state that the main objects of the Society shall be:

To achieve the greatest possible genetic improvement in the national cattle herd for the benefit of Irish Farmers, and the Dairy and Beef industries and Members by collecting, collating and distributing available information and data of practical and scientific interest, by promoting the exchange of all such information and data amongst breeders of cattle in Ireland

This will be achieved through the following subsidiary objects:

- Leading in partnership with its members the development of cattle breeding in a way which will best serve the national livestock sector.
- Providing member services that facilitate members of the Society in the provision of services to cattle farmers that ensure the breeding of cattle that better satisfy future market requirements for cattle derived products.
- To publish information that will assist cattle farmers and the cattle breeding industry to monitor national progress in cattle breeding and that will identify those individual cattle with the greatest potential to contribute to the future interests of the national livestock sector.
- Undertaking in conjunction with its members and non-members such lawful activities as the Board determines necessary to ensure cattle utilized for commercial purposes in Ireland are of the greatest merit.

ICBF is an umbrella national coordinating organisation, we operate the centralised database into which all the Farm events, Calf / Pedigree Registration, Milk recording, AI data, etc flows and resides.

ICBF carries out Dairy, Beef and Sheep genetic evaluations for Ireland.

ICBF also provides its own web based breeding tools/reports to farmers through its "Herdplus" and "Lambplus" Services.

ICBF carries out Dairy, Beef and Sheep identification and recording directly through its Animal Events Recording system (both paper and online). Also indirectly our member partners gather related data through their field services, e.g. AI, Milk recording organizations.

2. In the case of an "umbrella" organisation:

a) Give details of any state involvement

ICBF was created as a partnership of cattle breeding industry organisations including Herd Books, Artificial Insemination companies, Milk Recording organisations and the organisations representing farmer interests (IFA & ICMSA). ICBF has a share capital of some € 2 million with 54% held by the cattle breeding industry (Artificial Insemination members 18%, Milk Recording members 18% and Herd Book members 18%) and 46% held jointly by Irish Farmers Assoc.(IFA) and Irish Creamery Milk Suppliers Assoc. (ICMSA). While Dept of Agriculture Fisheries and Food (DAFF) has one seat on the Board of ICBF it does not own any shares in ICBF and is not a member of ICBF.

As well as generating operating funds from the services it provides, ICBF also receives a Grant from DAFF and farmer contributions collected on ear tags. This income is used to cover operating costs, and depreciation.

ICBF has received capital grants from EU Structural Funds and the Irish National Development Plan. These grants have been used to assist in the establishment of a national infrastructure for cattle breeding. Projects benefiting from these funds include those that established the cattle breeding database and the genetic evaluations systems for dairy and beef cattle. For more on ICBF and its structure and functioning see http://www.icbf.com/aboutus/index.php.

"Sheep Ireland" www.sheep.ie is the trading name of Sheep Database Ltd. In 2008, Sheep Ireland, was formed after a period of extensive consultation with the sheep industry. The key developments and functions of Sheep Ireland effected in 2008 include;

- To immediately establish a policy making Board, containing representation of sheep farmers and key sectors with the responsibility of establishing a more permanent structure and putting in place operational systems for sheep breeding.
- That the interim structure will involve close collaboration between key industry players to establish a shared database which will meet the information needs of the industry.
- That the breeding objectives for sheep in Ireland will be established from market returns, and production costs by using the best available skills.
- The breeding program for sheep in Ireland will be optimised to deliver more profit to commercial sheep producers.

For more on Sheep Ireland and progress to date see http://www.sheep.ie/aboutus/index.php

b) Ensure that all areas of the organisation and member-organisations complete the sections of this questionnaire which are relevant to their structure and activities.

Where ICBF as the umbrella group does not have the answer to a particular section, we have asked and received clarifications from our shareholder member organizations (e.g. Milk recording Organisations (MROS), AI companies or Herdbooks.

c) In submitting the reports to ICAR please include national information and copies of the replies from each member-organisation.

Where ICBF as the umbrella group does not have the documents to hand for a particular section, we have asked and received copies from our shareholder member organizations (e.g. Milk recording Organisations (MROS), AI companies or Herdbooks.

3. Please give details of the organisation, including a description of the governance and management structures. Ideally here include a map showing any business sites such as laboratories, offices, service providers which have a bearing on the services/products provided to farmers.

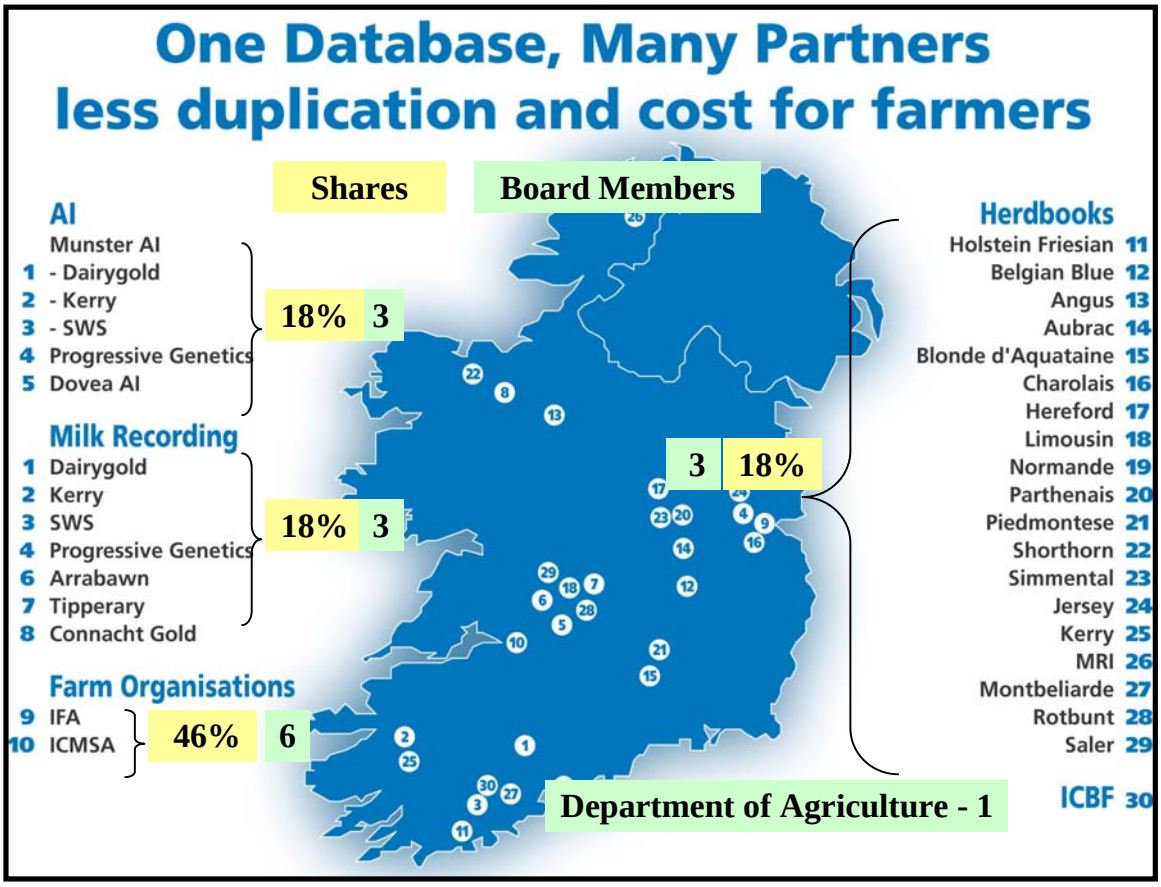
ICBF Structure: There are four categories of member – Herd Book, Milk Recording, Artificial Insemination, Farmer Body (IFA & ICMSA).

Members are allocated shares in proportion to their level of activity within each group - registrations, milk recorded cows, and inseminations respectively for Herd Book, Milk Recording and Artificial Insemination. The Board decides admission to membership. The Board can form committees as required.

At the operational level ICBF has a flat structure CEO and CFO with 3 dept managers over;

1. Genetic Evaluation
2. IT/Development
3. Farm services (HerdPlus)

The map below shows the location of ICBF (30) and of the different organisations that use the ICBF cattle breeding database on a daily basis. See also on the map the proportion of shares each category of member is apportioned. Each organisation on the map is linked to the database. Before the establishment of the ICBF database, almost all of these organisations had a separate database of their own. Obviously, there has been a massive reduction in duplication of data.



Where does the data come from ?

1. Ancestry data comes from two main sources:

   Calf Registration via CIF's Animal Events recording system - in order to get an animal passport, a farmer indicates the sex, date of birth, dam of the calf, and since the introduction of Animal Events, the sire information.

   Herd-books – prior to CIF's Animal Events system we migrated pedigree files from Herdbooks who have been maintaining the ancestry of pedigree animals for many years.

2. Performance data comes from a wide variety of sources.

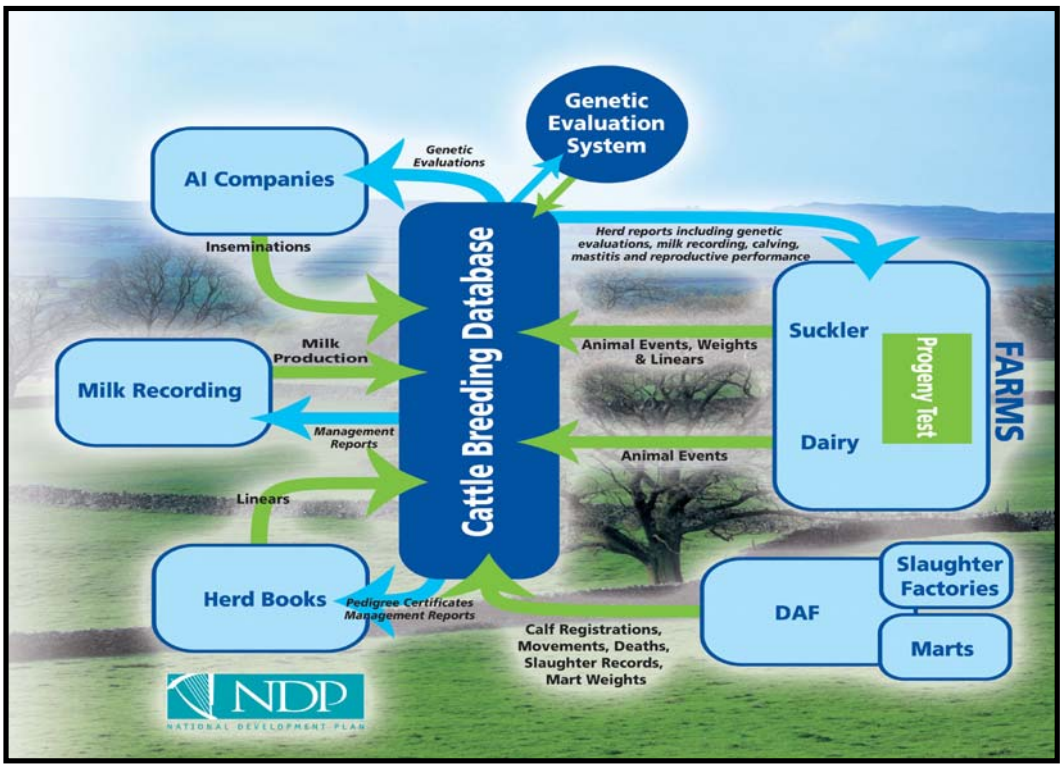
   Dairy animal performance data comes from ;

   - Milk Recording organizations (MROS) (Milk, Fat, Protein, SCC).
   - Calf registration (Calving Interval - how long since the last calving;
     Survival - how many calves has a cow had;
     Calving performance - how easy/difficult are the calvings from a particular bull).
   - Slaughter Factories (Culled cow weights/grades, fattened animal weights/grades).
   - Linear scoring data - used as a predictor of survival.

   Beef animal performance data comes from

   - Calf registration (as above).
   - Weaning weights and linear scores.
   - Slaughter Factories (as above).

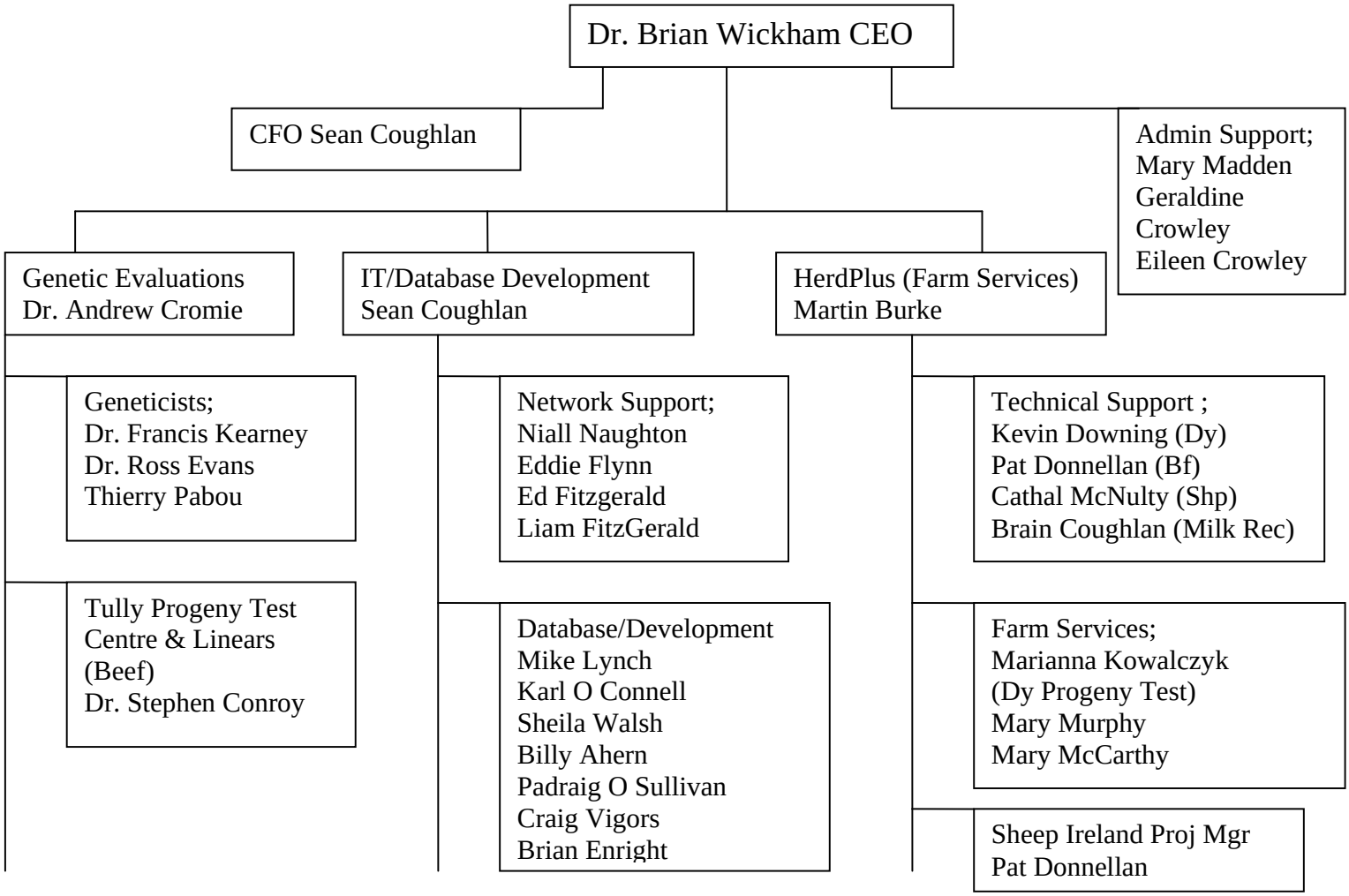
Data Flows: The flowchart shows the flow of data in and out of the ICBF database.



Sheep Ireland Interim Board was formed under the Chairmanship of Ignatius Byrne of DAFF, and included six other members: Henry Burns (IFA), Kevin Kinsella (IFA), and James Brosnan (ICMSA) representing farmers and John Joyce, Ann Murphy and Larry Barrett representing breeders. Oliver Molloy (DAFF) was appointed as Secretary. Dr Brian Wickham, the Chief Executive of ICBF, reported to the Interim Sheep Board.

4. Please provide an organisational structure chart

ICBF Organisation Chart Dec 2009



5. What is the core business of the organisation?

The core activity of ICBF is to produce Dairy, Beef and Sheep genetic evaluations for Ireland. In line with Interbull schedules, ICBF produces dairy and beef evaluations three times a year for farmers and the wider industry. For Sheep evaluations happen annually.

As well as genetic evaluations, ICBF is an umbrella national coordinating organisation, we operate the centralised database into which all the Farm events, Calf / Pedigree Registration, Milk recording, AI data, etc flows and resides.

ICBF carries out Dairy, Beef and Sheep identification and recording directly through its Animal Events Recording system (both paper and online). Also indirectly our member

partners gather related data through their field services, e.g. AI, Milk recording organizations. We also do the all the computations for the following products/services;

HerdPlus® Breeding Products and Services direct to farmers - both paper and web based
Dairy – see http://www.icbf.com/services/herdplus/dairy/index.php
Beef - see http://www.icbf.com/services/herdplus/beef/index.php

LambPlus® Breeding Products and Services direct to farmers – both paper and web based
Sheep – see http://www.sheep.ie/services/lambplus/index.php

MRO Milk Recording Reports, Test day (Animal lactations, Herd summary, Mastitis Incidence, Annual Reports)

MRO – Electronic Milk Meter Calibration – annual calibration of all MRO's Tru Test EMMs performed by ICBF in Moorepark Laboratory (Teagasc center) Fermoy Co. Cork

Pedigree Certificates for all Dairy and Beef Herdbooks in Ireland

Dairy and Beef progeny test programs under brand name G€N€ IR€LAND®

Beef Linear Scoring service and reports under brand name GROW®

Dairy Linear reports

Database infrastructure (events recording, reports etc) for;

- Teagasc National Farm Advisory (Discussion Group Reports)
- Animal Health Ireland
- Govt Suckler Cow Welfare Scheme

Genomics Laboratory – ICBF has simple laboratory facility at Highfield House for sub-sampling blood samples into 1ml vials for DNA and genotyping which is outsourced to a USA laboratory. ICBF then stores blood sample for future use.

6. What other business is the organisation involved with?

None.

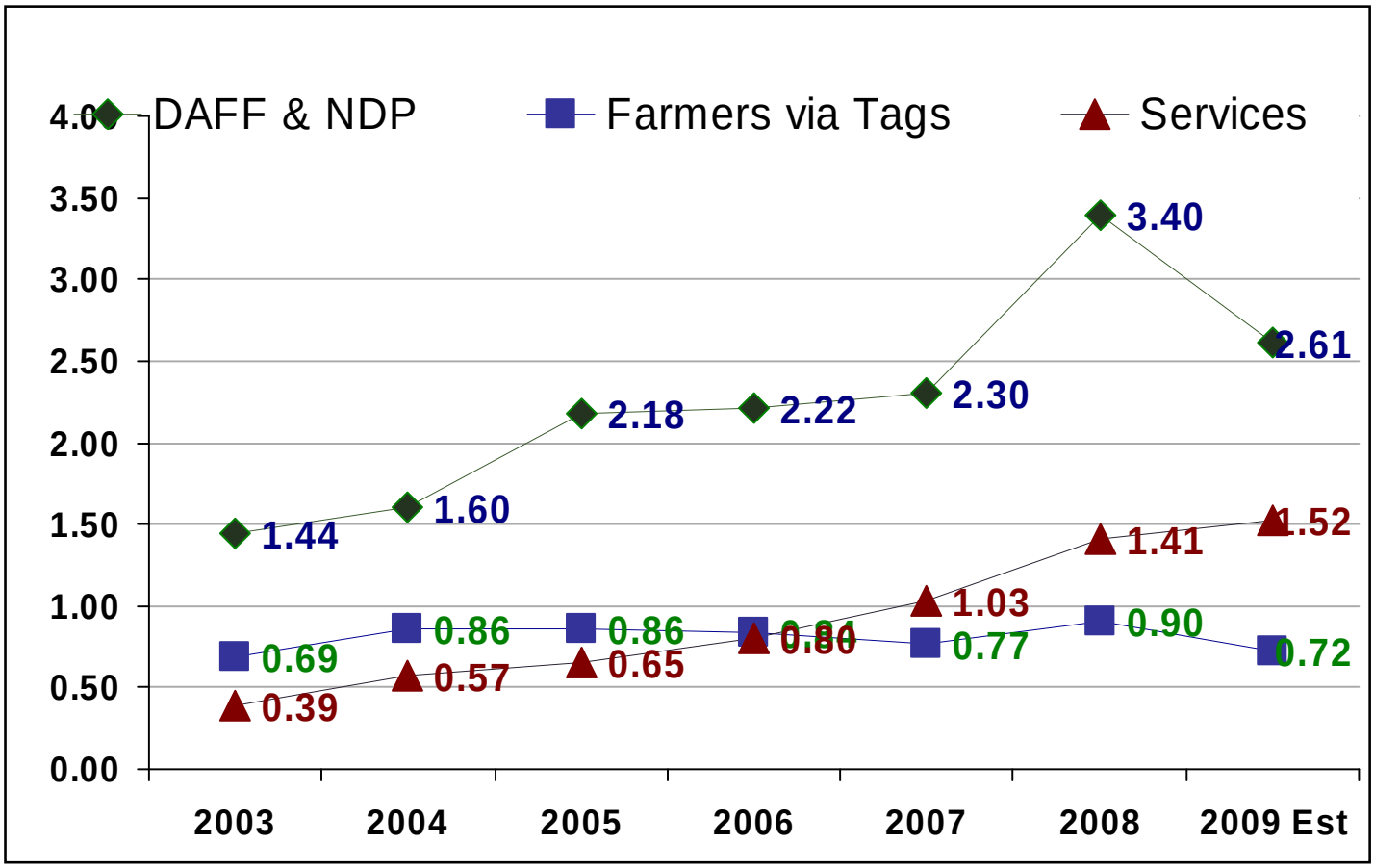
7. How is the organisation funded?

As well as generating operating funds from the services it provides to farmers (directly through HerdPlus) and through its services to its partners (AI, Milk Recording and

Herdbooks), ICBF also receives a Grant from DAFF and farmer contributions collected on ear tags. This income is used to cover operating costs, and depreciation.

ICBF has also received capital grants from DAFF and EU Structural Funds through the Irish National Development Plan. These grants have been used to assist in the establishment of a national infrastructure for cattle breeding. Projects benefiting from these funds include those that established the cattle breeding database and the genetic evaluations systems for dairy and beef cattle and lately genomic evaluations.

Trend Graph in ICBF Source and Amounts for ICBF Funding (€ millions)



8. Does the organisation provide services in other countries? If so please give details. (Commercial confidentiality will be respected)

N/A

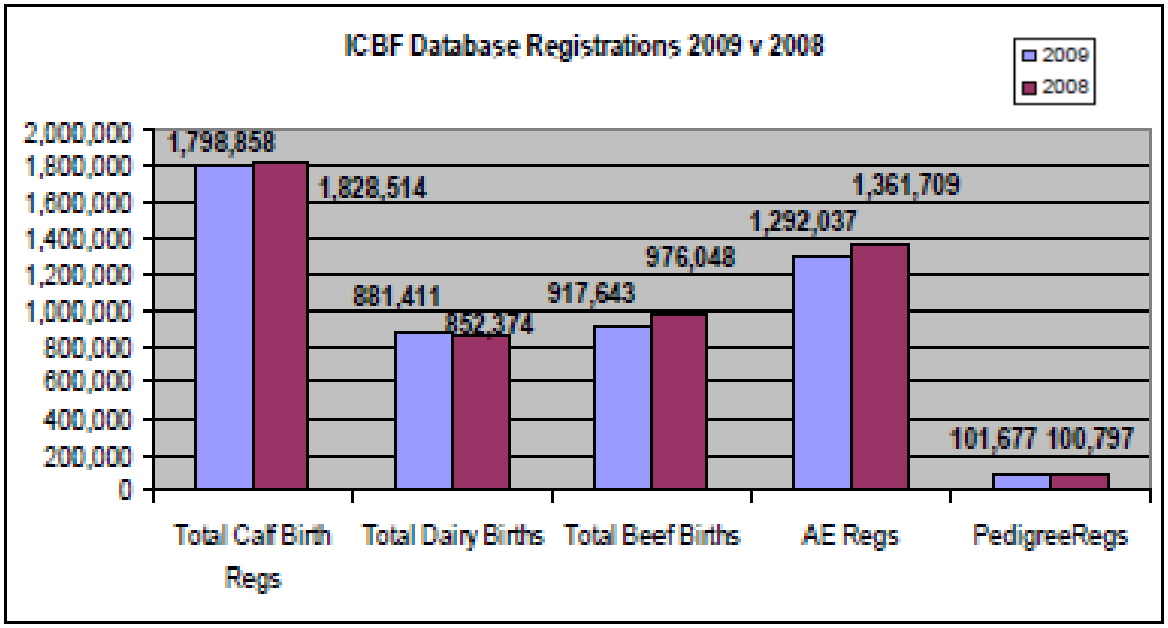
9. What, if any, other quality assurance schemes, not covered elsewhere, have the organisation in place? Give details

None currently but developing our Quality system to be in line with and ultimately be approved for ISO certification (Quality management systems - Requirements (ISO 9001:2008)).

One of our key management tools with respect to quality is the ICBF Strategic Priorities document which summarises our 2010 goals (see Appendix 1)

9a What is the number of farms serviced by the organisation? If a national or "umbrella" organisation please give details for each constituent member organisation.

To give you and idea of the size of the ICBF database, at the time of print (end November '09) there are approx 22,000 Dairy herds with approx 846,400 dairy cows and some 889,000 beef cows and some 59,000 beef herds. See the table below the number and type of registrations that hit the database Year to date 30th November 2009.



Milk Recording Organisations (MROs)

National Milk Recording Statistics - Herds, Cows 30/11/09		
Milk Recording Organisation	**Total Herds Recorded YTD 30/10/09**	**Total No. Cows Recorded YTD 30/10/09**
Progressive	2,081	178,340
Dairygold*	1,508	117,099
Kerry*	891	62,467
SWS*	857	61,912
Tipperary	137	11,149
Arrabawn	141	11,882
Connacht	143	9,753
Donegal	33	3,918
Total	**5,791**	**456,520**

* In 2009 Dairygold, Kerry and SWS Milk Recording organisations amalgamated into one company called Munster AI Farm Services Group.

10 What recording options are available to these farms?

(i) Recorder Service – ICAR Section 1.3 Method "A"

This is where an official recorder from a Milk Recording Organisation (MRO) goes to the farm and records PM and AM volume for each cow as well as taking a representative sample from each milking for constituent analysis. A number of recorder based schemes are available depending on how many visits you require per year. Typically the services offered are as follows;

Note: Charges and services options vary according to MRO and table below is for example use only. Farmers are advised to contact their relevant Milk Recording Organisation for exact details of their schemes and costs.

A4 - Farm Visit once every month	€16 - €17 per cow
A6 - Farm Visit once every 6 weeks	€13 - €14 per cow
A8 - Farm Visit once every 8 weeks	€11 - €12 per cow

(ii) Electronic Do-it-Yourself (EDIY) - ICAR Section 1.3 Method "B"

This service is where the farmer himself does the recording using Tru-Test Electronic Milk Meters The farmer operates the system hence the EDIY name. The farmer first has to be trained by Milk Recording Organisations Technician before allowed do the EDIY recording. He receives refresher training annually and continuous support from his Technician throughout. Further details on this service can be seen on web at http://www.icbf.com/services/milkrecording/files/Leaflet%20Electronic%20DIY%20Milk%20Recording%20Kildalton.doc

There are some 9 herds recording using Lely Robots in the country. Again these are treated as DIY where the farmer uses the Lely shuttle to capture representative sample. The MRO ensures the farmer is fully trained by the Lely centers technical staff.

11. How many farms use each option?

(i) Recorder Service – ICAR Section 1.3 Method "A"

Some 3,937 herds were recorded using this method in 2009

(ii) Electronic Do-it-Yourself (EDIY) - ICAR Section 1.3 Method "B"

Some 1,854 herds were recorded using this method in 2009

12. How many animals are recorded in each option?

(i) Recorder Service – ICAR Section 1.3 Method "A"

Some 302,163 (66% cows) were recorded using this method in 2009

(ii) Electronic Do-it-Yourself (EDIY) - ICAR Section 1.3 Method "B"

Some 154,357 cows (34% cows) were recorded using this method in 2009

13. What is the average herd/flock size in each option?

(i) Recorder Service – ICAR Section 1.3 Method "A"

Average herd size in A recording = 77 cows

(ii) Electronic Do-it-Yourself (EDIY) - ICAR Section 1.3 Method "B"

Average herd size in B recording = 83 cows

PEDIGREE Herd book registrations 2008

	2008			
Herdbook Association	**Births**	**Males**	**Females**	**Members**
Belgian Blue Cattle Breeding Society	929	469	460	66
Jersey Cattle Society of Ireland	348	64	284	33
Irish Aberdeen Angus Association	-	-	-	-
Irish Angus Cattle Society	3,791	1,979	1,812	568
Irish Aubrac Cattle Society	506	218	288	57
Irish Blonde d'Aquitaine Breed Co-op Ltd	500	245	255	66
Irish Charolais Cattle Society	10,394	5,332	5,062	2,308
Irish Hereford Breed Society	3,849	2,041	1,808	517
Irish Holstein Friesian Association	62,624	4,516	58,108	2,736
Irish Limousin Cattle Society Ltd	9,872	4,987	4,885	1,753
Irish Normande Cattle Society	-	-	-	-
Irish Piemontese Cattle Society Ltd	162	79	83	30
Irish Simmental Cattle Society Ltd	2,747	1,314	1,433	493
Irish Shorthorn Cattle Society	1,423	429	994	303
Kerry Cattle Society of Ireland	-	-	-	
Meuse Rhine Issel Cattle Society	221	48	173	15
Montbeliard Cattle Society	503	74	429	54
Norwegian Red Cattle Society	197	32	165	16
Saler Cattle Society	764	290	474	132
Total	**98,830**	**22,117**	**76,713**	**9,147**

Pedigree registration and certificate request can be done electronically via authorized farm software (67%) or by paper through ICBF's Animal Events Recording book (33%).

(iii) HerdPlus Clients (ICBF Breeding Information Service)

HerdPlus® Breeding Products and Services direct to farmers - both paper and web based
Dairy – see http://www.icbf.com/services/herdplus/dairy/index.php
Beef - see http://www.icbf.com/services/herdplus/beef/index.php

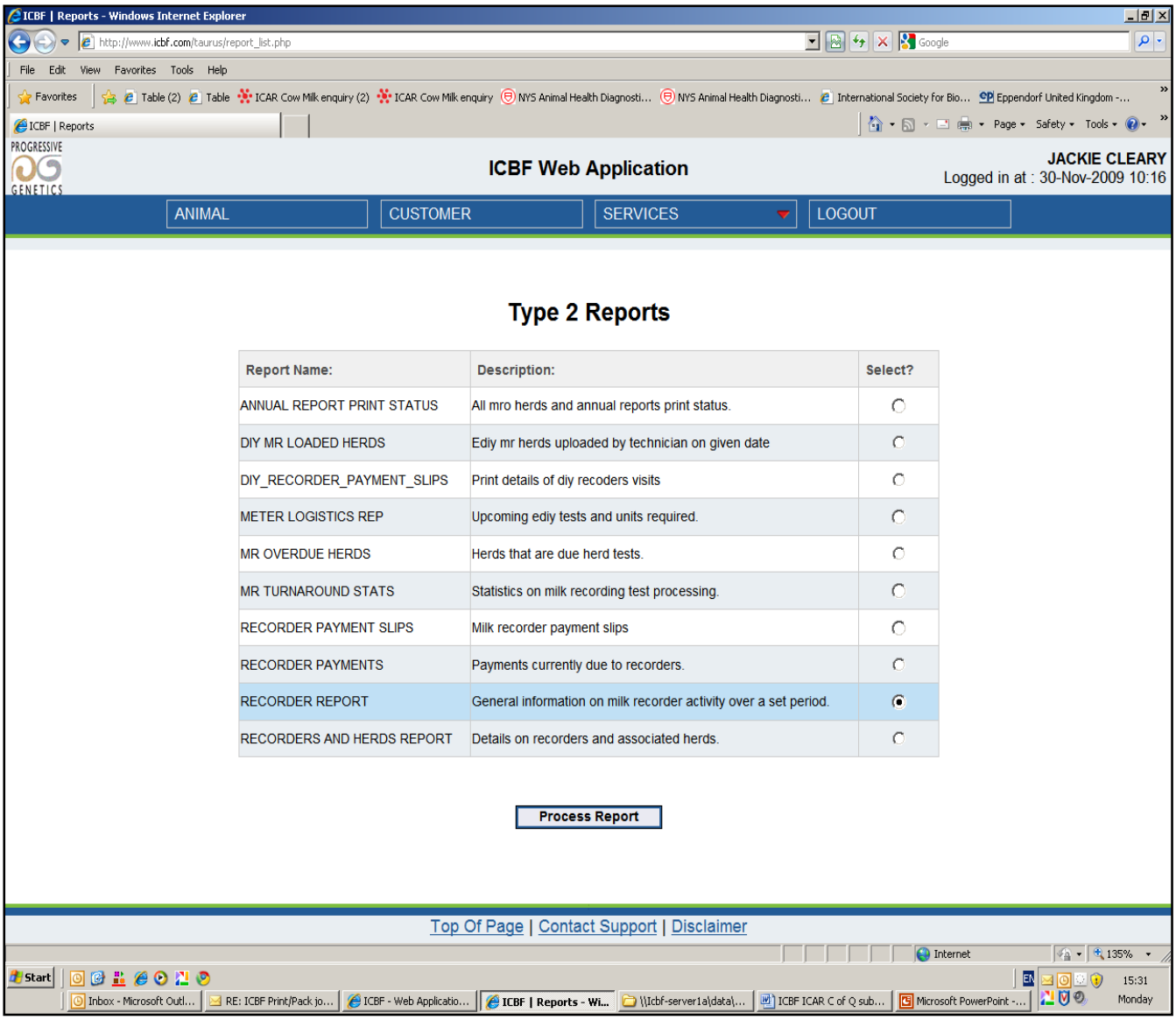
6,365 herds availing of ICBFs Breeding service (HerdPlus)
4,114 Dairy farmers (74% on web service, 26% Postal) Average Herd size 84 cows
2,251 Beef farmers (69% on web service, 31% Postal) Average Herd size 33 cows

Sheep – we are only in developmental stage with sheep database with some 100 pedigree flocks on board with 2009 and only one genetic evaluation run behind us.

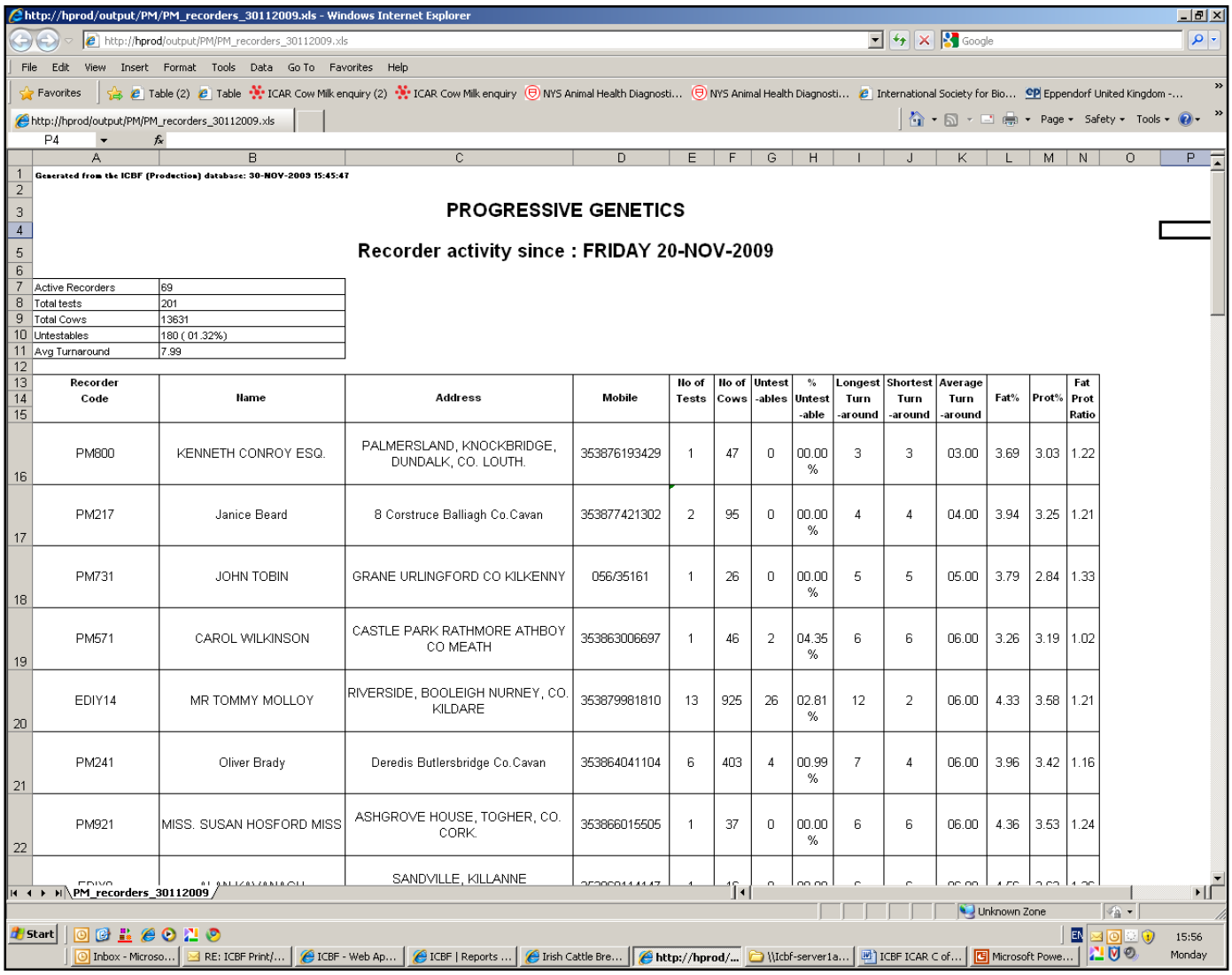
14. Give details of the supervision programmes for technicians and both internal and external staff. Include here the routine number of items such as identity checks and check recordings for dairy production staff. For conformation the programme of checks and comparisons.

As an umbrella organization ICBF has developed monitoring tools for all MROs Recording. Each MRO has its own web log-on and can view all their herds and recorder/technician details. For Recorders and Technicians they have numerous web based reports which MROS run monthly which measure Recorder/Technician performance with respect to test day turnaround time, overdue reports, Fat/Protein ratio, Number untreatable samples ("sours") etc. Below see list of such Type 2 reports (Type 1 are farmers reports)

MRO Management Report Suite – Progressive Genetics (example)



MRO Recorder Report – Progressive Genetics (example)



Generated from the ICBF (Production) database: 30-NOV-2009 15:45:47

PROGRESSIVE GENETICS

Recorder activity since : FRIDAY 20-NOV-2009

Active Recorders	69
Total tests	201
Total Cows	13631
Untestables	180 (01.32%)
Avg Turnaround	7.99

Recorder Code	Name	Address	Mobile	No of Tests	No of Cows	Untest -ables	% Untest -able	Longest Turn -around	Shortest Turn -around	Average Turn -around	Fat%	Prot%	Fat Prot Ratio
PM800	KENNETH CONROY ESQ.	PALMERSLAND, KNOCKBRIDGE, DUNDALK, CO. LOUTH.	353876193429	1	47	0	00.00 %	3	3	03.00	3.69	3.03	1.22
PM217	Janice Beard	8 Corstruce Balliagh Co.Cavan	353877421302	2	95	0	00.00 %	4	4	04.00	3.94	3.25	1.21
PM731	JOHN TOBIN	GRANE URLINGFORD CO KILKENNY	056/35161	1	26	0	00.00 %	5	5	05.00	3.79	2.84	1.33
PM571	CAROL WILKINSON	CASTLE PARK RATHMORE ATHBOY CO MEATH	353863006697	1	46	2	04.35 %	6	6	06.00	3.26	3.19	1.02
EDIY14	MR TOMMY MOLLOY	RIVERSIDE, BOOLEIGH NURNEY, CO. KILDARE	353879981810	13	925	26	02.81 %	12	2	06.00	4.33	3.58	1.21
PM241	Oliver Brady	Deredis Butlersbridge Co.Cavan	353864041104	6	403	4	00.99 %	7	4	06.00	3.96	3.42	1.16
PM921	MISS. SUSAN HOSFORD MISS	ASHGROVE HOUSE, TOGHER, CO. CORK.	353866015505	1	37	0	00.00 %	6	6	06.00	4.36	3.53	1.24
[illegible]	[illegible]	SANDVILLE, KILLANNE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Animal identity is preserved as the input sheets used in recording are printed/posted to recorder directly from the database or directly loaded to handhelds (AI and Conformation scoring).

MRO Input sheet automatically generated from database – Progressive Genetics (example)

Milk Recording - Input Sheet

No. Smp.

Rec. Date

PROGRESSIVE GENETICS
KYLEMORE ROAD
BLUEBELL
DUBLIN
Tel: 01/4502142

Herd Owner: MICHAEL MCCRANN
Herd No.: **IE2314091** Date:
Address: TOOMAN, BORNACOOLA, CO LEITRIM
Tel: 043/24342 ()
Page: 2(3) Scheme:A6 No. of Tests: 6/7

PM211

Herd Test Code: **IE2314091/20100122**

Last Recording Date: **27-NOV-2009**

Current Cows In Herd **Schedule Date: 22-JAN-2010**

Cow FB No. / Cow I&R No.	Sample No.	Volume (Kgs) PM	Volume (Kgs) AM	Status	Cow FB No. / Cow I&R No.	Sample No.	Volume (Kgs) PM	Volume (Kgs) AM	Status
IE231409110439				Not Milked Before	027 IE231409180206				In Milk
IE231409140441				Not Milked Before	028 IE231409190306				In Milk
IE231409160435				Not Milked Before	030 IE231409160204				In Milk
IE231409170378				Not Milked Before	32 IEJHJL0032N				In Milk
IE231409170436				Not Milked Before	042 IE231409120142				In Milk
IE231409180379				Not Milked Before	069 IE261006972069				In Milk

15. In the case of "umbrella" organisations:
a) What quality standards of performance are expected of the participating member organisations?

Milk recording Meters – All MROs who provide records only use ICAR approved meters
Manual Recording Meters - All MROS have annual calibration of manual meters
MROs have training program for recorders & operate annual refresher training for recorders
Electronic Meters – ICBF take in each meter annually for calibration and reissue
ICBF and MRO combine to train new E technicians and annual refresher training of technicians
Milk Recording Laboratories in Ireland take part in ICAR ring test proficiency programme run by Teagasc Research Laboratory Moorepark, under the auspices of ICBF
MROs encouraged to pursue ISO 9000
ICBF has developed monitoring tools for MROs Recording eg test turnaround time, overdue reports, recorder activity, Fat/Protein ratio

ICBF's Electronic Meter Calibration Laboratory (Tru Test EMMs)

b) What programme of supervision is carried out to ensure such standards?

ICBF monitors monthly statistics and ranks and feedback is given to MROs on performance

c) What input do the participating member-organisations have in the quality control programme of the whole organization?

ICBF meet with dairy and beef industry partners regularly throughout year and we take inputs/feedback from MROs, AI Organisations and Herdbooks at these meetings. However it is ICBF's whole responsibility for the Quality systems within the core activity of ICBF i.e breeding information/services and Genetic Evaluation.

d) What direction is given, if any, on individual service and product development in member-organisations?

ICBF takes a very active role in new product and service development for its service partners, examples of new technology applications initiated by ICBF include;

- AI Handhelds / autolinking to sire advice on web – some 300 in the field
- Electronic DIY Milk Recording – some 1400 units in field
- Linear scoring handhelds

e) Is there active business competition between the member-organisations?

Yes there is open competition between the member organizations in AI, Milk Recording and Herdbooks. Historically the country was divided into regions which in turn were serviced by that "area provider" but laterally due to market laws there is open competition in the country to provide Milk Recording, AI etc so any farmer can be served by any member organisation he chooses.

f) If there is such competition, what effect does this have on the "umbrella" organisation?

There is no effect on the organisation other than its positive in that competition enhances quality and service levels.

16. What direct and indirect benefit do you believe that organisation will derive from the ICAR Certificate of Quality?

ICBF as a national organisation would use the Certificate of Quality framework to further improve the Quality systems within its own organisation and also within its members organisations. We would use it also as a springboard impetus to pursue formal registration to ISO 9000.

Animal Identification

17. Is there a unique national identification scheme for the species for which certification is sought? Give details of format and give examples.

The Official Irish National ID tag is as follows;

IE241280291099, where

IE2412802 = the herd owners nation farm ID
9 = check digit
1099 = 4 digit sequential animal number

18. Is the above identification used as the sole identifier within your organisation? If not please give details of format and give examples.

The National ID is the primary animal identification but secondary IDs may also exist for the animal eg the International Tag Type (ITT), so for animal IE241280291099 is its primary ID it also has a secondary ITT of AANIRLM241280291099.

19. What checks are made by your organisation to ensure correct animal identification and avoidance of duplication? If there is a routine programme of such action give details, including timescales.

As gatekeeper of the nation breeding database ICBF has in built logarithms which ensure any new tags associated with births or animals moving into the database meet the check digit requirements and there are no duplicate IDs allowed. Our IT staff periodically run data queries with the logarithms to validate all tags in database.

20. Give details of any links between your organisation and breeding companies and breed societies which takes place on a routine basis.

ICBF is a non profit organisation and is operationally and financially independent from AI and Breeding companies. For structural links see Question 1 and 2 at the start of this document. Three times per year ICBF publishes genetic evaluation indices for each animal in the database (including AI and Herdbook animals). The Dairy index is called the Economic Breeding Index (EBI) and the beef index is called the Suckler Beef Index (SBV).

ICBF shares this information with the AI companies in the form of Active Bull Lists after each evaluation run.

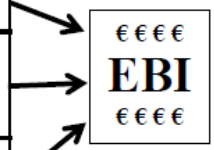
For Dairy see http://www.icbf.com/services/evaluations/dairy.php

For Beef see http://www.icbf.com/services/evaluations/beef.php

ICBF also holds “Industry” meetings throughout the year to review the emphasis and values of each trait and sub index and to share new genetic developments. See Table below which show the latest economic values fir the EBI traits.

Table 1. *Economic values & % emphasis of the various traits in the EBI formula.*

EBI Sub - Index	Trait	Economic Value (€)	Trait Empasis	Overall Emphasis
Production	Milk Yield (kg)	-€0.09	12%	42%
	Fat Yield (kg)	€1.26	5%	
	Protein Yield (kg)	€6.91	25%	
Fertility	Calving Interval (days)	-€11.97	23%	34%
	Survival (%)	€11.17	11%	
Calving	Direct Calving Difficulty	-€3.65	4%	11%
	Maternal Calving Difficulty	-€1.73	2%	
	Gestation (days)	-€7.54	4%	
	Calf Mortality (%)	-€2.58	1%	
Beef	Cull Cow Weight (kg)	-€0.51	2%	9%
	Carcass Weight (kg)	€1.38	4%	
	Carcass Conformation	€10.32	2%	
	Carcass Fat	-€11.71	1%	
Health	Locomotion (score)	€1.13	1%	4%
	Udder - (SCC)	-€57.21	3%	



21. What action takes place if errors of identification are found?

Our IT staff periodically (once a quarter) run data queries to validate all tags in database. In the event of erroneous tags being discovered they are corrected by ICBF staff and root cause analysis is performed so corrective action can take place to prevent recurrence. In the event of historical duplicates (from migrated data in setting up database pre 2002) we have a merge data facility which amends records into one animal so all records/data is preserved.

22. What checks are carried out to ensure correct parentage?

Outside the routine data integrity checks (breed fraction, age of sire and dam etc) the individual pedigree herd books perform parental DNA audits.

23. Give details of any DNA or blood-typing which are carried out. Include the name of the laboratory carrying out such analyses, who receives the results and for what

Irish Holstein Friesian Assoc. sample every young bull and 1/100 heifer calves by taking hair samples from the tail of the animal and sending them to Wetherbys Laboratory for analysis and reporting back to IHFA. In the event of anomalies pedigree registration is denied and breeder visited.

ICBF target certain animals for genotyping (eg building up reference training populations for genomic evaluations) and send the blood samples to Geneseek Inc in Nebraska for DNA extraction and genotyping using. In November 2009 we collected over 962 blood

samples from Irish farms, targeted stock bulls and cows of high EBI reliability. In our small Genomics lab we subsampled 1ml from each animal's blood and dispatched the subsamples for genotyping to a laboratory in the USA (GeneSeek Inc, extraction based on the Illumina 50K SNP chip). The remainder of each sample (approx 6 – 8mls) was then stored in a freezer in our Genomics Laboratory. This is in fact akin to database storage as the DNA genotype of these animals is readily accessible for future needs, some maybe yet unforeseen.

The measure of the quality is the number of SNPs that get "called" correctly. The higher the call rate the better and low call rates indicate some contamination of the DNA. The average call rate for the 962 samples was 98.6% which is excellent. Thanks to the quality job done in the lab, we are now in a position to analyse and blend these genotypes into the next genetic evaluation run.

For more on information on ICBF's Genomics, including international collaborative efforts, see http://www.icbf.com/services/genomic/index.php

24. Are genetic defects recorded and reported? Please give details.

Not currently no, but plan to in future.

Recording and Sampling Devices

25. Who owns the recording and sampling devices used on farm?

Mechanical Meters/Jars. 90% of meters are owned by the farmer 10% by MRO – either way they are calibrated once a year by MRO's. 100% of Jars obviously owned by farmers.

Electronic Meters – 70% owned by farmers and 30% (mobile TTEMMS) owned by MROs

Beef Load cells for Linear scoring & weighing ; 7 x Tru Test weigh cells owned and calibrated annually by ICBF.

26. If known, give details of the numbers of each type of recording device.

Mechanical Meters/Jars. The makeup of Mechanical meters is mainly Waikato Mk V and Tru-test WB - exact Quantity unknown at time of print but est. 20,000 Waikato and 10,000 Tru-Test. On the Jars there are approximately 12,000 jars being recorded mainly DeLaval (80%) and assorted Westfalia, Surge after that. Exact numbers with MROS.

Electronic Meters – There are approx 1,800 Dairymaster Weighall, 1,400 DeLaval MM15s MM25s, 1,400 Tru-Test Electronic Milk Meters (TTEMMs), and approx 300 Gascoigne mainly MR 2000.

Beef Load cells for Linear scoring & weighing ; 7 x Tru Test weigh cells owned and calibrated annually by ICBF.

27. What checks are carried out to ensure reliability of results obtained and what record of such checks are kept?

MROs do an annual calibration of mechanical meters and validate electronic meters on farm either through software or water test. Jars are also put through annual maintenance check for condition and moving parts wear and water test performed if warranted by MRO staff. Records kept by MROs

For Tru-Test EMMs (mobile) all meters are returned annually to ICBF for water test and calibration. ICBF also does annual check for Beef Load cells. Records kept by ICBF.

Also Milk Recording Results from farm throughout the year are validated by min / max Volume, F and P, and persistency constants set in the database. Likewise for beef weanlings min/max wgt with respect to age of animal.

28. Who is responsible for the maintenance of the recording and sampling devices?

It is the respective owners, (either farmer or MRO) who are responsible for the maintenance of recording and sampling devices

29. What action takes place if the results obtained from the recording or sampling devices are found to be outside the limits described in the ICAR Guidelines?

MROs are notified and investigation as to the reason for the discrepancy is sought. Records in such cases will not be allowed to stand as is and will be deleted. In the case where there is a meter at fault we will, where possible, will check previous test day results from previous farm that used that meter and address. (eg in case of TTEMM then the serial no. of meter is known = traceability).

30. What process, if any, does the organisation take to ensure staff and farmers are aware of ICAR-approved recording or sampling devices?

All MRO staff are made aware ONLY ICAR approved meters are allowed for milk records ref
http://www.icar.org/pages/Sub_Committees/sc_recording_devices_approved_milkmeters.htm

31. What use is made of any record derived from non-ICAR-approved recording or sampling devices?

None – such records may stay at farm level for own farmers management but as recording organisations only record from ICAR approved meters the management data stays on farm and does NOT enter database for genetic evaluation purposes

Production and conformation recording

32. Give details of how data is recorded on farm and what on-farm check are made to ensure best quality of data.

Milk Recording can be A or B method. For A recording only trained recorders can take samples and read yields. The recorders have a preprinted ID sheet from database and use combination of marking and position to ensure COW ID and sample are matching 100%. For B recording only option is via the TTEMM electronic meter (closed system) or Lely Astronaut robots (v few) - MRO technicians are responsible for training the farmers before use.

MROs operate annual refresher training for recorders

ICBF conduct annual refresher training for MRO TTEMM technicians
Beef Linear scoring and weighing is carried out on farm by ICBF trained technicians who undergo annual reference sessions and every 3-5 years have exam based harmonisation sessions.

33. What unit of measurement is used to record yield?

For both Milk Recording and Beef weights the standard unit is the Kilogram (Kg)

34. What, if any, checks are made to ensure that the recorded yield is in line with that which may be reasonably expected and what is the process undertaken if they are not?

At loading or keying the database has max min constants for milk volume, F % and P% as well as "persistency" levels when calculating lactation yields to date. For Beef like wise max and min weights for animal's age are set in database as database "constants".

MROs are notified and investigation as to the reason for the discrepancy is sought. Records in such cases will not be allowed to stand as is and will be deleted. In the case where there is a meter at fault we will, where possible, will check previous test day results from previous farm that used that meter and address. (eg in case of TTEMM then the serial no. of meter is known = traceability).

35. Are the ranges of yields recorded in conformance with ICAR Guidelines?

Yes, as per Table 11.2. from *ICAR Guidelines June 2008*

Table 11.2. Limits of error for milk yield and fat percentage per species for milk recording devises (both test day recording and daily recording)

	Milk yield			Fat percentage		
Species	Range	Standard deviation[1]	Bias[2]	Range	Standard deviation	Bias
Cattle	2 - 10 kg > 10 kg	0.50kg 5 %	0.2 kg 2 %	2 – 7 %	0.10 % fat	0.05 % fat
Buffalo	2 - 10 kg > 10 kg	0.25 kg 2.5 %	0.2 kg 2 %	3 – 15 %	0.20 % fat	0.10 % fat
Goat and sheep	0.3 - 0.8 kg > 0.8 kg	0.04kg 5 %	0.025 kg 3 %	2 – 12 %	0.20 % fat	0.10 % fat

[1]In kg or in percentage of mean reference yield.
[2]In kg or in percentage of the reference yield.

36. Where there is meat recording give details of the programme.

ICBF receives beef data updates from 95% of meat factories which contain carcass grades as per the E, U, R, O and P system. These values are the used in genetic evaluations by contributing to the carcass index which in turn feeds into the overall beef merit index know as the Suckler Beef Value

37. Give details of how events such as calving/lambing/kidding, inseminations (AI and natural, plus identity of sire) and health events are recorded.

Paper – via ICBF's "Animal Events System and Recording notebook
Web - On line through www.icbf.com – farmer has his own log on & password
Email - via ICBF Approved farms software packages
Handheld GPRS – AI technicians handheld "syncs" with ICBF database

38. Give details of the training programmes of farmers and staff to ensure reliable recording practices.

At each Launch Teagasc (National Farm Advisory) conducted national training in all its centers nationwide. They are responsible for training farmers. ICBF hold "in service training days for all Teagasc advisors each year to "train the trainer".

For DIY Milk Recording the MRO technician trains farmer or his manager on methods in first two milkings. In the event the trainee is a farm manager and if he leaves the employ then the replacement needs to be trained in turn before meters are dropped to that farm again.

Once a year at the start of the recording season both recorders and DIY support technicians receive annual refresher training. For DIY farmers any changes to practice or procedure are relayed at the first recording session of the new season.

39. Give details of check procedures to ensure maintenance of recorders or recording standards.

MROs train all new recorders and have a policy to accompany new recorders with experienced recorder (trainer) until competency is reached and signed off. MROs operate annual refresher training for recorders

40. Give details of any conformation recording carried out by the organisation.

ICBF operates a Beef weanling Linear scoring service called GROW (Genetic Recording of Weanlings). Prior to ICBF taking over the operation of beef linear scoring, each herdbook used employ their own scorer and each would only score animals within that breed/herdbook. ICBF now employ these 8 Linear Scorers who work for ICBF and uitilise a common trait scoring system agreed by all herdbooks so all animals are scored using a harmonsied scale across all breeds (see descriptions below). These Linear Scorers score and weigh all beef breeds. They undertake formal harmonisation training every two years to ensure "calibration" among scorers.

No. Beef Animals Scored and Weighed up to Nov 30th 2009

Pedigrees – 2009			
Month	Scored	Weighed	% Cattle Weighed
Jan	862	797	**92%**
Feb	759	655	**86%**
Mar	656	527	**80%**
Apr	391	348	**90%**
May	266	225	**85%**
Jun	658	636	**97%**
Jul	1078	976	**91%**
Aug	786	759	**97%**
Sep	801	766	**96%**
Oct	908	853	**94%**
Nov	598	572	**96%**
Dec			

Beef Weanling Linear Scoring Rules;

1. All eligible animals must be Scored AND Weighed.

2. Eligible Animals:

a. 150 – 300 days old.

b. Minimum group of 5 – can included different pedigree breeds.

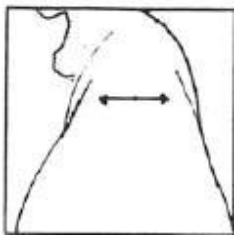
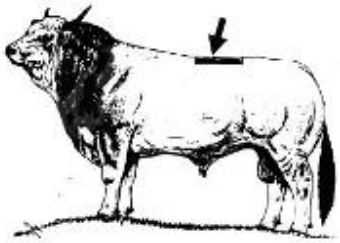
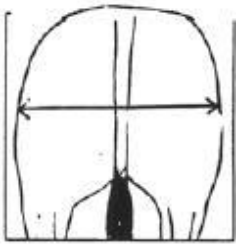
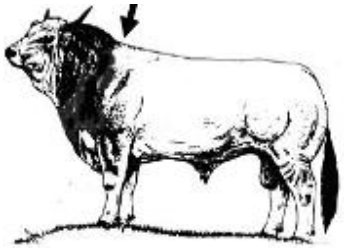
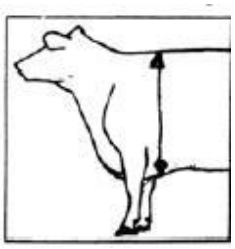
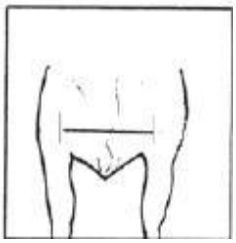
c. Preferably by 2 different sires.

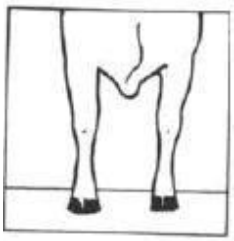
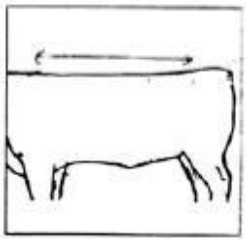
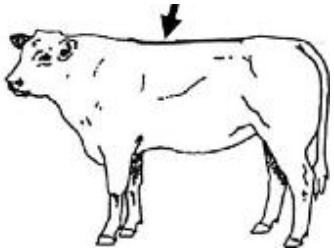
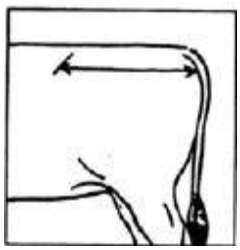
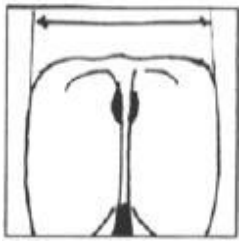
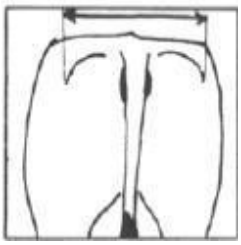
d. Commercials with known sires may be included.

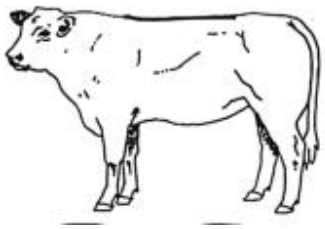
e. Maximum of 3 visits/breeder/year.

f. Only sick/injured animals may be excluded at discretion of scorer.

If the above rules are not complied with scores & weights will NOT be included in evaluations. **Beef Linear Traits Scored are;**

1. Width At Withers  Width of the animal at the highest point, above the front legs (1 = Narrow. 15 = Wide)	**2. Width Behind Withers**  Width behind the Withers (1 = Narrow. 15 = Wide)	**3. Hind Quarter Development**  The level of roundness and fill of the rear point, above the front legs end when viewed from the side (1 = Low. 15 = High)
4. Loin Development  The overall level of width, length and fill of the Loin into account (1 = Low. 15 = High)	**5. Development of Inner Thigh**  The level of fill / development of the muscle between the back legs (1 = Low. 15 = High)	**6. Thigh Width**  Overall Width of the Hindquarters when viewed from behind (1 = Narrow. 15 = Wide)
7. Height of Withers  Height of the animal at the highest point above the front legs (1 = Small. 10 = Tall)	**8. Depth of Chest**  The vertical distance from the withers to the bottom of the chest behind the front legs (1 = Shallow. 10 = Deep)	**9. Width of Chest**  The width of the animal between the front shoulders (1 = Narrow. 10 = Wide)

10. Fore Legs  1 = Toes pointed out. 5 = Toes straight ahead. 10 = Toes pointed in.	**11.Hind Legs - Side View**  1 = Straight. 5 = Angled. 10 = Sickled.	**12. Hind Legs -Rear View**  1 = Toes pointed out. 5 = Toes straight ahead. 10 = Toes pointed in.
13. Length of Back  Distance between withers & hip bone (1 = Short. 10 = Long)	**14. Level of Back**  1 = Dip. 5 = Perfect. 10 = Hump	**15. Pelvic Length**  Distance between hip bone & rear of animal (1 = Short. 10 = Long)
16. Width at Hips  Width between the hip bones (1 = Narrow. 10 = Wide)	**17. Width at Pins**  Width between the pin bones (1 = Narrow. 10 = Wide)	**18. Thickness of Bone**  Degree of thickness of canon bone (1 = Narrow. 10 = Thick)
19. Locomotion		**20. Docility**



The level of Correctness when Weanling walks

(1=Low, 10=High)

1-2 = Aggressive
3-4 = Flighty/Wild
5-6 = Nervous
7-8 = Restless
9-10 = Docile

For Dairy animals the IHFA conduct conformation scoring see Q 41 below

41. If no conformation is carried out by the organisation, are such details obtained from a third party? If so give details.

Using the ICBF data uploaded to their handhelds, IHFA have a team of classifiers who conduct Dairy conformation assessments- these are trained by IHFA. ICBF are responsible for developing and supporting the software and hardware (handheld) for these classifiers and all data flows into ICBFs' database. Scoring is based as follows;

Linear Assessment is the carried out on 19 linear traits. In correlation with this there is the Type Classification where the cows are scored from 65 points to a maximum of 97 points on any of the five main breed traits. Legs and feet, rump, dairy character, frame and finally the udder which would also have the biggest weighting of 40% on the final score with frame 15%, Rump 10%, legs and feet 25% and dairy character 10%.

Heifers can be scored in five grades, namely:

VG 85 - 89 points

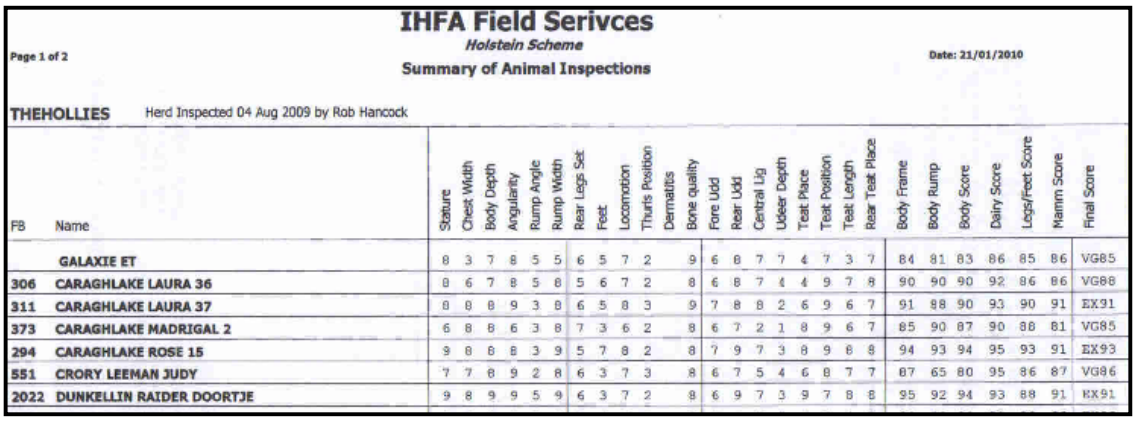
Good plus 80 - 84 points

Good 75 - 79 points

Fair 65 - 74 points

For more info see www.ihfa.ie

For classification and conformation scoring, a report is printed on farm by the scorer on a mobile printer. See here an example page of such a report from IHFA with the animal's scores and classification.



IHFA Field Serivces

Holstein Scheme

Summary of Animal Inspections

Page 1 of 2 — Date: 21/01/2010

THEHOLLIES Herd Inspected 04 Aug 2009 by Rob Hancock

FB	Name	Stature	Chest Width	Body Depth	Angularity	Rump Angle	Rump Width	Rear Legs Set	Feet	Locomotion	Thurls Position	Dermatitis	Bone quality	Fore Udd	Rear Udd	Central Lig	Udder Depth	Teat Place	Teat Position	Teat Length	Rear Teat Place	Body Frame	Body Rump	Body Score	Dairy Score	Legs/Feet Score	Mamm Score	Final Score
	GALAXIE ET	8	3	7	8	5	5	6	5	7	2		9	6	8	7	7	4	7	3	7	84	81	83	86	85	86	VG85
306	**CARAGHLAKE LAURA 36**	8	6	7	8	5	8	5	6	7	2		8	6	8	7	4	4	9	7	8	90	90	90	92	86	86	VG88
311	**CARAGHLAKE LAURA 37**	8	8	8	9	3	8	6	5	8	3		9	7	8	8	2	6	9	6	7	91	88	90	93	90	91	EX91
373	**CARAGHLAKE MADRIGAL 2**	6	8	8	6	3	8	7	3	6	2		8	6	7	2	1	8	9	6	7	85	90	87	90	88	81	VG85
294	**CARAGHLAKE ROSE 15**	9	8	8	8	3	9	5	7	8	2		8	7	9	7	3	8	9	8	8	94	93	94	95	93	91	EX93
551	**CRORY LEEMAN JUDY**	7	7	8	9	2	8	6	3	7	3		8	6	7	5	4	6	8	7	7	87	65	80	95	86	87	VG86
2022	**DUNKELLIN RAIDER DOORTJE**	9	8	9	9	5	9	6	3	7	2		8	6	9	7	3	9	7	8	8	95	92	94	93	88	91	EX91

Transport

42. How are samples identified for transport to laboratory?

Depending on MRO its either barcode or by jumbo number then position in tray and accompanying Input sheet, which has herd number etc.

43. Give details of transport system, collection points and timeframes used for samples from farm to laboratory.

Samples are usually dropped either to lab directly or to a "depot" for pick up by MRO courier. The longest step in the cycle is getting the samples from the farm to the laboratory and typically (see Dairygold example here) that takes an average of approx 3.5- 4.5 days. Note: The Data recording center and labs are in most part the same location.

	Recording to Weighings Entry (W - R)	Weighings to Lab Analysis (A - W)
DM October 2009	3.35	.68
DM September 2009	3.39	.72
DM August 2009	3.47	1.28
DM July 2009	3.01	.89
DM June 2009	3.35	1.08

44. Give details and timeframes used for recorded data to go from farm to data-processing centre.

The recorded data is on Input sheets and travels with the samples i.e. usually dropped either to lab directly or to a "depot" for pick up by MRO courier. The longest step in the cycle is getting the samples from the farm to the laboratory and typically (see Dairygold example here) that takes an average of approx 3.5- 4.5 days. Note: The Data recording center and labs are in most part the same location.

	Recording to Weighings Entry (W - R)	Weighings to Lab Analysis (A - W)
DM October 2009	3.35	.68
DM September 2009	3.39	.72
DM August 2009	3.47	1.28
DM July 2009	3.01	.89
DM June 2009	3.35	1.08

The exception to this is where the recording is EDIY, in which case the time taken for the recorded data to get from farm to database is that night or worse case, next day. (In this case recorded data means; milking times, cow ID, weights, sample number but as no lab results as yet.) See more on EDIY Process here
http://www.icbf.com/services/milkrecording/files/Leaflet%20Electronic%20DIY%20Milk%20Recording%20Kildalton.doc

45. In the case of an "umbrella" organisation are there fixed requirements for member-organisations? If so what are they, such as time from farm to laboratory, sample' box distribution, etc?

ICBF has developed web tracking tools for each MRO so they can track performance at organization level (Turnaround by MRO) and at Recorder level (Turnaround by recorder). Goal is to get the average turnaround time to 3 – 4 days as farmer needs his data back as soon as possible !

The MROs Milk Recording managers discuss each month. Overall national average from Recording day to Results is 5 – 7 days. ICBF comment; Ireland is crying out for a centralised laboratory to drive such efficiencies – see Q 43 below.

Herd Test Turnaround Analysis.

Covering all herd tests the completed processing for the month beginning 01-OCT-2009.

Key:

Actual date for milk recording	**R**	**Weighings entry date (lab)**	**W**
Lab Analysis Date	**A**	**Report print date**	**P**

Processing turnaround. From Recording to Report Printing. (P - R).

	Workload Tests	Workload Animals	Mean lead time, days
DM October 2009	456	30214	5.75
DM September 2009	620	39899	5.9
DM August 2009	536	37641	6.82
DM July 2009	655	44967	5.69
DM June 2009	636	44040	6.36

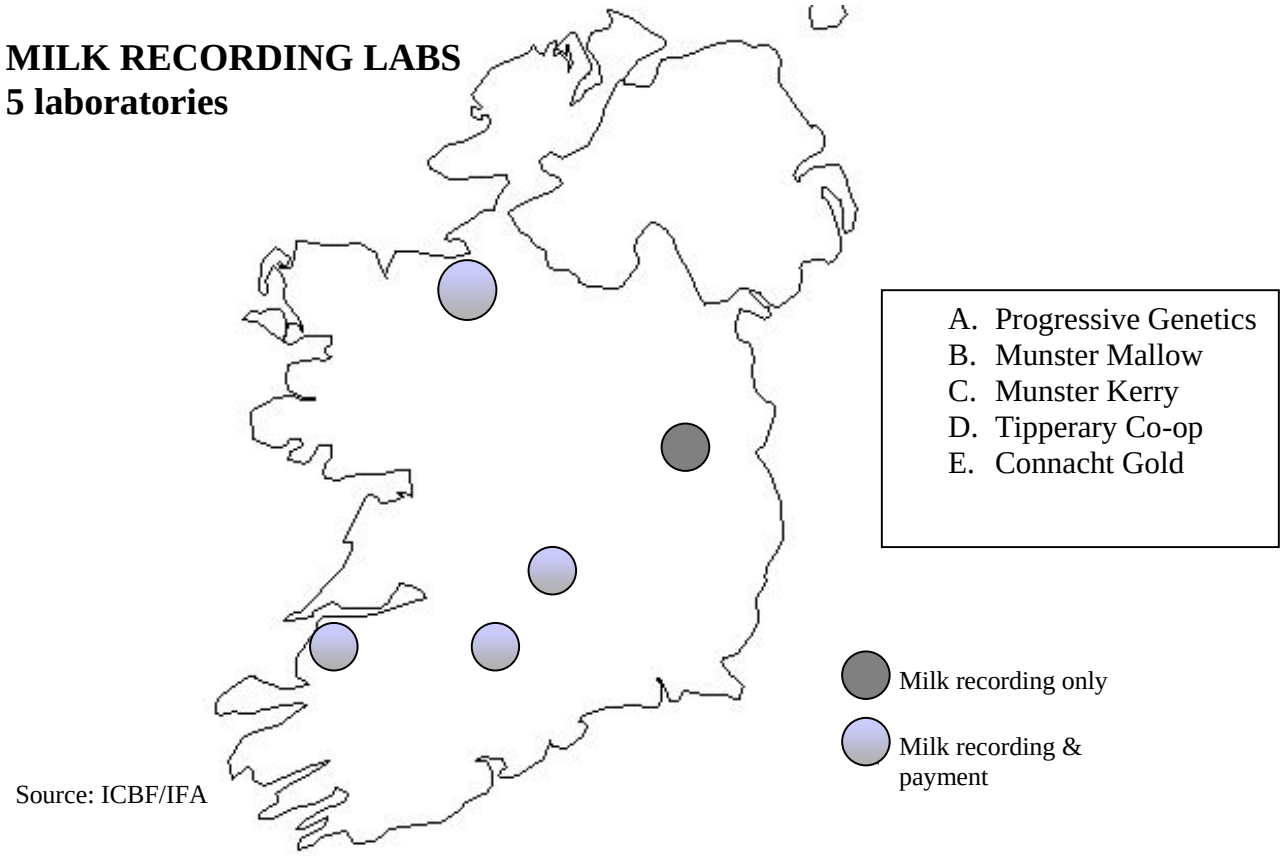
Means for Intermediate Steps.

	Recording to Weighings Entry (W - R)	Weighings to Lab Analysis (A - W)	Analysis to Report Print (P - A)
DM October 2009	3.35	.68	.67
DM September 2009	3.39	.72	.8
DM August 2009	3.47	1.28	.82
DM July 2009	3.01	.89	.7
DM June 2009	3.35	1.08	.95

Laboratory

46. Is the laboratory owned by the organisation applying for the ICAR Certificate of Quality?

No – MROs or Co-op owned, as of 2009 there are 5 milk recording laboratories.



47. If not so owned by the applicant:
a) Please give details as to ownership and governance

MROs or Co-op owns and runs these laboratories

b) What standards of performance are expected, or contracted, in terms of service provision in areas such as return of results to either the data processing centre or farmer?

Via Web ICBF have “turnaround” reports on each MRO and reports are tracked shared and discussed each month. Overall national average from Recording on Farm to Results in farmers hand is 5-7 days. See Q43-45 for examples

c) Does the applicant have a formal place on its governing body?

No

d) Who instigates development of analysis-driven services?

Can be either of MRO, Co-op, Teagasc or ICBF

e) Does the laboratory carry out analytical work for another organisation which carries out similar work to the applicant?

No

48. Does the laboratory have external certification? Give details.

Varies some have ISO 9001 (eg Progressive Genetics) others not

49. Does the laboratory take part in ring-tests? Give details.

Yes all laboratories whether MRO or Co-op (payments) participate in Monthly ring tests. Teagasc Moorepark (National Dairy Research Lab) are contracted by ICBF to conduct the proficiency ring test each year. The system is very simple

- Each month each lab receives 2 sample to test from Moorepark
- Test results to Moorepark & compared vs Reference
- Tolerances. Fat +/-0.10, Prot +/-0.07, Lact +/-0.10, SCC +/- 15%

1 Penalty Point and a Yellow Card if Difference is > tolerance

2 Penalty Point and a Red Card if Difference is > 2 x tolerance

ICBF and all labs receive and review the results annually.
See Table below for the No. of Penalty points issued in 2008 ring tests for the 5 labs (coded).

Moorepark Proficiency Programme Report 2008

Penalty points for accumulative differences

The number of penalty points received by each participating lab over the 12 months with the total adjusted for the number of tests carried out. The labs are also ranked from the lowest to the highest based on the adjusted total.

Lab Code	Fat	Protein	Lactose	SCC	Total	Tot Adj	Rank
E	0	0	0	0	0	0.0	1st
F	0	0	0	0	0	0.0	1st
J	2	0	0	0	2	2.2	3rd
K	2	0	0	1	3	3.0	4th
M	1	1	1	1	4	4.4	5th

Note: 2 labs in joint first place with zero points

50. Give numbers and details of instruments used.

Mikoscsan (Foss) Series 4000, FT 6000, Bentley 2000,
Fossomatic 5000, Bentley Somacount
Some individual models vary among labs (available on request).

51. Give details of instrument calibration and checking programmes.

Daily set up and monthly maintenance and annual manufacturer calibration as per Foss / Bentley schedules

52. Give details of staff skills, including routine training and monitoring programmes.

Most staff would be third level qualified to technical Cert level.

53. How are samples identified within the laboratory? Give details.

Barcode or bottles numbered with accompanying Input sheet (has cow no's and Herd ID)

54. Give details of the systems and processes used to ensure accurate analyses.

Daily set up and monthly maintenance and annual manufacturer calibration as per Foss / Bentley schedules. Plus ICBF runs monthly ring test performance samples.

55. Give details of systems and processes which are used where sample results are not that which would be expected.

At loading or keying the database has max min constants for F % and P% as well as "persistency" levels when calculating lactation yields to date.

56. Give details of processes which take place if the samples are missing, or in a condition which would not give reliable results.

For sours or missing samples then no replacement calculation is done – its simply omitted and any lactation to date calculations for that cow is based on preceding valid F% and P% from previous recording.

57. Are the ranges of constituents reported in conformance with ICAR Guidelines?

Yes, as per Table 11.2. From *ICAR Guidelines June 2008*

Table 11.2. Limits of error for milk yield and fat percentage per species for milk recording devises (both test day recording and daily recording)

	Milk yield			Fat percentage		
Species	Range	Standard deviation[1]	Bias[2]	Range	Standard deviation	Bias
Cattle	2 - 10 kg > 10 kg	0.50kg 5 %	0.2 kg 2 %	2 – 7 %	0.10 % fat	0.05 % fat
Buffalo	2 - 10 kg > 10 kg	0.25 kg 2.5 %	0.2 kg 2 %	3 – 15 %	0.20 % fat	0.10 % fat
Goat and sheep	0.3 - 0.8 kg > 0.8 kg	0.04kg 5 %	0.025 kg 3 %	2 – 12 %	0.20 % fat	0.10 % fat

[1]In kg or in percentage of mean reference yield.
[2]In kg or in percentage of the reference yield.

58. Are there any additional analyses carried out for which there are currently no ICAR Guidelines? Give details.

No.

Data Processing

59. Does the organisation applying for the ICAR Certificate of Quality own the data processing centre or facility?

Yes all data processing occurs within ICBF – we do however take Milk records keyed to ICBF database by MROS. Likewise all Animal Events data keying is outsourced to SWS BPO in Clonakilty, also see Q3.

60. If not so owned please give details:
a) Please give details as to ownership and governance

For Animal Events data keying outsource company see
http://www.swsbpo.com/live/team.html

b) What standards of performance are expected, or contracted, in terms of service provision in areas such as return of results to the farmer, third party or genetic evaluation centre?

Service level agreements are part of contract between ICBF and SWS BPO for data input. ICBF and partners manage all farmer reports transmittal.

c) Does the applicant have a formal place on its governing body?

No.

d) Who instigates development of data-based services for farmers and others?

ICBF is responsible for all development of screens reports, products and services.

e) Does the processing centre carry out work for another organisation which carries out similar work to the applicant?

No but SWSBPO who carry out data keying for ICBF also provide a Calf passport service for DAF and other work from different industry sectors.

61. Does that data processing centre have external certification and if so give details?

Yes, SWSBPO has ISO 9000

62. How does the data arrive at the centre and by what route?

Animal Events sheets can be sent in post directly from farmer. Instead of sending on sheets to the data keying centre in SWSBPO, he also has the option of entering data directly to the database on line (username and password controlled) or he can send an output file from an ICBF authorized/compatible farm package via email to animalevents@icf.com where a script picks the file and auto-downloads to the database. Results can be sent back to the farmer via email or else he can download result on line.

63. At which point are laboratory results incorporated with yield and other data?

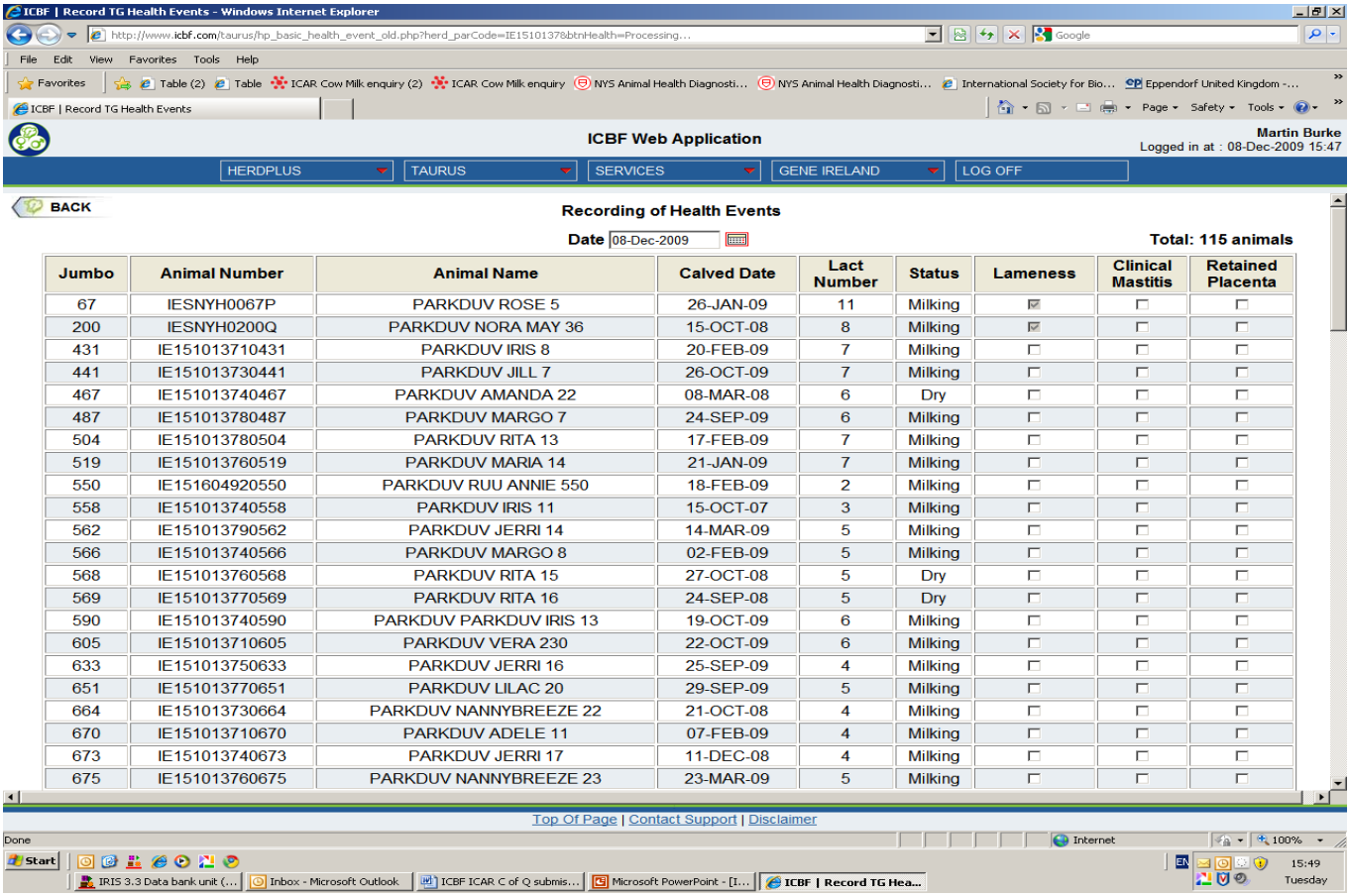
Each night a batch job runs in the ICBF database which merges any keyed or electronically loaded weights to matching lab results. (Lab results are put up on ftp by each lab each day).

64. What method of lactation calculation is used?

Currently as per ICAR section 2.1.4.3.1 using Standard Lactation Curves (ISLC)

65. Does the organisation record health traits, if so which? What use is made by the organisation of this information? Is such information passed to third parties and if so give examples.

Some traits recorded in presence absence format egg Mastitis lameness etc (see screen shot below) but not widely used.



Jumbo	Animal Number	Animal Name	Calved Date	Lact Number	Status	Lameness	Clinical Mastitis	Retained Placenta
67	IESNYH0067P	PARKDUV ROSE 5	26-JAN-09	11	Milking	☑	☐	☐
200	IESNYH0200Q	PARKDUV NORA MAY 36	15-OCT-08	8	Milking	☑	☐	☐
431	IE151013710431	PARKDUV IRIS 8	20-FEB-09	7	Milking	☐	☐	☐
441	IE151013730441	PARKDUV JILL 7	26-OCT-09	7	Milking	☐	☐	☐
467	IE151013740467	PARKDUV AMANDA 22	08-MAR-08	6	Dry	☐	☐	☐
487	IE151013780487	PARKDUV MARGO 7	24-SEP-09	6	Milking	☐	☐	☐
504	IE151013780504	PARKDUV RITA 13	17-FEB-09	7	Milking	☐	☐	☐
519	IE151013760519	PARKDUV MARIA 14	21-JAN-09	7	Milking	☐	☐	☐
550	IE151604920550	PARKDUV RUU ANNIE 550	18-FEB-09	2	Milking	☐	☐	☐
558	IE151013740558	PARKDUV IRIS 11	15-OCT-07	3	Milking	☐	☐	☐
562	IE151013790562	PARKDUV JERRI 14	14-MAR-09	5	Milking	☐	☐	☐
566	IE151013740566	PARKDUV MARGO 8	02-FEB-09	5	Milking	☐	☐	☐
568	IE151013760568	PARKDUV RITA 15	27-OCT-08	5	Dry	☐	☐	☐
569	IE151013770569	PARKDUV RITA 16	24-SEP-08	5	Dry	☐	☐	☐
590	IE151013740590	PARKDUV PARKDUV IRIS 13	19-OCT-09	6	Milking	☐	☐	☐
605	IE151013710605	PARKDUV VERA 230	22-OCT-09	6	Milking	☐	☐	☐
633	IE151013750633	PARKDUV JERRI 16	25-SEP-09	4	Milking	☐	☐	☐
651	IE151013770651	PARKDUV LILAC 20	29-SEP-09	5	Milking	☐	☐	☐
664	IE151013730664	PARKDUV NANNYBREEZE 22	21-OCT-08	4	Milking	☐	☐	☐
670	IE151013710670	PARKDUV ADELE 11	07-FEB-09	4	Milking	☐	☐	☐
673	IE151013740673	PARKDUV JERRI 17	11-DEC-08	4	Milking	☐	☐	☐
675	IE151013760675	PARKDUV NANNYBREEZE 23	23-MAR-09	5	Milking	☐	☐	☐

We have initiated a baseline national survey of some 250 dairy herds under Teagasc Herd Ahead programme. Animal Health Ireland Ireland is a newly formed organization for whom ICBF will provide health trait incidence screens for farmers. It is envisaged to role this out in 2010.

66. What are the timeframes from data processing to the farmers receiving reports?

It varies from literally “seconds” when farmer runs eg a HerdPlus Fertility Report on line from our Web to National Ave of 5-7 days for milk recording (2009).

67. Give details/examples of reports sent to farmers.

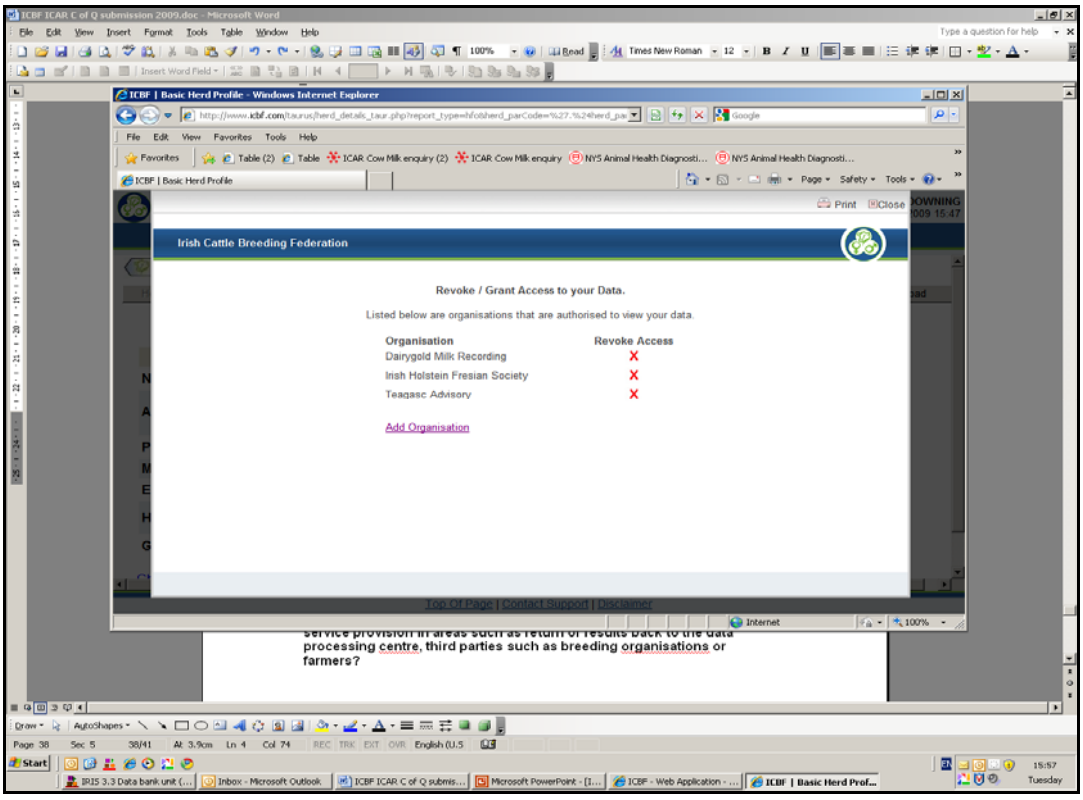
Milk Recording – Animal, Farm Summary, SCC, Lactation Certs, Annual reports, etc
HerdPlus (Dairy) – EBI, Calving, Fertilty, Sire Advice, Dairy Cow Report etc
HerdPlus (Beef) – €uro-Star, Calving, Fertilty, Sire Advice, Suckler Cow Report etc

68. What process is in place if it is found that a farmer knowingly provides misleading or false information, within the official recording programmes?

His data is deleted and he will be a) "Resigned" from the data base or b) monitored for compliance for 12 months

69. Do third parties such as nutritionalists and veterinary surgeons receive copies of the farmer's results? If so what protocols are in place for this service?

Yes VETs, Teagasc advisors etc can gain access but only if the farmer grants permission. He can do this in writing or on line once logged in on his own password



Genetic Evaluations

70 (1). What species/breeds are evaluated?

Dairy, Beef and sheep – all breeds with information available

71 (2). What traits are evaluated in each case?

Dairy - milk, fat, protein, calving interval, survival, somatic cell count, conformation traits, lameness, calving ease (direct and maternal), mortality, gestation length, cull cow weight, carcass fat, carcass conformation, carcass weight, temperament, milking speed

Beef - conformation traits, temperament, lameness, calving ease (direct and maternal), mortality, gestation length, cull cow weight, carcass fat, carcass conformation, carcass weight, weaning weight (direct and maternal), calf quality, survival

Sheep – days to slaughter, ultrasound fat, ultrasound muscle, lamb survival, lambing ease, weaning weight.

72(3). Give formulae for calculations for species which currently have no ICAR Guidelines for genetic evaluations or where evaluations are for purely internal use and/or what is the model used for evaluation of your production traits?

N/A

73 (4). Give correlations where known.

N/A

74(5). Give details if the number of traits to be expanded in the next year and give details.

Insemination traits will be included in the dairy and beef evaluation

75 (6). Give details of standards of operation including any peer-review.

Production evaluation in accordance with ISO9001. Interbull validation tests.

76 (7). Give details of the length of time for which production and pedigree data have been collected

Traits been collected since early 1970's

NB: For applicants using ICAR's Interbull services

Where appropriate, the ICAR Secretariat will obtain from Interbull Centre, for the auditor, a Report of Conformity relating to the Applicant in relation to genetic evaluations, showing regard to the current ICAR Guidelines and the current Interbull Code of Practice

Such a report will include:

- Résumé of information received from the applicant or service provider
- A copy of the Form GE as per Interbull Code of Practice
- A short summary of current validation procedures

77 (8). Give details of the length of time which the applicant or service provider has taken part in ICAR's Interbull and/or Interbeef genetic activities.

Since 2001

78 (9). Has the applicant or service provider's data been rejected for inclusion in the Interbull evaluations for any reasoning the past five years? If yes give details and the steps taken to address the problem(s).

No

79 (10). When did the applicant or service provider last take part in an Interbull test-run for production traits? If possible give a summary of that test.

September 2006. Jersey data submitted to the production test-run. We did not have enough qualifying AI bulls to be included in the evaluation.

80 (11). What is the average correlation between your results and other organisations' results from the Interbull evaluations?

Production – 0.85
Other – 0.8

All applicants completing this section

81 (12) . What use is the organisation making, or intends to make of genomics and the reporting of such information?

We are currently publishing GEBVs on animals where we have a genotype for that animal. A paper outlining the use of genomics in Ireland was presented at the Interbull 2009 conference. A copy of the paper can be found at http://www.icbf.com/publications/files/itb_082009_FK.pdf
2010 Update – some 34% of all Dairy cow inseminated in Spring 2010 were with Genomically Selected bulls, so Ireland is in production with respect to offering Genomically selected bulls.