INSIDE THIS ISSUE

PAGE 04
Nutrition Matters

PAGE 10
Feeding Your Early Lactation Autumn Calved Cows

PAGE 16
Dairygold / Teagasc Joint Programme 2018-2020

PAGE 19
EIP’s Helping To Support Cleaner Water And Agriculture
Welcome to the November edition of

MILK MATTERS
DAIRYGOLD’S DAIRY ADVISORY BULLETIN

Dear Milk Matters Reader,
This month’s Nutrition Matters looks at late and early lactation feeding for dairy cows. Our feeding plan is dependent on your herds current BCS or liveweight and silage quality. Thin dry cows will require extra concentrate feeding, fat cows now will need different management. Light weanling heifers will need the correct feeding to allow them to be at the correct weight come breeding time.

This Autumn’s grassland management has a massive impact on the quantity and quality of grass available to your cows next spring. This month’s Grass Matters looks at management from here to closing up.

Selective Dry cow therapy is a term we will hear a lot about before 2022. On pages 17 and 18 Stuart Childs looks at how selective dry cow therapy may work on your farm.

In this month’s Fertility and Breeding Matters, Doreen explores how we can improve the level of immunity in our herds in the months of November/December & January. Doreen also looks at the correct drying off procedure for our cows and explores the best options available for winter dosing.

Yours Sincerely,

Liam Stack M.Agr.Sc
RUMINANT TECHNICAL MANAGER, DAIRYGOLD AGRIBUSINESS

To contact the editor of MILK MATTERS
email: lstack@dairygold.ie
Grass Growth

THE YEAR TO DATE

By LIAM STACK, M.Agr.Sc, Ruminant Technical Manager

Grass Growth

National Grass Growth Curve

Milk Proportion % (weeks 1-42)

Milk production to week 42 (figures based on ICBF cow numbers):

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>YTD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total annual Milk Yield per cow in Dairygold (kg)</td>
<td>4822</td>
<td>5000</td>
<td>4909</td>
<td>5166</td>
</tr>
<tr>
<td>Total annual Milk Solids per cow (kg)</td>
<td>366</td>
<td>380</td>
<td>373</td>
<td>396</td>
</tr>
<tr>
<td>YTD Average Protein %</td>
<td>3.48</td>
<td>3.50</td>
<td>3.47</td>
<td>3.54</td>
</tr>
<tr>
<td>YTD Average Fat %</td>
<td>4.11</td>
<td>4.10</td>
<td>4.13</td>
<td>4.12</td>
</tr>
<tr>
<td>YTD Average Lactose %</td>
<td>4.87</td>
<td>4.88</td>
<td>4.78</td>
<td>4.76</td>
</tr>
</tbody>
</table>

Milk Butterfat % (weeks 1-42)

Milk Lactose % (weeks 1-42)
Grass:
The month of October has been wet in some parts but hopefully you still have some grass in your cows’ diet. It’s imperative that you clean paddocks out during the last round while closing the farm with enough grass on-board to ensure you have grass next spring.

Farm Cover Targets:

<table>
<thead>
<tr>
<th>Stocking Rate (Lu/ha)</th>
<th>2.5</th>
<th>3</th>
<th>3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm Cover At Housing</td>
<td>550-600 kg/DM/ha</td>
<td>600-650 kg/DM/ha</td>
<td>700-750 kg/DM/ha</td>
</tr>
</tbody>
</table>

Mineral and vitamin nutrition for your cows:
a. Leafy Autumn grass is high in potash, therefore Mg is required to guard against tetany
b. Autumn grass is low in Se, Cu, I, Zn

Manage BCS
Grass growth has been strong this summer, so in general cow BCS is good. However, everyone should do a late lactation condition score of your cows. Do your cows need to gain condition score from here to Christmas or can they afford to lose a bit of body condition? Milking cows gain condition more efficiently than dry cows. If your cows need to gain some condition an extra spend on concentrates now, could save in the long term.

Do your cows need to gain some condition or are they ok?
To gain 1 unit of Body Condition Score requires 200 UFL. To gain a ¼ of a condition score add 1kg to the levels of concentrates recommended in the “possible diets” on page 5.

Maintaining milk lactose
Milk lactose is lower this year than previous years. Milk lactose is affected by stage of lactation and energy nutrition. Despite the good grass growth lactose is mirroring 2018, a very poor grass growing year. It has stabilised of late, but every effort must be taken to keep lactose percentages as high as possible now to prevent milk price deductions and forced early drying off.

Reasons for low lactose:
- Low energy intake.
 Autumn grass is generally lower in DM, sugar and UFL than summer grass. As we move into the autumn more concentrates are required for the same level of production as is required by summer grass. Higher levels of concentrate feeding alone are no guarantee of high levels of energy intake or milk lactose %. Higher levels of concentrates must come in conjunction with an overall higher daily intake.

For example:
From the table on page 5 farmer B is feeding 3.5kg more concentrates to his cows than Farmer A but he is allocating 6kg DM less grass daily. His cow’s total daily intake is 23% lower (16.2kg DM daily vs 13.2 kg DM daily) and energy intake is 24% lower (15 UFL vs 12.9 UFL) than farmer A. Farmer C has bridged the gap by introducing some grass silage (4kgDM silage per cow = 1 round bale per 50 cows).
Farmer A | Farmer B | Farmer C
--- | --- | ---
Grass Allowance (kgDM) | 14 | 8 | 8
Concentrate feeding (kg Fresh) | 2.5 | 6 | 4.5
Grass Silage (kgDM) | 0 | 0 | 4
Overall intake | 16.2 | 13.2 | 17.3
UFL intake | 15.0 | 12.9 | 14.7

Possible diets and margin over feed costs (0 BCS gain or loss):

<table>
<thead>
<tr>
<th>Grass only</th>
<th>Grass + Silage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grass (kg DM)</td>
<td>14</td>
</tr>
<tr>
<td>Silage intake (kg Fresh)</td>
<td>-</td>
</tr>
<tr>
<td>Alfalfa (kg Fresh)</td>
<td>-</td>
</tr>
<tr>
<td>10 ltrs Milk Yield</td>
<td></td>
</tr>
<tr>
<td>14 ltrs Milk Yield</td>
<td>1</td>
</tr>
<tr>
<td>18 ltrs Milk Yield</td>
<td>3</td>
</tr>
<tr>
<td>10 ltrs Milk Yield</td>
<td>Margin over feed cost €/day</td>
</tr>
<tr>
<td>14 ltrs Milk Yield</td>
<td>3.49</td>
</tr>
<tr>
<td>18 ltrs Milk Yield</td>
<td>5.10</td>
</tr>
</tbody>
</table>

*Allow for 0 BCS change, if your cows need to gain 0.25 BCS add 1kg of concentrates to the recommended rate. Grass UFL (DM)= 0.9, Silage UFL (DM) = 0.78 (70 DMD), Concentrates UFL = 0.95. Milk value 40c/ltr to reflect solids

When should I introduce an 18% protein?
Energy is the most important nutrient for your cows. Moving from a 16% to an 18% will have no impact on energy intake. Feeding 3kg when your cow needs 4kg will have a bigger impact on maintaining yields. You only need to consider moving up in protein once your cows are housed full time.
FEEDING YOUR STOCK THIS WINTER

By LIAM STACK, M.Agr.Sc, Ruminant Technical Manager

Dry cow:
Cows in the wrong body condition score (BCS) need to have this rectified 2-3 weeks before calving starts. From then on a greater proportion of the energy fed to the cow is partitioned to the calf and the cow won’t gain much weight.

Conversely, fat cows need to lose excess BCS before this point, as underfeeding the cow leading up to calving leads to excess negative energy balance at calving and all the subsequent issues:

- Milk fever
- Retained cleansing
- Lower immune status
- Increased NEB post calving = lower milk proteins, milk yields and poorer fertility performance

BCS AT CALVING DEPENDS ON:
- BCS when dried off
- Length of dry period
- Quantity and quality of feed.

Concentrate feed levels required by Dry Cows:

<table>
<thead>
<tr>
<th>Silage DMD</th>
<th>BCS</th>
<th>55 DMD</th>
<th>62 DMD</th>
<th>68 DMD</th>
<th>72 DMD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2Kg</td>
<td>1Kg</td>
<td>Silage only</td>
<td>Restricted Silage</td>
</tr>
<tr>
<td></td>
<td>2.75</td>
<td>3Kg</td>
<td>2Kg</td>
<td>1Kg</td>
<td>Silage only</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>4Kg</td>
<td>3Kg</td>
<td>2Kg</td>
<td>1Kg</td>
</tr>
</tbody>
</table>

FEEDING YOUR WEANLING THIS WINTER:
In general, weaning performance is not good over the 1st winter with gains as low as 0 - 0.3Kg LWG being recorded. On-target heifers weighing 240kg need to gain 0.55 kg/day across the 1st winter. Only silage of 75DMD is capable of supporting this. Check your laboratory analysis. Light heifers weighing 210kg need to gain 0.7 kg/day across the 1st winter.

Concentrates required by weanling across the 1st winter

<table>
<thead>
<tr>
<th>Silage DMD</th>
<th>60</th>
<th>65</th>
<th>70</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Weanlings (0.7kg DLWG)</td>
<td>2.5Kg</td>
<td>2Kg</td>
<td>1.5Kg</td>
<td>0.5Kg</td>
</tr>
<tr>
<td>On Target (0.5 kg DLWG)</td>
<td>1.5Kg</td>
<td>1Kg</td>
<td>0.5*Kg</td>
<td>*</td>
</tr>
</tbody>
</table>

*Because of good response to meal at low levels all weanlings should get 1Kg until January.

FEEDING YOUR MAIDEN HEIFERS THIS WINTER:
Target LWG of 0.7 kg/day across the 2nd winter is required. 70 DMD silage diet will support 0.3kg/day.

Concentrates required by In calf heifers across the 1st winter

<table>
<thead>
<tr>
<th>Silage DMD</th>
<th>55</th>
<th>60</th>
<th>65</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentrates required by heifers</td>
<td>4Kg</td>
<td>2.5Kg</td>
<td>2Kg</td>
<td>1.2Kg</td>
</tr>
</tbody>
</table>

KEY POINT: In November your weanlings need to be 40% of your cows’ mature weight. For a 600kg February calved Mature Cow, that’s 240kg.
Prime Elite Heifer Rearer

A 19% protein nut to support growth of body frame and to achieve target mating weights.

Contains biotin, a B vitamin to promote healthy hoof growth and decrease incidence of lameness.

Supports the development of milk producing cells in the udder.

High levels of good quality proteins to promote lean muscle growth.
DRY COW MINERALS

If you’re buying your dry cow minerals now be cautious that your minerals are going to meet the requirements of the cow.

Mineral Feeding Pre-Calving

The main objectives of a Dry Cow Management Program are for cows to calve;

1. In an optimum calcium status; this is a function of the silage mineral status and the level mineral of Magnesium and Vitamin D3 in the pre-calving mineral.
2. With reduced metabolic disorders; this is influenced by the mineral Magnesium, Iodine, Selenium and Vitamin E & A levels.
3. In an optimum immune status; this is influenced by the mineral Vitamins and trace elements (Selenium and Vitamins A & E).
4. Producing high quality colostrum; this is influenced by the mineral and vitamin supplementation.

Mineral must haves:
A mineral that is formulated to meet the must haves in the accompanying tables will result in (assuming BCS, energy and protein nutrition and calving management are correct):

• Reduction in sub-clinical milk fever
• Less retained placenta
• Reduced calf mortality
• Enhanced immunity and thrive
• Improved cow fertility

<table>
<thead>
<tr>
<th>Element</th>
<th>What It Effects</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mg</td>
<td>Milk Fever</td>
<td>A pre-calver mineral should contain 30+ grms per day</td>
</tr>
<tr>
<td>Cu (Copper)</td>
<td>Fertility, immune status, production</td>
<td>A pre-calver mineral should contain c.400mg/day. To limit losses and maximise cow availability c.25-30% of this Cu should be in the bioplex form</td>
</tr>
<tr>
<td>Zn (Zinc)</td>
<td>Lameness, SCC, Mastitis, Production</td>
<td>A pre-calver mineral should contain c.500mg/day. To limit losses and maximise cow availability c.25-30% of this Zn should be in the bioplex form</td>
</tr>
<tr>
<td>Se (Selenium)</td>
<td>Retained Cleansings, Colostrum Quality, Afterbirth, SCC, Mastitis</td>
<td>A pre-calver mineral should contain c.5mg/day. To limit losses and maximise cow availability c.25-30% of this Se should be Selpex</td>
</tr>
<tr>
<td>Iodine</td>
<td>Weak Calves, Embryonic Deaths</td>
<td>A pre-calver mineral should contain, but not exceed 60mg/ day.</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>Retained Placenta</td>
<td>A pre-calver mineral should contain &gt;60,000 iu/day.</td>
</tr>
<tr>
<td>Vitamin D</td>
<td>Milk Fever</td>
<td>A pre-calver mineral should contain &gt;12,000 iu/day.</td>
</tr>
<tr>
<td>Vitamin E</td>
<td>Retained Cleansings, Colostrum Quality, Afterbirth, SCC, Mastitis</td>
<td>A pre-calver mineral should contain &gt;500 iu/day.</td>
</tr>
</tbody>
</table>
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The goal of early lactation nutrition is to produce milk while getting your cows back in calf.

Limitations:
- Feed intake potential
- Feed energy content

Feed intake potential:
The higher the dry matter content, the better the dry matter digestibility and the better the preservation of your forage the higher its intake potential will be.

Silage preservation vs intake beef cattle

<table>
<thead>
<tr>
<th>Preservation</th>
<th>Good</th>
<th>Bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>4.2</td>
<td>4.8</td>
</tr>
<tr>
<td>Ammonia – N%</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Dr Matter Intake (kg/DM)</td>
<td>0.9</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Silage dry matter digestibility (DMD) vs intake beef cattle

<table>
<thead>
<tr>
<th>DMD</th>
<th>75</th>
<th>70</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Matter Intake (kg/DM)</td>
<td>9</td>
<td>8.3</td>
<td>7</td>
</tr>
</tbody>
</table>

Feed energy content:
In early lactation we must prioritise the feeding of the highest energy forages and concentrates to our cows:

Why?
Our cow’s energy demand is at its highest in early lactation but her intake potential is at its lowest. This imbalance leads to an unavoidable lack of energy. The degree of this imbalance and the extent of this imbalance impact milk protein, milk yields and most importantly fertility performance.

Energy content of differing feeds:

<table>
<thead>
<tr>
<th>Feed</th>
<th>Energy Density (UFL/kg/DM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grass silage very good quality (77 DMD)</td>
<td>0.87</td>
</tr>
<tr>
<td>Grass silage ~ poor quality (65 DMD)</td>
<td>0.72</td>
</tr>
<tr>
<td>Maize silage ~ 30% starch</td>
<td>0.87</td>
</tr>
<tr>
<td>Maize silage ~ 25% starch</td>
<td>0.83</td>
</tr>
<tr>
<td>Whole crop cereal silage ~ 3T spring barley</td>
<td>0.83</td>
</tr>
<tr>
<td>Whole crop cereal silage ~ 2T spring barley</td>
<td>0.72</td>
</tr>
<tr>
<td>Brewer’s grains</td>
<td>0.92</td>
</tr>
<tr>
<td>Apple Pulp</td>
<td>0.8</td>
</tr>
<tr>
<td>Concentrates</td>
<td>1.1</td>
</tr>
<tr>
<td>Fodder beet</td>
<td>1.12</td>
</tr>
<tr>
<td>Sugar beet</td>
<td>1.15</td>
</tr>
</tbody>
</table>

A cow milking 25 litres needs 16.5 UFL. Her intake potential is 18 kg DM. Therefore every mouth full of feed she eats needs to have an energy density of 0.9 UFL. From the table above no forage on its own can support this.

High energy feedstuffs like fodder beet, sugar beet and good quality maize silage are advantageous. However, with this higher energy comes lower protein. Beware of poor quality grass, maize or wholecrop. Poor quality wholecrop for example is 13% lower in energy than good quality wholecrop (0.72 vs 0.83 UFL). Be wary of wet feeds like apple pulp. These can be value for money at times but must be used sparingly as you
will fill your cows intake potential with water. Water has 0 energy.

Getting this wrong will lead to:
1. Low milk proteins 3. Excessive BSC loss
2. Low milk yield 4. Poor fertility performance

Relationship between body condition loss post calving and 6 week in calf rate (for cows with a pre-calving condition score of > 3). Teagasc trial 1999.

Energy nutrition and lameness
Controlling negative energy balance in early lactation is one of the best ways to prevent lameness caused by sole ulcers, haemorrhages and white line disease, according to new research.

When cows lose body condition they begin mobilising fat from all areas of the body, including the fat pad that exists in the feet of cows. Cows have three cylinders of fat lying under the hoof, which acts like gel cushioning in trainers - a shock absorber. Research has shown cows with thinner fat cushions are more likely to have sole lesions. Again to help in the prevention of lameness we need to limit BCS loss after calving to 0.5 max.

Protein:
We need to ensure that we are meeting the cows requirements while not over supplying it. A cow’s milk yield is driven by PDIE (available protein), not crude protein.

Milk protein Yield vs Available protein Intake
Be-wary of raw material that supply a lot of protein but limited amounts of available protein.

Crude protein and PDIE of barley and sunflower
Despite having c.3 times the crude protein, Sunflower only supplies the same amount of PDI as barley.

Don’t over feed protein:
Within this country we have for years been feeding excessive levels of crude protein. Since the introduction of the PDIE system we have swapped this with feeding excessive PDIE. The level of protein you feed should be in balance with the energy in the cows’ diet. An imbalance will lead to high levels of nitrogen lost from your production system.

An excess of protein to energy leads to high milk urea nitrogen and has been shown to; - delay first ovulation or oestrus; - lower/reduce conception rate and - lead to a greater amount of post calving weight loss.

Protein requirements of a dairy cow (450kg MS or 6000ltrs) at peak yield is 95 to 105g PDI/KG DM (1800-2000 g PDI/day) or 16 % crude protein.

Mineral Nutrition
Grazed grass and grass silage is a suboptimal trace element source for dairy cows. Deficiencies of copper, selenium and iodine are widespread. Isolated deficiencies in manganese, zinc and cobalt also exist.

Mineral interactions within grass silage can result in induced or secondary deficiency e.g. molybdenum and sulphur cause copper deficiency.

Dietary deficiencies of copper, selenium and iodine are linked to:
- poor fertility,
- cystic ovaries,
- anoestrous,
- irregular or supressed oestrus
- and early embryonic death.

It is extremely important to ensure that the inclusion level of the mineral in a concentrate match the concentrate feeding level. If the concentrate is
formulated at 10 kg but you’re only feeding 6 kg of a concentrate, the dairy cow will not be getting the correct mineral levels.

---

**How much concentrates do my cows need?**

1. The energy requirement is dictated by the yield of your cows?

In a split calving herd its hard to know what the milk yield of your freshly calved cows is. The latest research from Teagasc, Johnstown Castle is saying that a 7000 litres cow calved in September or October is milking c.27 ltrs in November.

Milk yield by calving month for a 7000 ltr herd

<table>
<thead>
<tr>
<th>Calving Month</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>28.2</td>
<td>26.7</td>
<td>25.2</td>
<td>23.8</td>
<td>22.6</td>
<td>21.7</td>
</tr>
<tr>
<td>September</td>
<td>9</td>
<td>27.3</td>
<td>26.9</td>
<td>25.6</td>
<td>24.3</td>
<td>23.5</td>
</tr>
<tr>
<td>October</td>
<td>-</td>
<td>11</td>
<td>26.7</td>
<td>27.4</td>
<td>26.3</td>
<td>24.5</td>
</tr>
<tr>
<td>November</td>
<td>-</td>
<td>-</td>
<td>10.8</td>
<td>26.5</td>
<td>27.9</td>
<td>27</td>
</tr>
<tr>
<td>December</td>
<td>16</td>
<td>10</td>
<td>-</td>
<td>9.7</td>
<td>27.4</td>
<td>28.3</td>
</tr>
</tbody>
</table>

Source: Teagasc Johnstown castle

2. What is your forage base?

   a. All grass silage

   b. Mixed forage diet

Feeding recommendations for Good Maize silage + grass silage and 28 ltrs (6gals)

<table>
<thead>
<tr>
<th>Feeding Recommendations</th>
<th>Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% Maize Silage : 75% Grass Silage</td>
<td>7.5 kg Dairy balancer gold 6 25%</td>
</tr>
<tr>
<td>50% Maize Silage : 50% Grass Silage</td>
<td>6.5 kg Dairy balancer gold 6 29%</td>
</tr>
<tr>
<td>25% Maize Silage : 75% Grass Silage</td>
<td>5.5 kg Dairy balancer gold 4 32%</td>
</tr>
</tbody>
</table>

**Prioritise the feeding of concentrates to the cows that need it.**

Figures from Siobhan Kavanagh of Teagasc have shown massive variation of milk yields within a herd. At a winter milk conference she analysed a 7500ltrs herd.

The herd was averaging 21ltrs, with only 8% of the herd exceeding 35ltrs. Flat rate feeding these cows for 28ltrs would have resulted in over feeding 81% of the herd.

Over-feeding lower yielding, late lactation cows will lead to fat cows at drying off and calving. Fat cows at calving leads to a multitude of problems from milk fevers, to lower milk protein in the early lactation, to excessive BCS drops post calving and ultimately poorer fertility performance. Not only are you adding concentrate costs but you could be creating a problem further down the line.

**Rumen Function**

Poor rumen function leads to undigested feed/energy being passed out in the dung.

We need to maximise rumen function by:

- Not over feeding starch and sugar,
- Feeding sufficient effective fibre,
- Feed Yea-sacc,
- Feed a rumen buffer where required.

**KEY POINT:** If you’re not making milk you’re making expensive manure...
BENEFITS OF OUR DAIRY FEED RANGE

✔ Dairygold is committed to maximising the use of native Irish cereals across its range of feed.
✔ High levels of bypass starch coming from the coarse processing of maize and a blend of high energy digestible fibre to stimulate rumen function.
✔ Contains YEA-SACC live yeast to promote an enhanced rumen through improved ration digestibility and the stabilisation of rumen function pH.
✔ Contains Agolin a natural plant extract designed to optimise rumen environment to increase feed efficiency, increase production, improve fertility and decrease daily methane emissions.
✔ BIOPLEX copper, zinc, manganese and SEL-PLEX organic selenium from Alltech to support the immune system and improve fertility parameters.
✔ Elevated levels of vitamin E to maximise cow immune status.
✔ Elevated levels of vitamin D to prevent milk fever post calving.

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Standardisation Case Study: Treatment of cows for antibiotics

The use of standard work in Leanfarm practices involves being consistent and having a one best way to do a job. This month we will identify a standard way that can be used to identify and segregate cows that have been treated for antibiotics. The aim of the standard process is to ensure that the milk from the cow is kept out of the tank following treatment with antibiotics. This has become a challenge for dairy farmers particularly as a result of expanding herd sizes.

Example of standard process:

1. Read and observe the detail on the label of the veterinary medicine and follow the withdrawal instructions.

2. A combination of methods can be used to identify the treated cow
   - Spray
   - Tail tape
   - Leg / Ankle straps (see colour coding system)
   - Drafting

3. The following records should be kept:
   - Cow Number / identification
   - Treatment details (name of antibiotic)
   - Reason for treatment (e.g. mastitis)
   - Date of first and last treatment
   - Date of return to herd

Remember! Records should be visible for all family members / staff on the farm.
- Make everyone aware through the above communication methods along with telling them.

Remember! Ensure the dump bucket is large enough for cow.
Use the dump bucket for one cow only and keep clean.

Testimonial: Liam O’Doherty, Croughavoe Mitchelstown, Co. Cork

An example of an effective 5 step standard process used by Liam when cow is out of tank due to treatment is as follows:

Think RED for treated cow and observe withdrawal checking with delvo before resuming milk supply

1. Clip the cows tail and udder
2. Place RED tape at two points on the tail
3. Spray the cow RED back udder and legs
4. Add her details to your whiteboard in RED
5. Always deal with treated cow FIRST when milking.

Important! RED should only be used where antibiotics have been administered.
Leanfarm Competition

Well done to our Leanfarm Completion Winners which judged recently by our Leanfarm Steering Committee. The competition was jointly won by entrants from the Limerick and Mid Cork Regions. The winners received a €100 Coop Stores voucher.

**Joint Winner 1:** Dan and Ann O’Sullivan, Carrigeen, Crookstown, Co. Cork. Also included in photo below are Ger Hennessy (Milk Advisor), Graham Kavanagh (Dairygold Continuous Improvement Coach) and Donald O’Leary, Kilumney Coop Stores presenting the voucher to Dan and Ann.

*The idea shows a very effective means for locating a 1-inch hose pipe in the milking parlour for washing down surfaces.*

**Joint Winner 2:** Liam and Geraldine Herlihy, Bruree, Kilmallock, Co. Limerick. Also included in photo below are Jack Cahill (Milk Advisor), Graham Kavanagh (Dairygold Continuous Improvement Coach) and Robert McCarthy Raheen Coop Store presenting the voucher to Liam and Geraldine.

*This was a very useful example of standard work whereby instructions for the use of the generator are visible in the dairy.*

We are continuing to take entries for our second Lean Farm Idea Competition of 2019. Please forward your ideas or improvements by photo to:

1. Email: leanfarmcomp@dairygold.ie
2. Post: Lean Farm Competition, Dairygold Cooperative Society Limited, Clonmel, Mitchelstown, Co. Cork

Please note closing date 31st December 2019. Prize for the winner is €200.
Add life to your land and profit to your business

**Farm:** John and Margo Fox farms on their family farm near Ballylanders, Co. Limerick. They milk 100 cows on a milking platform of around 100 acres. The land type is heavy with a clay nature and his grazing season extends from late March to the end of October. John is part of the Soils Pilot Project in the Dairygold / Teagasc Joint Programme. One of the main aims of the project is to maximise the soil fertility potential of their farms.

**Need for change:** John has expanded his herd from 80 to 100 cows since milk quota removal in 2015. With the increased cow numbers John felt his farm was underperforming in terms of grass growth which focused his mind on improving his overall soil fertility. John thought paddocks were not thriving and the longevity and quality of swards were not satisfactory. Even discussing the situation with members of his local dairy discussion group, he was not getting the full return on the fertiliser he was applying.

**Plan of action:** The farm was soil sampled and a nutrient management plan completed in December 2017. Straight away low pH was a big issue on the farm with upwards of 65 % of the farm below target on soil pH. John applied up to 2 tonnes of lime per acre when an opportunity arose to correct the low pH fields. He had no issues with spreading lime at any time of the year as long as ground conditions allowed. In the last number of years, up to 175,000 tonnes of lime have been spread resulting in 80 % of the farm now being on target for soil pH. The plan for next year is to have 100 % of the farm at the optimal soil pH (6.3-6.5).

**Learnings so far:** John believes lime is undervalued and underrated and the investment in lime rather than fertiliser alone has paid a big dividend. His growing more grass with the same level of fertiliser input and has seen a rejuvenation in sward quality and persistency. Correcting soil fertility has given John the opportunity to produce a surplus of quality silage and the potential to increase cow numbers by 10 to 15 %. He has noticed no softening of the ground from lime use and believes that a little and often approach to lime application works best on his soil type.

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**Figure 1:** Snap shot of December 2018 Soil pH results
Antimicrobial resistance (AMR) or antibiotic resistance is the term used to describe when infection causing bacteria survive exposure to antibiotic that would have previously killed it. Resistance to antibiotics is very real as we have only a very limited number of antibiotic groups to treat both human and animal infection. It is estimated that AMR will be responsible for the deaths of up to 50,000 people by the year 2050.

In light of increasing resistance, new European legislation will take effect from January 28th, 2022 which will mean that we will no longer be allowed to administer dry cow antibiotics to all quarters of all cows in the herd (blanket dry cow therapy).

In the past, we used dry cow antibiotics for both treatment of udder infections but also to prevent infection. It is this prevention aspect of blanket dry cow therapy that the new legislation targets as this is seen as unnecessary or unwarranted use of antibiotics and could potentially fan the flames of the resistance fire. Use of antibiotics to treat known infection will still be allowed. However, it will require evidence of infection in the form of milk recording data and culture and sensitivity analysis for your each farm.

Cows with somatic cell counts of <200,000 for the full lactation are deemed as not having an infection and could potentially fan the flames of the resistance fire. Use of antibiotics to treat known infection will still be allowed. However, it will require evidence of infection in the form of milk recording data and culture and sensitivity analysis for your each farm.

In order to position yourself for selective dry cow therapy, you should consult with your vet or advisor to see if you are in a position to try sealer only on a proportion of cows this winter. The following diagram will help you decide whether you might be in a position to try some SDCT this winter.
* If this is your first time attempting SDCT, you might wish to consider using a lower threshold i.e. SCC 50,000 as you selection criteria for year 1.

You are now halfway on the journey towards practicing selective dry cow in your herd. The second part of this race will be won with good practice in the process of drying off. The three key words for the drying off process are; **HYGIENE, HYGIENE, HYGIENE!**

1. Identify the cows to be dried off with sealer only and draft following milking.
2. Wash out the parlour and get organised (gloves, methylated spirits, cotton wool, teat sealers, a table, a bucket for rubbish, eat something?)
3. Small numbers (6-8 cows) at a time in the parlour to minimise dunging and contamination of the working environment.
4. Thoroughly clean the teats, seal, teat spray and mark well to identify that cow has been dried.
5. Stand in a clean yard for a period to allow teats to close.
6. Move to paddock or clean dry cubicles and maintain high standard of cubicle hygiene in general but in particular in the 2 weeks post dry off and again in the 2 weeks prior to calving.

The process may sound like a lot of work, however, the same process should be used if applying antibiotic tubes. Take your time and don’t try to dry too many cows in one day.

Remember that it will take at least 5 minutes per cow and possibly longer to do the process correctly, so that is 12 cows per hour. The average herd size in Dairygold is close to 100 cows so that means that the drying off process is going to take over 8 hours to complete.

The presence of Strep. Agalactiae in a herd can vary from one year to the next hence culture and sensitivity is a key element of SDCT.

**WARNING:**

If Strep. Agalactiae is identified in your milk culture and sensitivity; **DO NOT** practice Selective Dry Cow Therapy this winter. Strep. Agalactiae is a highly contagious form of mastitis in dairy cows but is easily cured if treated with an effective dry cow antibiotic tube.

The presence of Strep. Agalactiae in a herd can vary from one year to the next so culture and sensitivity is a key element of SDCT.
EIP’s Helping to Support Cleaner Water and Agriculture

By CIARA DONOVAN,
Farm Sustainability Advisor, Supply Chain Division

EIP stands for ‘European Innovation Partnership’. It is a new initiative co-funded by the Department of Agriculture, Food and the Marine and the EU. €59 million in total has been designated to fund 23 various agri-related projects across the country, the majority of which are now underway. The EIP initiative has been consistently described as taking a ‘ground-up approach’, meaning that the funding is awarded, and it is then up to those involved in the project to decide how best to utilize the funds. The initiative and its new approach of placing communities in control of designing and running the project, has been broadly welcomed.

Over the past two months two EIP projects within the Dairygold region, the Duhallow Farming for a Blue Dot Catchment and the Mulkear EIP, have been launched. Both specifically aim to improve water quality through the support and participation of farmers and members of the local community.

The Mulkear EIP

<table>
<thead>
<tr>
<th>Total Budget</th>
<th>€1,172,830</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of project</td>
<td>5 years (ends 2023)</td>
</tr>
<tr>
<td>Project Manager</td>
<td>Ruairi O’Conchuir</td>
</tr>
<tr>
<td>No. of farmer participants</td>
<td>60 (20 enter each year 2019, 2020, 2021)</td>
</tr>
<tr>
<td>Technical and Funding support available</td>
<td>Based on projects actions undertaken</td>
</tr>
</tbody>
</table>

What’s involved as a participant?
Farmers who participate in this project might be asked to carry out a variety of actions which will be tailored to improving water quality on their farm.

Participation is voluntary and Ruairi O’Conchuir explains “We want to make sure that the funds are used to achieve as much as possible, and that the funding and technical support offers an opportunity to local farmers to deliver a partnership approach focused on enhancing water quality and sustainable water management on their farms, via a suite of catchment sensitive farming measures to support farm viability, water quality and biodiversity”. Ruairí explains that in addition are many innovative plans for the project including a digital story telling initiative, community outreach and an environmental education programme in the local national schools. Participation in the Mulkear EIP is based on an Expression of Interest (EOI) form received from farmers wishing to participate in the project which is available from the project office in Pallasgreen.

If you are farming lands within the wider Mulkear Catchment, including the Mulkear, Newport, Bilboa and Dead rivers and wish to find out more please see www.mulkeareip.com or contact Ruairí Ó Conchúir on 087 062 5582.
Duhallow farming for a Blue Dot Catchment

<table>
<thead>
<tr>
<th>Total Budget</th>
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<tbody>
<tr>
<td>Length of project</td>
<td>5 years (ends 2023)</td>
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<tr>
<td>Project Manager</td>
<td>Maura Walsh</td>
</tr>
<tr>
<td>No. of farmer participants</td>
<td>Up to 100 participants</td>
</tr>
<tr>
<td>Funding support available</td>
<td>Up to €2,000 per annum (Average €1500 per annum)</td>
</tr>
</tbody>
</table>

What ‘s involved as a participant?
Similar to the Mulkear project, there is a broad choice of actions which will be funded under this project however, this project aims to cater for larger numbers of participants. The project is aimed at those farming in the High Ecological Status catchments of the Allow, Dalua and Owenanare. Funded through a results-based payment system, participating farmers will implement farm specific actions focussed on nutrient and sediment management, water course protection, biodiversity enhancement, and knowledge transfer/training.

Some examples of options to choose from include:

- The retention of wet grassland, species rich grassland, alluvial woodland, ponds or wetlands.
- The management of sediment through protection of water courses to prevent erosion, provision of alternative drinking water sources, vegetated drains, or silt traps etc.
- The management of nutrients through low input/species rich grasslands, low emission slurry spreading, buffers along water courses or strategic tree planting.
- The enhancement of habitats for biodiversity including invasive species eradication, provision of nest boxes or hedge planting.

If you are farming in the Allow, Dalua or Owenanare catchments and wish to find out more about the project see www.irdduhallow.com/environment/duhallow-eip or contact IRD Duhallow on 029 60633

2019 PRE-CALVER GOLD MINERAL OFFER
BUY 10 AND GET 1 BAG FREE

Please contact your local Agri Branch Lead, your local Area Sales Manager or Inside Sales on 022-31644 for more details
OCTOBER GRASS IS SPRING GRASS

About 67% of the grass available in early spring (Feb/March) is grass that will grow during October/Early November. Therefore it is essential that the fields/paddocks closed during October are not grazed in November. Some farmers will be tempted to go back and graze closed fields; even if grass growth remains strong. What is grazed now will not be available in spring. Eating into grass supply now will not only increase the cost of milk production next spring but reduce the total amount of feed made available on the farm. Carrying a low level of grass on the farm entering winter reduces the amount of grass grown in spring!!! Remember every day the cow is at grass next spring is worth almost €3/cow/day.

Grass demand is getting higher in spring!
The trend in 6 week spring calving rate for the dairy farms in the Dairygold Co-op region is outlined in the table below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Six week spring calving rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>58%</td>
</tr>
<tr>
<td>2014</td>
<td>60%</td>
</tr>
<tr>
<td>2015</td>
<td>61%</td>
</tr>
<tr>
<td>2016</td>
<td>63%</td>
</tr>
<tr>
<td>2017</td>
<td>68%</td>
</tr>
<tr>
<td>2018</td>
<td>68%</td>
</tr>
<tr>
<td>2019</td>
<td>69%</td>
</tr>
</tbody>
</table>

The demand for spring grass is increasing all the time due to increased calving rates, increased cow numbers and increased stocking rate. Therefore having as much grass available as possible for cows to graze in spring is important. The closing grass strategy on the farm in autumn has the greatest influence on spring grass supply. Early fertiliser nitrogen application influences spring grass supply and grass recovery after grazing. Grazing late into November will defeat the whole purpose of ensuring an adequate supply of grass is available next spring.

Grazing targets: Early November
The target is to have a minimum of 60 % of the farm closed by early November. Higher 6 week calving rates and higher stocking rates dictate that over 70 % of the farm should be closed by November 1st. Paddocks closed up during October should remain closed and not grazed again in November.

Every 1 week delay in closing will cost your farm over 100kg of grass DM/ha in Spring
(Latest Research from Michael Egan, Moorepark)

TARGET CLOSING COVER: Mid November
For those who grass measure the target closing cover in mid-November is 550-600kg DM/ha. This should result in a farm cover of 650-750kg DM/ha on December 1st (Industry Target).

However, for those farmers who are going to calve down extra animals next spring and more compactly and a higher stocking rate on the milking platform, 650Kg DM/ha is probably a better guide as the target cover for mid-November. This should result in a farm cover of 750-800kg DM/ha on December 1st.

L, P, K & R
I have been travelling the country a lot recently and a farmer in Limerick recently reminded me that that we if want to increase grass production on the farm, it’s all
about L, P, K & R. He is a member of a Grass10 grass group and demonstrated to all us quite convincingly the benefits of these pieces of the grass jigsaw!

L= Lime, P=Phosphorus, K = Potassium and R=Reseeding

I had never seen or heard it expressed this way before but this was his experience of growing grass over the years – and he has lots of experience! Incidentally, I was astonished at the graze outs being achieved by the cows on the farm in poor grazing conditions.

**Spread Lime**

Most spreading of lime takes place during non-peak months of grass growing. Many agricultural contractors have responded exceptionally well to the lime challenge and are prepared to spread lime in more flexible quantities i.e. 10 tonnes on 5 acres to help address the lime challenge.

- Try to spread 2t/ac of lime over the next few months on the fields that need it if possible

**Spread K (Potassium)**

Many soils are deficient in K also and this time of year is a good time to tackle K deficiency. Trying to spread K in spring can lead to grass tetany problems on grazing ground and too much K in silage when applied in large quantities to silage ground.

- Try to spread Muriate of Potash (0-0-50) which costs about €400/ton ($20/bag). This would increase grass production by at least 1 ton of DM/ha (worth €200/ton) on grazing ground and an even greater response on silage ground.

- November application if your K index is low (Index 1 or 2). 1 bag/acre of 0:0:50 applied will generally result in the soil increasing an index. i.e. moving from index 1 to index 2.

- Given this cost of straight K fertiliser (€20/acre): The benefit in grass production is €60/acre.
In Ireland, the two factors that have the largest influence on production from grassland farming are soil type and climatic conditions. Dairy farming in Ireland depends to a large extent on the efficient conversion of grass to milk and grass grazed efficiently is the cheapest feed available on most dairy farms. There is a large variation in the cost of milk production in dairy farms in Ireland. Some of the variation in cost may be associated with variation in soil type and climatic conditions. Irish dairy grazing systems have developed under the premise that the most profitable option is to maximize the amount of pasture harvested directly by grazing.

To maximise grass utilisation on heavy soils it is critical to have:
- good farm roadways.
- a well laid-out paddock system.
- multiple water access points.

Ground conditions are often marginal on farms with heavy soils. It is inevitable some damage will be done; therefore it is essential that when animals come off a damaged area, they do not go in there again until the next rotation. This cannot be done without an adequate farm roadway system; easy to operate paddock system with multiple access/exit points. Cow paths or spur roadways should be considered.

On a recent trip to Kerry, I came across a new innovation to grazing grass in longer/narrower paddocks. You could call it grazing by the backdoor. Basically it was a cow track/spur roadway installed at the back of the paddock system. As grazing conditions are often difficult in heavy land particularly at the start and end of the grazing year, this spur roadway of about 4 foot wide allowed animals to graze at the back of the paddocks without have to cross over the front of the paddock. It cost about €6000 to install and is 500 meters long. See the diagram below. The top 6 inches of soil and filled with “pencil” or “slig” to field level. quarry dust was then used to finish it off on the surface. However the flexibility it provided in terms of grazing was phenomenal. Damage to paddocks was completely minimised.

One might argue that this cost a nice bit of money but every day at grass on average is worth easily over €2/cow/day. This herd has about 80 cows. So very quick sums would suggest that a week out grazing at both the start and end of the grazing season is worth over €2000 to this herd! In 3 years, the money spent is returned!!!
FERTILITY & BREEDING

By DOREEN CORRIDAN, MVB MRCVS PhD, Munster Cattle Breeding

DRIY PERIOD

The dry period needs to address the following 5 areas to ensure production and fertility in the subsequent lactation.

- Vaccinations Programme
- Dosing Programme
- SCC Reduction Programme
- Dry Cow Nutrition - cows calve in a BCS of 3.0 to 3.25
- Minerals and Vitamins

1st November is 11.5 weeks (81 days) to 20th January Calving

- Dry off 1st calvers calving in Jan/Feb/early March Now
- Dry off low BCS cows in Jan/Feb Now
- Dry off high SCC cows that will be difficult to cure Now
- Plan the winter dosing Now
- Test silage being fed to dry cows in last 14 days before calving- Avoid high K silages for these 14 days
- Order dry cow minerals now – key is the length of time they are fed pre calving- aim for 8 weeks

Immediate Jobs to commence dry off in November
1. Do a milk recording now
2. Do a culture & sensitivity on high cows now that were low SCC in 2018
3. Clip cows’ tails now

Drying Off Cows

An extremely important job not to be rushed and will set you up for a low SCC in early lactation in 2020.

1. Cow’s tails clipped.
2. Head torch - Superb to ensure cleanliness and clear view of teat end
3. Clean the lights in the parlour
4. Glasses - If you need glasses for reading you need them for drying off. In order to see the teat opening clearly to avoid ‘poking’ and allow partial insertion of the tube into the teat.
5. Cotton wool and methylated spirits in addition to the wipes that are supplied with the tubes.
6. Antibiotic tubes and teat sealers
7. Clean yard to stand the cows after drying off.
8. Cubicle beds prepared - Use disinfectant Lime for the next two weeks and reduce the stocking rate in this area.
9. Marker Spray and record keeping

Process

1. Cut out concentrates in the week prior to drying off to reduce the milk volume. Keep milking twice a day prior to dry off and dry off abruptly.
2. Only dry off one row per day to ensure best practice is observed with every cow. Remember one row of 14 cows will result in the insertion of 112 tubes, one row of 20 cows is the insertion of 160 tubes.
3. Put away the mobile phone and all other distractions and avoid doing it on a morning when you are under time pressure. It will take longer than you think.
4. Have a routine right front, left front, left hind, right hind and repeat this routine for both the dry cow antibiotic and the teat sealer. Keep to this routine this will ensure that each teat will receive one antibiotic tube and one teat sealer.
Issues have arisen whereby mistakes were made, and one teat received two dry cow tubes prolonging the withdrawal period and another teat perhaps the high SCC quarter received no tube.

The herdowner conclusion ‘being that the tube was of no use and its withdrawal period was longer than on the box’.

5. Prepare the teat ensuring it is perfectly clean and wiped with alcohol either the wipes or meths, the wipes can get dirty very easily need the cotton wool and methylated spirits especially when putting up two tubes.

6. Insert the tube immediately after cleaning the teat end- Avoid the practice of one-person cleaning and another person following tubing- Work together handing each other the tubes and the wipes.

7. Gently insert the tip of the tube 0.5 cm into the teat canal to avoid any damage to the teat canal.

8. Massage the antibiotic well into the udder

9. When inserting the teat seal hold the base of the teat to ensure all the teat seal remains in the teat. I have become aware of a practice whereby herd owners are warming the teat seal in warm water to allow for easy insertion. This is not good practice as it allows the introduction of bacteria from the water into the teat canal and it is liquefying the teat seal resulting in it going up into the udder and not remaining in the teat canal. Bring the box of teat seal into the dwelling house the night before will help in frosty mornings and will it not have any negative consequences unlike the above situation. Avoid the practice of placing teat teat tubes in water-numerous cases of mastitis in the next two weeks will result. Also, I suspect you are doing too many cows in one go if your fingers are getting sore from the teat seal!

10. Keep the gloves clean, sprayed and changed.

11. Teat Spray the cows well after tubing.

12. Allow the cows to stand in a clean yard for 30 minutes to 2 hours allow the teat end to close prior to putting back into a field or into a house. This is crucial as the field is clean but the roadway to the field is not therefore, we need a closed teat canal.

13. Avoid putting cows that are very free or that are dried off while milking a lot of milk into cubicles after drying off as lying in the cubicles will force out the teat sealer. Put these cows out the field or into a loose house with a clean straw bed where they can lie down properly.

### Dry Cow Intramammary Products

<table>
<thead>
<tr>
<th>Name</th>
<th>Active Ingredient</th>
<th>MILK Min Dry Period</th>
<th>MILK After calving</th>
<th>MEAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bovaclox DC Extra</td>
<td>Cloxacillin 600mg, Ampicillin 300mg</td>
<td>49 days</td>
<td>156 hrs</td>
<td>28 days</td>
</tr>
<tr>
<td>Bovaclox DC</td>
<td>Cloxacillin 500mg, Ampicillin 250mg</td>
<td>45 days</td>
<td>120 hrs</td>
<td>28 days</td>
</tr>
<tr>
<td>Bovimast DC</td>
<td>Cloxacillin 500mg</td>
<td>28 days</td>
<td>120 hrs</td>
<td>28 days</td>
</tr>
<tr>
<td>Noroclox DC</td>
<td>Cloxacillin 500mg</td>
<td>28 days</td>
<td>96 hrs</td>
<td>28 days</td>
</tr>
<tr>
<td>Noroclox DC Xtra</td>
<td>Cloxacillin 600mg</td>
<td>42 days</td>
<td>96 hrs</td>
<td>28 days</td>
</tr>
<tr>
<td>Orbenin Dry Cow</td>
<td>Cloxacillin 500mg</td>
<td>35 days</td>
<td>96 hrs</td>
<td>28 days</td>
</tr>
<tr>
<td>Orbenin Extra Dry Cow</td>
<td>Cloxacillin 600mg</td>
<td>42 days</td>
<td>96 hrs</td>
<td>28 days</td>
</tr>
<tr>
<td>Ceprain Dry Cow</td>
<td>Cefalonium 250mg</td>
<td>54 days</td>
<td>96 hrs</td>
<td>21 days</td>
</tr>
<tr>
<td>Cephanguard DC</td>
<td>Cefquinome 150mg</td>
<td>35 days</td>
<td>24 hrs</td>
<td>2 days</td>
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<tr>
<td>Cefimam DC</td>
<td>Cefquinome 250mg</td>
<td>35 days</td>
<td>48 hrs</td>
<td>2 days</td>
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<tr>
<td>Kefamast Dry Cow</td>
<td>Cefalexin 500mg, Dihydrostreptomycin 500mg</td>
<td>40 days</td>
<td>60 hrs</td>
<td>28 days</td>
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<tr>
<td>Multimast Dry Cow</td>
<td>Penethamate hydroiodide 100g, Neomycin sulphate 100 mg, Procaine benzylpenicillin 410 mg</td>
<td>50 days</td>
<td>96 hrs</td>
<td>28 days</td>
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<tr>
<td>Nafpenzal DC</td>
<td>Nafcillin 100mg, Dihydrostreptomycin 100mg, Procaine benzylpenicillin 300mg</td>
<td>46 days</td>
<td>48 hrs</td>
<td>14 days</td>
</tr>
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**Critically Important Antimicrobial (CIA):** These antibiotics are not to be used for prevention or as a first line of treatment. They should only be used following culture and sensitivity testing. For more information see: https://www.agriculture.gov.ie/amr/informationforlivestockprofessionals/

**CIA** These antibiotic tubes have a long duration of activity. These are useful for cows that require a long dry period and a long duration of treatment.
SELECTIVE DRY COW THERAPY GUIDELINES 2019
1, 2, 3 of Selective Dry Cow Therapy (SCDT).

1. Suitable Herd fulfilling all the following
   a. Herd SCC at a minimum under 200,000 SCC throughout 2019 - milk recording & Bulk tank
   b. Milk recording for the past two years - min of 5 recordings per year – early & late recordings
   d. 80% of cows in the calculations for Mastitis Control Dry Period/Calving
   e. A milk recording within 42 days of each batch of cows dried off.
   f. Less than 10% new infection rate in cows in the last two dry periods.
   g. Less than 15% new infection rate in last years in heifers.
   h. One cubicle space for each cow.
   i. Cubicles and housing maintained clean and dry. Limed.
   j. Good clean calving facilities.

2. Suitable Cows fulfilling all the following
   a. Cows less than 100,000 SCC in last recording.
   b. Cows that had no case of clinical mastitis recorded in 2019.
   c. Cows that had no reading over 200,000 for 2019, min of 5 recordings. Or cows that did not exceed 100,000 in 2019
   d. CMT test the cows the day before drying off to pick up any new infections since milk recording CMT will only detect infected quarters greater than 500,000 SCC
   e. Cows that have no visible teat damage, warts and are not extremely free cows.

3. Excellent Dry Off Procedure
   a. Dry off procedure excellently executed; give it the respect it deserves. Remember you now have no antibiotics to allow for a less than ideal procedure.
   b. Do it yourself so you only have yourself to blame.
   c. Dry off ‘sealer only cows’ in a batch together.
   d. Maximum of 10-20 cows dried off any morning.
   e. This procedure requires concentration and focus; This job needs time and cannot be rushed ensure you have eaten the breakfast before commencing this job in the morning with daylight.

For Herds that selectively dried off cows in 2017 or 2018
1. Assess the performance of the group relative to the cows with a similar SCC at dry off and monitor their progress throughout the lactation in 2019.
2. This assessment will determine your decision for this season.
TIME & CONCENTRATION & FOCUS required, best done after breakfast when you are fresh, fed and not tired and have morning light.

Warning - This is not for everyone. Herd owners who did not adhere to strict guidelines have had a poor experience when using selective dry cow therapy.
Prudent not to exceed 30% of any herd using SCDT, initially limit it to 10% in year 1
Parasite Control

Housing is the ideal time to control stomach worms, lungworm, Liver Fluke and Rumen fluke as cattle do not pick up any when housed. We can dose them in the dry period allowing them to gain BCS, calve and produce and they go to grass clean.

Our grazing practices are changing as we develop the technologies to maximise grass in the diet, this is resulting in an increased parasite burden.

- Grazing Later, Grazing Earlier, Grazing Tighter, Rotation Length shorter
- Stocking rate Increasing, Rotational Grazing not practical with just cows on the grazing platform, Climate change

Bulk Milk sampling, factory reports and dung samples will all help to determine what parasites are on the farm.

Liver Fluke

Albendazole (Albex), Triclabendazole (Fasinex, Tribex) and oxyclozanide (Zanil) are the drugs licensed for dairy cows for Liver Fluke.

Albendazole also covers for stomach and lung worms and Zanil covers also for Rumen fluke, however both these products only kill mature Liver fluke over 10 weeks. Therefore, cows need to be dosed when housed 3 weeks and repeated prior to calving or else used in conjunction with triclabendazole that kills Liver Fluke from 3 weeks.

To maximise the kill with Liver Fluke.
1. Know the parasite burden on the farm.
2. Use the product appropriately.
3. Avoid underestimating the weight of the cow.

Cows with Liver damage from liver Fluke will not reach their potential in milk production, they will not increase in body weight in the dry period as fast as they should their immune system will be compromised and vaccines will not be as effective as in cows with clean livers. Also cows with liver Fluke are more prone to salmonella.

Lungworm & Stomach worms

In the winter housing period, we have an opportunity to get rid of the worms for the entire housing period as they will be not be ingesting any, this will increase performance over the winter period and allow cattle go to grass clean. The aim is to build Immunity in young stock & Avoid Drug Resistance long term.

Essentially, we have two families of drugs for winter dosing of worms.
1. Macroyclic Lactones - Ivomec, Mastermectin, Cydectin, Eprinex etc.
2. Albendazoles - Albex, Albencare, Tramazole etc

Avoid Levamisoles in winter dosing programmes as they do not cover Type 2 worms - important in the winter.

As some of the macrocyclic lactones are the only products that can be used in the grazing/milking season it is probably prudent to use a Benzimidazole - white drench for worms and one of the Pyrethrin's for lice in the herd for the winter.

Principles.
1. If using the albendazoles need to wait 3 weeks after housing to allow maturity of all the worms.
2. Talk to your vet about the most appropriate product for you
3. Rotate between the two families depending what you used all summer
4. Avoid underestimating weight
5. When using pourons always clip the hair prior to application and do all animals in the group as they lick the product from their pen mates.
6. Calibrate the gun and allow for air in the gun and the animal spitting out some product.

Abortions:
Investigate all abortions, there is a tendency to ignore the first abortion seen.

- This view needs to be changed as the first one seen may not be the first one as studies have shown that less than 30% of all abortions are observed.
- All abortions storms start with a single case initially.
- An abortion rate of 2% between the fourth month and term may be considered normal.
- The main aim of abortion investigation is to prevent abortions next season by implementing informed control strategies and to try and limit further abortions this season.
- Call your veterinary practitioner to investigate the abortion.
- Have all collected material foetus and placenta stored in a safe place- preferably in a leak proof bucket etc.
- Have the dam isolated and available for clinical examination and blood sampling.
- Have as much information available as possible- bulk milk results etc.
- Prepare a recent history of husbandry and management changes.
- Have previous laboratory reports available
- Regional veterinary laboratories report a higher success rate with the diagnosis if the foetus and placenta are accompanied with a blood sample from the dam.

Disease Reduction this winter and next spring.
Give the cow the best possible next 6 months you possibly can.

1. Basic Comfort- Cubicle place, clean passage and well-ventilated house
2. Nutrition Correct- Calve in a BCS of 3.0 to 3.25
3. Parasite elimination
4. Vaccinate for necessary diseases- Salmonella, Lepto, IBR + other issues in last 2 years
5. Eliminate low calcium next spring – Test Silage to dry cows in last 14 days for K Potassium. Potassium is the curse of the dairy farmer in the last 14 days pre calving in silage.
MILK FEVER

By LIAM STACK, M.Agr.Sc, Ruminant Technical Manager

Sub clinical milk fever is a gateway disorder, with these cows being more susceptible to retained cleanings, metritis, ketosis, lower production, poor fertility performance.

The Potassium Effect:
An excess of potassium limits magnesium absorption, delaying the release of stored calcium and increasing the incidence of milk fever. Grass silage with greater than 1.5% potassium can cause such issues. Grazed grass can contain 2-2.5 times the level of potassium compared to grass silage leading to higher levels of milk fever from cows calved off grazed grass.

Milk Fever Check List:
1. BODY CONDITION SCORE: CALVE COWS AT CONDITION SCORE 3.0
2. FORAGE: GRASS SILAGE
Organise through your Dairygold area sales manager or our inside sales department to have your grass silage:

1. potassium level checked.
If the potassium result is greater than 1.5% you should:
a. dilute the grass silage potassium levels with straw, hay, maize silage, wholecrop. While doing this you need to ensure that the cows UFL and PDI requirements are being met. If not colostrum yield and quality will be negatively affected.
b. Feed adequate Mg and vitamin D (Read the label before you buy precalver minerals).

2. calcium level checked
A dry cow has a requirement for 50grms of calcium. Silage calcium percentages of greater than 0.5% are over supplying calcium (grass silage only diets). Do not feed additional calcium in minerals. Feed adequate Mg and vitamin D to overcome (Read the label before you buy precalver minerals).

3. magnesium level checked
A dry cow requires 40grms of Mg. Good quality pre-calver minerals will supply 30 + grms. Your silage needs to supply the rest. Is it? (See laboratory analysis report)

3. PRE-CALVING MINERAL
  - Calcium. Your dry cow does not require large amounts of Ca, pre-calving mineral should contain less than 2% Ca.
  - Magnesium, Pre-calving mineral should supply 25grms of Mg per head per day
  - Vitamin D, pre-calving mineral needs to supply greater than 10000iu/per day

Calcium supply and demand
Grass silage generally supplies an excess of calcium for a dry cow but a deficit of calcium for milking cows. During the dry period the cows stores this excess. Once she starts to bag up, her diet cannot meet her requirements and she needs to draw calcium from her body reserves. This switch from storing to drawing calcium requires a hormonal change, which is controlled by the cows’ magnesium and vitamin D nutrition.

Successful prevention of Milk fever will substantially reduce the risk of many other problems.

When assessing your herds risk of milk fever be wary of:
1. Herd body condition score, with fat cows being 4 times more likely to suffer from milk fever.
2. Herd age, with cows on their third and greater lactation being more likely to suffer.
3. Calcium status. Where low, milk fever risk is very high.
4. History, a cow that had a milk fever in the previous lactation is 10 times more likely to have it in the current lactation.

KEY POINT: Testing your grass silage will allow you to put a nutritional strategy in place to prevent milk fever.
National Dairy Show
On Saturday the 19th October, all roads led to the Green Glens Arena, Millstreet for the 37th National Dairy Show. The show has grown in recent years to become Ireland’s premier indoor agricultural event.

This year the trade stand area was extended, with over 150 trade exhibits. The day also included live demonstrations from hoof care, tractor & loader demo to farm safety. A new addition this year, were the informative seminars from leading agricultural companies covering a wide and varying list of topics.

But of course the main attraction of the day was the impressive display of stock on show, from all over the country. This year’s judge was Erhard Junker from Switzerland. Erhard has a wealth of judging experience from shows across Europe. At the end of the day, Paul Hannan’s, Lisnalty Megasire Rituel, took the Irish Examiner Supreme Championship top prize. Reserve went to Woodmarch Cancun Lyme 2, exhibited by ML & E McNamara, while Hon. mention was picked up by, Des Grands Trix Harmonica exhibited by A&S Foody and R. Timlin. Cork club members also had great success on the day. A full list of placings can be found on the IHFA website. Congratulations and well done to all.

Upcoming Events
The Cork Holstein Friesian Club will hold its AGM on Wednesday 4th December in the Kingsley Hotel at 8pm. Guest speaker on the night will be Dr. Paddy Wall on antibiotics and milk. All welcome.
10 TOP TUBING TIPS!

**Hygiene** noun

“Conditions or practices conducive to maintaining health and preventing disease, especially through cleanliness”

When it comes to drying off cows, do we give enough attention to hygiene? Or do we just try and get the job done, and breathe a sigh of relief when it is? Remember, what you do now when you dry off your herd can make or break 2020, in terms of mastitis. Bacteria can sneak in through the open teat end, especially in the early dry period...... and they can also be welcomed in by the human, during the process of drying off! Cleanliness is crucial, and even more so if you are using teat seal only at drying off.

1. Have extra hands on deck, whether you have a big or small herd. The less you have to handle and pick up, the cleaner you will stay
2. Clip tails well before you start. A swipe from a dirty tail is a great way to contaminate the area (and if it's across the face, test your patience!)
3. Don't dry off cows during milking. Draft them off once they're milked, and bring them back in for drying off when the parlour is clean
4. Have some breakfast first! Drying off cows can be hard enough with doing it on an empty stomach
5. Every cow deserves clean gloves
6. Mark the cow before you give her any treatment—this reduces the risk of any mistakes later
7. Sterilise the teat ends thoroughly before introducing any tube. Use sterilising wipes or cotton wool balls soaked in methylated spirits, whichever you find easier to work with
8. Teat seal is meant to stay in the teat! Before you put the tube of seal in, pinch the teat where it joins the udder and don’t massage it up afterwards
9. Keep good treatment records, to avoid any mix-ups when calving starts
10. It's not a race!! If you want to dry off the last cow as well as you did the first cow, then 20 cows is about the most any one person will manage at a time

For more information and practical tips on Dry Cow Treatment, see CellCheck Farm Guidelines for Mastitis Control-Guidelines 16 – 18 & Management Notes C - F
WE’VE GOT WINTER FARMING ADVICE COVERED

NOVEMBER 2019 HERD HEALTH, MILK QUALITY & WINTER NUTRITION OPENDAYS

- ADVICE ON WINTER FEEDING, DOSING & MINERALS
- ADVICE ON CHLORINE FREE PRODUCTS & WASH ROUTINES
- ADVICE ON SOIL & SILAGE ANALYSIS
- EXCLUSIVE OFFERS

TIME: All open-days run from 10am to 1pm

Dates and Locations:

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<tr>
<th>Day</th>
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For more Information
Please contact your local Area Sales Manager or our Inside Sales Team on 022 31644