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Welcome to the July edition of

MILK MATTERS
DAIRYGOLD’S DAIRY ADVISORY BULLETIN

Dear Milk Matters Reader, 2019 has been kind so far. The mild spring and good grass growth lead to strong yield and milk protein %s at farm level. The early summer has kept this trend going with good but not overly excessive growth. Years with very high peaks in growth will have lower milk protein %s at farm level as it’s more difficult to stay on top of grass quality.

In this month’s, Nutrition Matters, we focus on feeding cows to maintain production and grass quality. To maintain the early season advantage in milk protein % we must maintain grass quality across the summer months.

Within Grass Matters, John Maher explores benefits of improving grazing infrastructure on more marginal farms while also looking at how we should manage our paddocks across the month.

We are now in the month of July. Cows served now will calve on the 10th of April unless you use proven short gestation sire. Short gestation sires can push calving back by a week and boost production by 14kg Milk Solids. In this month’s, Fertility and Breeding Matters, Doreen outlines how to approach breeding in July, which bulls to use and managing the introduction of stock bulls.

Yours Sincerely,

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

To contact the editor of MILK MATTERS
email: lstack@dairygold.ie
THE YEAR TO DATE

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

Grass Growth

Milk production to week 24 (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><strong>YTD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total annual Milk Yield per cow in Dairygold (kg)</td>
<td>2600</td>
<td>2638</td>
<td>2504</td>
<td>2703</td>
</tr>
<tr>
<td>Total annual Milk Solids per cow (kg)</td>
<td>192</td>
<td>195</td>
<td>185</td>
<td>201</td>
</tr>
<tr>
<td>YTD Average Protein %</td>
<td>3.37</td>
<td>3.39</td>
<td>3.34</td>
<td>3.44</td>
</tr>
<tr>
<td>YTD Average Fat %</td>
<td>4.01</td>
<td>3.99</td>
<td>4.06</td>
<td>4.01</td>
</tr>
<tr>
<td>YTD Average Lactose %</td>
<td>4.96</td>
<td>4.93</td>
<td>4.87</td>
<td>4.85</td>
</tr>
</tbody>
</table>

Milk Protein % (weeks 1-24)

Milk Butterfat % (weeks 1-24)

Milk Lactose % (weeks 1-24)
GUARD AGAINST THAT MID-SUMMER PRODUCTION SLUMP

Grass growth peaks in the months of May and June. With this comes the challenges of maintaining the correct pre-grazing covers and post grazing heights.

Poor management of grass across the summer can result in the build-up and carryover of stem into paddocks. Stemmy paddocks are of lower digestibility, leading to lower grass intakes, accelerated yield drops and lower milk protein %.

Successful grassland management is built around a compromise between adequate daily herbage allowance and post grazing sward height. We must walk the tight rope, of supplying enough grass to meet our cows intake requirements, while maintaining adequate grazing pressure to ensure paddocks are grazed out tight enough.

To maintain grass quality during the mid-summer:

1. Walk your grass weekly (more frequently during times of high growth)
2. Create a grass wedge

A grass wedge looks at how your farm is fixed for grass now and over the coming weeks. Is there a deficit or surplus?
It allows you to react with confidence:
- Taking paddocks out for round bales when there’s a surplus.
- Feeding back those round bales or concentrates during times of shortage.

KEY POINT: An increase of 1% in grass digestibility will increase dry matter intake by 0.3-0.4kg DM, supplying enough energy for c.0.75 ltrs of milk.
The summer will bring both scenarios.

3. **Graze paddocks at 1400-1600kg/ha**

Grazing paddocks at the correct pre-grazing covers and to the correct post grazing heights, increases utilisation and maintains grass quality (digestibility). The better the grass quality, the higher the grass intakes, milk yields and the milk protein %.

UFL and milk carrying capacity of different pre-grazing covers:

<table>
<thead>
<tr>
<th>Cover (kgDM/ha)</th>
<th>Potential Intake (kg DM)*</th>
<th>UFL of grass</th>
<th>Milk supported (kg)**</th>
<th>Milk solids supported (kg)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1300</td>
<td>17</td>
<td>1</td>
<td>25</td>
<td>1.8</td>
</tr>
<tr>
<td>2000</td>
<td>16.5</td>
<td>0.95</td>
<td>22</td>
<td>1.6</td>
</tr>
<tr>
<td>2500</td>
<td>16</td>
<td>0.9</td>
<td>19</td>
<td>1.4</td>
</tr>
</tbody>
</table>

*Potential intake assumes an intake reduction on heavier covers
** UFL requirement maintenance = 6, per kg milk = 0.44, per kg MS = 6.2

4. **Graze paddocks down to 4cm**

To maintain grass quality you must graze down to 4cm. Simple as. Leaving a butt on your paddocks introduces stem, drops the intake potential and energy content of your swards.

**Is there a place for topping?**

Certainly the most economical way to get down to 4cm is with your cows. Higher yielding cows struggle to attain the energy they need on grass as they cannot eat enough of it. Be wary of asking these types of cows to graze to 4cm as this may result in intake restriction and milk yield drops. In these situations getting the topper out and maintaining grass quality is the priority.

**Milk proteins and mid-summer grass quality:**

Milk proteins follow the same curve annually. In the spring, it starts off high and drops to a low point around Paddy’s day. As we get more grass (energy) into our cow’s diet, milk protein recovers. The low point and the speed of the recovery is year dependent. In years with a lot of early grass milk proteins are higher. Due to the high levels of early grass, 2019 has been very good for milk protein %.

![Protein % graph](image)
Mid-summer milk protein plateau
Milk proteins plateau every June and July before kicking on again from August to year end. This mid-summer plateau is down to grass quality. 2019 has been kind to us in this regard. Growth has been strong but not strong enough to build up massive excesses of grass on farm. This has made it easier to ensure we have the correct grass covers. By following the 4 points above to maintain grass quality you will guard against the mid-summer milk protein plateau.

Milk volume and mid-summer grass quality:
Milk volume should decline at 2.5% a week or 10% a month from its peak. A decline of greater than this is down to insufficient energy intake. Once volume starts to decline it’s very hard to stop. This is especially true in late lactation. After a production decline adding energy back into the diet is not guaranteed to give a volume increase. However, it will slow the drop back to a more natural rate.

Every effort should be made to maintain volume across the mid-summer grazing season. Failure to do so will lead to:
- Low individual cow milk yields in the autumn
- Lower milk lactose %
- The possibility of having to dry cows off early when solid adjusted milk prices

Milk supplied to Dairygold has declined by 7% since peak supply in week 20 or 1.75% on average per week.

To maintain energy intakes across the mid-summer grazing season:
1. Maintain grass quality and quantity
2. Use concentrates strategically when needed

Concentrates required at Grass:

<table>
<thead>
<tr>
<th>Grass intake (kg DM/day)</th>
<th>Milk Yield (kg/day)</th>
<th>Milk Solids (kg/day)</th>
<th>Concentrates (kg/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>&gt;25</td>
<td>&gt;1.75</td>
<td>1*</td>
</tr>
<tr>
<td>17</td>
<td>28</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>17</td>
<td>30</td>
<td>2.1</td>
<td>2.5</td>
</tr>
<tr>
<td>17</td>
<td>32</td>
<td>2.25</td>
<td>3.25</td>
</tr>
<tr>
<td>17</td>
<td>34</td>
<td>2.35</td>
<td>4.25</td>
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<tr>
<td>17</td>
<td>36</td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td>17</td>
<td>38</td>
<td>2.65</td>
<td>6</td>
</tr>
</tbody>
</table>

*Assumes 0 BCS change, +/- 1 kg DM grass = +/- 1 kg of feed, +/- 1 kg of milk = +/- 0.5 kg of feed

*grass alone does not meet a cow’s daily requirement for calcium, phosphorus, magnesium, zinc, iodine and selenium. Even though a cow’s energy demand might not require concentrates, feeding 1kg of concentrates at grass is the cheapest and most effective method of supplying these minerals.*
This year a new sustainability section was introduced to Dairygold’s annual prestigious Milk Quality Awards. Massive congratulations are due to Edward and Breda Donovan who were the overall winners on the night but equally, sincere congratulations are due to Pat and Noreen Cronin who came home with the inaugural award for Sustainability within the Milk Quality Awards.

Above left: The Cronins receiving their award as winners of the Mid-Cork Region as well as overall Sustainability winners of the Milk Quality Awards from Dairygold Chairman John O’Gorman and CEO Jim Woulfe. Above right: The Donovan family who were overall Milk Quality Award winners on their farm in Cloyne, East Cork.

What is the Sustainability Award and why were the Cronins chosen as the overall winners for the award?

Milk Quality is central to all awards at the annual Dairygold Milk Quality Awards. Along with their outstanding achievements from a sustainability perspective the Cronins have exemplary milk quality standards, achieving a 55 point Balanced Scorecard annually for the last 6 years (back to 2013!).

<table>
<thead>
<tr>
<th>Average Kgs MS/Cow</th>
<th>550</th>
<th>Milk recording</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Fat</td>
<td>4.48</td>
<td>Doing Selective Dry Cow Therapy</td>
<td>✓</td>
</tr>
<tr>
<td>Average Protein</td>
<td>3.74</td>
<td>Sensativity testing</td>
<td>✓</td>
</tr>
<tr>
<td>SCC</td>
<td>73,000</td>
<td>Soil Samples every 2 years</td>
<td>✓</td>
</tr>
</tbody>
</table>

Along with these impressive credentials the herd is in the top 1% for EBI nationally. Pat utilises low emission slurry spreading as much as possible through his contractor’s trailing shoe system and he makes sure that all slurry is applied in the spring and early summer when conditions are appropriate. He has tried protected urea this year and he intends to use more of it in the future. All of these things contribute to the sustainability of the farm. However, all of these actions are best practice and of financial benefit. Pat would openly admit that his motivation for the majority of these actions is financial and as Pat said,’ it was just common sense to me’.
There are three aspects to sustainability – financial, social and environmental. The majority of farmers are naturally trying to be financially sustainable, however being socially and particularly environmentally sustainable is often much more difficult to achieve.

Don Crowley said “I just loved Pat’s system. Every cow earned her place. He is producing from 81 cows, what most people would need 120 cows to produce and he worked with the land type that he had, not against it”

The Judges Views
Judges for the Milk Quality Awards, Don Crowley and Karina Pierce both noted that the Cronin farm had reduced from 90 cows (a stocking rate of 2.9 LU/ha) in 2017, to 81 cows in 2019 (stocking rate of 2.5 LU/ha). Pat & Noreen made the conscience decision to maximise what they could produce from their cows and concentrate on quality rather than quantity. This allowed them to maintain and protect the environment and also reduce labour input on the farm, improving their lifestyle at the same time.

Walking around the Cronin’s farm, the benefit to the environment that this balanced stocking rate allowed for was obvious. A large wet patch at the top of the land had developed into a mature wetland habitat. Many farmers would have drained and reclaimed this area. Numerous rocky out-croppings or sloped areas were fenced off and Pat had frequently planted native trees and hedging within or along the boundaries of these ‘waste areas’, enhancing the biodiversity within. Pat had participated in REPS 3 over 10 years ago but has continued to maintain and enhance his habitats, as if he were still a participant, to the obvious benefit of environment around him.

It is difficult to achieve all three aspects of sustainability on any farm. However, here no the Cronin farm a balance of nature has been achieved and financial, social and environmental sustainability is present in abundance. The Cronin’s ethos to reduce waste, embrace technologies that will improve production and an appreciation for nature has resulted in a highly productive, environmentally friendly dairy system.
For more information on these products or to discuss how we can work together to achieve greater environmental sustainability please contact your Area sales manager, your local branch Agri lead or our inside sales department. Inside Sales Team on 022 31644
Thermoduric bacteria can have serious implications for the quality of milk and subsequent dairy products. Thermoduric bacteria exist in the dairy cow’s environment on-farm, e.g. in soil, bedding and faeces. These bacteria enter milk produced on-farm largely via the cow, during milking, in the first instance. Poor milking machine and bulk tank cleaning can result in multiplication of these bacteria and can further exacerbate the problem. Therefore, the critical control points for minimising thermoduric bacteria in farm milk are: (i) a clean cow and cow environment; (ii) a totally effective cleaning regime for the milking machine; and (iii) a totally effective cleaning regime for the bulk milk tank. The presence of thermoduric bacteria is indicative of ineffective cleaning somewhere in the milk production process. Detailed protocols for achieving clean cows and environment, clean milking machine and clean bulk milk tank are outlined below.

Cow and milking hygiene

- Ensure that teats are clean and dry before milking. If the milk sock is soiled after milking, then teat preparation is inadequate. If you wash teats, they should be dried
- Keep cows in a clean environment – if the udders and teats look dirty, then there is a problem. Collecting yards and approach roads should be scraped regularly
- Keep cow tails trimmed and udder hair clipped –minimum 3 times per year
- Keep hands/gloves clean throughout milking
- Keep milking clusters clean during milking and if they fall on the floor flush out completely
- Do not wash down clusters while still attached to a cow
- Do not wash down the platform while cows are present
- Cover meal bins in the parlour (some feed ingredients are high in thermoduric bacteria)

Milking plant hygiene

- Ensure sufficient volume of water to ensure all surfaces are in contact with detergent solution (9 litres/unit)
- Maintain adequate turbulence (air injection for large plants) and vacuum level during the wash cycle
- Hot water usage is critical (70/80OC) - lower chemical usage with hot water
- Milk stone remover should be used at a minimum once weekly and more often if water hardness is an issue, or install a water softener
- After the wash cycle, the milking plant should be disinfected twice daily with peracetic acid in an additional rinse
- Thermoduric bacteria survive in cracked and perished rubber-ware - replace regularly
- Debris can build-up in the plate cooler - use clean filter sock during washing and get milking machine technician to clean plates
Bulk milk tank hygiene

- Disinfect the bulk milk tank outlet regularly
- Avoid having the milk supply pipe immersed in milk during milk transfer
- Keep the bulk milk lid closed at all times, especially during milking
- Ensure sufficient volume of detergent wash solution for size of bulk tank - Insufficient volume will result in poor surface contact with detergent
- Blocked suck-up detergent tubes will result in insufficient detergent usage, replace these tubes yearly
- Spray balls clogged or spinners not moving freely or missing will impact on effective tank cleaning
- Cool milk to 3/4 °C within 30 min of the completion of milking with the aid of a plate cooler

Thermoduric bacteria – key points that you may not know:

- The risk of thermoduric bacteria entering milk via the cow is higher during periods of very dry or wet weather
- High thermoduric counts do not mean you will have a high total bacterial count
- It is extremely difficult to eliminate thermoduric bacteria at the processing site - easier to minimise levels on farm

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✓ More efficient fermentation
✓ Less protein breakdown
✓ Reduced fermentation losses
✓ Higher nutritive value
✓ Higher digestibility
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✓ 1 bag/bottle treats 100 tonnes
✓ Improved animal performance
✓ Can also be used on bale silage

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Which county won the All Ireland Hurling final in 2018?

Galway [ ] Limerick [ ]

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Name ____________________________ Contact number ____________________________

Email address ____________________________ Type of farming ____________________________

Address line 1 ____________________________ Current insurer ____________________________

Address line 2 ____________________________ Farm insurance renewal date ____________________________

Eircode ____________________________ Dairygold account number ____________________________

Please tick here [ ] to confirm you have read the data protection section below and that you give Zurich permission to use your personal data as set out therein. Zurich Insurance will contact you by phone, email and/or SMS for an insurance quotation.

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Closing date for entries is midnight 31 July 2019. For full terms and conditions visit www.zurich.ie/dairygoldcompetition.

Zurich Insurance plc is regulated by the Central Bank of Ireland.
For years we have generally spread urea in the spring and then switched to CAN during the summer as they are the best N products to use during these times of the year. Protected urea is a relatively new fertiliser N product that has recently been thrown into the mix. This article will answer some of the questions around protected urea.

What is protected urea?
Protected urea uses the same granule as normal urea that we have been spreading for years. The only difference is that a protection in the form of a urease inhibitor has been added to the granule. These inhibitors reduce ammonia-N gas emissions from the urea which means that more of the fertiliser N is available for grass growth. The reduction in ammonia-N gas emissions also means that it’s better for the environment. Typically when we spread normal urea we are looking to have a small amount of rain within 2-3 days to wash it in. This 2-3 day window is increased when protected urea is used.

Where does protected urea fertiliser fit in?
Protected urea is suitable for spreading throughout the whole grazing season. At present protected urea can come as straight N or in a compound with potash and/or sulphur. Some of the available compounds with protected urea include: 40% N + 6%S, 38% N + 7.5%S, 27-0-11 and 29-0-14+3%S. Straight protected urea and these compounds with protected urea can be used on silage and grazing ground.

How does protected-urea compare to normal urea and CAN?
Teagasc has done a large amount of work comparing protected urea to normal urea and CAN. Trials measuring grass yield, greenhouse gas (GHG) emissions and ammonia-N emissions where conducted at three locations (Cork, Wexford and Down) across the country for two growing seasons. The trails found that protected urea produced the same amount of grass as urea and CAN. Fig. 1 shows the average grass growth over the two years for the different N fertilisers across the three locations. The trials also found that protected urea had lower GHG emissions than CAN and lower ammonia-N emissions than urea.

Fig 1: Grass yield from plots receiving either CAN, Urea or Protected urea at three locations across Ireland. Source: Harty et al., 2017
Why change away from what we know?
One of the main reasons for the change from CAN or urea to protected urea will be to help us to meet strict new targets to reduce both GHG and ammonia-N emissions by 2030. Agriculture in Ireland accounts for 33% of national GHG emissions and virtually all (>98%) national ammonia-N emissions so as an industry we’ll have to play our part in reducing emissions. There are many things that can be done on farm to reduce emissions. However, many of the options will increase farm costs and labour. Moving from using CAN to protected urea is one of the most practical and cost effective options available to reduce emissions from farms. Based on current fertiliser prices protected urea is actually cheaper than CAN per unit of N (fig. 2). Teagasc trails to date show that protected urea is growing the same amount of grass as CAN and crucially, it ticks all the boxes when it comes to the environment and emissions targets (See fig 2). Why not try a couple of pallets of it this summer and see how you find it.

<table>
<thead>
<tr>
<th>Fertiliser N Type</th>
<th>N Content</th>
<th>€ Cost</th>
<th>Annual Grass Yield</th>
<th>GHG Emissions</th>
<th>Ammonia Emissions</th>
<th>Nitrate Leaching Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>46%</td>
<td>€0.85/kg N</td>
<td>✓</td>
<td>✓</td>
<td>✘</td>
<td>✓</td>
</tr>
<tr>
<td>Protected Urea</td>
<td>46%</td>
<td>€0.95/kg N</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>CAN</td>
<td>27%</td>
<td>€1.05/kg N</td>
<td>✓</td>
<td>✘</td>
<td>✓</td>
<td>✘</td>
</tr>
</tbody>
</table>

Fig 2: Comparison of CAN, Urea and Protected urea fertiliser in terms of cost, grass yield and environmental impact.

**KEY POINT:** Moving from using CAN to protected urea is one of the most practical and cost effective options available to reduce emissions from farms

**KEY POINT:** Protected urea is cheaper than CAN, grows similar amounts of grass and is ticking all the boxes when it comes to the environment and emissions targets
John Galvin farms with his wife Yvonne near Dunmanway Co Cork. John is the Grass Focus Farmer in the Dairygold/Teagasc monitor programme. John is milking 94 crossbred NZ Friesian Jersey cows with an EBI of €155 on a milking platform of 26.8ha. In 2018 John sold 518kg milk solids/cow to the co-op with 1.48tonnes meal fed/cow. Currently cows are producing 1.91kg milk solids/cow (23litres at 3.74% protein and 4.32% fat) on 1.5kg meal.

In 2018 the farm grew 10.9tonnes grass DM/ha, which was significantly affected by the drought. By mid-June this year the farm has already grown 6.3 tonnes grass DM/ha and cows have started the sixth grazing rotation. This is a combination of excellent soil fertility and grassland management. John regularly tests his soil and currently 86% of the farm is over 6.5pH, 97% of the farm is in Index 3 or 4 for Phosphorous and 100% of the farm is in Index 3 or 4 for Potassium. Cows got out to grass after morning and evening milking from 8th February and only missed 6 grazings this spring. John is a very strong advocate of on/off grazing, using strip wires and back fencing and temporary pathways within paddocks to ensure cows are utilising as much grass as possible in the spring. From April onwards, John uses the grass wedge to control the quantity and quality of grass on farm. Since the end of April, John has kept his average cover/cow between 140-180kgDM/cow, thus ensuring pregrazing yields are between 1400-1600kgDM/ha.

**Current average performance of monitor farmers: 20th June 2019**

<table>
<thead>
<tr>
<th>Stocking rate on milking platform:</th>
<th>3.77</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Farm Cover kgDM/ha</td>
<td>583</td>
</tr>
<tr>
<td>Grass cover/cow kgDM/cow</td>
<td>156</td>
</tr>
<tr>
<td>Pre Grazing cover kgDM/ha</td>
<td>1463</td>
</tr>
<tr>
<td>Grass Demand kgDM/ha</td>
<td>59</td>
</tr>
<tr>
<td>Grass Growth Rate kgDM/ha</td>
<td>66</td>
</tr>
<tr>
<td>Milk litres/cow</td>
<td>24.32</td>
</tr>
<tr>
<td>Fat %</td>
<td>4.14</td>
</tr>
<tr>
<td>Protein %</td>
<td>3.66</td>
</tr>
<tr>
<td>Milk solids/cow/day</td>
<td>1.95</td>
</tr>
<tr>
<td>Meal kg/cow</td>
<td>2.5</td>
</tr>
</tbody>
</table>

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- Extremely high protection from damage by birds, dogs, cats and hail.
- Tread-safe, resistant to tearing.
- High grade treatment of seams and hems.
- Saves time - quick and easy to use.
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- No need to cover with tyres or sand.
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- No decay - no mould.
- Available in sizes 10x15m, 10x12m, 8x15m and 8x12m.
What is Clover?
Clover is a legume. It can fix nitrogen directly from the atmosphere. This fixed atmosphere nitrogen is then available for the clover and perennial rye grasses (PRG) within your sward to grow. The nitrogen fixing potential of the clover with your sward is dependent on the amount of chemical nitrogen you apply. Higher levels of chemical N yield lower levels of clover fixed N.

Nitrogen Fixed By Clover Swards

<table>
<thead>
<tr>
<th>Chemical Nitrogen application</th>
<th>Potential Fixed N</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 kg/ha</td>
<td>c.200kg/ha</td>
</tr>
<tr>
<td>240 kg/ha</td>
<td>c.50kg/ha</td>
</tr>
</tbody>
</table>

20% clover required on average across the year for results

KEY POINT: Within their analysis of the abatement potential of differing agricultural measures, Teagasc calculate that if 25% of beef farmers and 15% of dairy farms broadcast clover seeds over existing grass swards that we can avoid 69 thousand tonnes of CO2 equivalent per year (2021-2030).
Differences Between Clover and Perennial Rye Grass (PRG)

<table>
<thead>
<tr>
<th></th>
<th>Clover</th>
<th>Grass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixes atmospheric N</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Temperature it starts growing</td>
<td>5c</td>
<td>8c</td>
</tr>
<tr>
<td>Quality</td>
<td>Clover is generally better quality across the main grazing season. This is positive for milk protein and milk yield</td>
<td></td>
</tr>
<tr>
<td>Intake Potential</td>
<td>Clover intake potential is c.+1kgDM/day from July to September. This is positive for milk protein and milk yield</td>
<td></td>
</tr>
</tbody>
</table>

What are the benefits of clover to my system?

For the past 4 years Teagasc have been studying:
1. Grass only swards plus 250kg chemical N/ha,
2. Clover + grass swards plus 250kg chemical N/ha
3. Clover + grass swards plus 150kg chemical N/ha for 4 years.

Results:

1. Nitrogen Use Efficiency and Grass growth.
   All 3 treatments grew the same amount of grass. i.e clover has the potential to reduce your nitrogen use by 100kg per ha for the same grass growth. Every kg of N you buy costs c.€0.90-€1. 100kg N spared could save you up to €100 per ha. This increases your nitrogen use efficiency and reduces the amount of carbon that’s produced in the manufacturing, distribution and spreading of the chemical fertiliser.

   The grass clover swards are higher in quality and have a higher intake potential than the grass only swards across the main grazing season. The grass clover swards produced 33kg extra milk solids per cow per year.

Issues With Clover At Farm Level?

Despite its environmental and performance benefits clover has been slow to take hold.

1. Post emergence weed
   In the presence of chickweed weed control can be more difficult if clover is present.

2. Persistency within swards has been an issue.
   Through correct management Teagasc have managed to attain 6-7 years of persistency

3. Bloat
   Due to its higher quality across the summer, cows preferentially graze clover over grass. The highest risk periods for bloat is when there:
   a. Is a high clover content within the sward
   b. Are hungry cows
   c. Is low dry matter content pasture

   To reduce the bloat risk associated with clover:
   a. Have clover in all paddocks
   b. Use the strip wire when needed.
      If you grazed to below 4cm on the previous day there is a higher chance cows will be hungry and will gorge themselves on the clover within the new sward if given free access. In these situations, use a strip wire to force cows to eat the more fibrous grass in conjunction with the clover
   c. During times of increased risk use bloat oil in the water.

4. Reduced spring growth:
   Clover needs a soil temperature of 8c + before it starts to grow. Due to its slow start Teagasc have calculated that you will need to feed c. 1 extra bale per cow in February and March. Mild springs like 2019 are less of a challenge. Once you get through the 1st round of grazing a clover grass swards will growth as well as a grass only sward.

For more information on the dairygold grass seed mixes available with clover please contact our Grassland Specialist James Bourke on 086 7938408, your local area sales manager, your agri branch or inside sales on 022 31644
Mixture No. 1+: High Clover Grazing (Also available without clover)

High inclusion of astonenergy and meiduno make this mix 52% tetraploids. Higher levels of T are being encouraged by Teagasc due to their palatability and performance on farm. Astonenergy has continually proven its quality and superior graze out potential within the Teagasc on-farm variety trials. New within the mixture this year are Oakpark (a Teagasc bred variety) and Astonking. Over all this mixture offers good seasonal growth, quality and palatability.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Heading Date</th>
<th>Pliody</th>
<th>PPI</th>
<th>RL Ground Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astonenergy</td>
<td>02-Jun</td>
<td>LT</td>
<td>€132</td>
<td>5.4</td>
</tr>
<tr>
<td>Meiduno</td>
<td>03-Jun</td>
<td>LT</td>
<td>€167</td>
<td>5.2</td>
</tr>
<tr>
<td>Astonking</td>
<td>05-Jun</td>
<td>LD</td>
<td>€116</td>
<td>5.8</td>
</tr>
<tr>
<td>Oakpark</td>
<td>02-Jun</td>
<td>LD</td>
<td>€118</td>
<td>6.8</td>
</tr>
<tr>
<td>Clover</td>
<td></td>
<td></td>
<td>YES</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% T</th>
<th>Total PPI</th>
<th>Spring</th>
<th>Summer</th>
<th>Autumn</th>
<th>Quality</th>
<th>Silage</th>
<th>Persistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>52%</td>
<td>€133.3</td>
<td>€38.1</td>
<td>€31.6</td>
<td>€33.3</td>
<td>€12.3</td>
<td>€19.1</td>
<td>-€1.2</td>
</tr>
</tbody>
</table>

Mixture No. 2: Two Cut Silage (Also available with clover)

A mixture designed specifically for silage (two or more cuts) with exceptional spring growth for high first cut yields, no clover (questionable role in an intensive cutting system) and durable varieties to ensure a long lasting sward.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Heading Date</th>
<th>Pliody</th>
<th>PPI</th>
<th>RL Ground Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astonconqueror</td>
<td>25-May</td>
<td>ID</td>
<td>€165</td>
<td>6.4</td>
</tr>
<tr>
<td>Rossetta</td>
<td>23-May</td>
<td>ID</td>
<td>€156</td>
<td>6.3</td>
</tr>
<tr>
<td>Fintona</td>
<td>22-May</td>
<td>IT</td>
<td>€191</td>
<td>5.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% T</th>
<th>Total PPI</th>
<th>Spring</th>
<th>Summer</th>
<th>Autumn</th>
<th>Quality</th>
<th>Silage</th>
<th>Persistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>€172.6</td>
<td>€78.6</td>
<td>€25.1</td>
<td>€39.4</td>
<td>-€1.3</td>
<td>€30.9</td>
<td>€0</td>
</tr>
</tbody>
</table>
Mixture No. 3: Dairygold Extend Gold (Also available with clover)

Excellent spring and autumn growth combined with exceptional quality for a palatable sward. This mixture is for intensive grazing situations where extending grazing, is a priority. The level of abergain has been increased within the mixture this year to increase the %T. Also suitable for one cut silage systems.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Heading Date</th>
<th>Pliody</th>
<th>PPI</th>
<th>RL Ground Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abergain</td>
<td>04-Jun</td>
<td>LT</td>
<td>€214</td>
<td>5.7</td>
</tr>
<tr>
<td>Aberchoice</td>
<td>09-Jun</td>
<td>LD</td>
<td>€189</td>
<td>6.1</td>
</tr>
<tr>
<td>Drumbo</td>
<td>07-Jun</td>
<td>LD</td>
<td>€117</td>
<td>6.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% T</th>
<th>Total PPI</th>
<th>Spring</th>
<th>Summer</th>
<th>Autumn</th>
<th>Quality</th>
<th>Silage</th>
<th>Persistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>46%</td>
<td>€183.2</td>
<td>€33.6</td>
<td>€38.4</td>
<td>€43.6</td>
<td>€45.2</td>
<td>€22.4</td>
<td>€0</td>
</tr>
</tbody>
</table>

Mixture No. 4: Heavy Soils/Extensive Grazing Mix (Also available without clover)

This is an excellent mixture for heavy soils or for extensive farmers that struggle to keep rotation lengths at the 18-20days during the summer. It has a higher levels of diploids to provide a good dense base to the sward with high ground scoring varieties which will ensure a persistent sward in challenging soils. This mixture delivers good seasonal growth and high grass quality.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Heading Date</th>
<th>Pliody</th>
<th>PPI</th>
<th>RL Ground Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drumbo</td>
<td>07-Jun</td>
<td>LD</td>
<td>€117</td>
<td>6.4</td>
</tr>
<tr>
<td>Clanrye</td>
<td>06-Jun</td>
<td>LD</td>
<td>€68</td>
<td>6.8</td>
</tr>
<tr>
<td>Ballintoy</td>
<td>02-Jun</td>
<td>LT</td>
<td>€150</td>
<td>5.6</td>
</tr>
<tr>
<td>Clover</td>
<td>YES</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% T</th>
<th>Total PPI</th>
<th>Spring</th>
<th>Summer</th>
<th>Autumn</th>
<th>Quality</th>
<th>Silage</th>
<th>Persistency</th>
<th>RL GS</th>
</tr>
</thead>
<tbody>
<tr>
<td>27%</td>
<td>€1171</td>
<td>€29.2</td>
<td>€29.6</td>
<td>€31</td>
<td>€13.5</td>
<td>€13.8</td>
<td>€0</td>
<td>6.3</td>
</tr>
</tbody>
</table>
The first half of the grazing season has gone fairly well for most dairy framers, grass has grown well and grazing conditions have also been very favourable.

Now that it is half time we should review how the 1st half went and play a better second half. The Grass10 target is to achieve 10 grazings per paddock per year. Ideally, farmers should have finished the first rotation in early April and be running a 20 day rotation on average since then. The more rotations achieved on a paddock, the more grass grown and utilised on farm. The target is to have 5 grazing rotations/paddock completed on the entire grazing platform by July 1st. If a paddock is cut for bales (surplus grass) then this is counted as a “grazing” event. Maximising the number of grazings achieved on each paddock is a very effective method of increasing farm grass utilisation. Every extra grazing/paddock achieved increases annual grass DM production by about 1.4 t DM/ha.

As the level grass grown is strongly influenced by the number of grazing rotations achieved, then about 6.5 - 7ton of DM/ha should have been grown on the farm by July 1st (see table 1 attached).

Table 1. Grass10 targets for grazing rotations and grass production

<table>
<thead>
<tr>
<th>Rotation No.</th>
<th>Date</th>
<th>Kg DM/ha (ton DM/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Feb - Early April</td>
<td>1200 kg</td>
</tr>
<tr>
<td>2</td>
<td>Early April - May 1</td>
<td>1400 kg</td>
</tr>
<tr>
<td>3</td>
<td>May 1st - May 20th</td>
<td>1400 kg</td>
</tr>
<tr>
<td>4</td>
<td>May 20th - June 10th</td>
<td>1400 kg</td>
</tr>
<tr>
<td>5</td>
<td>June 10th - July 1st</td>
<td>1400 kg</td>
</tr>
<tr>
<td>5 Rotations</td>
<td>1st July</td>
<td>6800 Tonne DM/ha (6.8 ton DM/ha)</td>
</tr>
</tbody>
</table>

The figures from PastureBase Ireland (ww.pbi.ie) show that farmers achieved on average 3.8 Grazing rotations. The average level of grass production achieved was 6.1 tons DM/ha. However many farmers have achieved the targets outlined on Table 1.

What else have we observed?
Every week for the last 2 months, figures from PastureBase Ireland have shown (on average) that there is surplus grass on dairy farms (above 190kgDM/LU) from table 2. The target is about 160 - 180 kg DM/Ha. Growth of grass has also always exceeded the demand of the herd. This demonstrates that the level of grass being grazed is well above 1400 kg DM/ha. Therefore stem content is higher; therefore digestibility of grass eaten is lower.

Every 4% reduction in grass digestibility will reduce milk solids yield by about 5%.
Grazing grass that is too strong (high in grass cover or over 1400 kgDM/ha) will result in under grazing also. Most farmers are unable to achieve good clean-outs in their swards (not grazing down to 4cm). This has serious negative implications for grass quality for the rest of summer grazing. Ideally this surplus grass should be converted into round bale silage and not grazed.

Some farmers pre-cut this strong material as a means to try to rectify the problem. However, this is not removing the surplus grass from the platform. Many trials here, in Australia and New Zealand have examined pre-cutting and broadly the results demonstrate a reduction in milk protein content, a reduction in milk solids yield and less grass grown when grass is pre-cut. The higher the level of grass cover pre-cut, the more pronounced the negative effects are on both milk production and grass production. The cow has no ability to “choose” (or select) the grass of higher digestibility when it is pre-cut.

### Table 2: Grass10 Weekly Update: Source (www.pbi.ie)

<table>
<thead>
<tr>
<th>Date</th>
<th>Average Farm Cover</th>
<th>Cover/LU</th>
<th>Stocking Rate LU/ha</th>
<th>Growth (Kg/ha/day)</th>
<th>Demand of herd (kg/ha/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30th April</td>
<td>808</td>
<td>218</td>
<td>3.7</td>
<td>60</td>
<td>55</td>
</tr>
<tr>
<td>7th May</td>
<td>812</td>
<td>214</td>
<td>3.82</td>
<td>67</td>
<td>57</td>
</tr>
<tr>
<td>14th May</td>
<td>750</td>
<td>192</td>
<td>3.91</td>
<td>61</td>
<td>58</td>
</tr>
<tr>
<td>21st May</td>
<td>747</td>
<td>195</td>
<td>3.83</td>
<td>65</td>
<td>68</td>
</tr>
<tr>
<td>28th May</td>
<td>785</td>
<td>202</td>
<td>3.86</td>
<td>72</td>
<td>60</td>
</tr>
<tr>
<td>4th June</td>
<td>780</td>
<td>202</td>
<td>3.86</td>
<td>77</td>
<td>60</td>
</tr>
<tr>
<td>11th June</td>
<td>706</td>
<td>191</td>
<td>3.7</td>
<td>71</td>
<td>60</td>
</tr>
<tr>
<td>18th June</td>
<td>697</td>
<td>188</td>
<td>3.71</td>
<td>64</td>
<td>57</td>
</tr>
<tr>
<td>25th June</td>
<td>686</td>
<td>191</td>
<td>3.58</td>
<td>64</td>
<td>56</td>
</tr>
</tbody>
</table>

**How do we improve our grazing for the 2nd half?**

Keeping the “RiGHT” grass in front of the cows by keeping to a 20 day rotation is critical to keep the performance of the herd high. For those who measure grass this is 1400 KgDM/Ha of leafy grass.

**A growth rate of 65 - 70 kg DM/ha/Day for 20 days**

= **1300 - 1400 kg DM/Ha.**

i.e. 20 days multiplied by 65kg DM/ha/day = 1300 kg DM/ha

**Longer rotations result in:**

- less grass grown/ha
- poorer cow performance
- less grass utilised per ha
- grass of poorer digestibility
Any farm requires constant investment to keep the farm moving forward. However, in my experience those farmers that farm on heavy land often require more time, more effort and more money to be invested into the farm. However, investment on farm should be prioritised at areas that increase efficiency and reduce the exposure of the business to external shocks such as lower price of milk, higher price of inputs, poor weather conditions etc. All investments that give the highest returns should be prioritised.

Laurence Shalloo and Liam Hanrahan recently examined the relationship between the level of grass eaten (utilised) and the level of profit made from the farm. This analysis demonstrated that every ton of additional grass eaten by the grazing animal will add €173/ha additional profit to a dairy farm. Therefore it is important that investment in grazing is prioritised to give the maximum return. The level of return to these types of investments is high because it is investing in grazing. These investments will either enable the farm to grow more grass or lengthen the grazing season or both.

**Grazing Infrastructure:**
The design and layout of grazing infrastructure is

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**MOOREPARK ’19**

**IRISH DAIRYING — GROWING SUSTAINABLY**

**WEDNESDAY 3RD JULY, 2019 | 8.30AM - 5.00PM**

**DAIRY FARMING ON DIFFICULT / HEAVY LAND**

By JOHN MAHER, Ger Courtney & James O’Loughlin

Heavy Soils Programme, Teagasc

---

The average growth rates from PastureBase Ireland for the summer months are outlined in Table 3 below. The average level of growth is about 65 kg DM/ha/day.

**Table 3. Average grass growth rate (kg DM/ha/day) for May to September.**

<table>
<thead>
<tr>
<th>Date</th>
<th>Average Growth</th>
<th>Date</th>
<th>Average Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>05-May</td>
<td>56</td>
<td>07-Jul</td>
<td>70</td>
</tr>
<tr>
<td>12-May</td>
<td>60</td>
<td>14-Jul</td>
<td>73</td>
</tr>
<tr>
<td>19-May</td>
<td>79</td>
<td>21-Jul</td>
<td>69</td>
</tr>
<tr>
<td>26-May</td>
<td>78</td>
<td>28-Jul</td>
<td>66</td>
</tr>
<tr>
<td>02-Jun</td>
<td>79</td>
<td>04-Aug</td>
<td>65</td>
</tr>
<tr>
<td>09-Jun</td>
<td>73</td>
<td>11-Aug</td>
<td>65</td>
</tr>
<tr>
<td>16-Jun</td>
<td>75</td>
<td>18-Aug</td>
<td>63</td>
</tr>
<tr>
<td>23-Jun</td>
<td>75</td>
<td>25-Aug</td>
<td>63</td>
</tr>
<tr>
<td>30-Jun</td>
<td>70</td>
<td>01-Sep</td>
<td>63</td>
</tr>
</tbody>
</table>

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<tr>
<td>12-May</td>
<td>60</td>
<td>14-Jul</td>
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</tr>
<tr>
<td>19-May</td>
<td>79</td>
<td>21-Jul</td>
<td>69</td>
</tr>
<tr>
<td>26-May</td>
<td>78</td>
<td>28-Jul</td>
<td>66</td>
</tr>
<tr>
<td>02-Jun</td>
<td>79</td>
<td>04-Aug</td>
<td>65</td>
</tr>
<tr>
<td>09-Jun</td>
<td>73</td>
<td>11-Aug</td>
<td>65</td>
</tr>
<tr>
<td>16-Jun</td>
<td>75</td>
<td>18-Aug</td>
<td>63</td>
</tr>
<tr>
<td>23-Jun</td>
<td>75</td>
<td>25-Aug</td>
<td>63</td>
</tr>
<tr>
<td>30-Jun</td>
<td>70</td>
<td>01-Sep</td>
<td>63</td>
</tr>
</tbody>
</table>

---

The average growth rates from PastureBase Ireland for the summer months are outlined in Table 3 below. The average level of growth is about 65 kg DM/ha/day.
crucial to the overall herd performance and profitability of the farm. It can also simplify the management of stock especially during difficult grazing conditions. Importantly, it will enable the farmer to lengthen the grazing season and in many cases enable an additional ton of grass to be eaten at the start and end of the grazing season. This cannot be achieved without having an adequate farm roadway system, easy to operate paddock system with multiple accesses/exit points and easy access to water for cows.

Every farmer should reassess their farm in terms of roadways, access to paddocks, location of water troughs etc. Some paddocks on the farm may have proved difficult to graze due to inadequacies of the grazing infrastructure.

Now is a good time to take corrective action on these paddocks or roadways. These improvements in grazing infrastructure are generally not very costly to address. Some very simple modifications e.g. a new gap-way are often very easily completed. It is often that the extremities of the farm need the most improvements in terms of grazing infrastructure. Fundamentally every adjustment or improvement is trying to increase the number of days at grass and reduce the cost of milk production.

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 and easy access to water for cows. Cow-paths or spur roadways should be considered in some circumstances as they are useful in gaining access to out of the way paddocks and silage ground. Installation of some spur roadways on parts of the farm will allow cows to get on and off grazing quickly. They also facilitate cows to get to drier parts of paddocks and avoid wet patches.

The positioning of water troughs in paddocks is a common fault on many farms. Too often, cows have to walk a long distance to gain access to water and in wet grazing conditions this leads to increased damage to pasture. Ideally water troughs should be centrally located which allows greater flexibility in grazing. Other options can be considered. The standard rule of thumb is to have a water trough size of about 2 gallons/cow. So a 100 cow herd requires a 200 gallon water trough (with a 1 inch pipe mainline feeding it). However having TWO 100 gallon troughs in the paddock enables adequate water supply and increases flexibility when grazing during difficult weather conditions.

Multiple access/exit points to paddocks are easily created.

---

**Smarter Milking Workshop:**

**BRING MILKING EFFICIENCIES BACK TO YOUR FARM**

**Date**
18th July, 2019

**Venue**
Richard Coughlan, Broomhill, Mitchelstown, Co. Cork
Eircode P67 HT73

**THIS FREE EVENT STARTS AT 11AM**

**Topics covered at this event?**

- GETTING THE COWS IN AND OUT
- DOING THE JOB RIGHT
- SAVING ENERGY AND MONEY
- PRODUCING HIGH QUALITY MILK
- SAVING TIME ON MILKING
Benefits of KERVA Treated Grain For Feed

- Treating grain with KERVA produces nutritionally enhanced feed (increased protein content by 30% approx.), reducing the need for additional protein in the diet.

- KERVA increases the pH of the grain (pH 8.5-9.0) which results in better rumen buffering and a reduction in acidosis and laminitis.

- It is possible to safely feed higher levels of concentrate and concentrates with a higher level of grains when using KERVA treated grain.

- KERVA improves feed intake and fibre digestion in the rumen.

- The higher pH of KERVA grain ensures grain can be stored on farm for linger periods and without aeration.

For more information contact your local Area Sales Manager, Co-Op Superstores or Inside Sales Team on 022 31644.
1. FERTILITY

1st July mating is 10th April 2020 calving. 1st July mating with short gestation sires will take 1 week off - calving 3rd April.

Two mating opportunities left to calve in April 2020.

1. Cows not yet bred need to be synchronised and inseminated immediately. Give these an opportunity of remaining in the herd for 2020.

**Dairy Cows - Synchronization for cows - AI at fixed time**

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Treatment Description</th>
<th>AM/PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday 1st July</td>
<td>0</td>
<td>Insert PRID or CIDR and inject GnRH</td>
<td>AM</td>
</tr>
<tr>
<td>Monday 8th July</td>
<td>7</td>
<td>Inject PG &amp; Remove PRID/CIDR</td>
<td>AM</td>
</tr>
<tr>
<td>Wed 10th July</td>
<td>9</td>
<td>Inject GnRH (56 hours post PG)</td>
<td>PM</td>
</tr>
<tr>
<td>Thursday 11th July</td>
<td>10</td>
<td>AI all cows (16-20 hours post GnRH)</td>
<td>AM to noon</td>
</tr>
</tbody>
</table>

2. Use short gestation, easy calving sires.

These bulls will reduce the length of pregnancy and calve easier- resulting in more milk sold and cows will go back incalf easier the subsequent year.

<table>
<thead>
<tr>
<th>Bull</th>
<th>Name</th>
<th>Gestation Diff</th>
<th>Calving Diff Rel</th>
<th>Carc. Wt. (kg)</th>
<th>Carc. Conf.</th>
<th>Cow Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA4089</td>
<td>INTELAGRI MATTEO E.T.</td>
<td>-3.94</td>
<td>1.40%</td>
<td>96%</td>
<td>5.4</td>
<td>2nd calvers and older</td>
</tr>
<tr>
<td>AA4088</td>
<td>INTELAGRI MAVERICK E.T.</td>
<td>-3.65</td>
<td>2.00%</td>
<td>98%</td>
<td>8.7</td>
<td>2nd calvers and older</td>
</tr>
<tr>
<td>HE4297</td>
<td>FABB 1 NORTHERN STAR PP</td>
<td>-1.85</td>
<td>2.80%</td>
<td>95%</td>
<td>0</td>
<td>2nd calvers and older</td>
</tr>
<tr>
<td>BB4286</td>
<td>IDEAL DE PETIT WARET</td>
<td>-0.93</td>
<td>8.10%</td>
<td>90%</td>
<td>21.7</td>
<td>Mature cows only</td>
</tr>
<tr>
<td>HE4643</td>
<td>MOORSIDE 1 PANDA PP</td>
<td>-0.87</td>
<td>2.40%</td>
<td>54%</td>
<td>7.7</td>
<td>Cows</td>
</tr>
</tbody>
</table>

Easy calving is crucial for cows calving in April as they usually have a longer dry period and are in a higher BCS score at calving.

From now on it is prudent to use only short gestation sires as these sires will reduce the gestation length by up to 1 week- giving you a week’s extra milk next year.

To maximise calf value use sires that suit your calving difficulty % and have the highest carcass weight and carcass conformation.

The two Hereford sires are polled (PP), meaning their progeny will be born without horns, which is an added bonus.
3. Ensure the stock bull is working and ratio is correct

The stock bull is key to reducing the empty rate next year and reducing the number of cows calving in late April.

*Act now.*

Correct ratio - 1 young bull to 15 empty females, 1 mature bull to 20-30 empty females.

If more than 2 bulls running with the herd rotate the bulls 24 hours on and 24 hours off.

- This will maximise their use,
- Reduce wasted matings,
- Avoid a dominant bull not allowing a more fertile subordinate bull to mate
- Reduce the possibility of injuries to bulls.
- Ensure a more active, fertile, well rested bull is with the cows on a daily basis.

If more than 2 cows are on heat in the one day inseminate them as well, especially if it occurs on consecutive days.

If the bull goes lame or runs a temperature remove him from the herd until he is recovered. This may take 6 to 20 weeks.

Photosynthesis can result in a bull being out for the season.

Semen test him to ensure he is fertile and fit for purpose - your vet is best placed to help you with this decision.

4. Pregnancy testing - Opportune time to do a scan on cows served 30-35 days + and not repeated. Give them a chance of a service before the season ends.

Identification of empty cows now will allow them to receive a service before the end of the breeding season.

The milk pregnancy testing service that is offered through the milk recording is an extremely useful tool at this time of year, it will identify the empty cows and the pregnant cows very easily and conveniently. There will be a small % of inconclusives results in cows that will need a second test or can be scanned.

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2. LAMENESS

Lame cows do not improve by themselves, they need investigation and treatment.

A lame cow needs immediate treatment and we need to treat them with the same priority as a mastitis case.

**Cost & Prevalence of Lameness**

<table>
<thead>
<tr>
<th>Type of lameness</th>
<th>Digital</th>
<th>Interdigital</th>
<th>Solar Ulcer</th>
<th>Average Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence</td>
<td>45%</td>
<td>35%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Total cost of a single case</td>
<td>€282</td>
<td>€136</td>
<td>€505</td>
<td>€275</td>
</tr>
<tr>
<td>Total cost of 1.4 cases</td>
<td>€302</td>
<td>€152</td>
<td>€536</td>
<td>€297</td>
</tr>
</tbody>
</table>

Most affected cows have 1.4 episodes of lameness. Costs include treatment, milk loss, decreased fertility and increased culling.

In the summer white line disease is the biggest issue with lameness.

The white line is where the vertical part of the hoof meets the horizontal part, this is a cemented junction. It is the weakest part of the sole. Grit and stones become impacted in the white line and travel upwards to the corium the sensitive part of the hoof. This causes inflammation and lameness and if left untreated it worsens and may break out at the heel or coronary band.
### GRAZING COWS DAILY TIME BUDGET

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grazing</td>
<td>8</td>
</tr>
<tr>
<td>Lying resting</td>
<td>7-11</td>
</tr>
<tr>
<td>Standing, walking, grooming</td>
<td>2-3</td>
</tr>
<tr>
<td>Drinking</td>
<td>0.5</td>
</tr>
<tr>
<td>Milking</td>
<td>2-3.5</td>
</tr>
</tbody>
</table>

### RISKS FOR TRAUMA TO HOOVES

1. Let cows walk at their own pace with heads down to see where they are going- quads, jeep, dogs and impatient milkers are issues. Stay 5 metres behind last cow.

2. Road surface – Adequate width for herd size, high level of blinding, drainage, sharp stones removed especially at concrete interface.


4. Keep water off roadways – camper, draining & maintenance

5. Avoiding slopes and side hills

6. Avoiding sharp turns, too much pressure on hooves - Rubber mats useful in reducing hoof trauma especially in milk parlours and yards especially where cows are turning sharply exiting the parlour.

7. Good yard design and maintenance- avoid excessive use of backing gate

8. Adequate space in yards – Collecting yard 1.5 square metre/cow. Walking order different to the milking order- cows need room to realign and avoid jostling prior to entering the parlour.

9. Adequate resting time minimise long milking times and standing time.

### 3. AMR ANTIBIOTIC RESISTANCE

Antibiotic resistance is going to affect us all in our daily lives both personally and also from a farming point of view. If we have antibiotic resistant bacteria on our farm it is going to make treating animals for illness difficult or impossible in some cases. Also these antibiotic resistant bacteria may transfer to you and your family resulting in infections being more difficult to treat.

In dairy herds the major antibiotic uses are lactating and dry cow intramammary tubes and calf treatments for scour and pneumonia.

**What can we do?**

- Reduce the overall level of antibiotic usage.
- Maximise immunity through the use of vaccines to reduce sick animals.
- Parasite control at pasture and in the housed period to reduce poor immunity and sickness in animals.
- Provide an adequate environment to reduce disease challenge and maximise immunity- dairy cow & heifer housing and calf housing.
- Ensure you have the correct milking routine required to control infection. At this time of year post spray all cows and dip the clusters after the persistent and recently infected cows.
- Milking routine to prevent the spread of infection- varies with the level of infection.

**Plan for when we need to use antibiotics**

- **RIGHT DRUG**
- **RIGHT ANIMAL**
- **RIGHT AMOUNT**
- **RIGHT ROUTE**
- **RIGHT PERIOD OF TIME**

**AVOID TREATING COWS THAT ARE NOT WORTHLY OF ANTIBIOTIC TREATMENT AND UNLIKELY TO GET A CURE**
MILK RECORDING AND ACTING ON THE RESULTS IS KEY

Milk recording divides your cows into four separate groups based on their current and previous SCC. The graph shows the proportion of cows in each category and the number of cows in each category is written in the centre.

Persistently Infected
2 consecutive tests greater than 200,000 SCC

Recently Infected
greater than 200,000 in current test
less than 200,000 SCC in previous tests

Recently Cured
greater than 200,000 in previous test and
less than 200,000 SCC in current tests

Healthy Cows
Cows consistently less than 200,000 SCC

Persistently infected Cows - Ladies in Red.
Decisions to be taken on these cows

1. Are they worthy of treatment? Are we creating AMR issues and wasting money on treatment?
These cows have two consecutive tests over 200,000 SCC in the current lactation or if this is your first milk recording report they did not cure over the dry period. The milk records need to be analysed to ascertain whether these cows are chronically infected over an extended period or just the last two tests over a brief period. If these cows were infected in the last lactation, did not cure over the dry period and are high again this lactation, then these cows are probably not worthy of antibiotic treatment.

However if these cows were not infected last year and not infected over the dry period and have had two tests recently over 200,000 SCC then these cows are worthy of treatment.

- We need to CMT these cows to ascertain the number of quarters infected. If we have a young cow with only one quarter infected and a normal udder- no swelling or hardness, this single quarter can be dried off now. If there is more than one quarter infected and the udder is not normal- culling is the best approach when you consider her effect on the entire herd for the next six months.

The objective with this group is to stop the spread of infection from this persistently infected group to the healthy cows. Implement controls at milking either pre and post spraying or cluster flushing or cluster dipping. The critical thing here is the effect they have on the rest of the herd.

2. What cows are worthy of treatment now? Is a cure possible?
Recently Infected Cows
These cows have been infected since the last recording. They exceeded 200,000 at the current test and were less than that at the previous test, or if this is your first milk recording report they have been infected over the dry period or after calving.

These cows and especially the first calved heifers will respond to treatment and prompt treatment will result in a better outcome.

However, with this group we need to stop the spread of infection to the healthy cows.

These cows are ideal candidates to do a culture and sensitivity on to establish the bacteria involved and its sensitivity to antibiotics- this will also help you with the selection of your dry cow therapy.

Implement the plan
1. Milk record your cows – If you are not already milk recording it is not too late to start. Contact 022 43228.

2. Act on the results of milk recording- be cognisant of cows worthy of treatment that may respond to antibiotic treatment

3. Do a culture and sensitivity on untreated high SCC cows from their infected quarter.

4. Join the herd health programme and get two bulk tank tests done. Contact Aishling at 022 43228.
Field Evenings
The Cork Holstein Friesian Club held two field evenings in June, on the Roovesmore Herd of Donal Murphy and the Glenrea Herd of Martin and Michael Kennedy. Both evenings were well attended. Top quality herds and a superb line up of cows on show at each event just highlighted the excellent level of management on each farm. At each field evening, an open stock judging competition took place and also presentations were made to herd owners of Gold and Diamond awarded cows. The club would like to thank master judges, Michael O’Sullivan and Ivor Bryan for their expertise at each evening. The club would also like to thank and congratulate both the Murphy and Kennedy families on organising two enjoyable events.

Herds Competition and BBQ
Judging of the Dairygold Post Calver Gold herds competition took place during the month of June. Results will be announced at the clubs annual BBQ on Thursday 15th of August at the Vienna Woods hotel. All welcome, with tickets available from any club officer.

For more information on upcoming events and, reports and pictures of recent events, check out the club’s Facebook page, Cork Holstein.
GUT WORM AND ANTHELMINTIC RESISTANCE?

Anthelmintic resistance is when parasitic worms survive a dose of wormer (anthelmintic) that is normally expected to kill them.

This resistance can be passed down to future generations of worms making specific anthelmintics ineffective on a farm. Repeated use of wormers encourages the development of drug-resistant worms but steps can be taken to reduce the speed at which this occurs.

Grazing animals are naturally exposed to gut worms and usually develop an immunity to them by their second grazing season. Problems due to gut worms arise for animals with a decreased immunity, such as calves or sick animals, or if the pasture contamination is too high. Animals may then show clinical signs such as ill-thrift, scour, and reduced weight gain. Problems are usually seen towards the end of the grazing season because larvae build-up on the pasture over time. Anthelmintics are an essential tool in preventing these production losses.

There are three classes of anthelmintics available for treating gut worms: white drenches (benzimidazoles), yellow drenches (levamisoles), and clear drenches (macrocyclic lactones). If worms become resistant to one anthelmintic, they are then usually resistant to all anthelmintics within that class. A study by Teagasc and UCD has shown that there is evidence of resistance to all three classes of wormers in Irish cattle.

What can be done to avoid anthelmintic resistance?

- Implement a parasite control plan with the help of your veterinary practitioner.
- Investigate which anthelmintic classes are effective on-farm with a drench test.
- Consider that a group might not need dosing.
  - Are animals showing clinical signs or reduced performance?
  - Is the faecal egg count high?
  - Are there alternatives, such as pasture management that can reduce pasture contamination?
- Is the correct dosing practice being followed? Underdosing is a major factor leading to the development of resistance.
  - Are the animals being dosed for the heaviest animal in the group?
  - Is the dosing equipment delivering the correct dose?
- Anthelmintic classes should be changed regularly, and combination products only used if there is a need for both drugs.
- Bought in cattle should be dosed and isolated before joining the main group. They should then be placed on larvae-contaminated pasture that was recently grazed by cattle so that if resistant worms are present in the new stock, these will be diluted by susceptible worms.
- Dosing of animals and immediately moving them onto clean pasture is discouraged, as the resistant worms that survive the treatment will be the main worms that contaminate the pasture. Rather treat only a portion of the group, such as the poor performers, or treat a set time before moving animals onto new pasture. This way susceptible worms continue to be part of the worm population on the farm, diluting out the resistant worms. Your veterinary practitioner can provide guidance on this.
Maximizing the value of your reseeding

On the farm of
Sean Reidy, Meadestown, Kildorrery,
Co. Cork P67 PN26

TOPICS COVERED:
- Creating the correct condition for seed germination
- Weed control in new leys
- Gold Assure grass seed range

Held on Tuesday 23rd of July 2019 from 11am to 1pm

For more information contact your local ASM or Inside Sales on 022 31644

www.dairygoldagri.ie
NEW AREA SALES MANAGERS TO FURTHER STRENGTHEN DAIRYGOLD SERVICE OFFERING

By SEAMUS O’MAHONY, M.Ag.Sc., Head of Commercial, AgriBusiness

Over recent years we have seen significant change in our customers businesses. Our Milk Suppliers have expanded their milk production by 60% in volume terms since 2009 and the sustainability agenda has grown significantly in importance at every level of our industry. This growth and change has meant that customers will require different types and levels of support into the future and your society is conscious of the need to evolve our services accordingly.

Following an extensive review of the existing Area Sales Manager (ASM) structure, we are introducing some changes across our catchment areas over the coming months. This evolved sales structure will see Area Sales Managers more concentrated geographically in order to offer an enhanced service providing you with timely advice on animal nutrition, grassland management and assisting you with your farming decisions.

In recent weeks we have welcomed a number of new team members. John Friel B.Agr.Sc. has joined as Area Sales Manager in our Mid-Cork Region. John is a native of Donegal who now lives in Cork and has significant experience in the agri sector which will be ideally suited to serving our customer base.

Also, as some of you may be aware, Tom Mee is due to retire in July after a long and dedicated career. Tom will be succeeded by Karl Skehan B.Agr.Sc. who will assume responsibility for the majority of Tom’s customers. Karl, who is living in Limerick, has extensive experience in the agri-sector having held a variety of farmer facing roles during his career to date.

We wish Tom well in his retirement and welcome John and Karl to the business and hope that you will continue to support our business as we prepare for the decade ahead. In addition, as further changes take place to our ASM areas over the coming months, customers who are affected by these changes will receive a direct communication which will outline details of their new ASM. We look forward to your continued support and valued business as we strive to improve our service to you and your business.

If you have any queries, please do not hesitate to contact your existing Area Sales Manager or our Inside Sales Team on 022-31644.