Grass Varieties
New Management Protocols for Irish Recommended List Trials

PPI Information Meeting
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Contents of Presentation

- Herbage Evaluation Contact Personnel
- Background to DAFM’s Frequent Cutting Protocol
- Cooperation between DAFM & Teagasc
- Data Analysis
- Role of DAFM in Variety Testing
- Grass Seed Importation figures in relation to RL varieties
- Grass & Clover Recommended List 2014
- Herbage Evaluation Trials 2014
- Availability of FC data on RL
- The Future...?
## Herbage Evaluation Contact Personnel

<table>
<thead>
<tr>
<th>Backweston Farm</th>
<th>Ballyderown Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Claffey,</td>
<td>David Cummins,</td>
</tr>
<tr>
<td>DAFM,</td>
<td>DAFM,</td>
</tr>
<tr>
<td>Crop Evaluation &amp; Certification Division,</td>
<td>Crop Evaluation &amp; Certification Division,</td>
</tr>
<tr>
<td>Backweston Farm,</td>
<td>Ballyderown Farm,</td>
</tr>
<tr>
<td>Leixlip,</td>
<td>Kilworth,</td>
</tr>
<tr>
<td>Co. Kildare</td>
<td>Co. Cork</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:John.Claffey@agriculture.gov.ie">John.Claffey@agriculture.gov.ie</a></td>
<td>E-mail: <a href="mailto:David.Cummins@agriculture.gov.ie">David.Cummins@agriculture.gov.ie</a></td>
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</tbody>
</table>

**Acknowledgements:**
Dermot Grogan, M.Agr.Sc
Technical & Farm Staff at the 5 Trial Centres
Background to DAFM’s Frequent Cutting Protocol

- Requirement for rotational grazing information all season.
- DAFM took on board an 8 – 10 cut protocol for 2010 and subsequent sowings, which simulates grazing.
- Ceased sowing Italian Ryegrass and Hybrid Ryegrass after 2009.
- Ceased sowing Early Ryegrass after 2010.
- FC data will only be available for Intermediate and Late maturing groups of perennial ryegrasses.
# Frequent Cutting Protocol

<table>
<thead>
<tr>
<th>Spring Yield</th>
<th>Summer Yield</th>
<th>Autumn Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or 2 cuts</td>
<td>4 or 5 cuts</td>
<td>2 or 3 cuts</td>
</tr>
<tr>
<td>before 15(^{th}) April</td>
<td>15(^{th}) April – 15(^{th}) August</td>
<td>15(^{th}) Aug – 15(^{th}) October</td>
</tr>
</tbody>
</table>

- Cuts taken 15-21 days apart from Spring through Summer, extending to 28-36 days in Autumn.
- The target cutting height is 4-5cms.
- N fertiliser is applied to plots as soon as possible after cutting to optimise regrowth during the shorter cutting intervals (at a rate equivalent to slightly under the normal stocking rate upper limit of 170 kg organic N/ha).
Cooperation between DAFM & Teagasc

PK Good co-operation between DAFM and Teagasc.
PK Ground Cover Scores, which are used in the RL and PPI – now taken at the end of;
  • Year 0 – Sowing Year
  • Year 1 – 1st Harvest Year
  • Year 2 – 2nd Harvest Year
PK Persistency Trial under grazing at Teagasc Moorepark.
PK Enhanced / streamlined trial data analysis with aim of meeting stakeholder requirements.
Data Analysis

✓ Mixed model procedure used to analyse the data.
✓ Model includes:
  • Sowing year, harvest year, site, block and plot
✓ Fixed effects:
  • Variety
✓ Random effects:
  • Site, Block, Plot, Sowing year and Harvest year
Data Analysis

✓ Can easily take account of effects of varieties not being sowed in every trial.

✓ Can easily adjust for factors (site, plot, block, harvest year and sowing year) e.g. if certain varieties are outperforming others due to year, or block, etc. the model will adjust for this to ensure that this effect does not mask the true potential of each variety.
Role of DAFM in Variety Testing

✓ Under EU legislation, Crop Evaluation and Certification Division of the DAFM are responsible for evaluating new varieties of grass and clover in Ireland.

✓ To market an agricultural crop variety in the EU, it must be registered in the National Catalogue of at least one EU Member State and the seed must be certified.

✓ These official catalogues must be drawn up in accordance with uniform rules so that the varieties accepted will be distinct, stable and sufficiently uniform (DUS) and that they will be of satisfactory value for cultivation and use (VCU). DAFM is the Irish competent authority for this function.
Grass Seed Importation figures in relation to Recommended List (RL) varieties in Ireland
Breakdown of Ryegrass Imports

- Late Perennial Ryegrass: 78%
- Hybrid Ryegrass: 16%
- Italian Ryegrass: 4%
- Intermediate Perennial Ryegrass: 2%
## Grass Seed Imports

**01 July 2012 – 30 June 2013**

### Ryegrass Imports - 'Straights'

<table>
<thead>
<tr>
<th></th>
<th>RL Varieties</th>
<th>Non-RL Varieties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrid Ryegrass</td>
<td>53.8</td>
<td>57.8</td>
</tr>
<tr>
<td>Italian Ryegrass</td>
<td>27.6</td>
<td>27.1</td>
</tr>
<tr>
<td>Intermediate Perennial Ryegrass</td>
<td>354.6</td>
<td></td>
</tr>
<tr>
<td>Late Perennial Ryegrass</td>
<td>1960.4</td>
<td>248.5</td>
</tr>
</tbody>
</table>

**Note:**
- RL Varieties: European Ryegrass
- Non-RL Varieties: Other Ryegrass Varieties

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**Source:** Department of Agriculture, Food and the Marine

*An Rólán: Talmhaíochta, Bia agus Mara*
Clover Seed Imports
01 July 2012 – 30 June 2013

White Clover Varieties

- RL Varieties: 87%
- Non-RL Varieties: 13%
Recommended List 2014

- RL data is derived from statutory National List evaluations.

- Published in February 2014

- For first time contains provisional data on Frequent Cutting for some varieties
  - 2010 sowing year – 2011 + 2012 harvest years

- Two ‘main tables’ for the two different harvest protocols with Intermediate and Late varieties.
<table>
<thead>
<tr>
<th>Ryegrass Maturity Group</th>
<th>Italian</th>
<th>Hybrid</th>
<th>Early</th>
<th>Inter</th>
<th>Late</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploid</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>Tetraploid</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>6</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3</strong></td>
<td><strong>3</strong></td>
<td><strong>2</strong></td>
<td><strong>11</strong></td>
<td><strong>22</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>

Recommended List 2014
Plans for 2014

**2014 Sowings**
- Athenry – Lates
- Backweston – Inter & Lates
- Donegal – Inter
- Kildalton - Lates
- MK / Ballyderown – Inter & Lates
## Sowing Plan for 2014

<table>
<thead>
<tr>
<th>Site</th>
<th>Inter</th>
<th>Lates</th>
<th>FQT CU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athenry</td>
<td>-</td>
<td>24 varieties</td>
<td>-</td>
</tr>
<tr>
<td>Backweston</td>
<td>24 varieties</td>
<td>24 varieties</td>
<td>-</td>
</tr>
<tr>
<td>Donegal</td>
<td>24 varieties</td>
<td>-</td>
<td>15 varieties</td>
</tr>
<tr>
<td>Kildalton</td>
<td>-</td>
<td>24 varieties</td>
<td>15 varieties</td>
</tr>
<tr>
<td>Moorepark</td>
<td>24 varieties</td>
<td>24 varieties</td>
<td>-</td>
</tr>
<tr>
<td><strong>Controls:</strong></td>
<td>2 Inter + 2 Lates</td>
<td>2 Inter + 2 Lates</td>
<td>2 Inter + 2 Lates</td>
</tr>
</tbody>
</table>

Harvest Protocols: GP & FC for Inter and Lates at each site

Harvest Years: 2015 (Year 1) + 2016 (Year 2)
### Frequent Cutting Data and RL

#### Availability of FC data on RL

<table>
<thead>
<tr>
<th>Year</th>
<th>GP data only</th>
<th>FC provisional data (P)</th>
<th>FC full data (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RL 2014</td>
<td>52%</td>
<td>48%</td>
<td>0%</td>
</tr>
<tr>
<td>RL 2015</td>
<td>24%</td>
<td>38%</td>
<td>38%</td>
</tr>
<tr>
<td>RL 2016</td>
<td>6%</td>
<td>40%</td>
<td>54%</td>
</tr>
<tr>
<td>RL 2017</td>
<td>2%</td>
<td>30%</td>
<td>68%</td>
</tr>
<tr>
<td>RL 2018</td>
<td>2%</td>
<td>0%</td>
<td>98%</td>
</tr>
</tbody>
</table>
The Future..?

- More FC data available for RL varieties.
- Increasing confidence in data for all varieties.
- Information from Teagasc’s Pasture Base Ireland.
- Number and varieties of species evaluated?
- Suitable hybrid or festulolium varieties for FC?
- Palatability.
- Scientific developments.
Thanks for your attention

*Go raibh míle maith agaibh go léir!*