Managing Cows in the Dry Period

Glanbia Dry Cow Program

A dry cow programme must take account of

1. **Physiological changes that occur**
   a. Regeneration of mammary tissue
   b. Nutrition for foetal growth
      - 60% of foetal growth takes place in the last two months.
   c. Drop in DMI in the last 3 weeks, approx 30%

2. **Management objectives**
   a. Cows must calve in an optimum calcium status
      - 4 fold increase in the calcium requirement at calving. Maximising the calcium status is critical in preventing at calving and early lactation:
        1. Acute milkfever - digestive upsets
        2. Subacute milkfever - rumen acidosis
        3. Retained afterbirths - poor reproduction
        4. Metritis - decreased peak yield
        5. Reproductive tract infections – decreased total lactation milk production.
      - Total diet calcium = 0.5% - 0.75%
      - Forages Ca; Grass Silage 0.45%,Maize Silage 0.18% - 0.25%
   b. Immune system must be maximised for calving
      - Vitamin A and E status, Energy status.
      - A reduction in these vitamins near calving = Retained Afterbirths
      - Vitamin A is = mastitis.
   c. Rumen papilla need to be stimulated to elongate in the transition period
   d. Reduction of metabolic disorders at calving
      - Milk Fever, Ca Status
      - Retained Placenta, Vitamins/Energy
      - Dystocia (difficult calving)
      - Displaced Abomasum
      - Lameness
   - Aim BCS 3.0+ at dry off AND calving down.
- Precalver Minerals 100g/day for last 6 weeks.
- Grass silage alone is not ideal forage

<table>
<thead>
<tr>
<th>Feed guidelines for dry cow</th>
<th>Condition Score BCS @ drying-off</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Silage DMD</strong></td>
<td>2.0-2.5 “Thin”</td>
</tr>
<tr>
<td>75%</td>
<td>Silage restricted</td>
</tr>
<tr>
<td>70%</td>
<td>Ad lib silage</td>
</tr>
<tr>
<td>65%</td>
<td>Ad lib silage +1kg</td>
</tr>
<tr>
<td>60%</td>
<td>Ad lib silage +2kg</td>
</tr>
</tbody>
</table>

-5%DMD for Wet or Poor Preservation = +1kg concs.

**Thin Cow (BCS 2.75) on 65DMD Silage**

- 8 weeks = 2kgs meal
- 10 weeks = 1.5kg meal
- 12-14 weeks = 1kg meal

**What happens if cows don’t calve down at the correct condition score?**

- **Too Thin**
  - ≤ 2.75 at mating = 16% less likely to go in calf in the 1st 6 weeks of the breeding season
  - Less milk
- **Too Fat**
  - Longer period of reduced feed intake pre-calving
  - NEB pre-calving
    - Slow or difficult calving
    - Fatty liver, ketosis
    - DA
  - 30% lower feed intake post calving
    - Lower Milk proteins
    - Poorer fertility performance
Dry Cows on Straw

- Straw/concentrate system better than silage alone.
- Improves milk yield and helps avoid health problems.
- Gives control of BCS without restricting feed.
- Increases intake capacity and primes rumen for lactation.
- Spares silage for the milking cows.

OPTIONS (assumes good BCS at dry-off)
1. Keenan Hi Fibre Straw-based Dry Cow TMR. (50%Straw, 50% lactation TMR).
2. **Ad lib Straw + 10kg silage + 2kg 16%P conc.**
3. Ad lib Straw plus 3.5kg 16-18%P concentrate

Close up Feeding

- Avoid severe intake drop close to calving.
- Prime the cow for lactation diet.
- Feed Lactation Dairy nut at 1-2kg/day for last 2 weeks along with Precalver Minerals.
- Use Precalver concentrate for high yield herds, E.g. Gain Precalver Activator @ 1-2kg/day.
- Yeast helps maintain intake close to calving.

Silage Analysis

FBA

- Grass silage
- Maize/Wholecrop
- Sample size 500 grams
- Post Samples directly to FBA, Carrigeen Ind Est, Cappoquin, Co Waterford.
- Sample Form - Same as Soil, use different codes Include Order Number on Sample Form Charge out from branch using order number when result is returned
**Silage results**

**pH**
pH is an indicator of how well your silage fermented. Lower DM silage require lower pH.

![Silage pH & dry matter as Indicators of fermentation quality](image)

**Ammonia-N**
Another indicator of fermentation.

> 10 = a lot of protein breakdown due to poor fermentation. High residual fertiliser

5 – 10 = good

< 5 = excellent, little protein break down

**NDF**
Neutral Detergent Fibre = FIBRE + cell wall material = cellulose, hemicellulose, lignin

High NDF = Low Intake

**PDI**

- PDI (Protein Digestible in Intestine) = Feed Bypass protein + Microbial protein.
- **Bypass** Protein is a constant feature of each feedstuff.
- **Microbial** Protein production in rumen varies with nutrient supply to rumen bugs.
- PDIE = Bypass + Microbial, where Energy is limiting in rumen.
- PDIN = Bypass + Microbial, where Nitrogen (Protein) is limiting in rumen.
- Diet total PDIE and PDIN are summed separately and the lower value is used. Usual limitation is PDIE on Grass/Silage diets and PDIN on Beet/Maize silage diets.
- PDIA = The dietary protein undegraded in the rumen, but truly digestible in the small intestine

**UFL**

Net energy of Feed stuff. Relative to barley. Barley UFL = 1

**ME**

Metabolisable Energy in a feedstuff

**Feed Budgeting**

**DMI**

Dry Stock/Bulls/Weanlings/Finishing cattle DMI = 2-3% BW  
Milking Cows = 3- 4% BW

**Silage Requirements**

- Dry Cow 1.25T/month
- Suckler cow 1.25T/month
- Store cattle 1.25T/month
- Finishing Cattle 0.9T/month
- Weanlings 0.75T/month

**Silage in Pit**

- Volume (Feet)/45 = T grass silage
- Volume (Feet)/50 = T Maize silage

**Minerals Spec Pre-calving**

- Mg 19-26%
- Vitamin A 300,000 – 800,000iu/kg
- Vitamin E3 3,600 – 10,000iu/kg
- Iodine 700mg/kg
- Selenium 60 mg/kg
**Gain Pre-calver Improved v.s Gain Pre-calver Gold**

**Precalver Improved** costs €3.21/cow/yr.  
**Precalver Gold** with TNT costs €4.33/cow/yr.  
Precalver minerals should be fed as normal where dry cows also receive mineralised concentrate e.g. Gain Beefgro or dairy nut (other than Gain Precalver Activator).

**SuperChoice Precalver Gold**

- **TNT pack** primes dry cows for Gain TNT lactation Dairy nuts e.g. DRIVE.
- **TNT pack** provides benefits of protected Cu, Zn, Se and extra Vitamin E.
- **Bioplex protected Copper** boosts reserves and fights deficiency.
- **Bioplex protected Zinc** helps support hoof and udder health.
- **Selplex protected Selenium** helps reduce retained afterbirths, cell counts (SCC), mastitis and iodine deficiency.
- **Vitamin E** helps Selenium to boost both cow and calf immunity.

**How Much Are Production Diseases Costing You**

<table>
<thead>
<tr>
<th></th>
<th>NDH</th>
<th>VLD</th>
<th>Calf death</th>
<th>*RFM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profit</strong></td>
<td>8.3</td>
<td>13.68 *</td>
<td>9.35</td>
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<tr>
<td><strong>Treatment cost</strong></td>
<td>12.15</td>
<td></td>
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<tr>
<td><strong>Vets Costs</strong></td>
<td>65</td>
<td>23.4</td>
<td>83</td>
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<tr>
<td><strong>Death</strong></td>
<td>57.6</td>
<td>56.64</td>
<td>70</td>
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<tr>
<td><strong>Farmers time</strong></td>
<td>38</td>
<td></td>
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<td>1.9</td>
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<tr>
<td><strong>Reduced yield</strong></td>
<td>38.88</td>
<td>145.55</td>
<td>185.43</td>
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<tr>
<td><strong>Calving interval</strong></td>
<td>9.23</td>
<td></td>
<td></td>
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<tr>
<td><strong>Increase culling</strong></td>
<td>18.62</td>
<td>47.71</td>
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<td><strong>Extra services</strong></td>
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<tr>
<td><strong>Increase risk of VLD</strong></td>
<td>20.45</td>
<td>185.54</td>
<td>284.11</td>
<td>395.49</td>
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<tr>
<td><strong>Increase risk of NDH</strong></td>
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<tr>
<td><strong>Total cost of single case</strong></td>
<td>30.68</td>
<td>213.37</td>
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<td><strong>Total cost of 1.5 cases</strong></td>
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NDH = non detected heat
VLD = vulval discharge
* weighted average of three different treatment types, includes vet costs
RFM = Retained foetal membrane

<table>
<thead>
<tr>
<th></th>
<th>Mild</th>
<th>Severe</th>
<th>Fatal</th>
<th>Average</th>
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<tbody>
<tr>
<td><strong>Occurrence</strong></td>
<td>0.8</td>
<td>0.1</td>
<td>0.1</td>
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<td><strong>Death</strong></td>
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<tr>
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<tr>
<td><strong>Total cost of single case</strong></td>
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<td>2546.42</td>
<td>317.15</td>
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