Pasturebase Ireland
Lessons for Spring grazing management

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Talk Outline

- Pasturebase Ireland results
- Factors affecting spring grass supply
- Grazing management principles and impacts
- Spring Nitrogen & spring grass milk production value
Grassland Challenge – Improve Production and utilisation

- 1t/ha increase in grass utilisation is worth €10,000-12,000 to a 40ha farm
PastureBase Ireland

- Web based grassland management decision support tool
  - Front end
- Grassland data base – back end
- Data capture by farmer
- Core measurement is pre-grazing herbage mass / farm
14.0 - 13.8 - 12.2 t DM/ha
Pasture Base Ireland Dairy Farms DM Production

<table>
<thead>
<tr>
<th>Top 20 Farms 2015</th>
<th>Grazing DM</th>
<th>Silage DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>13953</td>
<td>2315</td>
<td></td>
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<tr>
<td>Top 20 Farms 2014</td>
<td>Grazing DM</td>
<td>Silage DM</td>
</tr>
<tr>
<td>13396</td>
<td>3122</td>
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<tr>
<td>Top 20 Farms 2013</td>
<td>Grazing DM</td>
<td>Silage DM</td>
</tr>
<tr>
<td>11523</td>
<td>2397</td>
<td></td>
</tr>
<tr>
<td>Year 2015</td>
<td>Grazing DM</td>
<td>Silage DM</td>
</tr>
<tr>
<td>11928</td>
<td>2189</td>
<td></td>
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<tr>
<td>Year 2014</td>
<td>Grazing DM</td>
<td>Silage DM</td>
</tr>
<tr>
<td>11350</td>
<td>2522</td>
<td></td>
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<tr>
<td>Year 2013</td>
<td>Grazing DM</td>
<td>Silage DM</td>
</tr>
<tr>
<td>10185</td>
<td>2083</td>
<td></td>
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</table>

Grazing DM and Silage DM Production for Top 20 Farms from 2013 to 2015.
What are high producing farms doing?

Cumulative Paddock Yield to 01/12/2014

Paddock

Silage Yield

Grazing Yield

Yield

Average

Cumulative Paddock Yield to 01/12/2014

Paddock

Silage Yield

Grazing Yield

Yield

Average

The Irish Agriculture and Food Development Authority
Factors Influencing Spring Grass supply

- Autumn closing date - farmer
- Closing cover - farmer
- Winter grass growth rate - 50% farmer
- Spring nitrogen application - farmer
- Spring grazing management – farmer
- Spring grass growth - 50% farmer
Every Week delay in closing from October 2nd reduces Spring grass supply by 77kg DM/ha.
Farm cover (kg/DM/ha) profile from Autumn 2015 to Closing

Max
Average
Min

The Irish Agriculture and Food Development Authority
DM Production Proportion by Season

Spring growth Variation is 5% to 14% - 0.5t DM/ha to 1.8t DM/ha
Spring Grass Production on Farms 2015

The Irish Agriculture and Food Development Authority
75% of cows calved

Farm cover >800kg DM/ha

Area grazed March 2 (21%) (8 - 46%) (>30%)

Cows allocated 10kg DM – 3kg concentrates

Nitrogen 30 units spread (0 - 60 units/ac) (60)

Slurry 22% of area (0 - 60%) (50%)
### Delaying Grazing in Spring - Digestibility effects (Garry et al. 2015)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Period 1 (Early; 25th Feb-9th Mar)</th>
<th>Period 2 (Late; 19th Mar – 30th Mar)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early</td>
<td>Mid</td>
</tr>
<tr>
<td>Days closed</td>
<td>156</td>
<td>142</td>
</tr>
<tr>
<td>Pre Yield (kg DM/ha)</td>
<td>2364</td>
<td>1647</td>
</tr>
<tr>
<td>DMD (g/kg)</td>
<td>800.1</td>
<td>801.6</td>
</tr>
</tbody>
</table>

- Early closed paddocks need to be grazed by mid March
Late grazed sward

Early Grazing Effects on Sward Characteristics

Early grazed sward

+ Milk solids
+ Grass Growth
+ Grass Quality

Late grazed sward

- Low utilisation
Spring production and its association with total grazing DM production

\[ y = 5.8342x + 4666.4 \]

\[ R^2 = 0.668 \]
Number of grazing achieved and its association with total grazing DM production

$y = 1385.9x + 1811.2$

$R^2 = 0.7302$
Fertiliser Recommendations – February/March

- Spring Nitrogen (N) application is essential to boost growth on all paddocks

  Average Grass Growth Response of 10 kg DM per 1 kg N applied per ha in Spring

  Efficiency of slurry utilisation increased (x6) during February & March

- Immediately after the closed period for fertilizer and slurry application
  - Apply 2,500 gals. slurry/ac. to 30% of paddocks (<650 kg DM/ha herbage mass)
  - Apply 23 units urea/ac. to remainder (Urea = 30% cheaper than alternatives/kg N)

- In early March
  - Apply 2,500 gals. slurry/ac. to 30% of paddocks
  - Apply 40 units urea/ac. to remainder

- 70-80 units N applied by April 1st

- Weather forecasts to avoid heavy rain and waterlogged soils within 48 hours of nutrient application to minimise losses and maximise benefits.
<table>
<thead>
<tr>
<th></th>
<th>Indoors</th>
<th>Outdoors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk yield (kg)</td>
<td>27.3</td>
<td>28.3</td>
</tr>
<tr>
<td>Milk fat conc. (%)</td>
<td>4.16</td>
<td>3.86</td>
</tr>
<tr>
<td>Milk protein conc. (%)</td>
<td>3.07</td>
<td><strong>3.36</strong></td>
</tr>
<tr>
<td>Milk fat yield (g/day)</td>
<td>1124</td>
<td>1094</td>
</tr>
<tr>
<td>Milk protein yield (g/day)</td>
<td>832</td>
<td>949</td>
</tr>
<tr>
<td>Milk solids yield (kg/day)</td>
<td>1.97</td>
<td>2.04</td>
</tr>
</tbody>
</table>

*Spring Grass - Milk Production Effects*  
(Kennedy et al. 2004)
Take home messages

✓ Potential exists to grow more grass - improvements in grazing management
✓ Framework – 2016 – is different
✓ High spring covers – spring rotation targets
✓ Set farms up for the year – third grazing early May
✓ Wet weather management plan – on/off grazing, multiple access points, flexible attitude
✓ Spring grass is a crucial feed for the lactating cow
Let 2016 be the Year to use grass better

Questions?