

# Milk Matters

SUPPORTING SUSTAINABLE FARMING



## INSIDE THIS ISSUE

- |                   |                      |
|-------------------|----------------------|
| PAGE<br><b>03</b> | Lameness             |
| PAGE<br><b>11</b> | March Nutrition      |
| PAGE<br><b>19</b> | Grass Matters        |
| PAGE<br><b>23</b> | Fertility & Breeding |



Welcome to the March edition of

# MILK MATTERS

DAIRYGOLD'S DAIRY ADVISORY BULLETIN



Dear Milk Matters Reader,

This month's **Nutrition Matters** examines how correct nutrition can positively influence fertility performance. The article also highlights how butterfat and protein percentages can be used as a management tool, helping you to access the nutritional status of your herd.



**Grass Matters** explores how management decision made now influence the amount of grass your farm will grow this spring. You need to ensure that you have enough of the farm grazed in early march to allow sufficient time for grass to recover. You need to ensure you have enough early fertiliser out to ramp up growth this spring. You need to ensure your fertiliser programme matches your soils P&K requirements. Within **Grass Matters**, John Maher, Teagasc, also looks at how management of spring grazing will differ on heavier type soils.

In **Fertility and Breeding Matters**, Doreen Corridan explains that Herd Health Bulk Tank Milk Sampling is the easy way of monitoring the health status of your herd. This month's edition also explores how to use milk recording in the battle with SCC.

Yours Sincerely,

*Liam Stack*

Liam Stack M.Agr.Sc

RUMINANT TECHNICAL MANAGER,  
DAIRYGOLD AGRIBUSINESS

## CONTENTS

- Lameness ..... 03
- March Nutrition ..... 11
- Moving from Whole Milk  
Milk Replacer ..... 14
- Maize Gold Boost ..... 17
- Chemical Control of Ragwort  
in Grassland ..... 18
- Grass Matters ..... 19
- Dairy Farming on Difficult /  
Heavy Land ..... 21
- Fertility & Breeding ..... 23
- AHI Notes ..... 29
- CHFC Matters ..... 30
- First Cut Silage ..... 31

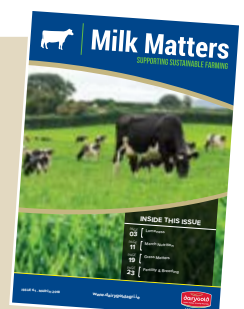


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# MILK MATTERS

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# LAMENESS

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



Lameness is becoming a bigger issue on farm with herds getting bigger and cows walking longer distances.



**KEY POINT:** Prompt recognition and treatment of lameness is critical to lowering lameness risk on your farm.

## Are My Cows Lame?



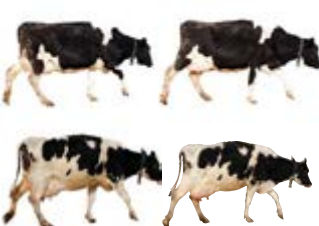

A herd locomotion or mobility score will allow you to access herd lameness.

The key things to look for when lameness scoring are:

- Walking speed – the cow should be able to keep up with herdmates and walk at the same pace as a person.
- Position of the head – this should be slightly below the back line with little movement.
- Stride – the back feet should walk in the same track as the front feet and the stride should be smooth.
- Back – should be flat and not arched.

Estimate Cost of a single case of Lameness	
	€/Case
Treatment Cost	55
Loss of Production(c.500ltrs @0.15c/ltr margin)	75
Culling (10% of lameness = culling)	100
Reduced Fertility	50
	<b>280-300</b>

## DairyCo Mobility Score

Category of score	Score	Description of cow behaviour	Suggested action
<b>Good mobility</b> 	0	Walks with even weight bearing and rhythm on all four feet, with a flat back.  Long, fluid strides possible.	<ul style="list-style-type: none"> <li>• No action needed.</li> <li>• Routine (preventative) foot trimming when/if required.</li> <li>• Record mobility at next scoring session.</li> </ul>
<b>Imperfect mobility</b> 	1	Steps uneven (rhythm or weight bearing) or strides shortened; affected limbs or limbs not immediately identifiable.	<ul style="list-style-type: none"> <li>• Could benefit from routine (preventative) foot trimming when/if required.</li> <li>• Further observation</li> </ul>
<b>Impaired mobility</b> 	2	Uneven weight bearing on a limb that is immediately identifiable and/or obviously shortened strides (usually with an arch to the centre of the back).	<ul style="list-style-type: none"> <li>• Lame and likely to benefit from treatment.</li> <li>• Foot should be lifted to the cause of lameness before treatment.</li> <li>• Should be attended to as soon as practically possible.</li> </ul>
<b>Severely impaired mobility</b> 	3	Unable to walk as fast as a brisk human pace (cannot keep up with the healthy herd) and signs of score 2.	<ul style="list-style-type: none"> <li>• Very lame.</li> <li>• Cow will benefit from</li> <li>• Cow requires urgent attention, nursing and further professional advice.</li> <li>• Cow should not be made to far and kept on a straw yard or at grass.</li> <li>• In the most severe cases, culling may be the only possible</li> </ul>

Ref: <http://dairy.ahdb.org.uk/>



**Causes of lameness:**

There are several causes of lameness but all produce the same result: **Decreased feed intake and milk production.**

**1. Infectious Lameness**

Mortellaro is extremely contagious and can cause severe lameness. It affects the skin above and around the hoof



**Mortellaro**

Lesions may look very different - from a strawberry appearance seen here to hairy warts in the same location

**Treatments:**

- Foot bathing (chemicals/antibiotics)
- Topical treatments - Pastes/Sprays/Antibiotic, consider a bandage
- Hoof trimming & cleaning the infected area

**Prevention:**

- Routine Foot bathing
- Biosecurity - Keep the bug out of the herd/farm
- Foot bath all incoming stock to prevent new strains of the bacteria entering

Some herds have Mortellaro and other herds don't, so maintaining a good biosecurity plan can help to prevent it from entering your herd. Only buy cows and bulls from herds that are free of Mortellaro.

When speaking at the World Buiatrics Congress in July 2017, Nigel Cook noted that for Mortellaro prevention, we need focus on the early identification of acute lesions (before the cattle are lame) and prompt effective treatment, starting around breeding age in replacement heifer pens and continuing throughout

the life of the animal, coupled with an effective footbath program to control chronic lesions and hold them in check.

**Bandage after treatment– Yes or No?**

Bandages can leave the skin soft and compromised if left on for longer than 3 days. However, without a bandage there is not sustained contact time for any topical product to work. At the international cattle lameness conference in Munich, Germany research showed that bandaging leads to a 71% - 86% treatment rate within one month but not using a bandage only lead to a 30% - 40% treatment rate.

**Treatment and control is a must:**

A study from the US showed that the majority of Mortellaro infections are treated with an antibiotic had recurred when assessed after 120 days. Treatment in isolation from a control strategy is not sufficient for control.

**Foul in the Foot**

Foul in the foot is caused by bacteria entering the foot through cracks in the skin caused by wet and dirty conditions. Symptoms of foul are swelling around the hoof, splayed claws and a foul smell.



**Foul in the foot**

Note the foot and fetlock are swollen with infection. This is very painful and the animal will likely be carrying this leg.

**Treatments:**

- Injectable Antibiotic

**Prevention:**

- Prevent Mortellaro (which allows other bacteria to enter)
- Routine Foot bathing - to harden the feet
- Foot hygiene - scraping in sheds

**Foot-bathing Standard Operating Procedure:**

- Allow the use of 1 litre of footbathing solution per cow before changing
- 200 litre footbath is sufficient to footbath a 65 cow herd 3 times
- 200 litre footbath is sufficient to footbath a 100 cow herd 2 times
- Calculate the volume of liquid in the footbath when 5 inches deep
- Add the correct amount of chemical/antibiotic and mix thoroughly
- Do not allow the footbath to drop below 4 inches
- Hose cows feet before entering the footbath
- Allow cattle to stand on clean concrete yard for 20 minutes after footbathing
- Refill solution when:
  - o the footbath becomes contaminated

- o the number of cows footbathed exceeds the number of litres in the footbath
- o or every 48 hours (whichever is the soonest)

- Footbath daily
- Do not allow cows to drink the solution

**Footbathing to treat mortellaro**

- 150gms lincospectin per 200 litres
- Or 10 erythrocine sachets per 200 litres
- Run all the affected groups through the footbath once per day for 3 days. Lameness through first
- Start control footbathing the day after the treatment finishes

**Footbathing to control mortellaro and foul in the foot**

- 5% formalin (10 litres per 200 litres water)
- Or 5% copper sulphate (10kg per 200 litres water)
- Or 10% zinc sulphate (20kg per 200 litres water)

None of these products are particularly pleasant to work with. There are human health (carcinogenic) and environmental risks associated. Care must be taken when using and disposing of the solution.

- Or Provita Hoofsure Endurance at a rate of 1-2%, (2-4 litres per 200 litres water)
- Footbath needs to be daily for 3 days once per month to be effective
- Footbath all animals on the farm
- Minimise the amount of slurry, mud and dirty water that cows walk through
- Build up and drain mucky road ways
- Fix water leaks
- When housed ensure that cows are not standing in or walking through slurry or dirty water in yards or passageways







Proviata provide a full range of infectious lameness control products thoughts is Hoofsure range.

**Hoofsure Endurance** is a footbath solution, scientifically proven proprietary blend of organic acids, essential oils and wetting agents. It is a safe, non-toxic, non-carcinogenic and biodegradable product, which can be easily disposed into a slurry pit or lagoon. This product should be used at a 1% dilution rate for maintenance and a 2%+ dilution rate in more difficult conditions.

**Hoofsure Endurance** can also be used as a 25% topical spray in conjunction with or as an alternative to footbathing. This involves 4 simple steps :

1. Clean feet if necessary
2. Do not overfill the sprayer, leave at least 2 litres space at the top. If overfilled and/or over pumped the sprayer will be damaged.
3. Spray feet with Provita Hoofsure Endurance (1 part product to 3 parts water).
4. Apply three consecutive days in a row.

**Hoofsure Konquest** is a scientifically proven proprietary concentrated gel, for topical application. It can be used with a hoof bandage. Use this on more difficult cases of mortellaro.

**Hoofsure Combat** is a unique film-forming hoof spray containing a proprietary blend of organic acids and essential oils, providing persistent longer lasting activity.

## 2. Environmental Lameness

On farms without a Mortellaro or foul in the foot problem, most lameness is caused by cows picking up claw injuries.

### Solar Ulcer/Bruising

Caused by too much weight bearing on a claw/foot due to too much time standing on hard surfaces or overgrown claws. Usually affects outer claws on hind feet



**Sole Ulcer**



**Sole Bruising**

### Treatments:

- Hoof trimming.

### Prevention:

- Routine hoof trimming to prevent claw overgrowth
- Adequate number of comfortable cubicles to reduce standing time

- Allow cows to travel at their own pace

### Whiteline Disease (Penetration)

Caused by small stone penetrating through the sole of the foot at the weak join between the hoof wall and the sole (known as the 'white line'). Small loose stones on hard surfaces are perfect to cause this penetration. In time it becomes a foot abscess, but this may take months.



**Whiteline Disease**

The defect in the left of the photo. This started with a small stone penetration, but much more debris is now being driven in when the cow walks. May eventually close over, but will then burst out as a painful abscess months later.

### Treatments:

- Hoof trimming - to open out the abscess/remove the pus & stone etc. & take weight off affected claw. Block placed on good claw may help with this.

### Prevention:

- Good laneways/cow tracks to prevent the injury
- Routine footbathing will harden feet
- Routine foot trimming to spot any stones early before the abscess develops

## Laminitis

This is caused by an inflammation in the foot affecting the growth of the claw for a period of time. The inflammation is usually caused by dietary upsets called ruminal acidosis.



**Laminitis**

The rings on the claw show a recurrent laminitis problem in this cow. Laminitis usually affects the front feet as they carry 60% of the animals weight.

### Treatment:

- Correct the nutrition & allow the animal lots of time to lie down and take weight off affected feet.

### Prevention:

- Prevent subacute ruminal acidosis (SARA):
- Adequate number of comfortable cubicles to reduce standing time

## Nutrition and Environmental Lameness

### Energy Nutrition:

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.

Cows have three cylinders of fat lying under the hoof, which acts like gel cushioning in trainers – a shock absorber. When cows lose body condition they begin mobilising fat from all areas of the body, including these fat pads. Research has shown cows with thinner fat cushions are more likely to have sole lesions.

### Subacute Ruminal Acidosis (SARA):

SARA is a condition where a cow's rumen pH is too low. This gives rise to laminitis.

To prevent SARA:

- Increase concentrate feeding levels slowly after calving
- Don't over feed starch and sugars (wheat, barley, beet)
- Feed adequate levels of effective fibre (straw)
- Feed Yea-sacc. Dairygold postcalver gold range of feeds contain Yea-sacc

### Vitamins and Lameness:

Biotin is a B vitamin. Published research has shown that feeding c.20mg Biotin per day had positive effects on:

- White line separation,
- Digital and Inter-digital Dermatitis (mortellaro),
- Healing of Sole Ulcer
- Lameness in Seasonally Calved Dairy Cows

Dairygold's postcalver gold range of feeds contain Biotin

### Minerals

Minerals, particularly zinc, manganese and copper, also play a key role in preventing laminitis. They improve a cow's immune

system, promote tissue growth and improve energy utilisation.

Zinc is particularly important as it improves hoof condition and increases the rate of tissue repair. The composition of the hoof wall is predominantly keratin. Zinc is required for keratin formation. A zinc deficiency may lead to slow hoof growth, thin walls, weak connections and a weak horn.

Manganese helps minimise foot problems by maintaining leg conformation through proper bone and collagen formation. Copper plays an important role in strengthening both the horn and the connective tissue of the foot.

Dairygold's post calver gold range of feeds contain organic forms of these minerals which are better absorbed, stored and utilised by the animal, reducing the risk of lameness.

***Consult your Dairygold area sales manager to ensure your cows' diet is set up to minimise the risk of lameness.***

## Housing, Roadways and Lameness

Cow comfort is essential in minimising lameness, whether inside on cubicles or walking on roadways.

### Cubicles

Cows need to lie down for about 14 hours per day. Less time than this significantly increases the risk of lameness. Therefore, cubicles need to be attractive to the cows and as comfortable as possible to encourage maximum lying time. Cubicles must provide lying areas that are well-drained and bedded.



### Roadways

Roadways should typically be 1 to 2 meters wide and dug to a depth of 0.3 meters. A poor roadway will cause injury to cow hooves and slow down the herd, so proper construction and regular maintenance, especially in the first 300 to 500 meters from the milking parlour, is important.

The surface of the track should be able to be compacted into a hard, smooth, wear-resistant top and should prevent seepage of water through to the base.

Drains on either side of the roadway are good to prevent water seeping into the base from the surrounding ground. These drains should be graded

so the water has somewhere to flow.

### Walking cows:

Avoid rushing cows.

A cows must be able to see where she is walking. When cows are rushing, their heads rise and they cannot see where they are placing their feet so are more likely to walk on stones or sharp objects. Minimise the risk of this by having clean, level road and yard surfaces without sharp stones.

Depending on the cause (or causes) of the herd lameness problem, **the treatments and approaches to prevention will likely vary.**

### Key Roadway specifications:

Cross fall / slope	1:20 one sided slope, 1:15 two sided slope
Construction	Geotextile (optional) 200 – 300 mm hard core plus 50-75 mm fine material
Cow walking speed	2-3 km on good road surface
Road slope	Max of 3:1

# IF YOU THINK FORMALDEHYDE OR COPPER SULPHATE IS THE ANSWER

## THINK AGAIN!



### Hoofsure Endurance

- Organic acids and tea tree oil - non-toxic, non-carcinogenic and biodegradable
- 7% to 19% better results than Copper Sulphate and Formaldehyde respectively
- The safer, proven alternative

\*References available on request

## SPECIAL OFFER

Purchase 3 x 20 litre Hoofsure Endurance

**RECEIVE FREE** 5 litre acid resistant sprayer

See in store for Terms and Conditions

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The Dairygold logo features the brand name in a white, lowercase, sans-serif font on a red background.

QUALITY FEEDS

# DAIRY FEEDS RANGE

## Benefits of the Dairygold Feed Range:

### 1. Native grains

- Maximum inclusions in all our rations

### 2. High energy

- high levels of bypass starch coming from maize meal and a blend of high energy digestible fibre resulting in good rumen function
- maximum milk yield and protein %.

### 3. Only good quality protein used

- high levels of PDI
- good protein efficiency
- maximum yield and protein %.

### 4. YEA-SACC Inclusion

- to aid rumen function and efficiency
- lower levels of digestive upset
- higher milk volume
- better fertility performance

### 5. Agolin

- limit energy lost as methane
- help the cow utilise all her dietary protein
- resulting in increased milk yield
- less body condition score loss
- improved fertility performance

### 6. Bioplex Copper, Bioplex Zinc and Selplex & elevated levels of Vitamin E

- better fertility performance
- lower SCC and mastitis
- reduced lameness
- improved immune function

### 7. Biotin

- prevent lameness
- increase milk yield.

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# MARCH DAIRY NUTRITION

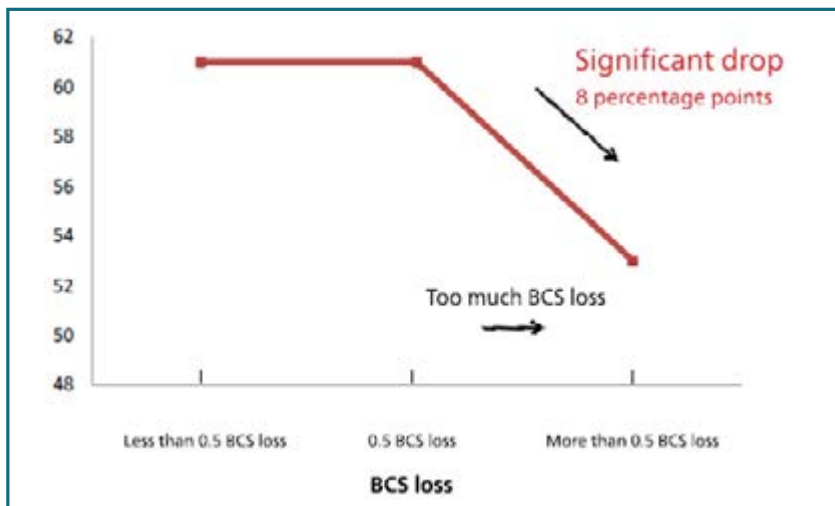
By LIAM STACK, M.Agr.Sc, Ruminant Technical Manager



**KEY POINT:** Our goal is to minimise BCS loss

Cows that lose less than 0.5 BCS in the 1st 5 weeks after calving ovulate 15 days earlier and reach 1st service 14 days earlier than cows that lose 1BCS \*Dairy.co.uk

**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.**



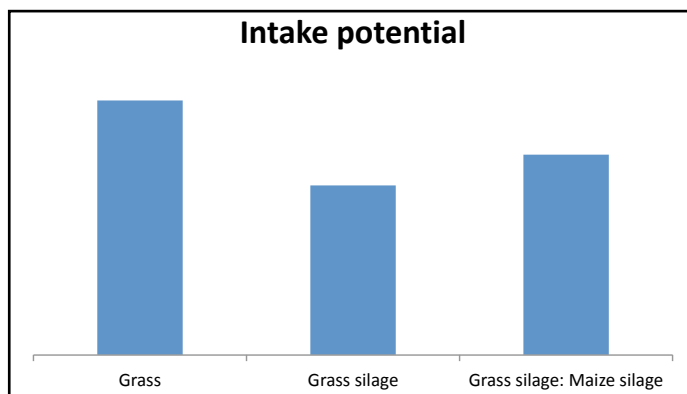
**KEY POINT:** Every 1% increase in 6 week calving rate is worth €8.20 per cow. Moving from 58% 6 week calving rate to 90% will increase profits in a 100 cow herd by €25,000 or will increase net margin by c. 5c/ltr.

By now hopefully everyone has some level of grass in their cow's diets. This is very important from an economic point of view, but I would contend that it's far more important from an energy intake point of view.

Grass is the most digestible forage available to your cows. This high level of digestibility means that cows will eat more grass than any other forage and that grass has a higher level of energy than any other forage.

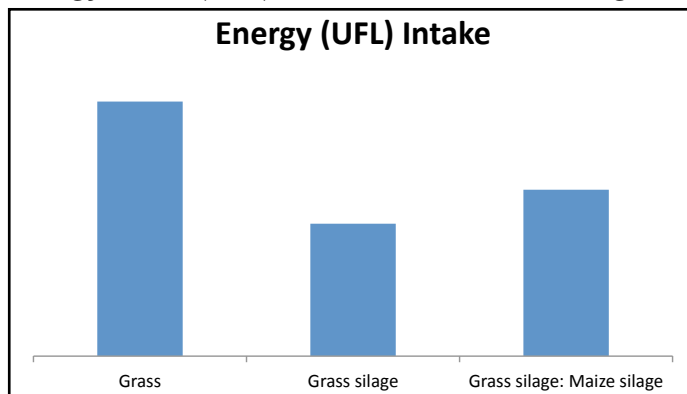
### Dry Matter Intakes Potential of different forages

The more of grass you can get into your cows diets the



better. It will provide more energy than grass silage, requiring less concentrate feeding while returning better production.

### Energy Intake (UFL) Potential of different forages







However, our approach to grass at this time of the year must be planned.

If we over allocate grass, we will run down our covers too quickly and we wont have sufficient grass on the farm come the 4th-10th April. We must adjust our concentrate feeding based on the quantity of grass our cows are eating.

Replacing even 2kg DM silage with 2 kg DM grass is worth doing from a performance standpoint. However, getting a small amount of grass into your cows daily doesn't mean you can go from feeding 6-8kg of concentrates to feeding 2-3kg of concentrates. **6kg DM grass daily equates to c. 1kg lower concentrate feeding levels for the same level of production.**

**Energy supplied by the forage portion of a cows diet**

	UFL Supplied	Concentrate Saving
Grass silage only	9.4	
2kg DM grass + 10 kg DM 68 DMD Grass silage	9.8	-0.5 kg
6kg DM grass + 6 kg DM 68 DMD Grass silage	10.7	-1.25 kg

**Concentrates required: Out by day, In by night**

	Milk Yield (kg)				
	18	22	26	30	34
6kg DM grass + 6 kg DM 64 DMD Grass silage	4	6	8	10	12
6kg DM grass + 6 kg DM 68 DMD Grass silage	3.5	5.5	7.5	9.5	11.5
6kg DM grass + 6 kg DM 72 DMD Grass silage	3	5	7	9	11

*\*It is possible to get higher grass intake into cows allowed c.4 hours grazing, put a specific on-off grazing plan has to be implemented. For information on this please see "grass matters section" within February 2018 milk matters.*

**Concentrates required: Grass + concentrates**

If however, you are getting larger volumes of grass into cows then there can be larger savings in the volume of concentrates needed

	Milk Yield				
	18	22	24	28	32
12 kg DM	2	4	5	6.5	8.5
14 kg DM	1.5*	1.5	2.5	4.5	6.5
16 kg DM	1.5*	1.5*	1.5*	2.5	4
17kg DM	1.5*	1.5*	1.5*	1	3

*\*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 1.5kg of concentrates at grass is the cheapest and most effective method of supplying these minerals.*

**Be-wary of over estimating the volumes of grass your cows are consuming**

**Ultimately if we get this energy intake wrong, cow will lose too much BCS in the 1st 8 weeks after calving and herd fertility performance will be disappointing.**

**Early Warning Sign of Underfeeding**

**1. Low Milk Proteins:**

In early lactation, herd protein below 3.05/3.1 are of concern.

**2. High butterfat to protein ratio.**

This is an indication of ketosis. In early lactation, herd butterfat:protein ratio of above 1.4:1 are of concern.

Eg. Butterfat % of 4.5, to a protein % of 3.15 is a ratio of 1.43:1. The high butterfat% is coming from the body fat the cow is losing.

**Consult your Dairygold area sales manager on what your milk constituent are telling you about your cows diet.**

**Reason for low milk protein/ketosis/underfeeding:**

- Diet is too low in energy; caused by:
  1. Feeding low energy (UFL) feeds i.e poor quality silage or poorly managed grass (with insufficient concentrates to balance)
  2. Low intake of high energy feeds i.e overestimating grass allowance.

**ACTION:**

- Use the latest and best grassland management techniques to maximise grass intakes and grass

quality.

- Increased concentrate feeding at grass if cows intakes are not being met eg during adverse weather.

### MYTH:

Feeding a higher protein feed at the same level will help. The protein content of your nut has very little implication on milk protein % and cow body condition score loss. If your milk proteins are low, feeding the same kgs of a higher protein feed will only worsen the situation. YOUR COWS NEED MORE KGS OF FEED.

### What protein nut should I get?

The protein content of your concentrate is of much lower significance than how much of the concentrate you are feeding.

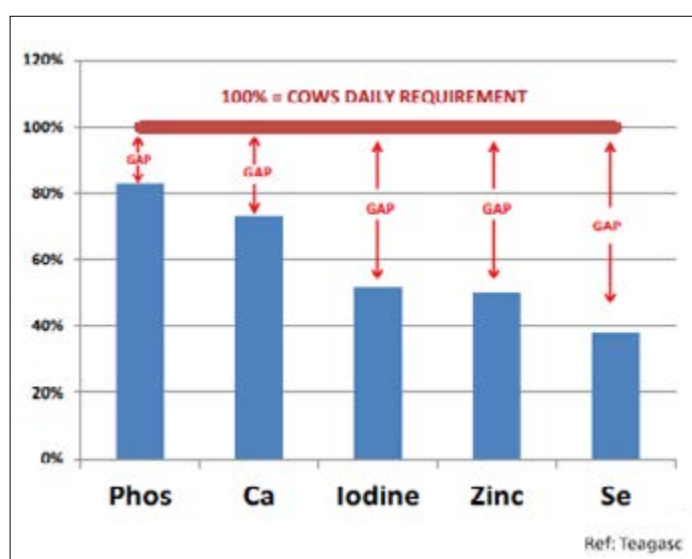
### But a general rule of thumb is:

- Inside on silage or silage + a few hours grazing – 18%
- Out by day (6-10 hours grazing)– 16%
- Out full time - 14%

### Mineral Nutrition:

On both silage and grass diets cows need mineral supplementation.

Grass alone as a mineral source for dairy cows



Dietary deficiencies of copper, selenium and iodine are linked to:

- poor fertility,
- cystic ovaries,

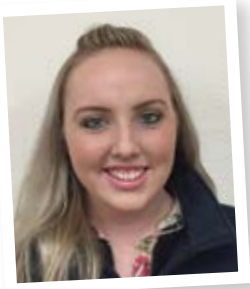
- anoestrous,
- irregular or suppressed oestrus
- and early embryonic death

### Be-wary of feeds with low mineral inclusions

Mineral and vitamin are expensive to include in compound feed. With the dramatic price increase in vitamins pre-Christmas, due to a plant fire in Germany and China trying to control smog levels, this has never been more evident. The increase in vitamins levels has the potential to increase feed costs by 5-7 € per tonne. However, you will only incur this extra cost if you include the minerals and vitamins in the first place.

Our nutritional team at Dairygold quality feeds know the importance of the mineral nutrition of your cows to yearly performance. We include our minerals and vitamins pro-rata with our feeding or cal mag rates. This means that our vitamin and mineral inclusion are in sync with our feeding levels i.e. if you feed one of our feeds at our prescribed level all your cows vitamin and mineral requirements are being fully met.





# MOVING FROM WHOLE MILK TO MILK REPLACER

By REBECCA O'SULLIVAN, B.Ag.Sc. Calf Milk Replacer Specialist

Calves can be moved from whole milk to milk replacer from 4 days of age with no nutritional issues.

However, depending on your feeding situation you can transition calves onto milk replacer at any age.

## Transitioning calves onto milk replacer from birth:

- Age: 1 Day:** Colostrum, 3 ltrs within 2 hours from the cows 1st milking
- Age: 2-4 Days:** Transition milk, 4ltrs/day
- Age: 5 Days:** 5 ltrs mixed calf milk replacer
- Age 6 Days:** 6 ltrs mixed calf milk replacer
- Age 6-44 Days:** 6 ltrs mixed calf milk replacer

If concentrate intake and live weight gain is sufficient start the weaning process at 44 days of age.

## Transitioning calves onto milk replacer at any time:

If calves are on 6 ltrs whole milk daily they can move straight to 6 ltrs milk replacer.

- Day 0:** 6 ltrs whole milk
- Day 1:** 6 ltrs mixed calf milk replacer

## You can also transition calves to milk replacer in combination with whole milk.

Day by day plan for transitioning calves onto twice a day day milk replacer

Day 0	AM	3 ltrs Whole Milk		<b>The milk replacer must be mixed with water before being fed with the whole milk, i.e. 187g MR + 1.313L water = 1.5L. Do not add the milk powder to whole milk</b>
	PM	3 ltrs Whole Milk		
Day 1	AM	1.5 ltrs Whole Milk	1.5 ltrs CMR	
	PM	1.5 ltrs Whole Milk	1.5 ltrs CMR	
Day 2	AM	1.5 ltrs Whole Milk	1.5 ltrs CMR	
	PM	1.5 ltrs Whole Milk	1.5 ltrs CMR	
Day 3	AM	1.5 ltrs Whole Milk	1.5 ltrs CMR	
	PM	1.5 ltrs Whole Milk	1.5 ltrs CMR	
Day 4	AM		3 ltrs CMR	
	PM		3 ltrs CMR	

That is 1.5 L of whole milk and 1.5L milk replacer, morning and evening for 3 days prior switching completely to milk replacer.

## Moving from Twice a Day to Once a Day (OAD) Feeding

Under EU law, calves must be fed twice-a-day, one of these feeds can be a concentrate feed as long as it is fed separate from the milk feeding. With OAD feeding, like twice a day feeding the driver of performance is the grams of milk replacer the calf consumed per day.

With OAD you can increase the milk replacer concentration into a smaller volume of water or you can feed the same volume of milk replacer as twice a day in one feed. i.e 3ltrs of water + 750 grms of powder is a 20% concentration rate giving 750grms of powder daily. This gives the same volume of powder as 6 ltrs either feed once or twice daily with 750grms of powder included.

With OAD, high volume feeding is only workable once the calf reaches 4 weeks of age as prior to that the calves abomasum is not large enough to deal with these higher volumes of milk.



- On the day before going to once a day – feed the calves their 3 litre morning feed but don't feed them in the evening.
- The calves should be fed in the following way for a smooth transition from twice a day feeding to once a day feeding.

### Transitioning calves to OAD milk replacer

				CMR Mixing
Day - 1 (day before changing)*	AM	3 ltrs Whole Milk/ CMR		2.625 ltrs water + 375grms CMR
	PM	3 ltrs Whole Milk/ CMR		2.625 ltrs water + 375grms CMR
Day 0	AM	3 ltrs Whole Milk/ CMR		2.625 ltrs water + 375grms CMR
Day 1			3.5 ltrs CMR	3 ltrs water + 500grms CMR
Day 2			3.6 ltrs CMR	3 ltrs water + 600grms CMR
Day 3			3.75 ltrs CMR	3 ltrs water + 750grms CMR

\* Day -1: You can change to OAD at any age. Day -1 equates to the last day calves are feed twice a day before you transition to OAD.

**Successful rearing of your calves requires proper colostrum management (see previous pages) and unrestricted access to:**

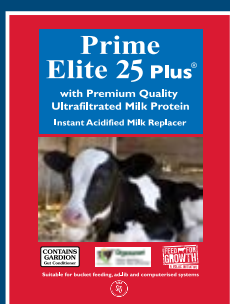
- Clean water (in addition to milk/milk replacer fed)
- Fresh, palatable starter concentrate (preferably coarse)
- Straw

**Allow access to fresh water, straw and Prime Elite Krispi Kaf from day 3**

**Both Dairygold's Prime Elite 23% and Prime Elite 25% plus milk replacers can be used in once and twice a day feeding systems.**

**NEW**  
from  
**Dairygold**

# Prime Elite 25 Plus®



<b>Protein</b> 25%	<b>Oil</b> 18%	<b>Ash</b> 7%	<b>Fibre</b> 0.1%	<b>Ca</b> 0.8%	<b>Na</b> 0.5%	<b>P</b> 0.7%
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✓ Improved "whole of life performance" - today's heifer calf is tomorrow's milking cow.

✓ Formulated with specially selected high quality fats and proteins designed to meet the nutritional needs of high performance calves

- ✓ Contains globular proteins to promote early thrive
- ✓ Contains Digesterom for better digestion and better feed efficiency
- ✓ Contains Garden gut conditioner 100% recommended rate
- ✓ Low ash content and correct mineral levels to avoid scours



## MEET OUR FARM EXPERT IN YOUR FIELD.

JP Aherne, our dedicated Dairygold local expert in the Munster region, is happy to visit you at your farm to talk about the cover you need – he can even put it in place straight away.



To find out more about Zurich's exclusive farm insurance deal and preferential pricing for Dairygold members, return your Zurich Insurance referral form to Dairygold or call JP on 086 411 3797.



Zurich Insurance plc is regulated by the Central Bank of Ireland. Terms, conditions and standard underwriting criteria apply.

# Virolac Concentrate



Control your SCC with Ireland's leading teat disinfectant

## Advantages of Virolac concentrate

- **Powerful antibacterial disinfectant LSA<sup>®\*</sup>**
- **Excellent teat condition**
- **4-1 mix**
- **Pre and Post**

**NOW AVAILABLE IN CONVENIENT 10KG DRUM TO MAKE UP 50 LITRES OF READY TO USE TEAT SPRAY.**



Call +353 87 1239515 for more information



\*LSA is a lactic salicylic acid complex. It is effective against all MASTITIS causing germs within 30 seconds. It is also effective against black spot and bovine herpes.

# MAIZE GOLD BOOST

By DIARMUID O'RIORDAN



## Maize Gold Boost

- Maize is a high output crop and requires significant soil nutrients to support yield.
- An up to date soil analysis is vital to ensure proper crop nutrition.

### Nutrient Requirements for Maize (units/ac)

- Chemical Nitrogen fertiliser is best applied before the last cultivation and incorporated in as top dressing Nitrogen fertiliser after emergence can cause scorch.
- Zinc is the most important trace element deficiency in maize and most likely to elicit a yield response when applied however Magnesium and Manganese deficiencies are very common also.

	N Allowance	P Allowance	K Requirement
Index 1	144	56	200
Index 2	112	40	180
Index 3	88	32	152
Index 4	60	16	96
Typical nutrient value 5000 gallons/ac Slurry	-30	-21	-127
<b>Field Requirement = Requirement - Slurry</b>			

## Dairygold Maize Gold Boost

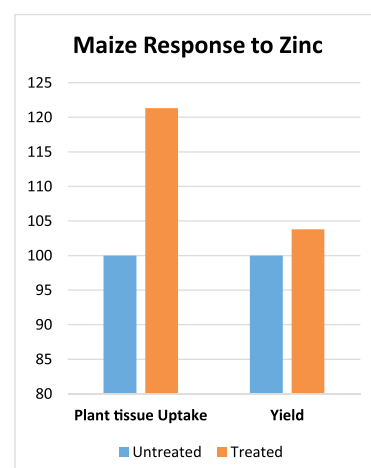
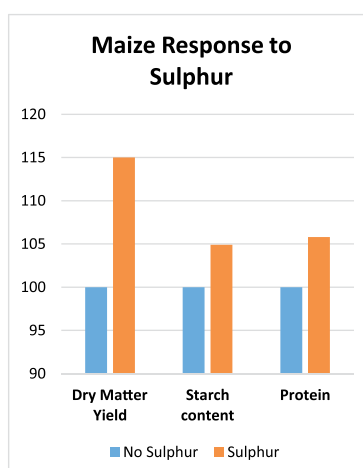
19 – 4 – 19 + 1.3% Sulphur + Wolftrax Zinc

Dairygold Maize boost is specifically formulated to meet maize nutrient requirements in the South West of Ireland. It should be applied at a rate of 8-9 bags/ac and incorporated into the soil prior to sowing.

	Bags to the acre	Nitrogen Index 1	Phosphorus Index 3	Potassium Index 3	Sulphur	Zinc
<b>Crop Requirements</b>		<b>144</b>	<b>32</b>	<b>152</b>	<b>11</b>	<b>Yes</b>
<b>16-4-20</b>	<b>9</b>	<b>144</b>	<b>36</b>	<b>180</b>	<b>0</b>	<b>X</b>
<b>Maize Gold Boost</b>	<b>8</b>	<b>152</b>	<b>32</b>	<b>152</b>	<b>10.4</b>	<b>✓</b>

### Features & Benefits:

- The Nitrogen in Maize Gold Boost is Urea based. As the product will be incorporated into the soil there are no issues or fears with regard ammonia losses.
- Nitrogen from Urea is held longer in the soil and provides a prolonged release thus feeding the crop later into the season.
- Sulphur – Maize Gold Boost supplies much needed Sulphur to the plant that can increase Dry Matter Yield by up to 15%. Sulphur applications can also increase starch levels and protein content



- Wolftrax Zinc – Zinc is the most common trace element deficiency found in Maize grown in the South West of Ireland. Early intervention with zinc coated fertiliser can prevent yield penalties from the outset.





# CHEMICAL CONTROL OF RAGWORT IN GRASSLAND

By SHANE COTTER, B.Agr.Sc

Ragwort (*Senecio Jacobea*) also known as ragweed, buachalán is poisonous in the green and preserved state and has been responsible for many animal fatalities. Ragwort is listed as one of many noxious weeds in the Noxious Weeds Act. It is also a biennial plant (lives for two years). Ragwort poisoning can also show symptoms such as tenesmus, hind limb weakness and severe animal pain according to the Department of Agriculture.

Normally animals don't eat ragwort in pastures unless grazed grass availability is extremely restricted. An animal must consume up to 12 % of the animal's body weight in the weed to cause severe problems. Ragwort becomes more palatable to animals when cut or sprayed, as this releases sugars in the plant. Most fatalities occur where there is a mixture of ragwort finely chopped in hay or silage where cattle are forced to eat this palatable ragwort.

## Spray Control

At smaller infestation levels, pulling of ragwort can be a successful control option. For larger infestation numbers, sprays such as MCPA, 2, 4-D (D50) and Forefront T provide good control but measures must be taken to avoid stock eating any dying or dead ragwort present.

The key points in chemical Ragwort control include:

- The best time to spray ragwort is at the rosette stage, roughly around half the size of a rugby ball
- The larger the ragwort the longer it takes for the carcass to rot down and not be cut in silage/grazed
- Avoid spraying once the plant becomes stemmy
- Ensure the plant is actively growing
- Spray in the Spring (February to Mid-March) or late Autumn (September to Mid-November)
- Ensure that the plant is fully decayed into the soil before grazing again (usually 5 to 6 weeks).



The best spray options are in the table below, note no spray control option is clover safe. Forefront T can only be used on grazing ground.

Spray	Rate L/ha (l/ac)	Water Rate L/ha (l/ac)	Note
Forefront T	2.0L/ha (0.8 l/ac)	300L/Ha (120 l/ac)	To be sprayed on grazing ground only
Lupo	4.0L/ha (1.6 l/ac)	200L/Ha (80 l/ac)	Add an adjuvant for best control



# GRASS MATTERS

By JOHN MAHER, Dairy Specialist, Teagasc Moorepark



## THE MOST IMPORTANT DAY IN MARCH ST. PATRICK'S DAY

Grazing has got off to a slow start in 2018. While the growth of grass is about normal, the turnout of cows to grass has been delayed. We have now entered catch-up mode on most farms. So we must get moving in terms of grazing the farm. The latter half of February has resulted in improved grazing conditions, but most farms will probably not reach the target of having 60 % grazed by St. Patrick's Day. However, most farms should be able to achieve 40-50% of the farm grazed by Mid-March. For most farms this means a slightly later start to the second round (2nd week of April) depending on grass growth of course.

Every dairy farmer will need to examine the farm for grass supply during March. It is important to keep an eye on the recovery of paddocks grazed in February during March to ensure that enough grass is available in early April. Therefore you must walk the farm.

The primary time will be St. Patrick's day and the primary area to look at is the paddocks grazed in February. This will tell you what grass recovery has taken place. There will need to be 4 -5 paddocks with a good level of grass recovery (500-600 kgDM/ha on March 17th) to ensure that the 2nd rotation can begin in early April. Taking average growth rates in March – then these paddocks will have a cover of 900 kgDM/ha by April



*This should be the level of grass on the first grazed paddocks on St Patrick's Day.*

1st. This will only happen though if these paddocks have received their 60-70 units N/ac by mid-march.

**“The proportion of the farm grazed in February and level of grass recovery on these paddocks will determine when the 2nd rotation will begin”**

If grass growth is poor in March, the start of the second round will need to be delayed.

**FOLLOW THE GRASS GROWTH RATES ON THE PASTUREBASE IRELAND WEBSITE:**  
[www.pasturebaseireland.ie](http://www.pasturebaseireland.ie)

The Spring Rotation Planner tracks the proportion of the farm grazed but tells us nothing about the supply of grass available. It also supplies no information about the levels of regrowth on the farm. Regrowth levels have to be tracked on the farm from mid-march.

For those who measure grass, the average farm cover should not drop below 500kg DM/ha at any time, otherwise grass growth will be compromised.

### Grazing in March

While things have not gone according to plan in February, we must keep grass in the diet of dairy cows as much as possible during March. There are many reasons for this but primarily it is to:

- Increase Milk Price (higher Fat & Protein composition)
- Lower the cost of milk production
- Grow more grass and increase grass quality in subsequent rotations



### Need to get Grazing:

This can only happen if cows are turned out fulltime and silage removed from the diet of the cow.

Once silage is in the cow's diet, her appetite for grass is compromised i.e. grass intake is reduced. So we need to get cows grazing by day and night in March to catch up and remove silage (if not eliminate) it from the diet as much as possible. Having silage in front of the cows will reduce their urge to graze. If silage does have to be fed, then it should be fed to the minimum level. Cows should have no silage left in front of them a few hours before being turned out to graze.

As long as ground conditions are adequate underfoot – grazing can take place day and night. When ground conditions are difficult, then practices have to be put in place to keep grass in the diet of the cow without causing serious damage to the land. These practices include:

- Grazing for a few hours after each milking
- Using different entry and exit points to the paddock
- Grazing low covers of grass in difficult grazing conditions
- Using grazing techniques that minimise damage to land

It is important though that once a paddock/section is grazed during difficult weather that a back fence is put



up to prevent cows going back onto this area.

### START of the 2nd Round:

April 5th is the target date to start the 2nd rotation for those who follow the Spring Rotation Planner.

However this is dependent on:

- reaching the 30 % grazed in February
- having 60-70 units of N/ac out in March on the earliest grazed paddocks
- Normal level of growth.

So this year we will need above average growth in March to start the 2nd round in the early days in April.

### Fertiliser/Slurry

It is important to keep grass growing on the farm. Grass will need to recover after grazing and be ready to graze again in the first half of April. So Nitrogen fertiliser needs to be spread. The target is have 60 -70 units of Nitrogen applied to every acre (grazed and ungrazed) before April 1st. This nitrogen target can be achieved through a combination of slurry (6 units N/1000 gals) and fertiliser.

The soil fertility problem has not gone away. While slurry has P and K in it, it may not be appropriate for applying to grazing ground in latter half of March. So many farmers should consider spreading nitrogen compounds e.g. 18-6-12 to help improve soil fertility. Phosphorus (P) in particular is very important for growth of grass in spring.



*60-70 units of N /acre needs to be applied before April 1st. Applying a product like 18:6:12 will help improve soil fertility. 10:10:20 (2 bags/acre) should be considered for Index 1 soils/paddocks.*





# DAIRY FARMING ON DIFFICULT / HEAVY LAND

By JOHN MAHER, Ger Courtney & James O'Loughlin  
**Heavy Soils Programme, Teagasc.**

Teagasc launched a heavy soils programme in 2011, and has a number of demonstration dairy farms located in Macroom, Kiskeam, Castleisland, Listowel, Athea, Rossmore and Doonbeg. These farms are highly profitable and grow lots of grass despite farming on heavy land.

This month we are going to focus on the key issue of spring grazing for those who farm on heavy land and that require a different approach to those who farm on dry land.



*Have a good network of farm roads and spur roads is required*

## Spring Grazing

Turning out cows early to grass on a heavy farm is always a challenge.

The supply of grass on the farm for spring grazing is rarely an issue. It is the ground conditions that limit these farms in terms of grazing. The current supply of grass on these farms (as measured in mid-February) is very high. The average grass cover for these farms currently is 1040 kg DM/ha. This is largely due to paddocks being closed early by default due to poor grazing conditions in October/November. So the grazing season finishes early. The level of grass growth on these farms in spring is about half of a drier/warmer farm so most of the grass available in March comes from grass carried over from the autumn.



The grazing season will normally only really get going in March with the driest paddocks with good grazing infrastructure, good access, paddocks nearest the farm roadways etc. If the grazing conditions are very good, the wettest and most difficult paddocks will be grazed.

The spring rotation plan is different for a heavy farm. The aim is to try and graze about 30% of farm by St. Patricks Day and 60% of the farm by April 1st. Depending on grass growth, the 2nd rotation will normally begin around Mid-April. The early grazed paddocks will need to be examined in late March/early April. It is important to keep an eye on the recovery of these paddocks grazed during March to ensure that enough grass is available in Mid-April to start the 2nd rotation. Therefore you must walk the farm.

Flexibility in grazing is essential during this March/April period. Sometimes, the cows will only go out for 2-3 hours. Sometimes the paddocks will not be grazed out well. However it is better to have grazed and to leave some grass behind than have not grazed at all. Some days the cows cannot go out to graze because ground conditions are just too soft. However decisions about grazing CANNOT be made in the farmyard. Paddocks have to be assessed. Weather has to be assessed.

***It is vital to establish a good grazing infrastructure and to have a flexible approach to grazing challenges during this time of the year.***

### **Slurry/Fertiliser Application in Early Spring**

Generally Nitrogen fertiliser application is later on heavy farms for the obvious reasons. However, early nitrogen application cannot be delayed because of very wet paddocks or wet areas in paddocks. If 30% of the farm can be spread with fertiliser, then this should happen and the rest left behind until it is suitable for spreading. Normally the first application of N fertiliser is about 30 units N/acre. However the target of 60 units N/ac applied by early April must be achieved on as many paddocks as possible.

Flexibility is also need with slurry application and the right paddocks picked. There are now more machines/contractors available with better equipment for slurry application. e.g. large low pressure tyres etc.

### **Summary:**

Ground conditions are often marginal on farms with heavy land. It is inevitable that some damage will be done. Therefore it is essential that when paddocks are grazed and somewhat damaged, that the animals do not go in there again until the next rotation. This cannot be achieved without having an adequate roadway system, easy to operate paddock system with multiple access/exit points and easy access to water for cows.

# FERTILITY & BREEDING

By DOREEN CORRIDAN, MVB MRCVS PhD, Munster Cattle Breeding



## CONTROLLING SCC IN 2018

Control of SCC for 2018 begins now with an early milk recording before mid-march prior to all the cows calving. Waiting for all the cows to calve will result in less information, a delay in treatment and culling decisions resulting in a poorer overall outcome.

Mastitis Incidence Problem - Cow Report												
MUNSTER A.I. & FARM SERVICES GROUP BALLYVORSHEN MALLOW CO. COBK TEL: 022/43220					Herd owner: PAT MURPHY Herd No: IE1234567 Scheme A4 Print date: 10/02/16 Test date: 05/02/16 Page: 1(2)							
Mastitis Incidence History (Current Lactation)									Prev. lact.			
COW ID	DAIRY TAG	LABC. LINE	LACT. WKS	TESTS > 200	LASTEST S.C.C.	PREVIOUS S.C.C. (10000 herd tests)	PREVIOUS S.C.C.	PREVIOUS S.C.C.	PREV. LACT. TESTS > 200			
COW NAME	AGE	WKS	TEST	LAST TEST	PREVIOUS MASTITIS							
						05-Feb	08-Dec	18-Nov	14-Oct	02-Sep	22-Jul	
1125 IE1234567-5-0956	13/1/16	9	1	2908								48
MSZ	10y Om	23		4.0								0
	Spring	1										0
897 IE1234567-5-0956	21/1/16	1	1	2339								
	2y Om	15		3.2								
	Spring	1										
956 IE1234567-5-0956	20/1/16	4	1	1140	1248	900	2944	1046	998			1204
	5y Om	21		2.4								7
	Spring											0

## Early milk recording is a key requirement for establishing the following

1. Identify cows to cull immediately in order to protect the herd for 2018.
2. Identify cows and heifers to treat early in lactation, achieve a good outcome and protect the herd.
3. New infections in the dry period in cows.
4. 1st calved heifers SCC.
5. Cure rate achieved in the dry period.

### 1. Identify cows to cull immediately in order to protect the herd.

Consider culling cows with high SCC in the current lactation who were also high in the previous lactation, despite having been treated in the dry period with antibiotic therapy.

These cows are unlikely to cure. However the main reason for culling them is that they are a major source of infection in the herd and can be responsible for the spread of infection to other cows.

These cows if in good condition after calving will make €3.60 + per Kilo.

### 2. Identify cows and heifers to treat early in lactation, achieve a good outcome and to protect the remainder of the herd.

Treatment of cows in early lactation that are likely to cure is time and money well spent. These cows will return to full milk and will not be a source of infection for the other cows in the herd.

Identify these cows as soon as possible and treat rapidly as early identification will ensure more effective treatment outcomes.







### 3. New infections in the dry period in cows.

An early milk recording is key in establishing the number of new infections in the dry period.

The aim is to have less than 10% of cows, which is less than 1 in 10 having an SCC greater than 200,000 in the first milk recording after calving that had a low SCC at dry off. Ideally we want none.

### 4. 1st calved heifers SCC.

An early milk recording is key to establishing the SCC of 1st calved heifers, early identification will ensure more effective treatment outcomes, to ensure a long herd life of low SCC and reduced culling.

### 5. Cure rate achieved in the dry period/Effectiveness of dry cow therapy.

An early milk recording is key to establishing the cure rate in SCC achieved in the dry period.

The aim is to have a cure of 85%, that is for every 7 cows dried off with a SCC over 200,000 we need 6 of them to be under 200,000 after calving, ideally all of them cured.

Avoid holding back light heifers for 3 weeks, breed them and work with them throughout the year to maximise their gain each month.

### Milking Cows

1. Ensure all vaccinations are completed
2. Ensure cows are adequately fed and that energy intake matches the milk output. See “march nutrition” on pages 11-13 for a comprehensive feeding plan.

Grass is capable of supporting yields of 20+ litres provided grass quality is excellent. Excellent grassland management and good weather allow large volumes of dry grass to be ingested.

***Cows need to be adequately supplemented in difficult grazing conditions and in inclement weather.***

***Be-wary not to overestimate grass intakes.***

## Fertility - Preparing for breeding end April

### Maiden Heifers

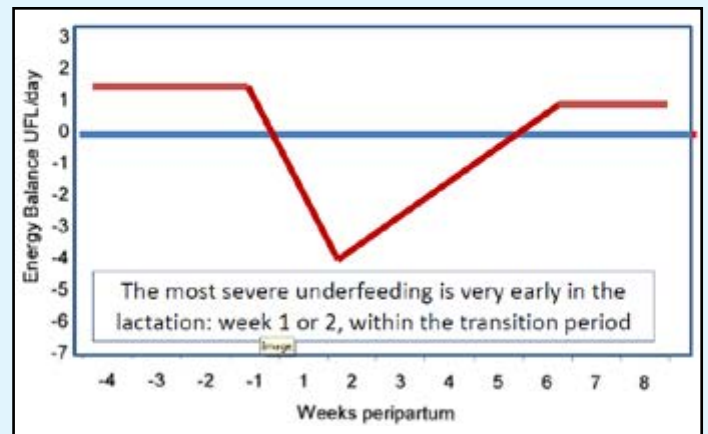
1. Vaccinations:
  - Complete all vaccinations prior to breeding season; one brand of BVD and Lepto.
2. Live Weight and Body Condition Score:
  - Live Weight and Body Condition Score are the two factors influencing heifers coming into heat and their subsequent conception rates.
  - Ensure heifers are 330+ Kgs and their BCS is 3.0-3.25 at mating.
  - Get light heifers out immediately as their weight gain will lift.

Concentrates needed at grass for Maiden Heifers

LWG needed	Current LW	Grass in diet	Concentrates
1kg	On Target	Plentiful	0kg
		Scarce	1kg
	Below Target	Plentiful	2kg
		Scarce	3-4kg

3. An option to increase BCS in cows of low BCS is to put them on once a day milking (OAD). This lowers the output and if you keep up the input it increases BCS. Only put cows on OAD that you wish to keep for 2019 and are low SCC. Feed them twice a day with the main herd and milk them once a day preferably in the evening if they are still in at night.

### Classical Early Lactation Negative Energy Balance!



The above image is courtesy of Finbar Mulligan UCD.

It clearly demonstrates the classical early lactation negative energy balance beginning 1-2 weeks pre calving and continuing for 5-8 weeks into early lactation.

Each herdowner has a different graph depending on the energy deficit:

- Is it marginal or severe?
- Is the energy deficiency for a long or short period?

### Late calvers and cows yet to calve



Prevent these cows going into negative energy balance in the week before calving and in the 1st eight weeks post calving. Avoid restricting intakes of cows regardless of BCS in the last 10 days pre calving as their requirements are rocketing. It is advisable to feed 1-2 Kg of concentrates in this period as it also helps to acclimatise the rumen to the diet post calving.

Late calvers need more attention to try and reduce their calving interval, if we succeed in getting them incalf quickly and gaining a month, they are a valuable asset and assist in increasing the 6 week incalf rate especially in herds with a spread out calving pattern.

1. Calve in a BCS 3.0 to 3.25 max
2. Increase their intakes in the last 10 days pre calving- introduce concentrates
3. They will have reduced intakes of grass for the 1st 6 weeks after calving. In supplementing late calvers assume that their intakes are 12kg grass DM and not 15Kg DM like the early calvers.



**KEY POINT:** A late calver on 24Kg milk should be fed 5Kg of concentrates while the early calver will be able to consume 15Kg of grass only needs 1.5KG of concentrates.

### Stock bull purchase



**Ensure enough bull power, this is crucial for compact calving, 1 young bull needed per 15-20 empty females.**

Our female numbers are increasing and our stock bull numbers have not increased accordingly.

1. Check his easy of calving index. In AI we are finding that for maiden heifers you need less than 2% difficult calving figure and for cows 4% or less. The reliability is lower in stock bulls and to be sure you need to try them out in cows in their first year for security. In achieving a 90% 6 week calving rate calving ease is crucial to get cows cycling but also to be able to cope with the calving.
2. Ensure he is well grown, has good legs and feet and a minimum scrotal circumference of 30cm
3. Buy him/them two months in advance of when needed, to allow for acclimatisation and disease testing/vaccination.
4. Bulls are very susceptible to stress and sudden nutritional changes.
5. Footbath him/them on arrival to avoid introduction of Mortellaro and pair him with another animal.
6. Vaccinate him/them with whatever the herd is being vaccinated for.
7. Get him/them fertility tested by your vet.
8. Ensure a young bull is able to serve prior to letting him loose with females. Confine him in a paddock



with a female on heat and observe.

- 9. Monitor him/them throughout the breeding season either with a chinball on him or scratch cards on heifers. Young bulls need to be fed during the breeding season.

### Get your vasectomised bull organised for the 2018 season now.

Also now is the time to retain one of your early born bull calves to vasectomise for the 2019 season.

Vasectomised bulls are invaluable for detecting maiden heifers in heat and also for the cows after 4-6 weeks into the breeding season when tail paint is getting inefficient and less effective.

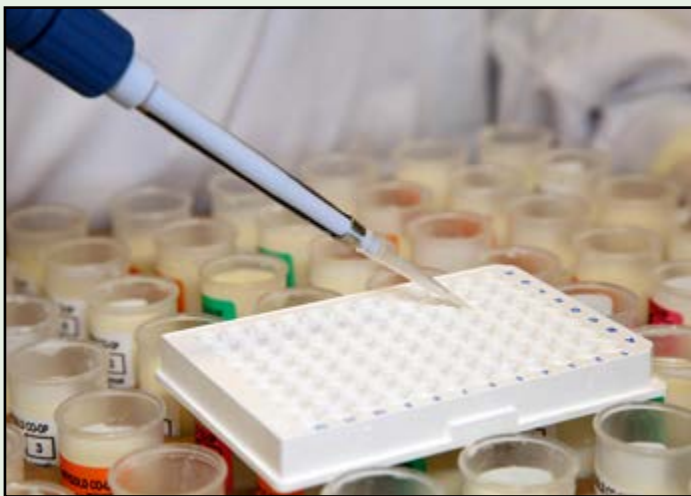
They are the key to getting the maidens incalf early in the season to easy calving sires and have them calving in February.

The 2<sup>nd</sup> 6 weeks of the breeding season needs more focus than we have being giving it.

I have seen vasectomised bulls being invaluable as the season progresses when the stock bull goes lame or needs a rest.

### Herd Health Bulk Tank Milk Sampling

*Simple, Sensible and Straight Forward way to know and monitor your herd status.*



**Bulk milk samples are collected at the Mallow laboratory and analysed there. If you want to join contact Munster herd health 022 43228.**

### IBR

***Herds that have a high bulk milk reading in IBR and are not vaccinating are losing 250 litres of milk per cow per lactation (Teagasc Moorepark).***

In herds that are not vaccinating the gB test is used and in herds that are vaccinating the gE test is used. This allow us to tell wild virus from vaccine, and how well the vaccine is controlling infection in a herd.

The bulk milk test is an extremely useful way in initially establishing the IBR status of the herd whether vaccinating or not.

Vaccination works in two ways, it reduces the shedding of the virus by the carrier animals and secondly it boosts the immunity of the naïve non-carriers to help them withstand the challenge of exposure.

In herds that need to vaccinate the ideal time to vaccinate is one month before calving. The reason for this is that calving is a very stressful time on cows and the carriers are more likely to shed virus around calving. Secondly the incalf heifers joining the herd for the first time are likely to be naïve as these have been reared in isolation from the cows also they are likely to be stressed post calving. If you have not yet vaccinated, get in before the breeding season.

One vaccination regime is to vaccinate with the live vaccine every 6 months- for spring calving herds that is January and July. This regime is working well in most herds.

In closed herds with a reduced challenge an annual vaccine of inactivated IBR provided a live vaccine has been administered within the previous 6 months.

### Leptospirosis

Leptospirosis is a zoonosis, it can be passed from cattle to humans. Infected cattle secrete leptospirosis in their urine therefore milkers in the pit can be easily infected by urine splashing onto their skin or eyes or they may inhale it. For this reason alone, every herdowner should be vaccinating for leptospirosis. Ideally vaccination should be done one month prior

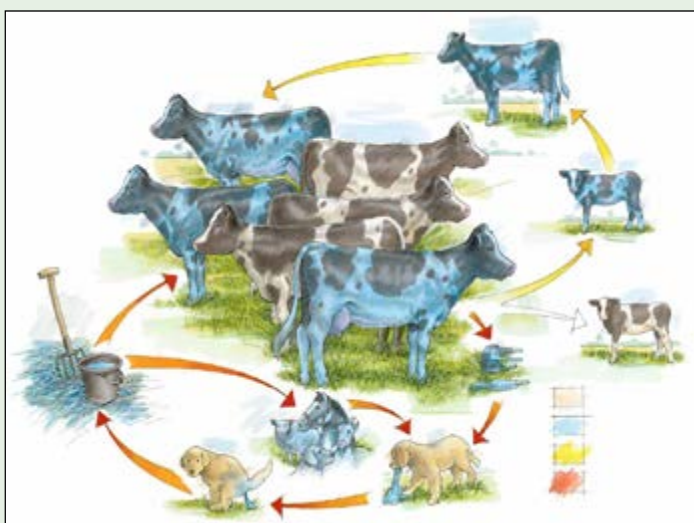


to the breeding season, in spring calving herds this vaccine can be moved to the Autumn when you have more time.

***Herds that have shown to have leptospirosis in the herd and are not vaccinating are losing €12 per cow per lactation (Teagasc Moorepark), mainly due to poor fertility.***

Herds that have a high reading for leptospirosis in the bulk milk tank and are not vaccinating would be well advised to vaccinate for leptospirosis.

## Neospora



Neospora is the number two cause of abortion investigated at the regional laboratories.

Neospora is transmitted two ways in a herd, a positive cow will have a positive calf over 80% + of the time and secondly cattle eating food that has been contaminated with infected dog or fox faeces. Dogs and foxes become infected by eating infectious afterbirths.

***Herds that have shown to have neospora in the herd are losing €12 per cow per lactation (Teagasc Moorepark).***

The bulk milk sampling is a very useful way to establish have you got neospora in the herd.

Herds with neospora in the herd need to be careful at calving to avoid dogs and foxes having access to afterbirths. Try and dispose of the afterbirths into an underground tank or barrel if possible. Also try and

avoid the contamination of food with dog or fox faeces. Herds with no new source of infection are having success in identifying the positive cows in late lactation and breeding these to beef bulls and breeding their replacements from the negative cows.

## Salmonella



Salmonella is a zoonoses, it can be passed from cattle to humans. For this reason alone, every herdowner should be vaccinating for salmonella.

***Herds that have shown to have salmonella in the herd and are not vaccinating are losing €96 per cow per lactation (Teagasc Moorepark).***

Salmonella is the number one cause of abortion investigated at the regional laboratories. A salmonella abortion storm in a herd is something you do not want to experience. Herds that have a high reading for salmonella in the bulk milk tank and are not vaccinating would be well advised to vaccinate for salmonella.

In spring calving herds, the ideal time to vaccinate for salmonella is late august/early September, initially cows and heifers need two doses three weeks apart and then an annual booster within the 12 months.



Evidence has shown that vaccinating young stock earlier has reduced the number of carriers. For this reason, as well as protecting heifers throughout their pregnancy it may be advisable to give the 2017 born heifers their primary and booster vaccine now prior to them going to grass and then come September they will only need a single booster.

### Liver Fluke



***Ongoing work in Moorepark is showing a loss of €150 per cow in herds with Liver Fluke and we are not addressing it.***

Over 80% of herds are affected by Liver fluke, the dry period is the only time to achieve a kill in the dairy cow. A high proportion of herdowners are not achieving a good kill for Liver Fluke kill across the winter. The reason for this is either not using a product that contains Triclabendazole (eg Fasinex 240, Endofluke, and Tribex) or underdosing or not dosing all the cows. Liver fluke causes damage to the liver resulting in reduced performance in production and fertility in dairy herds and reduced immunity.

The bulk milk test is excellent for liver fluke and gives a very good indication of the level on the farm in the autumn and gives a very good indication of the kill achieved by the March/April test.

Herdowners should know the level of Liver Fluke on the farm and know the level of kill that they are getting.

### Stomach Worms and Lungworms

Many factors are resulting in an increased parasite

burden of stomach and lung worm on farms. Stocking rates are increasing, we are grazing later in the season and earlier in the season resulting in a reduced period with no animals on pasture and finally we are grazing tighter.

Secondly with the increased use of the macrolytic lactones (ivermectin, moxidectin, eprinomectin) and their persistence, the development of immunity is reduced.

The bulk milk test is a very useful test for stomach worms and in a herd of dairy cows when the temperature of the soil surface rises to 10-12 OC activity increases.

In herds with an elevated level of stomach worms in the bulk milk it is worth dosing the first calvers only with a zero-withdrawal product.

In 2017 we saw an increased level of lungworm in some herds with cows coughing, if you were one of these herds it would be advisable to talk to your vet. The diagnosis of lungworm in adult cows is best done by getting your vet to listen to the cows with a stethoscope when they are infected or doing a lungwash, as there is no suitable bulk milk test and the dung will be negative for lungworm eggs even though it is lungworm that is causing the problem. There is a vaccine available for lungworm that is used extensively in the UK with success - Huskvac. Immunity develops rapidly for lungworm; however, you need to act in March.



# Animal Health Ireland NOTES



## You grow what you collect!

It is not possible to tell which bacteria are responsible for infections just by looking at milk, udders or somatic cell counts - you have to actually grow the bacteria to know for sure. A milk sample can be processed in a microbiology lab so that the bacteria that are present can be identified. However, all bacteria in the sample will be identified, whether they came from the cow's udder, your hands or dirt from a cow's tail!

If a sample contains three or more bacterial species, it is generally considered a contaminated sample. However, the sample has to go through the full lab process before it is known to be contaminated, and so you will still end up paying for a result that is essentially useless! You can avoid wasting time, effort and money, by making sure that any milk samples that you collect are done so in a sterile fashion, so the only bacteria present are the ones you want to identify, that came out of the cow's udder.

### Remember, hygiene is key!

- ✓ Label a sterile sample bottle-do this before sample collection as it can be difficult to write on a label that may have milk sprayed on it.
- ✓ Put on disposable gloves.
- ✓ Wash and dry the teats.
- ✓ Completely disinfect the end of the teats to be sampled, with a cotton ball and alcohol (or teat wipes). This step is critical.
- ✓ Remove the cap from the sterile bottle and place it upside down in a place not likely to be contaminated.
- ✓ Discard the first 2-3 squirts of milk. Collect the sample in the bottle, holding the bottle at an angle (to avoid anything falling into it) at least 3 - 4 cm from the end of the teat. 2 - 4 ml of milk is sufficient.
- ✓ Replace the cap and secure it tightly and keep in a cool dry place until it can be refrigerated, delivered or frozen.

For more information on collecting and culturing milk from cows with mastitis, see Management Notes A in the CellCheck Farm Guidelines for Mastitis Control.





# CHFC MATTERS

By ALAN BUTTIMER, CHFC Public Relations Officer

## Annual Pedigree Bull Show and Sale

The **Cork Holstein Friesian Club** are delighted to announce, that entries are now been taken for this year's annual pedigree bull show and sale. It will be held on Wednesday 4th April at Bandon Mart.

The show will start at 10.30am, with the sale immediately after at 12.00 noon.

Closing date for entries to Bandon Mart is Tuesday 13th March.

To ensure a high quality show and sale, strict entry standards are in place.

Entry criteria include;

- ◆ Dams yields of 550kg of combined fat and protein in any one complete lactation or Max of 305 days.
- ◆ Minimum protein of 3.5% in one complete lactation, or Max of 305 days.
- ◆ Dams must be classified Good Plus 82 or higher.
- ◆ Copy of pedigree cert to accompany entry.
- ◆ All animals must be exhibitor bred and Irish born.
- ◆ Haltered and leading bulls only.

The high qualifying standard ensures that this sale remains a premier place to purchase a pedigree Holstein Friesian breeding bull. A full list of bulls for sale will be available next month or on our Facebook page, Cork Holstein.



2017 champion bull 'Mountfarna Torondo' bred by John O'Callaghan receiving the championship from club president Carl Smith with Sean Kelly Cork Marts and judge Jane O'Mahony.



Pedigree Holstein Friesian bulls line up during the 2017 show and sale.



Judging of the 2017 pedigree bull show and sale. Judge, Jane O'Mahony.

# FIRST CUT SILAGE

## What Should I Use?

By RACHEL MCCARTHY, B.Ag.Sc. • Dairy ASM



### Nitrogen Requirements

100 units per acre

### Sulphur Requirement

16 units per acre

### P + K Requirements

Consult your soil sample

	P Allowance	K Requirement
Index 1	32	140
Index 2	24	120
Index 3	16	100
Index 4	0	100
3000 gallons/ac Slurry	-21	-90
Field Req = Req - Slurry		

## K Requirements

It's no secret, our recent soil samples have proven, that Silage ground tends to be among the poorest ground for soil K indexes on Irish farms. Generally, Irish farmers are not getting enough Potassium (K) out on silage ground. But it's not all about front loading K, timing is very important.

### Timing x rate –

The amount of Potassium and the timing of application can have a huge bearing on silage yield and quality.

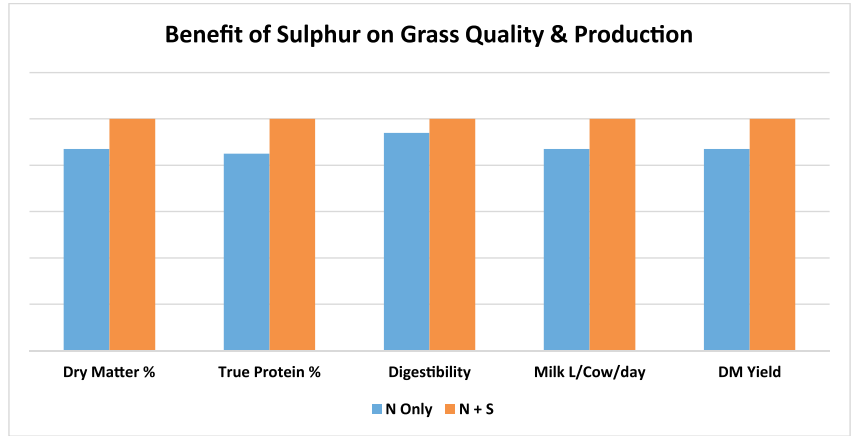
Much the same as the phenomenon which can cause grass tetany in grazing situations, heavy applications of Potassium early in the season on silage ground can lead to “luxury uptake” of Potassium in the crop and ultimately high levels of K in silage. This in turn can increase the risk of Milk Fever in the spring. Potassium levels in the silage should be <1.8%. A recent mineral analysis conducted by Dairygold has shown potassium ranging from 0.98% to 3.5%, with an average potassium of 1.94% in your silage.

Farmers who are applying 3000gallons/ac of slurry will usually have this pre-harvest requirement covered. Any additional K requirements should be applied later in the season. As higher levels of K applied may be taken off in the plant, it may not result in soil K levels increasing.



## Sulphur Requirements

In a recent survey, sulphur has been identified as being deficient in the majority of 1st cut silage crops. Historically, with 24:2½:10 or CAN, no sulphur has been applied to these crops. Sulphur can have a dramatic effect on the quality of your silage so if possible make sure to spread some sulphur on your silage ground. Silage crops can use up to 16 units/acre/cut.



## First Cut Fertiliser Options:

No Slurry							
Product	Rate	N	P	K	Sulphur	Selenium	Avail
Silage Boost	4 1/2 bags/ac	94.5	9	45	10	X	Yes
Selenicut	4 1/2 bags/ac	90	9	54	10	Yes	X
Sulpha 23-2-12 + S	4 bags/acre	92	8	48	24	X	X
24-2.5-10	4 bags/acre	96	10	40	-	-	-

With Slurry							
Product	Rate	N	Total N applied	P	K	Sulphur	Selenium
Slurry	3000 gals/ac	15		18	90		
+							
Selenigrass ± S*	3½ bags/ac	87.5	102.5	-	-	10.5	Yes
Sweetgrass 3% S	3½ bags/ac	81	96	-	-	10.5	-
Can + S	3 bags/ac	81	96	-	-	15	-
Sulpha 33 + 12% S	2½ bags/ac	85	100	-	-	30	-
Koch KAN 38% N + 7.5% S	2 bags/ac	76	91	-	-	15	-

\*Can be requested with 3% sulphur

## Koch KAN:

KAN is a nitrogen fertiliser based on urea, treated with AGROTAIN stabiliser. Teagasc Trials have proven that, Agrotain reduced volatilisation (N loss) to ensure that the Nitrogen is available to fuel crop growth all season long.

## Sulpha Nitrogen:

Sulpha Nitrogen is a urea ammonium nitrate. Its 2 forms of Nitrogen with the addition of sulphur lead to:

- Decreased N losses through volatilisation
- Reduced loss of N through leaching
- Better Nitrogen efficiency and uptake

**Consult your Dairygold area sales manager for a fertiliser programme to suit your farm.**

