Beef Business

SUPPORTING SUSTAINABLE FARMING

INSIDE THIS ISSUE

ISSUE 02 - JUNE 2018

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Golden Valleys, Growing Naturally
AGRI BUSINESS

WELCOME TO

Beef Business

DAIRYGOLD BULLETIN

Welcome to the Summer Edition of
DAIRYGOLD'S BEEF ADVISORY BULLETIN

Dear Beef Business reader, from a nutritional standpoint maintaining grass quality and quantity through the adoption of the best grassland management practices is the most important job you will do this summer. Grass will be the main driver of productivity and profitability in your herd.

In this edition of Beef Business we discuss how to plan you summer and autumn grazing. Should you spread fertiliser? Is there any benefit to spreading slurry at the back end of the year?

After a tough spring how are your silage reserves? What are the best fertiliser options available to you if you're considering a 2nd and 3rd cut this year? That depends on your soil P & K indexes. Check out pages 9 and 10 for your summer fertiliser options.

It is essential that you get soil pH right to unlock your grass growing potential. June and August are ideal times to spread lime. Pages 12 and 13 answer any question you may have about spreading lime.

Are you finishing cattle off grass this summer? Is it economical to give them concentrates? If so, how much concentrates should you be feeding them? See our feeding recommendations on pages 16 and 17.

Yours sincerely

Liam Stack

Liam Stack M.Agr.Sc

Ruminant Technical Manager
Dairygold Agribusiness

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Golden Valleys, Growing Naturally
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TABLE OF CONTENTS

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Grassland Management Guideline during the Main Grazing Season

May to August

by Diarmuid O'Riordan IASIS

The aim is to consistently offer your cattle a sward where there is green leaf to the base and very little stem. This will allow high daily live weight gains from a grass-only diet. To achieve this you need to walk grass weekly.

KEY POINT

Nationally beef farmers grown on average 5T grass DM/ha. The best commercial farmers are growing 10T grass DM/ha. Every extra Tonne of grass eaten on a beef farm is worth €105/ha.

When should I graze my paddocks?

- Ideal pre-grazing yield targets are 7 - 10 cm (1300 - 1600 kg DM/ha).
- Avoid grazing grass in excess of 11cm (1800 kg DM/ha).

If pre-grazing covers are exceeding this you should consider closing off the paddock and making round bales (depending on grass supply).

Pre-grazing yield guidelines

The Pre-grazing yield guidelines for a given pasture height taken with a plate meter are as follows:

Pre-grazing Yield (kgDM/ha)	Equivalent Pre-grazing Height (cm)
700-900	5-6
1000-1200	6-6.5
1300-1600	8-10
>2000	12+

KEY POINT

Grazing grass at the correct heights make it easier to graze paddocks out to the correct height.

How tight should I graze my paddocks?

Paddocks poorly grazed during the previous rotations = lower levels of weight gains.

Continually grazing to a very low post-grazing height will reduce grass growth.

High post-grazing residuals (400- 500 kg DM/ha) or high post grazing height (>6 cm), should be topped.

Post-Grazing Height and Grazing Residuals		
Post-grazing Residual	Equivalent Post Grazing Height*	Description
0-50 kg	3.5-4 cm	Tight Grazing
100-200 kg	4-4.5 cm	Ideal Grazing
200-400 kg	5-6 cm	Under Grazing
500 kg	6-7 cm	Topping required

*Post-grazing height measurements includes dung pad area.

Post-grazing heights measured with a plate meter

Rotation Length

Grass produces a new leaf every 7 days.

When the Fourth Leaf Appears

The first leaf will die/decay

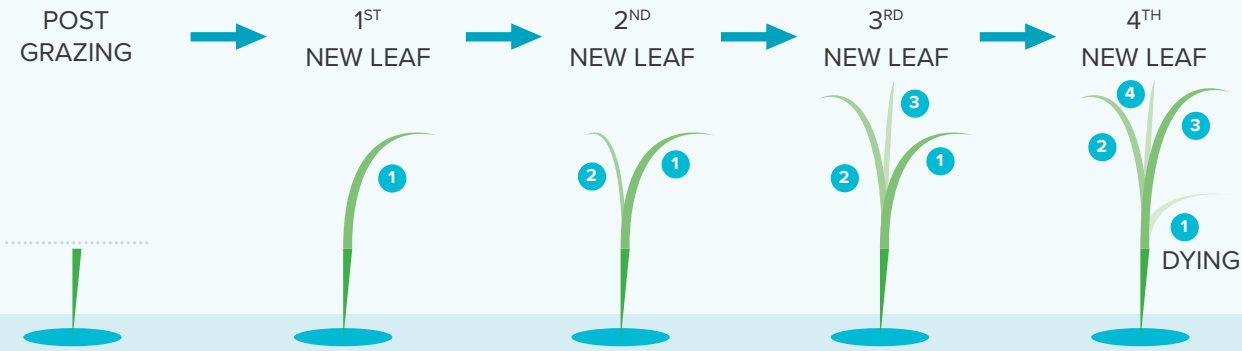
More stem will appear

More dead material will appear

The Result

Lower digestibility of grass eaten.

RyeGrass Regrowth Cycle

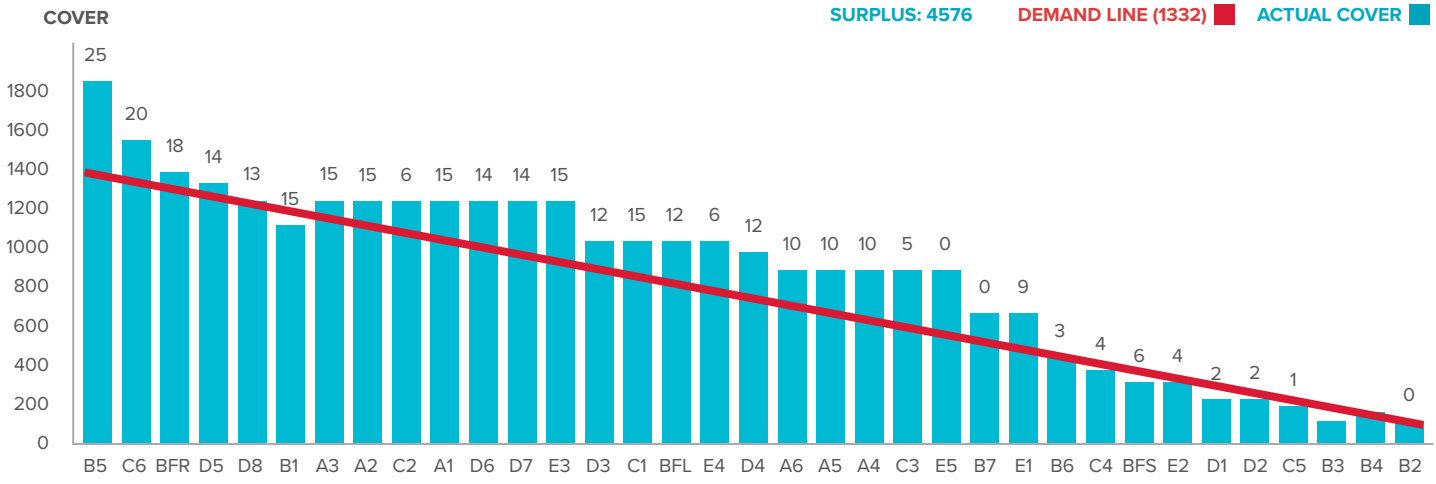


How many days of grass should I keep ahead of my cattle?

No more than a maximum of 14 and a minimum of 10 days ahead should be maintained during the main grazing season.

Days ahead versus a grass wedge

Days ahead give a `snapshot' of the amount of grass present on the farm on the day the farm walk is completed. It does account for growth. The grass wedge is preferable.



MAIN SEASON GRASSLAND TARGETS			
	Too low	Just right	Too high
Pre-grazing yield (kg DM/ha)	950 - 1,050	1,300 - 1,600	2,000 - 2,200
Pre-grazing height (cm)	6-7	8-10	12+
Rotation length (days)	14/16	18/21	26/30
Leaf content (%)	>70	>70	>60
Days ahead	10	14	22

Autumn Grassland Management

KEY POINT *

Every extra tonne of grass utilised is worth €90/ha.

You are trying to

Increase the number of days at grass and animal performance, set the farm up during the final rotation to grow grass over winter and provide grass the following spring.

There are two key Autumn periods

1. Period of autumn grass build-up.
2. Autumn rotation planner.

Building Autumn Grass

Build grass from mid-August Rotation length should be increased from 25 to 30 days in mid/late August to 35 to 40 days in late September. At lower grass growth in the later season, this can be done without effecting quality.

Continue to take out heavy covers as round bales in August, do not cut paddocks for bales in September.

Graze cover <2300kg DM/ha Higher pre-grazing yields will result in poor pasture.

Aim to have the highest farm cover in mid-September. Start closing paddocks in early October Last grazing rotation should be 30 to 40 days with first fields rested from 10th to 15th October. Closing should be a week to 10 days earlier on heavier type soils.

Graze paddocks to 4cm. Use younger or lighter animals or dry cows to achieve this residual in wetter conditions quality, utilisation and poorer winter and spring growth.

Autumn

KEY POINT *

2019 grazing starts in October 2018.

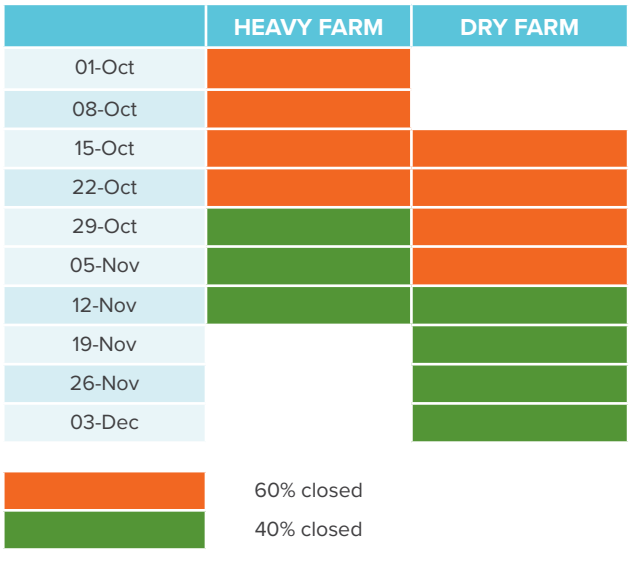
The goal of the autumn rotation planners is to keep grass in the diet of the cattle for as long as possible and to ensure you have high quality grass the following spring.

Dry farms

- start closing 10th October
- have 60% of the farm grazed by first week November
- have the final 40% grazed by 1st December.

Heavy or slow grass growing farms

- start closing 1 October
- have 60% of the farm grazed by 20th October
- have the final 40% grazed by mid-November.



Setting up Paddocks on your farm

by Michael English IASIS

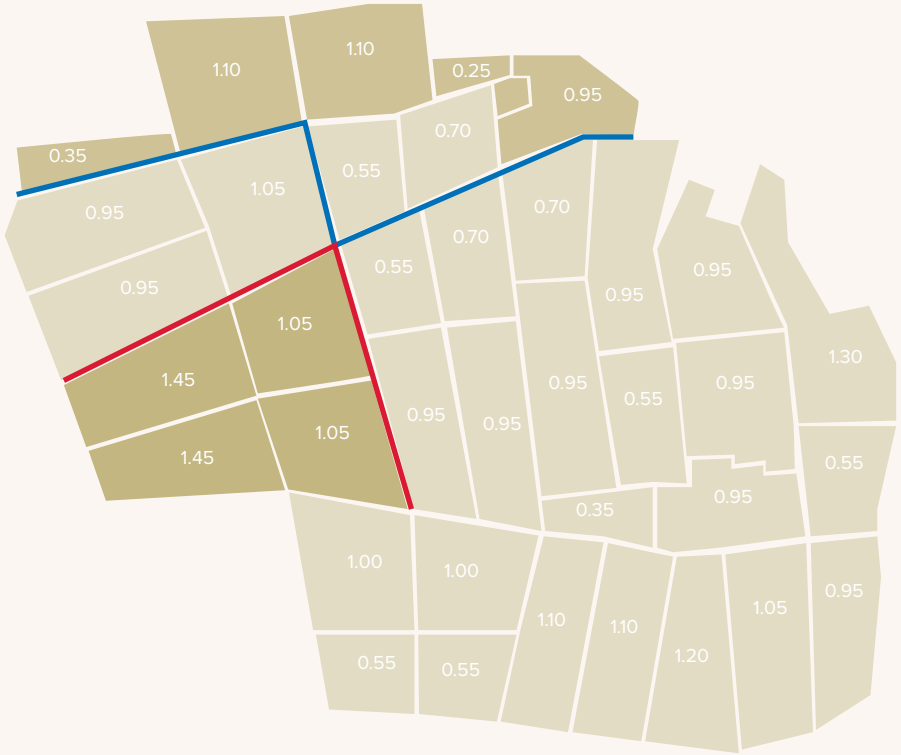
The more paddocks you have on your farm the more grass your farm will grow. The more grass you grow the more profitable and sustainable your farming enterprise is.

KEY POINT

Every additional day at grass in the spring is worth €1.54 per suckler cow per day or €540 per week for a 50 cow herd

To set up your paddocks correctly you need to

1. **Get a map of the farm with areas for each field/paddock**



2. **Decide on the number of paddocks required:**
   - There should be at least 7 paddocks per grazing group with silage ground closed,
   - Silage ground can be subdivided with temporary fencing

3. **What size should my paddocks be?**
   - Each paddock should last 3 days
   - Aim for 6-7 paddocks per grazing group

Example paddock size required for:

10 cows + 10 weanlings	20 cows + 20 weanlings	30 cows + 30 weanlings	40 cows + 40 weanlings
1.25 acres	2.5 acres	3.75 acres	5 acres

Assumes free draining productive ground

10 steers (500kg)	20 steers (500kg)	30 steers (500kg)	40 steers (500kg)
0.6 acres	1.2 acres	1.8 acres	2.5 acres

Assumes free draining productive ground

10 weanling (250kg)	20 weanling (250kg)	30 weanling (250kg)	40 weanling (250kg)
0.15 acres	0.3 acres	0.5 acres	0.6 acres

Assumes free draining productive ground

4. **Determine the most appropriate water trough position in each paddock:**

- Decide on main water line loop. Are 1 or 2 loops required?
- Are 1 or 2 water troughs needed per paddock?

Where should they go?

- Ideally water troughs should be located at the centre of the paddock.
- If there are two troughs per paddock — they should be staggered.

Cost of Water

- The approx. cost is €1 per 4.5 litre trough capacity (one gallon), equivalent to €300 for 1,350 litres (300 gallon trough).
- Water pipes, the approx. cost is €1/m

5. **Allow for multiple entrances into each paddock**

6. **Ideally keep paddocks square / rectangular**

- Rectangular paddocks work best; ideal depth:width ratio should be 2:1, not over 4:1. Long narrow paddocks increase the risk of poaching. 1ha = 10,000 m2. Aim for paddocks 150m deep x 65m wide.

7. **Farm Roadways**

- Determine the most suitable road layout to at least allow ease of turnout to drier paddocks in the spring
- Get a map of the farm. Mark the location of the dry areas, wet area, obstacles to roadways etc. Mark in the location of wintering facilities
- Design a system that allows the road to reach as many paddocks as possible on the farm
- Establish if the road system is for cattle only, or if it will be used for silage traffic
- Avoid sharp bends and angles with no bends less than 90 degrees
- Source local hardcore and binding for the roadway
- Walk proposed roadway for any issues that do not appear on a farm map, eg, winter ponds, ESB poles, etc. Adjust if necessary
- Construct roadways on the southern side of hedgerows.

Cost of Roadways

The approximate cost of roadways is €15-20 per metre run.

WIN

€1,000 Dairygold giftcard plus a luxury 2 night stay at the Muckross Park Hotel, Killarney

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Name

Address

Eircode

Contact number

Email address

Dairygold account number

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Type of farming

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All fields must be completed to qualify for the prize draw. If you've already returned your farm insurance renewal details to Dairygold, you'll automatically be entered into the competition. The promoter of this competition is Zurich Insurances plc., registered in Ireland No. 13460, with its registered office at Zurich House, Ballsbridge Park, Dublin 4. To enter the competition, entrants must complete the entry form, answer the questions and submit the entry form. Closing date for entries is midnight 29 June 2018. Entrants are deemed to have accepted these terms and conditions by participating in this competition. The competition is open to residents of the Republic of Ireland. Entrants must be 17 years of age or older in order to participate. The competition is not open to employees of the promoter or any associated companies, their families, agents and anyone else connected with this competition. Only one entry per person. No purchase necessary. Illegible entries or entries which are not submitted in accordance with these terms and conditions or entries containing an incorrect answer will be ineligible for the draw. The prize consists of a €1,000 Dairygold Gift Card and a luxury 2 night stay including two evening meals at the Muckross Park Hotel, Killarney. The hotel voucher is valid for 12 months and afterwards will revert to a €525 monetary amount after 12 months. A cash alternative will not be offered and cash back will not be provided on any unused portion of the Gift Card. The Gift Card is valid for one year from date of issue. The winner will be drawn at random on 6 July 2018 from all eligible entries. The name of the winner will be available for a period of four weeks after the closing date of the competition by sending a SAE to Competition Winners, Marketing Department, Zurich Insurance, PO Box 78, Wexford. The winner will be notified by telephone within 7 days of the draw and may be required to validate his/her age. The judge's decision is final and no correspondence will be entered into. The promoter shall not be responsible for any matter arising out of or resulting from the receipt of the prize. The promoter cannot accept responsibility for the acts or omissions of third parties. The winner will receive their prize within 21 days of the closing date of the competition. The promoter shall have no liability to the winner in the event that the winner is unable to take up the prize. The promoter reserves the right to select an alternative winner, should any winner not be in a position to take up the prize. The promoter reserves the right to withdraw, cancel, suspend or amend this competition or the terms and conditions of the competition, with no liability to any entrants, prize winner or any third party. The promoter reserves the right to offer an alternative prize of equal or greater value, should the prize become unavailable for any reason. To the fullest extent permissible by law, the promoter shall not be liable to any entrant or prize winner for any loss or damage howsoever caused, whether direct, indirect or consequential (whether in contract, tort or statutory duty or otherwise) arising out of or in connection with the competition and/or prize or the taking of the prize. By entering the competition, entrants agree to take part in any associated publicity relating to the competition without further consent or payment where required to do so by the promoters. This competition and these terms and conditions are governed by Irish Law. Any dispute arising out or in connection with this competition shall be dealt with exclusively by the courts of Ireland.

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Fertiliser requirements to building silage reserves with a 2nd and 3rd cut

Silage stocks are depleted nationwide after a long winter. Not all farms ran out of silage completely this spring, but every farm has used up considerable amounts of reserve stocks.

Silage stocks are depleted nationwide after a long winter. Not all farms ran out of silage completely this spring, but every farm has used up considerable amounts of reserve stocks.

To build back silage reserves we can

- Conserve more silage with a 2nd and 3rd cut. With this you need to ensure that soil fertility is maintained with adequate phosphorus (p) and potassium (k).
- Sell surplus stock

Converting Kg/ha to units per acre:

To convert Kg/ha to units per acre multiply the Kg/ha by 0.8.

Kg/ha	Units per acre
40	32
30	24
20	16

Multi-cut silage system

Multi-cut silage systems have a large requirement for nutrients and the crops must be fed accordingly. Below are the nutrients required for individual crops and multiple cutting systems. These requirements are for index 3 soils. If ground is in index 1 or 2 for phosphorus (P) or potassium (K) it will need additional p and k to build up soil indexes.

	Yield potential/ acre	Nitrogen (N) Requirement (units/acre)	Phosphorus (p) Requirement (units/acre)	Potassium (k) Requirement (units/acre)	Sulphur (S) Requirement (units/acre)
Nutrients required per cut (units/acre)					
1 cut	10	100	16	100	16
2nd cut	6	80	9	60	16
3rd cut	4	80	6	40	16
Nutrients required (units/acre)					
2 cuts	16	180	24	160	32
3 cuts	20	260	30	200	48

by Liam Stack
M.Ag.Sc

Build-up Requirements (units/acre) for index 1 and 2 soils for p and k.:

Build-up Requirement	P (Units/Acre)	K(Units/Acre)
Index 1	16	50
Index 2	8	25

Second Cut Silage

A 2nd cut silage crop is usually in the region of 15t/ha (6T/ac). 2nd cut silage also allows for a great opportunity to make up the balance of P and K which wasn't spread prior to 1st cut, particularly where slurry is being used.

Third Cut Silage

A 3rd cut silage crop is usually in the region of 10t/ha (4T/ac).

2nd and 3rd cut fertiliser requirements - No slurry					
Product	Rate (bags/ac)	N (units/ac)	P (units/ac)	K (units/ac)	S (units/ac)
Silage Boost	4	84	8	40	8
Selenicut	4	80	8	48	8
Sulpha 23-2-12 + S	3.5	80	7	42	21
24-2.5-10	3.5	84	8.75	3.5	0

The Value of slurry

Approximately 85% of the economic fertilizer value of slurry is due to its P and K, of which the K content is c.70%. The remaining 15% is Nitrogen.

Nitrogen availability from slurry is c.40% lower in the summer than in the spring. 1000 gals per acre of cattle slurry applied using a splash plate in the spring will supply 6 units N per acre. In the summer the N supplied this is reduced to 3.6 units per acre.

Using low emission slurry spreading (LESS) equipment increase the N supplied by c. 25-30%.

Average available Nitrogen in 1000 gals of cattle slurry applied to soils with low P and K indexes (1 or 2) in either spring or summer.

	Spring (units per acre)	Summer (units per acre)
Splash Plate	6.3	3.6
Trailing Shoe	9	5.4

The time of the year has little effect on P and K availability. Spreading slurry for its p and k in the summer will realise a lot of its value. .

2nd and 3rd cut fertiliser requirements - With Slurry					
Product	Rate (bags/ac)	N (units/ac)	P (units/ac)	K (units/ac)	S (units/ac)
Slurry	2000	7	12	60	5
plus					
Product	Rate (bags/ac)	N (units/ac)	P (units/ac)	K (units/ac)	S (units/ac)
Selenigrass ± S*	3	82	12	60	14
Sweetgrass 3% S	3.25	82	12	60	16
Can + S	2.75	81	12	60	20
Sulpha 33 + 12% S	2.25	81	12	60	35
KAN 38% N + 7.5% S	2	83	12	60	20

Acres of silage required from differing silage systems for differing winter length.

No of acres of silage needed for 25 suckler cows, 15 weanlings, 15 stores			
	3 month winter	4 month winter	5 month winter
1 cut	23	29	35
2 cuts	15	18	22
3 cuts	12	15	17

*acreage has 1 month buffer built in and assumes productive ground.

Autumn Fertiliser
Do I need to spread?

by Liam Leahy IASIS

KEY POINT

How much grass do you need to grow to extend the rotation length and how much fertiliser if any do you need to spread will depend on your stocking rate.

As part of the nitrate directive you cannot spread artificial Nitrogen (N) after the 15th September.

In August soils release their own organic N naturally. On lowly stocked farms (< 170kg organic N/Ha) this may provide sufficient N to build grass covers. Alternatively consider applying 20units N across August and September. Heavier stocked farms (<190kg organic N/Ha) may need to consider applying a blanket application of nitrogen (c.25units per acre in August and September). The amount to apply will depend on how much of your full years allowance you have left and the overall grass supply on the farm.

Response to N:

Under good growing conditions with high soil temperatures response of between 10-15kg DM/ha have been recorded. High perennial ryegrass swards respond better to nitrogen and these should be targeted for building autumn grass.

Should I apply slurry?

Approximately 85% of the economic fertilizer value of slurry is due to its phosphorus (P) & potassium (K), of which the K content is 70%. The remaining 15% is nitrogen (N).

Time of the year has a big effect on the N availability (see page 10) but has little effect on the P and K utilisation. Therefore, by spreading slurry in the autumn you will realise most of its value. Priorities slurry to low index P and K fields and fields with surplus grass removed as round bales.

Nitrogen and slurry applications in autumn

Apply slurry to low P & K paddocks. Apply low levels of nitrogen rather than missing N on paddocks. Apply a blanket application of nitrogen if required pre-September 15.

Time for Lime

Soil pH - Lime

by Liam Cronin B.Agr.Sc

Soil pH Target

Mineral soils should have a pH of 6.3. Peat soils should have a pH of 5.5. On grassland soils with high molybdenum pH should be kept below 6.2.

Benefits of getting soil pH right

1. Rye grass and clover swards persist for longer after reseeding.
2. Grassland soils receiving regular lime application release up to 80kg/ha of additional nitrogen. This is the same as applying 2.5 bags/acre of C.A.N
3. Applying 5T/ha of lime to grazing ground gives the same increase in grass growth as 40kg of P. Both increase grass growth by 1T/ha.
4. Applying 5T/ha of lime + 40kg of P gives a further 33% increase in grass growth or 1.5T of extra grass growth.
5. Applying lime increases your soil P index

How to correct low pH

Test soil every 2 to 4 years to determine your soil fertility status. Apply lime at the recommended amount to raise soil pH. If the recommended lime application rate is greater than 7.5T/ha (3T/acre), apply 7.5T year one and the remainder in year 3.

Liming in high molybdenum areas

For high Mo areas deduce 5 t/ha (2T/acre) from the lime advice.

RULE OF THUMB *

2.5t lime per ha (1T of lime per acre) increase pH by 0.2-0.3. To maintain a correct soil pH apply 2T per acre every 5 years (0.5-1t/ha/year).

When to apply lime

Lime can be applied during any time of the year, but late summer and early autumn is an ideal time. Liming softens the soil. Heavier soils and organic matter rich soils may poach more quickly after liming. On these types of soils apply a reduced rate more regularly.

Slurry, urea and liming

If your using slurry or urea before liming leave 10 days. If you intend using slurry or urea after liming leave at least 3 months. This will reduce N loss from the fertiliser.

Silage and Liming

Leave at least 3 months between liming and silage harvest.

Ground v.s Granulated Lime

Ground limestone is cost effective. It has an immediate (3-6 months) and lasting (12-36 months) effect on soil pH. It affects the top 4-5 inches of the soil.

Granulated lime has an immediate and short term effect requiring yearly application. It affects the top 10cm of the soil.

If your using granulated limestone apply one third of the recommended ground limestone recommended over 5 years.

For example: A liming recommendation of 7.5T/ha of ground limestone equates to apply 2.5T/ha granulated limestone over 5 years or 500kg/ha/year.

Magnesium Lime

Apply magnesium line where Mg levels are index 1 & 2. Lime and fertiliser application:

1st application is	2nd application is	Time between 1st and 2nd application	Reason
Lime	Urea	Avoid urea for 3-6 months	Ammonia losses from Urea and slurry are increase by high pH. Lime increase pH. If urea or slurry goes on 1st there is very little issue. If the lime goes on 1st the increase in pH following the lime will increase the ammonia loss. There is no issue with CAN as CAN contains less of the N in the ammonacal form. The Agrotain stabilizer used on KaN mitigates any issues associated with ammonia loss after lime. KaN can be used after lime with no issues
	KaN	No issue (wash lime in with a shower)	
	CAN	No issue (wash lime in with a shower)	
	Slurry	3-6 months (if concerned about N uptake from the slurry)	
Urea	Lime	1 week	
KaN		No issue	
CAN		No issue	
Slurry		1 week	

Advice for Damaged Paddocks

by Rebecca O'Sullivan
B.Ag.Sc

Rolling after Poaching?

For all types of poaching, rolling is not a solution as more soil compaction is not required.

Minor Poaching

In minor poaching cases, the plant is able to repair itself reasonably quickly and tiller density quickly returns to normal.

Moderate Poaching

In moderate poaching events grass seed should be broadcast or over-seeded once the ground has firmed up. Over-seeding success is dependent on getting as much seed-to-soil contact as possible and having moist conditions post-germination. The more open the pasture, the more likely that over-seeding will be successful. Use a tetraploid (bigger seeds) grass variety, at a seeding rate of 6-8kg/acre. The best time for over-seeding is late April or mid-summer (after silage cuts). It will only be on the third or fourth rotation that the new plants will start making a contribution to the sward.

Broadcasting grass seeds

Often the best time to broadcast grass seeds is just before the cows come to graze the paddock again. The cow's feet push the seed into the ground and so it quickly germinates.

By the next grazing the new grass plants will still be too small to be grazed by the cows but they will respond to receiving direct light and will grow quickly. The addition of more grass seed will have a big impact on reducing the invasion of weeds.

By the third grazing they will be a normal part of the sward. Consider ProNitro for this method, as it feeds the new seed directly.

Over seeding methods	
Grass harrow and fertiliser spreader combination	**Guttler or stitching-in machines**
Graze off or mow pasture down to 3.5-4cm.	
Harrow with a grass harrow to ensure a levelling of the divots and disturbance of the soil surface + spread the grass seeds with a fertiliser spreader at 6-8kg/ac.	Use a guttler or stitch-in seeder across the pasture at a seeding rate of 6-8kg/ac.
Spread compound fertiliser (1.5-2 bags/ac), either 18:6:12 or 10:10:20	
Roll pasture with a Cambridge roller (if available) or a light roller	
Spread a light coating of slurry (1,000-1,500 gallons/acre).	
Apply slug pellets	
Ensure the pasture is grazed frequently at light covers to assist seedling germination and tillering	

Over-seeding will not work if seeding is followed by dry conditions so, if this happens, continue to spread light levels of slurry (1,000-1,200 gallons/ac) or soiled water after grazing.

Minor Poaching

In minor poaching cases, the plant is able to repair itself reasonably quickly and tiller density quickly returns to normal.

KEY POINT

Both methods may require a post-emergence spray upon establishment

Consider using a coated seed: ProNitro®

ProNitro is a tetraploid grass seed mix coated with quick and slow release nitrogen. Its nitrogen feeds only the planted seeds and not the existing grasses or weeds. Prioritising nitrogen for the new seed stimulates accelerated growth by the new seed and leads to a new ley that is more competitive.

KEY POINT

Trials show ProNitro coated seeds to produce 200% more fresh weight than untreated seed three weeks after sowing

Day 1 Graze tight/cut silage
Day 2 Stitch in ProNitro grass mixture at 12kg per acre
Day 14 Graze ground if possible
Day 21-28 Spread Fert as normal (dependent on re:growth)
Day 42+ Continue rotation/cut grass

Severe Poaching

After severe poaching events the paddock will need to be properly re-seeded. A pasture will return without doing anything but it will be dominated by weed grasses that will produce much less usable food for stock. If drainage is an issue, it must be addressed before reseeding takes place.

Concentrate Feeding at Grass

by
Alan Ryan
B.Agr.Sc

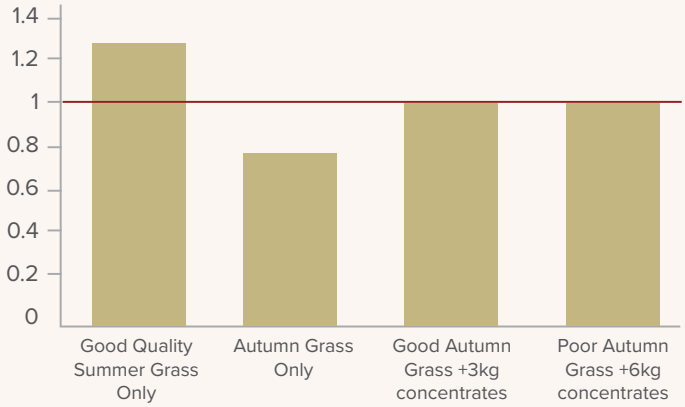
KEY POINT

Once cattle are housed for fattening, the cost per kg of live weight gain increases by up to 50% compared to grass-based finishing.

Finishing Cattle

Finishing cattle need to be kept gaining 1kg liveweight per day at a minimum. Cattle can grow in excess of 1.3kg per day in the first half of the grazing season on grass alone. However, even the best quality autumn grass will only support a max of 0.8kg LWG.

Potential Live Weigh Gain (LWG)



Why?

Autumn grass is lower in sugar and energy. Max UFL = 0.95 vs 1.05 in the spring. Autumn grass is lower in DM of 14-16%. Cattle cannot reach a high dry matter intake to satisfy its nutritional requirements.

Feeding levels required for 1kg LWG

Good Autumn grass	3kg
Good Autumn grass	up to 6kg

Once you have to go above 6kg/day, it may be as well to go indoors on an ad lib concentrate diet.

Does it pay?

The response to concentrate feeding at grass is dependent on how much concentrate you feed and how much grass you have. The first 2.5kg will give a bigger response to the 2nd. Concentrates will give a bigger response if grass is scarce. But assuming a concentrate price of €285/T and a carcass value of €4.00/kg and depending on how much grass you have, there is an economical response to feeding 5kg at grass.

Response to concentrates at grass	
Concentrate price	285 €/T
Carcass value	4.00 €/kg

	Conversion rate: kg meal/kg carcass	ROI
Shortage of grass		
First 2.5 kg	8:1	1.8
Second 2.5kg	11:1	1.3
Plenty of grass		
First 2.5 kg	9:1	1.6
Second 2.5kg	17:1	0.8

Cull cows

Suckler cows that have been scanned as not in calf should be marked for culling. If you're finishing these off grass consider weaning these cows early. Once the calf is 250kg you can wean. Early weaned cows with a condition score of 3 will take 50-60 days to finish. Later weaned cows at a condition score of 2.5 will take 90 days.

Feed required at grass to finish

With good quality grass fattening cows will need c.5kg of concentrates to gaining 0.75kg daily.

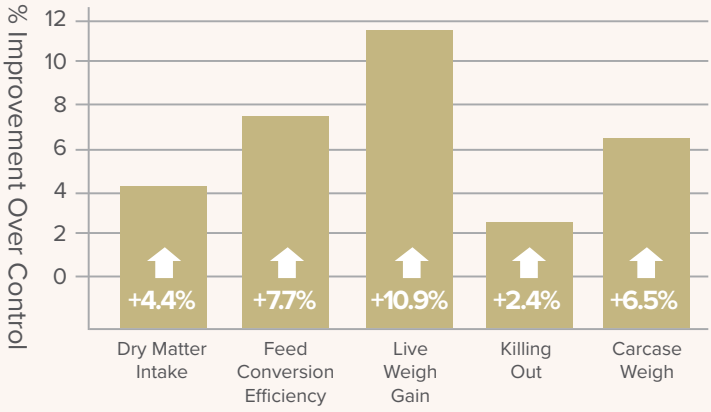
Feed required indoors to finish

Excellent silage + c.6kg of concentrates = 0.75kg daily. Higher concentrate feeding levels will be required with poorer silage.

Concentrate Type

To complement the high protein autumn grass you want a low protein, high energy concentrate. Manure can be quite loose on autumn grass. This is generally the case where excess amounts of protein are being consumed through grass and there is a low level of fibre in the diet. Concentrate supplementation can help manage this through the inclusion of a balanced supply of energy and protein along with digestible fibre. One other point that should be considered is the use of a live yeast products such as Yea-Sacc ®. This product has been proven to improve rumen function. Improvements in rumen function result in an increased conversion of both grass and concentrate leading to higher animal performance. The use of Yea-Sacc from Alltech is proven to help improve the rumen environment by increasing rumen pH and therefore, ensuring that the rumen bacteria work more efficiently. Research from Teagasc Grange has shown that the inclusion of Yea-Sacc in beef diets can improve performance by over 10 percent.

Percentage improvements in performance parameters in beef animals fed a Yea-Sacc diet compared to a control diet (R. Fallon et al, Teagasc Grange Research Centre, 2003)



Prime elite maize munch/meal, Beeflav or Beef meal mix are ideal concentrates for use at grass for finishing animals and cull cows.

Feed Concentrates to Beef Calves prior to weaning

by **Alan Ryan** B.Agr.Sc

Feeding a low rate of meal at grass for a period before selling weanlings will deliver an economic return.

RECOMMENDED FEEDING LEVEL	
Stock	Feeding Level
Bull weanlings for export	2kg – up to ad lib*
Continental Bull weanlings	1.5-2 kg
Heifers weanlings for export	2.5 kg – up to ad-lib **
Continental Heifer weanlings	1.5 kg
Non- Continental Heifer weanlings	1-2 kg
Weanlings not for Sale	1-1.5 kg

Ref: Teagasc

*Ad-lib if grass quality is poor or limited. Top-quality bulls will continue to develop muscle as opposed to laying down fat.

** Feeding ad-lib meals to the heifer calves, unless they are exceptionally well-muscled, will only result in them laying down fat around the tail head. Live exporters or the domestic trade do not want these puppy-fat heifers.

Does it pay?

If offered ad-lib concentrates weanling will eat c.4kg daily or c.170kg per head over six weeks. At grass every 5kg of meal will deliver 1kg of liveweight gain, or the 170kg of meal fed over the 6 weeks will deliver c.35kg weaning weight.

If you're getting €2.50 - €3.00/kg for your weanlings that's €87.50 - €105 return for €48 concentrate spend (assuming concentrates are costing €285/T.

When should I feed?

Start feeding animals at 0.5kg/day two months prior to expected sale date and up it over a 2-3 weeks period.

What level of LWG can I expect ?

The response to meal feeding depends on grass supply and quality, weight, age, sex and breed.

Stock	Feeding Level	LWG
Bulls	2kg	1.3-1.4 kg*
Heifers	1.5 kg	1.2-1.35 kg*

* must have good grass quality

Be wary that buyers do not want overfat weanlings and these types will normally sell at a lower price per kilo. Dairygolds', high energy and protein feeds, beefflav or beef meal mix, will deliver the best results.

Consult your local Area Sales Manager, Branch Agri Lead or Inside Sales feeding advice.

Grassland Specialist Maximise your Grass Yield in 2018

by **Shane Cotter**
B.Agr.Sc., Technical Sales Advisor

What will you do to grow more grass this year?

Dairygold will, this year, be running a grassland support programme after a successful trial in Limerick and North Cork in 2017. Last year as part of this programme, there were many events such as Branch Grassland Workshops where Shane Cotter, Grassland Specialist, Dairygold Agri Business was on hand to offer advice and support on reseeding, spraying and grassland management. This will continue in 2018 with the support our Grassland Specialists, Area Sales Managers and our Retail network.

The programme is a free service to you and is intended to improve grassland productivity on your farm throughout the year.

We have support to offer in the areas of:

- Grassland Sprays
- Full Reseeding Programmes
- Getting the most out of your soil

Farmer Benefits

1. Lower levels of weed infestation

We will be available to you to offer advice and support in all aspects of your grassland management this Spring and Summer. We are available to give you advice on-farm around new grassland sward management as well as advising you on grassland weed control options.

Increasing grass utilisation by 1.0tn DM/ha/year is worth €180/ha to dairy farmers. Controlling a field with 20% docks can grow 2t/Ha extra grass worth €360/Ha.

Before

After

2. Reseeding

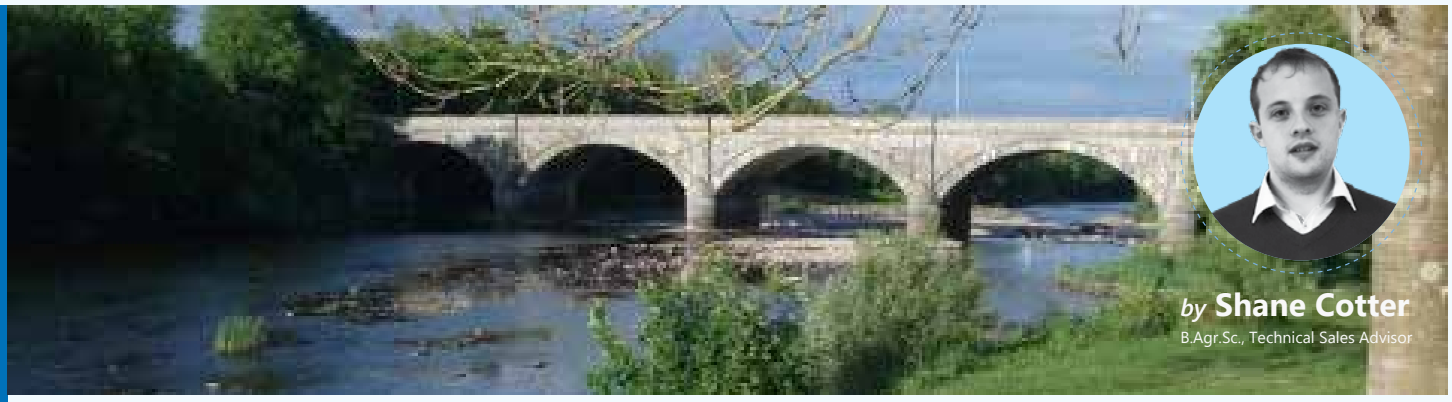
Now is the time to assess your paddocks and reseeding plan for the coming year. There are many benefits to reseeding poorly performing fields including:

- Provides more grass in the shoulder months
- A 25% increase in response to nitrogen
- A higher feeding quality
- Quicker re-growth
- Allows higher stocking rates for improved efficiency

For more information on any of the above topics relating to your own farm please call

Shane Cotter or Liam Cronin
in our Inside Sales Department on **022-31644**

Maintaining Drinking Water Quality through Best Practice Pesticide Application



by **Shane Cotter**
B.Agr.Sc., Technical Sales Advisor

Surface waters (rivers and lakes) account for 80% of drinking water supplies in Ireland. Low level detections of grassland herbicides have been found in drinking water supplies in the last number of years.

Provisional figures for 2017 indicate that there were just over 150 exceedances, of which MCPA accounted for 119 notifications. This is an increase from 2016, when there were 137 notifications. To date, the breaches have not given rise to health concerns (Department of Agriculture).

The National Pesticides and Drinking Water Action Group will therefore be testing water supplies once a week for MCPA as part of a new industry-led product stewardship scheme.

According to the Department of Agriculture, Food and the Marine, the scheme will monitor and sample water in four priority catchments from March to October 2018 for MCPA. Once per week during the main spraying periods and every two weeks outside of this.

The four catchment areas are

Longford Central	**Lough Forbes**
Troyswood, Co. Kilkenny	**River Nore**
Abbeyfeale Co. Limerick	**River Feale**
Newcastlewest, Co. Limerick	**River Deel**

As an industry we have already implemented some changes to reduce the levels found in drinking water. But it is imperative that we continue to improve our pesticide spraying management so we can safeguard MCPA as a vital weapon in our chemical armory.

Reduce pesticide risks by

- Choosing the right pesticide product
- Reading and following the product label
- Buying and applying the correct amount
- Not spraying if rain or strong winds are forecast in the next 48 hours
- Making sure you are aware of the location of all nearby water courses
- Complying with any buffer zone specified on the product label to protect the aquatic environment. Mark out the specified buffer zone from the edge of the river or lake or other water course
- Never filling a sprayer directly from a water course or carry out mixing, loading or other handling operations beside a water course
- Avoiding spills, stay well back from open drains and rinse empty containers 3 times into the sprayer
- Storing and disposing of pesticides and their containers properly

MCPA changes in recent years

- Rates of all “straight” herbicides based on MCPA were reduced from 3.3 ltrs per ha to 2.7 ltrs per ha;
- A 5m buffer strip along all water courses was made mandatory;
- It was made illegal to apply a “straight” MCPA based product between the months of October and February;
- Use of MCPA in a knapsack sprayer or weed-wiper was also made illegal;

Control of Rushes

Rushes are a tough, durable weed species and are not easily controlled. Rushes occur mainly on wetter soils, with lower soil fertility levels. However, clumps of rushes on drier areas left open after damage are also a common sight. Soft Rush is the most common type of rush in Ireland.

Grassland Management

Rushes can produce up to 8,500 seeds per fertile shoot every year. Maintaining a fertile, dense, leafy, highly productive grass sward is the best method to prevent rushes establishing and spreading. Maintaining soil fertility at optimum levels for pH, phosphorus and potassium is critical to this, as is applying sufficient levels of Nitrogen. Avoid any poaching, overgrazing or damage to grass swards.

Control

This needs to be a combination of:

- improving drainage,
- grazing management,
- fertiliser application,
- topping
- chemical control.

Chemical Control:

1. Top or mow existing rushes

Whether you are licking or spraying the rushes, top/mow the mature rushes 3 weeks prior to spray application. Rushes have a very tough outer skin, topping/mowing promote fresh green re-growth capable of taking in the herbicide. It also helps weaken the food reserves within the plant. Remove any mown rushes before spraying.

2. Products:

Apply MCPA in June or July when growth conditions are good. A wetting agent, such as Torpedo, will help the spray sticking to the slender rush ‘target’.

Product	Rate (ltr/ha) (ltr/ac)	Water Volume (ltr/ha) (ltr/ac)
MCPA	2.7 (1.1)	250-400 (100-160)
+		
Torpedo	0.2 ltr/ha	

GLAS Farmers:

Spraying of rushes is not permitted on land parcels on farms participating in the GLAS Scheme who have chosen to undertake the Low Input Permanent Pasture or the Traditional Hay Meadow option in this Scheme.

Rushes can be controlled by topping after the 15th July *

Johne's Disease in the suckler beef herd

by **Lorna Citer**
Programme Manager, Johne's Disease, Animal Health Ireland

Johne's disease is a bacterial disease of dairy and beef cattle for which there is no cure. It is caused by a bacterium known as MAP. Animals are susceptible from birth and once infected, the disease progresses slowly and subtly. The disease has a long incubation period with infected animals showing signs after a number of years so it is unusual to see clinical Johne's disease in animals younger than 2 years of age.

Johne's disease is usually introduced to a herd with an infected younger animal which appears healthy and may even have had a single test with a negative result. However, as this carrier animal matures and ages it may start to shed bacteria in its dung, infecting pastures and sheds in which it is kept.

Calves can become infected early in life by drinking milk or eating food contaminated with the bacteria, which are shed in the dung or milk of infected adult cattle. On occasion, when their dam has advanced Johne's disease, calves are born already infected. One infected cow in a calving pen or shed housing cows and calves can also infect a number of calves that come into contact with her dung.

The signs of disease vary depending upon the stage of infection, how many bacteria the animal swallowed as a calf, how soon after birth this happened and how quickly the gut wall has become damaged. Infection progresses slowly and changes may not be readily detectable unless a herdowner is regularly body-condition scoring or

weighing animals. The first signs of disease relate to a reduced feed-conversion efficiency, leading to loss of productivity characterised by a lower than expected weight gain, followed by weight loss, scour and ultimately emaciation and death. Some animals have a sub-clinical infection, with no obvious signs of disease, but these animals may also have reduced production, presenting as a reduced fertility, reduced slaughter weight and value, reduced milk quality and increased susceptibility to other diseases.

For a suckler herdowner this means that in a herd with uncontrolled Johne's disease, cows will be harder to get in calf and produce fewer, later calves. Increased culling of less productive cows means the herdowner requires an increased supply of replacement heifers to maintain herd size. A Johne's disease-infected suckler herd is also likely to experience challenges in finishing young cattle efficiently.

How pre-calving and calving cows are managed can have a considerable impact on reducing the spread of Johne's disease in a herd. As a first step, talk to your veterinary practitioner to discuss disease control methods appropriate for your herd. Develop a disease management plan prior to calving, to identify areas on which to focus attention in the calving and young calf pens. Effectively reducing the spread of Johne's disease in a herd starts by including effective cow-calf hygiene in everyday farm management practices. By reducing exposure of calves to faecal contamination by keeping them away from potentially infected cows and infected environments.

By following these steps, a beef suckler herdowner can manage the risk of JD spread in the herd.

- Pre-calving cows should be as clean as possible prior to calving, with udders and tails trimmed to minimise faecal contamination.
- Outdoor calving has advantages in reducing the likely contact of calf with infective dung and pasture.
- Try to avoid calving cows on pastures where slurry has recently been spread.
- For indoor calving, pens should be kept clean with bedding changed frequently, or topped up, to limit a calf's exposure to dung.
- Whatever your management system, try to remove the calf and its dam from where other cows are calving as soon as possible **(the ideal is 15 minutes)** after calving to an area where the level of contamination build-up is reduced **(for example onto pasture).**
- In an infected or test-positive herd all test-positive cows should be calved as a separate group and ideally their heifer progeny should not be retained for breeding or sold on for breeding purposes, since they may have been born infected.
- All beef herds should aim to keep calving heifers as a separate group since these animals are the group least likely to be shedding bacteria. Calves born into a herd practicing good hygiene practices are considered lower risk than the progeny from older age groups, where bacterial shedding is more likely. Heifer calves reared by heifer and young cow mothers could be retained as future replacement animals.

Although not every farmer will be able to do this, in suckler herds where Johne's disease has been present for some while, and is causing significant production losses, a herdowner could consider developing a control plan which includes the establishment of a low risk nucleus of replacement heifers which can become the foundation of a higher assurance herd.

This can be achieved by removing the heifer calves from younger dams straight after birth and raising them in isolation from the main herd (on milk replacer), only returning them to the main herd just prior to calving. If this practice is repeated in conjunction with annual whole herd testing and the early removal of test-positive cows, over several years the infection prevalence is likely to drop and with commitment and perseverance the herdowner may gain effective control over Johne's disease.

DAIRYGOLD BUYING FOR SHAREHOLDERS & CUSTOMERS

AGRI BUSINESS

Remember Storm Emma - didn't she look like this?

First there was the stress of milking in arctic conditions, then clearing roads, running low on fodder & sourcing extra feed.

FEED BINS

Many of us have grown our herds but still have the same size feed bin. That's something we can help you fix! Dairygold has agreed a ***New Summer Bin Offer*** *with Crowley Engineering Ltd and Spirofeed to supply discounted feed bins to Dairygold members.*

Benefits of getting a bigger parlour feed bin this summer

- Bigger bins reduce risk and stress; less frequent orders & more feed storage on farm.
- Future proof your business by matching your bin size to projected herd numbers.
- It's cheaper; Dairygold will provide a feed discount plus we have secured bin price discounts for you.
- Bin availability based on current demand will be tested this autumn. Don't wait to order.
- Your larger bin means you can get volume discounts per the Dairygold feed price list.
- Further saving by recycling your old bin to replace bagged feed with bulk deliveries.

But what size bin do I need?

Projected Herd	Suggested Bin Capacity
60	8 Tonnes
80	10 Tonnes
100	12 Tonnes
120	14 Tonnes
150	18 Tonnes +

The Early Bird Summer Offer

- Crowley's & Spirofeed will provide approx. 8% off their 2017/Spring 2018 price list for feed bins – saving up to €450 & avoiding an expected 10% price increase.
- Dairygold will add a €10 discount on feed to 3 times the feed bin capacity (i.e. €10/T on 30 T with a 10T bin or €10/T on 42 T with a 14T bin).
- Bins must be ordered by 29th June'18 and must be installed by 31st August '18.

To avail of the offer please complete and return a referral form to our Inside Sales Team, Dairygold Agri Offices, West End, Mallow, Co. Cork. The bin supplier will then call you.

FEED BIN REFERRAL FORM

AGRI BUSINESS

Name:		
Address:		
Dairygold Account Number:		
Telephone Number	Landline:	Mobile:
Email Address:		
Select Preferred Supplier:	Crowley Engineering ☐	Spirofeed Limited ☐
Likely Capacity Of New Bin:	10Tn ☐ 12Tn ☐ 14Tn ☐ 16Tn ☐ 18Tn ☐ 20Tn+ ☐	
I hereby request and authorise Dairygold Co-Operative Society Limited to confirm my relationship with the Society and forward my details to the selected bin supplier. I authorise Dairygold to update their records using the above contact details.		
Signed:		Date: