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.
            6. Dystocia(difficult calvings) – displaced abomasum.
        - 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

Feed guidelines for dry cow		
	Condition Score BCS @ drying-off	
Silage DMD	**2.0-2.5 "Thin"**	**2.5-3.0 "Good"**
75%	Silage restricted	Silage restricted
70%	Ad lib silage	Silage restricted
65%	Ad lib silage +1kg	Ad lib silage
60%	Ad lib silage +2kg	Ad lib silage +1kg
-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 fee 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.

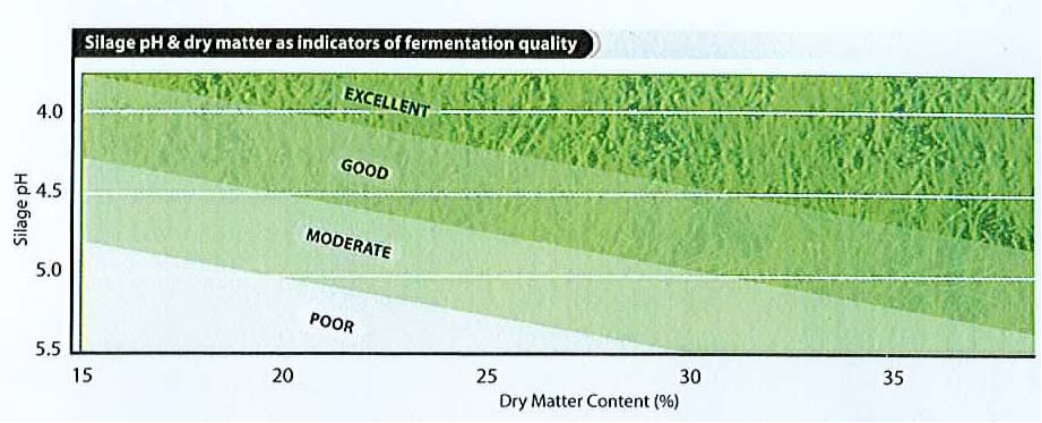
Silage Analysis
FBA

- 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.



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

	NDH	**VLD**	**Calf death**	***RFM**
Profit				
Treatment cost	8.3	13.68*		9.35
Vets Costs	12.15			
Death			38	
Farmers time			1.9	
Reduced yield		65	23.4	83
Calving interval		57.6	56.64	70
Increase culling		38.88	145.55	185.43
Extra services		9.23		
Increase risk of VLD			18.62	47.71
Increase risk of NDH		1.15		
Total cost of single case	20.45	185.54	284.11	395.49
Total cost of 1.5 cases	30.68	213.37		

NDH= non detected heat
VLD= vulval discharge
* weighted average of three different treatment types, includes vet costs
RFM= Retained foetal membrane

Milk fever				
Production disease	**Mild**	**Severe**	**Fatal**	**Average**
Occurrence	0.8	0.1	0.1	
Treatment cost	6.15	12.31	47.69	
Vets Costs		40.38	98.72	
Death			2369.23	
Farmers time	6.42	23.08	30.77	
Reduced yield	43.00	108.00		
Total cost of single case	55.57	183.77	2546.42	**317.15**