Milk Recording Services
Higher Benefit / Lower Cost - Options

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Dairy Cattle Breeding Conference,
Silver Springs Hotel, Cork
Topics

- National MR Statistics
- MR Uptake
- Milk Recording – New Services/Trials
- Cost scenarios
### Milk Recording – National Picture

<table>
<thead>
<tr>
<th>No. Dairy Herds/Cows in Ireland</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>30,900 Dairy Herds in Ireland</td>
<td></td>
</tr>
<tr>
<td>1,149,480 Dairy cows in Ireland</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. Milk Recording Herds/Cows in Ireland</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6,695 (33%) of these herds Milk Recording</td>
<td></td>
</tr>
<tr>
<td>375,693 (22%) of these Cows in Milk Recording</td>
<td></td>
</tr>
</tbody>
</table>

*Irish Cattle Breeding Federation Statistics, 2002*
# No. Cows Milk Recording – 2003 Update

<table>
<thead>
<tr>
<th>Herd Size</th>
<th>4 Week</th>
<th>6 Week</th>
<th>8 Week</th>
<th>Totals by herd size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 25</td>
<td>5,643</td>
<td>3,467</td>
<td>904</td>
<td>10,014 (3%)</td>
</tr>
<tr>
<td>26 – 80</td>
<td>133,988</td>
<td>97,126</td>
<td>19,612</td>
<td>255,726 (73%)</td>
</tr>
<tr>
<td>80+</td>
<td>52,227</td>
<td>29,353</td>
<td>10,126</td>
<td>91,706 (26%)</td>
</tr>
<tr>
<td>Totals by Scheme</td>
<td>191,858 (54%)</td>
<td>129,946 (37%)</td>
<td>30,642 (9%)</td>
<td>352,516</td>
</tr>
</tbody>
</table>

Herds with more than 2 tests in last 9 months - Stats extracted from ICBF database on December 2003
## Comparison of Milk Recording In Ireland vs International (2002)

<table>
<thead>
<tr>
<th></th>
<th>% Herds Recorded</th>
<th>3 Wks %</th>
<th>4 Wks %</th>
<th>6 Wks %</th>
<th>7 Wks %</th>
<th>8 Wks %</th>
<th>9 Wks %</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>53</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>33</td>
<td>54</td>
<td>37</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>82</td>
<td>5</td>
<td>63</td>
<td>32</td>
<td>96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>86</td>
<td>1</td>
<td>3</td>
<td>96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark *</td>
<td>88</td>
<td>74</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Danish herd pop. comparable scale to Ireland
**Comparison of Milk Recording In Ireland vs Denmark (2002)**

<table>
<thead>
<tr>
<th></th>
<th>Ireland</th>
<th>Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Dairy Herds</td>
<td>30,900</td>
<td>7,500</td>
</tr>
<tr>
<td>No. Herds in Milk Recording</td>
<td>6,695 (22%)</td>
<td>6,600 (88%)</td>
</tr>
<tr>
<td>No. Cows in Milk Recording</td>
<td>375,693</td>
<td>547,000</td>
</tr>
<tr>
<td>Average Herd size in MR</td>
<td>56</td>
<td>83</td>
</tr>
<tr>
<td>No. DIY Herds</td>
<td>0 to Negligible</td>
<td>5,600 (85% of MR)</td>
</tr>
<tr>
<td>No Herds who own meters</td>
<td>6,100</td>
<td>1,000</td>
</tr>
<tr>
<td>No. Field Recorders/ MR Technicians</td>
<td>575</td>
<td>90</td>
</tr>
<tr>
<td>Intervals offered</td>
<td>4, 6, 8 wks</td>
<td>4, 8 wks</td>
</tr>
</tbody>
</table>
To Milk Record or not - ?

If the **Effort** > Benefit,

then take up will never happen

If the **Benefit** > Effort

then take up will happen

(Effort = cost + inconvenience)
To Milk Record or not - ?

<table>
<thead>
<tr>
<th>Minimise Effort = Reduce Cost</th>
<th>Maximise Benefit = Increase Value Add</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIY option</td>
<td>Better, Timely Reports</td>
</tr>
<tr>
<td>Better Meter Utilisation</td>
<td>Timely Action/Mgt Info – more than just for premia</td>
</tr>
<tr>
<td>Move to Elec. Data processing – user friendly</td>
<td>Strategic Breeding Info - Decision Support System</td>
</tr>
<tr>
<td>Barcoded samples for Lab efficiency</td>
<td>Increase profit</td>
</tr>
</tbody>
</table>
Trial MR Services 2004

To tip the Benefit vs Effort equation in the right direction for the farmer we need to;

1. **Qualify New Methods**, DIY, Sharing Meters, EDI, Barcode tests in Lab etc. Planned for 2004 are;
   
   A. **DIY-E** (Data Handler + Shared Electronic Meters)
   
   B. Low Cost A8 – seasonal herds

2. **Increase Farmer education + change “sales pitch” to providing a DSS***(not discussed here)**

   *DSS = Decision Support System*
Current Recording Cycle
(5 Step - paper based)

1. Input sheet (Paper) sent to Recorder
2. On Farm – For PM & AM, Recorder samples and records weights on Input sheet
3a. Samples to lab for testing
3b. MR Office staff manually key weights to database
4. Database merges Lab Results + Weights, Herd Lactations calculated
5. Herd Reports sent by disk or posted to farmer
DIY Cycle (Electronic based)

Herd Reports available by e-mail to farmer (& in future via internet)

Technician loads cows no.’s from database directly to “handheld” and drops off at farm with electronic meters

On Farm – Meter auto samples to bar-coded vial, and transmits PM and AM weights to handheld – no Recorder necessary

Database merges Lab file + Weights file, Herd Lactations calculated

Samples to lab for testing

Technician loads results from handheld directly to database - no keying!

Database merges Lab file + Weights file, Herd Lactations calculated

Samples to lab for testing

Technician loads results from handheld directly to database - no keying!
Current Recorder Cycle
(cost- areas saved)

Herd Reports sent by disk or posted to farmer (Print, Pack & Post)

Database merges Lab Results + Weights, Herd Lactations calculated (Fixed)

Samples to lab for testing (Fixed)

MR Office staff manually key weights to database (No Labour, O/head)

Input sheet (Paper) sent to Recorder (Print, Pack & Post)

On Farm - Recorder samples and records weights on Input sheet (No Recorder Labour, Expenses)

Herd Reports sent by disk or posted to farmer (Print, Pack & Post)
A. DIY-E (Data Handler / Shared Electronic Meters)

1. TECHNICIAN UPLOADS HERD FROM DATABASE TO DATA HANDLER

- Technician plans and maintains Herd test schedule. (DK = 73 herds/Tech)
- He ensures all Data Handlers and Meters are sufficiently charged
- He has access to database from his home PC, can check his farmers data
- From his PC he Uploads the scheduled herds’ data (cows) to Data Handler
- If there are 5 farmers due for test next day then he uploads 5 Data handlers.
- Transports Data Handlers and Meters to Farmer on day of PM recording

Data Handler  Upload Herd  Charge Meter  Transport to Farm

No paper input sheet required – herd is loaded to data handler.
A. DIY-E (Data Handler / Shared Electronic Meters)

2. PM/AM - FARMER LINKS COW TO METER /BARCODE – WGT/SAMPLES

- At milking the farmer links cows number in data handler to meter/barcode.
- Meter takes Milk Weight Reading when finished
- Meter automatically takes sample into barcoded vial
- As cow is linked to meter the Data Handler now has captured the weight and barcode No. for both PM and AM
- Data Handler can also take data on Milking Time, Flow Profile, Wash Profile
A. DIY-E (Data Handler / Shared Electronic Meters)

3. TECHNICIAN PICKS UP METERS, DATA HANDLER AND SAMPLES

- After hot wash Farmer takes down meters for Technician to pick up
- Technician takes Meters and Samples with him
- Farmer has option of taking print out of PM, AM readings
- Print out will also give list of dry/missed cows and batt status of meters
A. DIY-E (Data Handler / Shared Electronic Meters)

4. TECHNICIAN DOWNLOADS HERDS DATA DIRECTLY TO DATABASE

- Technician plugs Data Handler into PC Interface and updates database
- No Paper, No Keying, – he checks farmer data, confirms download to Dbase
- Samples are sent to Lab
- Print out will also give list of dry/missed cows and batt status of meters

Data Downloaded

Samples sent to Lab
A. DIY-E (Data Handler / Shared Electronic Meters)

5. LAB ANALYSES AND SENDS CONSTITUENT RESULTS TO DATABASE

- Barcoded vials means no stopping of Foss machines to key Herd ID
- Robot* tester can test 480 samples/hr all lab tech is load/unload
- Foss outputs file to database with barcode and constituents linked

*Intellitech robot can be attached to std Foss (approx 80K Euro)

Robot + Foss test samples (480/hr)
A. DIY-E (Data Handler / Shared Electronic Meters)

6. FARMER LOGS AND ACCESES HIS REPORTS ON LINE

- Both Tech and Farmer can see Results on Line – pdf format
- If Farmer wants Hard copy he prints himself
- No print / pack / post cost – if farmer wants this he pays extra.

As well as standard Milk Production Reports some of the other “Decision Support” type reports include;

- Animals for Breeding
- Bull Selection
- Reproduction Herd
- Expected Calvings
A. DIY-E Project Update:

- 25 DIY Electronic Meters received 03rd Feb 2004
- 3 Data Handlers received 03rd Feb 2004
- Technician selected
- Commissioning trials scheduled on 2 farms 11th 12th Feb 2004
- 5 Dairygold MR Herds will run for season
- Gather and analyse data and qualify for Irish production 2005
**Immediate MR Service available**

2004

Herds on new database can now avail of new Low Cost A8. (SLAC method of calculation means accuracy is maintained although fewer tests).

- **Low Cost A8**
  - Seasonal Herds
  - 4 visits per season
  - Target cost to Farmer is €8 / cow (MRO to decide)

- **Aims**
  - Retain/Attract New Clients to Milk Recording
  - Reduce Recorder costs for MRO
Other MR Services under review 2004/5

- Low Cost A8 for all year round calving herds
- More flexible, farmer friendly intervals
- Alternate Recording AM/PM
- Data upload Milk Weights from Electronic Meters
New Client Charges- Scenarios

Example: Farmer with 75 cows, 12 unit parlour, has a PC & wants to sign up for Milk Recording (1 visit = AM+PM)

<table>
<thead>
<tr>
<th>Item</th>
<th>Current * A4 (€15.27)</th>
<th>Current * A8 (€10.56)</th>
<th>Low Cost A8 (€8.00)</th>
<th>DIY-E A8 (€5.00)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11 visits</td>
<td>7 visits</td>
<td>4 visits</td>
<td>4 visits</td>
</tr>
<tr>
<td>Herd Admin Fee</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Disk fee</td>
<td>33</td>
<td>33</td>
<td>Email</td>
<td>Email</td>
</tr>
<tr>
<td>Cow charge</td>
<td>1145</td>
<td>792</td>
<td>600</td>
<td>375</td>
</tr>
<tr>
<td>Meters x 12 (Rec Equipment)</td>
<td>1524</td>
<td>1524</td>
<td>1524</td>
<td>Rent @ € 4/meter/visit = € 192</td>
</tr>
<tr>
<td>Total Cost to Farmer</td>
<td>€2752</td>
<td>€2399</td>
<td>€2174</td>
<td>€617</td>
</tr>
</tbody>
</table>

*Representative figures are average of 3 large MROs charges, A4 = €15.27 /cow, A8 = €10.56, Meter cost = €127. Low cost A8 @ €8 /cow, DIY @ €7 /cow scenario*
### Existing Recorder Pay

**Example**: Farmer of 75 cows, 12 unit parlour, has a PC and has signed up for A8 (7 visits). He has been assigned a Recorder.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost (€)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat fee (0-25 cows) @ € 33/visit</td>
<td>33</td>
</tr>
<tr>
<td>Rate cows 26 – 80 @ € 0.22/extra cow</td>
<td>11</td>
</tr>
<tr>
<td>Typical Expenses</td>
<td>5</td>
</tr>
<tr>
<td>Recorder Payment per visit</td>
<td>€49</td>
</tr>
<tr>
<td>Recorder Payment per annum (7 visits)</td>
<td>€ 343</td>
</tr>
</tbody>
</table>

*Representative figures are average of what 3 large MROs are paying in 2003. This is direct cost only and does not take in any O/Head for recorder e.g.equip.
Summary

Challenges for implementation of Electronic DIY:

- Practice of Meter movement – this is well established in international - robust post use washing protocol is a given
- Initial cost of meters to MRO – offset by, max. equipment utilisation, equipment rental, depreciation & growth in business.

<table>
<thead>
<tr>
<th>MRO;</th>
<th>Farmer;</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Reduce Recorder Cost</td>
<td>✓ Reduce MR Charges</td>
</tr>
<tr>
<td>✓ Eliminate Keying cost</td>
<td>✓ User friendly, clean</td>
</tr>
<tr>
<td>✓ Reduce Lab costs (barcodes)</td>
<td>✓ Improve Data Accuracy</td>
</tr>
<tr>
<td>✓ Increase Meter Utilisation</td>
<td>✓ Improved/New Reports</td>
</tr>
<tr>
<td></td>
<td>✓ Breeding Advice</td>
</tr>
</tbody>
</table>