IRISH CATTLE BREEDING FEDERATION
& SHEEP IRELAND

The new infrastructure for cattle and sheep breeding in Ireland.

Brian Wickham
Chief Executive
ICBF & Sheep Ireland
Content

- Background
- Data & Information Sharing
- ICBF’s National Database
- Genetic Evaluation System
- Funding
- Benefits
Irish Cattle Breeding Federation Society Limited (ICBF)

- Established with interim Board in 1997
- Commenced operations in 1998
- Current structure in 2000

- Mission: achieving the greatest possible genetic improvement in the national cattle herd - Dairy and Beef
Stakeholders in cattle breeding control decision making.
Data & Information Sharing Agreement

- Contributors retain ownership
- Farm data through “Animal Events”
- Electronic sharing of data collected
- Data for research
- Integrated genetic evaluations
- Herd owner controls access
- Information for service providers
- HerdPlus® - information of herd owner
- User-pays & full cost recovery
## Database – single source – without duplication

<table>
<thead>
<tr>
<th>Source of data</th>
<th>Type of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farms</td>
<td>Animal events – birth, calving, weights, docility,</td>
</tr>
<tr>
<td>DAFF – official system</td>
<td>Registrations, movements, deaths, exports …</td>
</tr>
<tr>
<td>Meat Factories</td>
<td>Slaughter (date, weight, grade …), Images</td>
</tr>
<tr>
<td>Marts</td>
<td>Sale (date, weight, price …)</td>
</tr>
<tr>
<td>AI</td>
<td>Insemination (date, sire)</td>
</tr>
<tr>
<td>Milk Recording</td>
<td>Milk weight</td>
</tr>
<tr>
<td>Laboratories &amp; Milk Processors</td>
<td>Milk composition, disease test results, genotypes</td>
</tr>
<tr>
<td>Linear scoring</td>
<td>Weights, scores – beef &amp; dairy</td>
</tr>
<tr>
<td>Genetic evaluations</td>
<td>Breeding values, reliabilities, indexes …</td>
</tr>
</tbody>
</table>
## Database Information
- single source – to many users

<table>
<thead>
<tr>
<th>Users</th>
<th>Type of Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service providers:</td>
<td>• Customer profiles</td>
</tr>
<tr>
<td>- Milk recording</td>
<td>• Service details</td>
</tr>
<tr>
<td>- Herd Book</td>
<td>• Genetic evaluations</td>
</tr>
<tr>
<td>- AI Stud &amp; Field</td>
<td>• Herd Books</td>
</tr>
<tr>
<td>- Advisory</td>
<td>• Discussion Groups &amp; Farmer Reports</td>
</tr>
<tr>
<td>- Veterinarians</td>
<td>• Elite animals</td>
</tr>
<tr>
<td>- Milk processors</td>
<td>• Research results</td>
</tr>
<tr>
<td>- Researchers</td>
<td>• Active AI bull lists</td>
</tr>
<tr>
<td></td>
<td>• Raw data files for research</td>
</tr>
<tr>
<td>Farmers direct</td>
<td>• HerdPlus®- genetic evaluations, reports</td>
</tr>
<tr>
<td></td>
<td>• GROW®- reports</td>
</tr>
<tr>
<td></td>
<td>• G€N€ IR€LAND®- progeny test</td>
</tr>
<tr>
<td>General public:</td>
<td>• Statistics, Reports, Publications ...</td>
</tr>
<tr>
<td><a href="http://www.icbf.com">www.icbf.com</a></td>
<td>• Genetic Evaluations</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Beef Genetic Evaluations

ICBF Website

www.icbf.com

bull search

CF52
**Beef Bull €uro-Star Evaluation**

### €uro-Star Rating (ICBF, April 2010)

<table>
<thead>
<tr>
<th>AI Code:</th>
<th>CF52</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Name:</td>
<td>DOONALLY NEW</td>
</tr>
<tr>
<td>Owner:</td>
<td>NATIONAL CATTLE BREEDING CNTR</td>
</tr>
<tr>
<td>Date of Birth:</td>
<td>18-JAN-1997</td>
</tr>
<tr>
<td>Date of Evaluation:</td>
<td>April 2010</td>
</tr>
<tr>
<td>Breed:</td>
<td>CH (100%)</td>
</tr>
<tr>
<td>Sire:</td>
<td>HERMES / HME</td>
</tr>
<tr>
<td>Dam:</td>
<td>INTRUSE / 7193100567</td>
</tr>
<tr>
<td>National ID:</td>
<td>CALBREED9007</td>
</tr>
<tr>
<td>International ID:</td>
<td>CHLFRAM007197126709</td>
</tr>
</tbody>
</table>

### % Rank |
- 94%
- 98%
- 99%
- 1%

### Star Rating (within breed) |
- ★★★★★
- ★★★★★
- ★★★★★
- ★

### Index and Traits |
- Suckler Beef Value (SBV)
- Weaning Export
- Beef Carcass
- Daughter Fertility
- Daughter Milk
- Calving Difficulty (% 3 or 4)
- Gestation Length (Days)
- Docility (1-5 score)

### €uro-Value |
- €131
- €108
- €176
- €81
- €121
- 11.28%
- .79 Day(s)
- 0.14

### Overall Index – SBV in €

### Sub Indexes – in €

### Key traits phenotype units

Data Reliability: 40% - 60% = Average
20 - 40% = Below Average
< 20% = Poor
Dairy Genetic Evaluations

ICBF Website
www.icbf.com
bull search

GMI
## Dairy Bull EBI Evaluation

### Overall Index – EBI in €

<table>
<thead>
<tr>
<th>Index</th>
<th>Euro</th>
<th>Rel</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBI</td>
<td>98</td>
<td>99%</td>
</tr>
<tr>
<td>Milk Sub Index</td>
<td>58</td>
<td>99%</td>
</tr>
<tr>
<td>Fertility Sub Index</td>
<td>26</td>
<td>99%</td>
</tr>
<tr>
<td>Calving Sub Index</td>
<td>20</td>
<td>99%</td>
</tr>
<tr>
<td>Beef Sub Index</td>
<td>-8</td>
<td>99%</td>
</tr>
<tr>
<td>Health Sub Index</td>
<td>-3</td>
<td>99%</td>
</tr>
<tr>
<td>Maintenance Sub Index</td>
<td>4</td>
<td>99%</td>
</tr>
</tbody>
</table>

### Sub Indexes – in €

#### Key traits phenotype units

<table>
<thead>
<tr>
<th>Trait</th>
<th>PTA</th>
<th>Rel</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dir. Calv Diff (%)</td>
<td>3.32</td>
<td>99%</td>
<td>More</td>
</tr>
<tr>
<td>Mat. Calv Diff (%)</td>
<td>10.02</td>
<td>99%</td>
<td>More</td>
</tr>
<tr>
<td>Gest Len (Days)</td>
<td>-2.14</td>
<td>99%</td>
<td>More</td>
</tr>
<tr>
<td>Calf Mort (%)</td>
<td>-0.65</td>
<td>99%</td>
<td>More</td>
</tr>
</tbody>
</table>
Benefits to Stakeholders

- **State**
  - cost savings (€1.35m)
  - taxation (€2.27m)
  - research, education, knowledge transfer

- **Community**
  - Industry – processors, suppliers
  - Consumers
  - Society

- **Farmers**
  - Service users – now & future
  - Non users of services - now & future

- **Breeding Industry**
Projected Impact of ICBF on Genetic Gain of Dairy & Beef Calves Born in Ireland.

- Dairy base EBI (1)
- Dairy + ICBF (2)
- Dairy + ICBF + Genomics (3)
- Beef base (SBV)
- Beef + ICBF

Profit Index of Calves Born

Year of birth:
- 1995
- 1997
- 1999
- 2001
- 2003
- 2005
- 2007
- 2009
- 2011
- 2013
- 2015
- 2017
- 2019
- 2021

Dairy €236m
Beef €60m
Growth of Participation – 90% of calves born in 2009

- Calf births registered
- Animal events birth registrations
- Pedigree registrations

Suckler Cow Welfare Scheme

Million

2004 2005 2006 2007 2008 2009

Growth of Participation – 90% of calves born in 2009

Sheep Welfare
Conclusions

- Animal breeding is a unique and powerful tool for improving the profitability of cattle and sheep farming in Ireland.
- Irish animal breeding has been transformed through a unique partnership between farmers, the breeding industry and DAFF.
- New technologies, market imperatives and economic pressures are providing the motivation for this transformation to be continued.
- Continued investment will give excellent returns.
- The model established for animal breeding has potential to achieve substantial progress areas such as plant breeding, animal health and product quality.
ICAR 2012 Conference

Cork, Ireland

Mon 28th May - Fri 1st June 2012

www.icar2012.ie