Developing a low cost DIY weight recording model for beef cows and calves in Ireland

Niall Naughton, ICBF

ICAR Prague, June 2019
Who are ICBF?

• Based in Cork, Ireland
• Established in 1998 to increase farm profitability through genetics and data integration.
• Vision
  • Empowering sustainable farming through collaboration and excellence in genetics and big data solutions.
• ICBF national central database.
  • All stakeholders sharing data for farmer & industry benefit.
  • 2nd in world to launch dairy genomics.
  • Beef Genomics, largest cattle genomics project globally.
Beef Environmental Efficiency Pilot (BEEP)

- Announced by the Irish Department of Agriculture in October 2018.

- €20 million budget targeting the weighing of 500,000 Beef animals.

- Farmer receives €40 for weighing a cow and her calf.

- Weights must be submitted to the ICBF database before 1\textsuperscript{st} November 2019.

- ICBF is responsible for the administration and coordination of the project.
Beef Environmental Efficiency Pilot (BEEP)

Reason:

• Low levels of weighing on beef farms
  • 2% of weanling
  • 1% of cows

• Goals:
  1. Support decision making on farms through better quality data on herd performance.
  2. To further increase economic and environmental efficiency in the Irish suckler herd.
  3. Ultimately help reduce carbon emissions.

• Pilot began in February 2019 with 18,700 herds.
BEEP Challenges

1. Unknown level of weighing equipment on farms
   - Some farmers will have their own equipment.
   - Some will use technician services or borrow scales.

2. Provide access to weighing equipment at a low cost.
   - Decision made to set up a rental solution.
Rental Service

• Nationwide rental service
  - Had to be set up in less than five months.

• Estimated we needed
  - 400 sets of weight equipment.
  - 70+ depots around the country.

• EU tender procurement process
  1. Weighing equipment.
  2. Service provision.

• The rental fee for the farmer would be €50 per day.
Weighing Equipment

EziWeigh 7i Indicator

MP 600 Loadbars
Depots

- ICOS won the tender for the service provision.
- Rental service provided via Co-ops and marts
Equipment Management Software

• **Booking software**
  - Allow farmers reserve equipment online.
  - Design and develop customised booking software.
    - Investigated off the shelf options but they were not suitable.
    - Software was developed in house by ICBF.

• **Depot Management Software**
  - Record any issues with the equipment.
  - Keeps track of inventory, facilitates the movement of equipment between depots.

• Software available at [www.mybeep.ie](http://www.mybeep.ie)
The Beef Environmental Efficiency Pilot (BEEP) was launched by Minister Michael Creed TD on Wed 30th Jan 2019. Funding of 20 million euro has been made available by the Department of Agriculture, Food and the Marine (DAFM) for the pilot which aims to capture on-farm liveweights of approx. 500,000 cows and their calves.

How do I register my weighing scales for BEEP?
Please note: The rental charge is €50 per day (excluding Sundays).

Step 1. Please select your depot from the list below

Regions: [ ] Cork
Depots: [ ] Clondrohid (Dairygold)

Garranenagappul
Macroom
Co. Cork

Step 2. Please pick a date for collection of the scales

<table>
<thead>
<tr>
<th>Fri</th>
<th>Sat</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-Jun-10</td>
<td>12-Jun-10</td>
<td>13-Jun-10</td>
<td>14-Jun-10</td>
<td>15-Jun-10</td>
</tr>
</tbody>
</table>

Step 3. Please pick the day you will be returning the scales (Maximum rental 3 days)

<table>
<thead>
<tr>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-Jun-10</td>
<td>17-Jun-10</td>
<td>18-Jun-10</td>
</tr>
</tbody>
</table>

Mobile: [ ] 0012345677 (Required)

If you would also like your reservation details by email, please enter your email address below:

Email: [ ]

If you are adding additional herds (maximum of 2 herds) to this booking please enter their herd number below:

Additional Herd 1: [ ]
Additional Herd 2: [ ]

Click here if you accept the Terms and Conditions:

[ ]

[ ] Reserve Scales
Farmer weighs the animals
Other factors

• **Training**
  - Depots, 10 regional meetings to train staff.
    - Information about the scheme.
    - Booking software.
    - Engagement with depots.
  - Videos to train farmers and depot staff.
    - Developed videos in house.

• **Rental T&Cs**
  - Significant work in coordinating all parties.
  - Farmer signs T&Cs and is given an instruction booklet when collecting equipment.

• **Call Centre**
  - Trained to answer queries from farmers regarding the scheme.
Weight Recording Options

– Weights need to be submitted to the ICBF database

1. ICBF developed an Android/IOS App.

2. Web page

   http://www.icbf.com

3. Paper forms.

   Sent in by post and keyed.

4. Third party software/apps that integrate directly with ICBF.

– Encourage digital transmission.
Weight Recording Options – Android/IOS App
# BEEP - Record Animal Weight

Record live weights for cows and their calves.

Listing of animals eligible to be weighed for BEEP which have not yet had a weight submitted, animals with valid BEEP weights and animals who have left the herd without a valid weight. To record weights on other animals in your herd or animals which have BEEP weights already submitted please click here.

**Date of Weighing:**

---

### Animals To Be Weighed

<table>
<thead>
<tr>
<th>Jumbo</th>
<th>Animal Number</th>
<th>Sex</th>
<th>Date of Birth</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>123</td>
<td>IE1414510370123</td>
<td>F</td>
<td>22-MAR-13</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>IE141451040178</td>
<td>F</td>
<td>15-AUG-11</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>IE141451040184</td>
<td>F</td>
<td>22-AUG-12</td>
<td></td>
</tr>
<tr>
<td>199</td>
<td>IE141451039189</td>
<td>F</td>
<td>17-OCT-12</td>
<td></td>
</tr>
<tr>
<td>201</td>
<td>IE141451020201</td>
<td>F</td>
<td>27-OCT-12</td>
<td></td>
</tr>
<tr>
<td>205</td>
<td>IE141451020205</td>
<td>F</td>
<td>31-JAN-13</td>
<td></td>
</tr>
<tr>
<td>206</td>
<td>IE141451072206</td>
<td>F</td>
<td>09-FEB-13</td>
<td></td>
</tr>
<tr>
<td>208BI</td>
<td>IE1510394403710</td>
<td>F</td>
<td>14-FEB-13</td>
<td></td>
</tr>
</tbody>
</table>
## Weight Recording Options – Paper Option

**Herd Id:** D1770498

**Date:** 06-Jun-2019

### Weighing Date

Ensure that Weighing Date is recorded

### Scales Registration Number

OWN2995

<table>
<thead>
<tr>
<th>Cow Liveweight</th>
<th>Calf Liveweight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cow Tag</strong></td>
<td><strong>Weight (kg)</strong></td>
</tr>
<tr>
<td>372224667810295</td>
<td></td>
</tr>
<tr>
<td>IE141461070123</td>
<td></td>
</tr>
<tr>
<td>IE141461060205</td>
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</tr>
<tr>
<td>IE141461070255</td>
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</tr>
<tr>
<td>IE141461070255</td>
<td><strong>Multiple Births</strong></td>
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<tr>
<td>IE141461040260</td>
<td></td>
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<tr>
<td>IE151094460710</td>
<td></td>
</tr>
<tr>
<td>IE141461040194</td>
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</tbody>
</table>
Farmer Management Screens

Beef Environmental Efficiency Pilot (BEEP)

Eligible Animals

Eligible animals to be weighed through BEEP are:
- Beef calves (beef sire x beef dam) born in your herd from 01-Jul-2018 to 30-Jun-2019
- The dams of these calves

Eligible calves: 28
Eligible cows: 27

Data Recording and Scales Registration

Owned Scales Registration Number(s): OWN2995

- Record Weights
- Weight Recording Form
- View/Register Own Scales
- View/Register Third Party Scales

If you wish to rent a scales through the BEEP rental network, click here

Hard Summary

Calves weighed: 8/28
Cows weighed: 8/27

BEEP Herd Weighing Program
### Farmer Report

#### Weaning Performance Report
*Animals born between 01/08/2018 - 29/05/2019*

**Print Date:** 29-MAY-2019  
**Herd Owner:** JOHN DALY  
**Herd Number:** H1770498

1. **Summary Data** - Overview of weight performance of calves born in your herd in the period and their dams.

#### A. Calf Performance

<table>
<thead>
<tr>
<th></th>
<th>Born In Period*</th>
<th>No. Weighed**</th>
<th>ADG (kg)</th>
<th>Avg. 200 Day Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All</strong></td>
<td>28</td>
<td>8</td>
<td>1.18</td>
<td>287</td>
</tr>
<tr>
<td><strong>Males</strong></td>
<td>13</td>
<td>5</td>
<td>1.22</td>
<td>296</td>
</tr>
<tr>
<td><strong>Females</strong></td>
<td>15</td>
<td>3</td>
<td>1.11</td>
<td>272</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Your Herd</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Males</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td>250</td>
</tr>
</tbody>
</table>

#### Top Males & Females

<table>
<thead>
<tr>
<th>Calf Tag</th>
<th>Dam Parity***</th>
<th>200 Day Weight (kg)</th>
<th>ADG (kg)</th>
<th>Dam Jumbo</th>
<th>Dam Rep. Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>70316</td>
<td>3</td>
<td>326</td>
<td>1.37</td>
<td>217</td>
<td>★★★★★☆</td>
</tr>
<tr>
<td>50314</td>
<td>4</td>
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<tr>
<td>80317</td>
<td>6</td>
<td>308</td>
<td>1.29</td>
<td>174</td>
<td>★★☆☆☆☆</td>
</tr>
</tbody>
</table>

#### Top 5 Females on 200 Day Weight

<table>
<thead>
<tr>
<th>Calf Tag</th>
<th>Dam Parity***</th>
<th>200 Day Weight (kg)</th>
<th>ADG (kg)</th>
<th>Dam Jumbo</th>
<th>Dam Rep. Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>90318</td>
<td>7</td>
<td>291</td>
<td>1.2</td>
<td>157</td>
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</tr>
<tr>
<td>30312</td>
<td>2</td>
<td>268</td>
<td>1.08</td>
<td>250</td>
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</table>

#### Bottom Males & Females

<table>
<thead>
<tr>
<th>Calf Tag</th>
<th>Dam Parity***</th>
<th>200 Day Weight (kg)</th>
<th>ADG (kg)</th>
<th>Dam Jumbo</th>
<th>Dam Rep. Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>40313</td>
<td>8</td>
<td>261</td>
<td>1.09</td>
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</tr>
<tr>
<td>60315</td>
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<td>256</td>
<td>1.05</td>
<td>192</td>
<td>★★☆☆☆☆☆☆☆☆☆☆</td>
</tr>
</tbody>
</table>

#### Bottom 5 Males on 200 Day Weight

<table>
<thead>
<tr>
<th>Calf Tag</th>
<th>Dam Parity***</th>
<th>200 Day Weight (kg)</th>
<th>ADG (kg)</th>
<th>Dam Jumbo</th>
<th>Dam Rep. Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>10319</td>
<td>2</td>
<td>258</td>
<td>1.06</td>
<td>256</td>
<td>★★☆☆☆☆☆☆☆☆☆☆</td>
</tr>
<tr>
<td>10321</td>
<td>3</td>
<td>253</td>
<td>1.04</td>
<td>260</td>
<td>★★☆☆☆☆☆☆☆☆☆☆</td>
</tr>
</tbody>
</table>
Farmer reserves equipment online at www.mybeep.ie.

Goes to depot and collects weighing equipment, signs T&Cs.

Weighs the animals.

Submits weights to the ICBF Database.

Returns weighing equipment to depot and pays rental fee.
Operational Considerations

- **Biosecurity**
  - Concerns around the spread of disease
  - Stress the importance of cleaning and disinfecting equipment
  - Part of rental T&C’s
    - Equipment must be returned clean by farmer.
    - Payment may be stopped if farmer does not comply.
  - The depot disinfects equipment before each rental.

- **Accuracy of weighing data being submitted**
  - All farmer owned/borrowed scales need to be registered with ICBF.
    - Provides good knowledge of on farm weighing equipment.
  - Quality Control checks on data to identify irregularities.
  - Dept of Agriculture audits to ensure compliance.
Outcomes & Learnings

**Outcomes**

- Developed a national infrastructure for weighing cattle that can be used in the future.
- Help farmers see the benefits of weighing their animals.
- Improved genetic evaluations because of increased data.

**Learnings**

- Legal issues
  - Tenders and T&Cs were the most time-consuming aspects.
- Early engagement with service providers was essential.