

An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine

# Grassland Farmer of the Year: Regional Winner

*Farm Open Day at Michael Ryan's Farm, Deansgrove, Cashel, Co. Tipperary*



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine



# Grass10 Campaign: The Role of Grazed Grass

Grazed grass is the cheapest and most widespread feed for ruminant production systems in Ireland. Grass enables low-cost animal production and promotes a sustainable, green, and high quality image of milk production across the world. Recent industry reports (Food Harvest 2020 and Food Wise 2025) have highlighted the important role grass can play in an expanding milk production industry. Through a combination of climate and soil type, Ireland possesses the ability to grow large quantities of high quality grass and convert it through the grazing animals into high quality grass based milk and meat products.

Our competitive advantage in milk production can be explained by the relative cost of grass, silage and concentrate feeds. Therefore, increased focus on grass production and efficient utilisation of that grass should be the main driver for expansion of the livestock sector. An analysis of farms completing both grassland measurement in PastureBase Ireland and a Profit Monitor demonstrated increased profit of €173/ha for every 1 tonne DM/ha increase in grass utilised. It should be noted that issues such as environmental sustainability (carbon footprint, nutrient use efficiency, etc.) are also improved by increased grass utilisation.

Future growth in the pasture based milk production in Ireland will depend on an effective grass-based system. However, Irish farmers are not using grass to best effect and there is thus a need to (1) increase grass production and (2) ensure efficient utilisation of that grass.





# Michael Ryan and the Ryan Family

- Farm:** c. 83 Ha – 3 blocks
- Home:** 43.6HA's (Half owned and half leased)
- Outside block 1:** 23.44 Ha – all owned
- Outside block 2:** 15.76Ha – all owned

The home block is the milking ground.

The outside blocks are used for grazing the replacements and for silage production.

Milk is supplied to Dairygold Co-op.

## Background

Michael is farming in the foothills of the Rock of Cashel since spring 2010. He is married to Karen who is a chartered physiotherapist. She owns and runs Cahir Physiotherapy Clinic. Michael and Karen have 3 children, Micheal, Shona and Isla. Michael's parents are Maurice and Betty.

Michael completed his Degree in Agricultural Science, majoring in Animal and Crop Production from UCD in June 2002. He then farmed part time with his father, Maurice and worked fulltime with Macra na Feirme as a training and development officer covering Tipperary, Clare, North Cork and Limerick. Michael married Karen in December 2009 and took financial ownership of the farm in February 2010.

Since 2010, Michael has placed huge emphasis on soil fertility on the farm, soil sampling the farm every year to two years. He has learnt a lot along the way. He immediately corrected any pH deficiencies and saw that intensively grazing affects the K status of the soils. Sulphur had been a forgotten element on the farm but now Michael feeds sulphur into his fertiliser programme from April onwards. This has meant he has reaped the benefits. Grass production has grown from 10.6 tonnes in 2013 to over 16.75 tonnes in 2017.

Michael has upgraded the network of roads and put in a number of spur roadways to allow his cows better access to paddocks especially during the difficult spring months. This has allowed cows to access grazed grass nearly every day of the full grazing season from Feb to end of November.

## Farm History: Dairying

The farm has evolved overtime and has grown in cow numbers over the last decade especially since Michael took over the farm in 2010. This is outlined in the table below.

### Cow Numbers:

Year	2014	2015	2016	2017	2018	2019
Cows	80	103	120	125	140	145

Growth in cow numbers has been in line with the increase in the level of grass that has been grown on the farm. Outlined below is the grass production pattern over the last 6 years. There has been a 37 % increase in grass production on this farm.

**Grass Grown (tonnes/Ha):**

<b>Year</b>	2013	2014	2015	2016	2017	2018
<b>t/Ha</b>	10.61	13.9	14.6	15.5	16.75	12.3

**Grass Management**

The farm was a monitor farm under the Dairygold joint programme for 3 years from 2016 to 2018. He began measuring grass production in 2010 and has continued to do so ever since. Michael walks the farm weekly and twice a week in times of high growth. Last year the farm was walked and grass cover was measured 35 times. This information is then entered into the PastureBase Ireland web-based programme. Pre-grazing covers and cover per cow are 2 key figures that Michael uses when making grazing decisions.

Michael finds that you walk half the farm and measure grass when going to and from the cows and then the other half is covered when spreading fertiliser. He tries to encourage more farmers to measure grass and by doing it while going for the cows etc so it is not another job.

**High EBI herd**

Michael also works hard at achieving a very good black and white high EBI cow. He enjoys this part of the dairy business and it shows. In 2010 he bred the bull AZG, Deansgrove Argent who was listed in the EBI bull list from Dovea and more recently Deansgrove Pedro (FR 4721) from NCBC. The herd presently has an EBI of €166. Michael’s aim is to have a high EBI cow turning grass into quality milk/milk solids. In 2017 he achieved over 2000kgs of milk solids per ha with his cows and the grass he produced in Deansgrove, Cashel. This level of milk solids production will also be achieved in 2019.

**Discussion Groups**

Michael is a founding member of the 3C group in Tipperary, formed in 2006. This group is made up of 18 young farmers, male and female with the oldest member being the facilitator! Michael has benefitted enormously from interaction with other group members and by learning/taking new ideas when visiting other members’ farms. He also loves the trips the group takes every year and he has hosting some of these farmers that the groups have visited in the past.

Michael is also a member of the Outrath group. This group is made up of local farmers in the area and Michael has been a member since 2007. Michael was part of this group when they won the Munster Regional Winners of the Teagasc/ACCBank EBI Competition.

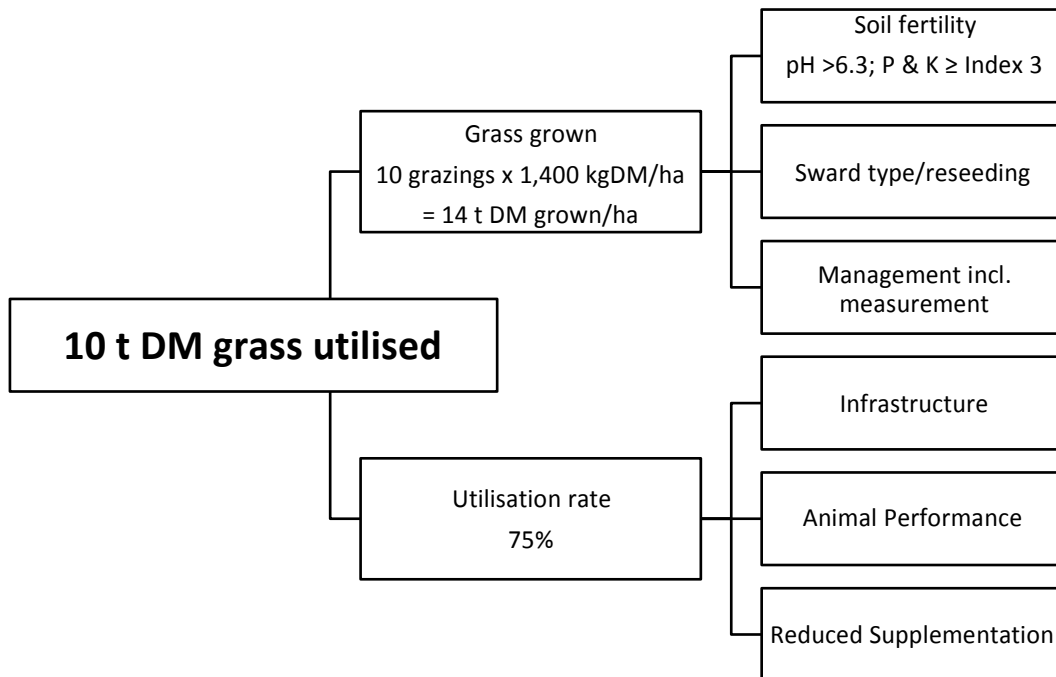
When Michael is not farming he enjoys nothing more than being involved in his local athletics club, Dundrum AC and his local hurling club, Cashel King Cormacs. He also loves a trip to a local or county hurling match.

**Map of the Ryan farm**



## Grass10 Campaign

Grass10 is a new four-year campaign recently launched by Teagasc to promote sustainable grassland excellence. The Grass10 campaign will play an important part in increasing grass growth and utilisation on Irish grassland farms, thereby improving profitability at producer level and helping to ensure the long term sustainability of Irish beef, dairy and sheep production. Significantly, it can provide the platform or framework to enable various industry stakeholders to collaborate for collective action. Given the current performance in terms of grass growth and utilisation, the need for 'collective action' should be clear.



### Objective

The objective of the campaign is to achieve **10 grazing's/paddock/year** utilising **10 tonnes** grass DM/ha. In order to achieve this objective, we will need to achieve significant changes in on-farm practices, specifically:

1. Improved grassland management skills
2. Improved soil fertility
3. Improved grazing infrastructure
4. Improved sward composition
5. Increased grass measurement and usage of PastureBase Ireland



## Grassland Farmer of the Year Competition

With 2017 designated the Year of Sustainable Grassland, and a proven link between increased grass utilization and increased profitability, the Department of Agriculture, Food & the Marine, in collaboration with numerous industry stakeholders including Teagasc, launched a competition as part of the Grass10 initiative to find the Grassland Farmer of the Year. Teagasc research indicates that grass utilisation can be increased significantly on farm.

With this background Grass10 has launched a grassland competition to recognise those farmers who are achieving high levels of grass utilisation in a sustainable manner. Practices used by these farmers to increase grass production and utilisation, include soil fertility management, sward renewal, grassland measurement and improving grazing infrastructure.

*The objective of the Grassland Farmer of the Year Competition is to promote grassland excellence for all Irish livestock farmers.*

***The Ryan Family: Regional Category winners of the Grassland Farmer of the Year Competition 2018.***

***Congratulations!!!!***





## Grassland Management



### **PastureBase Ireland: Technologies to assist grassland management**

Technologies which enable data-informed decision-making on the farm can help to increase farmers' confidence and greatly improve grassland management. Huge leaps have been made in developing decision support tools to improve resource farm efficiency, profitability and sustainability. The primary objective of most of these tools is to increase the information available to assist in farm-management decision making as well as to collect and collate large amounts of data in a centralised database.

Teagasc launched PastureBase Ireland (PBI) – an online grassland management decision support tool – in January 2013 and Grass10 will see the roll-out of the new PastureBase Ireland website as a key component of the campaign. Upon entering data from their own farm (e.g. grass measurements), the platform provides real-time and customised grassland management advice to the farmer to assist their decision-making. These reports are developed in such a way that allows farmers to benchmark their individual farm with farm in their discussion group or in their region. The data accumulated to date indicate that PBI participating farms have achieved improvements in grass DM production and grazing management.

PastureBase Ireland is informing us that farmers need to have a good control of current grass supply in order to manage grass. Grass cannot be managed correctly without knowledge of farm cover, grass demand and grass growth. The crucial point on any farm is utilising the feed resource produced on the farm.

The average number of grass measurements by the finalists was 35 per year. This shows that the farmers are constantly monitoring grass growth and supply which enables them to graze grass at the right cover which in turn allows them to grow more grass as re-growths are faster. The table below outlines the average grazing performance of the Bermingham farm.





### Grazing performance of Ryan Farm

Grazing Performance	2017	2018
Grass production (t DM/ha)	16.75	12.3
No. grass measures completed/yr	35	35
No. of grazings/events per Pdk/year	9.5	7.4
Days at grass	298	304

The average number of grazings being achieved over the last few years was 9 including the paddocks cut for silage as well as grazing. Maximising the number of grazing's achieved on each paddock is a very effective method of increasing farm grass utilisation. Every extra grazing/paddock achieved increases annual grass DM production by 1.5 t DM/ha PastureBase Ireland enables the farmer to keep track of grass growth per paddock, the number of grazing's per paddock and the quantity of grass being consumed at each grazing. This highlights poor performing paddocks and deficiencies in grazing management.



## **Farm Performance**

The Ryan family is farming about 80ha of land. Since 2014 the herd size has increased from 80 cows to 145 cows today. Milk solids production peaked in 2017 with over 2000 kg milk solids/ha produced in 2017 with a meal input of 970 kg/cow. In 2018, additional land was acquired through leasing and the farm will carry a stocking rate of 2.5 LU/ha on the whole farm and with a milking platform stocking rate of 3.7 LU/ha in 2019. Milk solids output from the farm is projected to a level of 2000 kg/ha from the milking platform in 2019.

This focus of output and profit on this farm is stemmed from high grass utilisation. The farm sold 520kgs milk solids/cow to Dairygold Co-op in 2018.

As with high grass utilisation good herd genetics has also a very important role to play in the high performance of this farm. The herd EBI of this herd is about €166. The six week calving rate has hovered around 85% over the last few years. Compact calving is key to profitability where the Ryan's can get high numbers of cows to grass early in the spring, which increases the value of milk sales and reduces feed costs. Having very good grazing infrastructure in place is essential to maximise the amount of grass eaten on the farm.



## **Soil Fertility Management**

Good productive soils are the foundation of any successful farming system and key for growing sufficient high quality grass to feed the herd. Therefore, the management of soil fertility levels should be a primary objective of every farm. A recent review of soils tested at Teagasc indicates that the majority of soils in Ireland are below the target levels for pH (i.e. 6.3) or P and K (i.e. Index 3) and will be very responsive to application of lime, P & K. On many farms sub-optimal soil fertility will lead to a drop in output and income if allowed to continue. Teagasc is highlighting 5 steps for effective soil fertility management.

1. Have soil analysis results for the whole farm (soil sampling every 2 years).
2. Apply lime as required to increase soil pH up to target pH for the crop
3. Aim to have soil test P and K in the target Index 3 in all fields
4. Use organic fertilisers as efficiently as possible
5. Make sure the fertilisers used are properly balanced

For those farmers aiming to improve soil fertility on their farms, following these 5 steps provides a solid basis for success.

### **Phosphorus (P)**

The proportion of soils tested with low soil P fertility (i.e. P Index 1 and 2) has increased to approximately 62%. This overall trend reflects the soil P fertility status on many farms, and indicates a serious loss in potential productivity. Recent research has shown that soils with P index 3 will grow approximately 1.5 t dry matter (DM)/ha per year more grass than soils with P Index 1. Most of the DM yield response in these experiments took place in spring and early summer.

### **Potassium (K)**

Soil analysis also shows that the trend in soil K status, across dairy and drystock enterprises, broadly mirrors that for P. Despite no legislative limits on K fertilisers, K usage dropped in line with P fertiliser applications. Consequently soil test results indicate a sharp increase in soils with low K status between. Over half of the soil samples tested by Teagasc had very low to low soil K status (i.e. K Index 1 or 2).

### **Increasing Soil Nutrient Availability-Lime**

Lime is a soil conditioner and corrects soils acidity by neutralising the acids present and allowing the micro-organisms and earthworms to thrive and break down plant residues, animal manures and organic matter. This helps to release stored soil nutrients such as nitrogen (N) phosphorus (P) potassium (K) sulphur (S) and micro-nutrients for plant uptake. In addition, ryegrass and clover swards will persist



for longer after reseeding where soil pH has been maintained close to the target levels through regular lime applications.

Liming acidic soils to correct soil pH will result in the following:

- Increased grass and crop production annually
- Increase the release of soil N by up to 60 units N/acre/year
- Increase the availability of soil P and K and micronutrients
- Increase the response to freshly applied N, P & K as either manures or fertiliser

Ground limestone is the most cost effective source of lime and can be applied throughout the year when the opportunity arises. Lime is the foundation of soil fertility and is a primary step to take when correcting soil fertility.





## **Investing in Grazing**

In order for expansion to be successful, there will be a requirement for significant investment on many farms. The available capital for this investment will be a scarce as expansion happens and continues. Therefore, investment on farm should be prioritised at areas that increase efficiency and reduce the exposure of the business to external shocks such as lower price of product or higher price of inputs etc. All investments that give the highest returns should be prioritised.

Every ton of additional grass eaten by the grazing animal will add €180/ha additional profit to a dairy farm. Therefore it is important that investment in grazing is prioritised to give the maximum return. The table below summarises the potential return on investment for different investments in a dairy farm business. Bottom Line: The level of return to these investments is high because it is investing in grazing. These investments will either enable the farm to grow more grass or lengthen the grazing season or both.

<b>Investment</b>	<b>Cost</b>	<b>Impact</b>	<b>Annual Return (%)</b>
Increase soil P & K levels	P & K application of 20 and 50kg/ha	+1.5 t DM/ha/year grass growth	152
Reseed full farm in eight year cycle	€650/ha	+ 1.5t DM/ha/year grass growth	96
Improve grazing infrastructure	€1,000/ha for roads, fencing and water	+ 1.0 t DM/ha/year grass eaten/utilised	58

## **The need for reseeding**

As grass is our main feed during the main grazing season, and the primary source of winter forage in the form of grass silage, the low level of reseeding must be addressed. Reseeding must be combined with managing, and where necessary increasing, soil fertility. Ireland will continue to increase milk production and the focus on efficient production of this milk is critical to maintain our industry competitiveness. Teagasc have developed a national grassland database (PastureBase Ireland), and the initial results show that there is huge capacity on Irish farms to grow more grass. The objective of this handbook is to outline the key points in grassland reseeding and to ensure farmers making the investment in renovating grassland get the best possible result.

### **Why reseed?**

Productive grassland farms must have perennial ryegrass dominated swards. Recent Moorepark research shows that old permanent pasture produces, on average, 3 t DM/ha per year less than perennial ryegrass dominated swards. Old permanent pasture is up to 25% less responsive to available nutrients such as nitrogen than a perennial ryegrass dominated sward. Reseeding is a highly cost effective investment. With regular reseeding the grass growth capacity of the farm can be increased substantially and the annual return of investment is large.



### **Objectives of reseeding are to create swards that:**

- (1) Increase the overall productivity of the farm
- (2) Increase grass quality
- (3) Are responsive to fertiliser - at least 10 kg DM/kg N applied
- (4) Allow higher animal output - 8% higher milk output per hectare relative to permanent pasture
- (5) Increase grass utilisation
- (6) Reduce silage requirement
- (7) Increase the productivity of the farm (carry a higher stocking rate)
- (8) Can allow clover to establish

### **Reseeding Checklist**

- Identify paddocks for reseeding (poorer performing paddocks; low perennial ryegrass content)
- Soil test and lime
- Sowing date
- Method of reseeding
- Spray off paddock
- When cultivating - prepare a good seed bed
- Choose appropriate grass cultivars
- Sowing rate
- Roll
- Slug and other pests
- Control weeds early
- Graze at 2 leaf stage
- Avoid poaching and over grazing

### **Cultivation techniques**

How paddocks are prepared for reseeding depends on soil type, amount of underlying stone and machine/contractor availability. There are many different cultivation and sowing methods available. All methods, when completed correctly, are equally effective.

### **Key points**

- Spray off old sward
- Graze sward tightly or mow to minimise surface trash
- Apply lime
- Choose a method that suits your farm
- Soil test
- Firm fine seedbed with good seed/soil contact is essential
- Roll after sowing



### Cultivation techniques

	<b>Do's</b>	<b>Do not's</b>
Ploughing	Shallow plough. Develop a fine, firm and level seedbed	Plough too deep (>15 cm). Cloddy, loose seedbed
Disking	Graze tight, apply lime. 3-4 runs in angled directions	Forward speed too fast - rough, uneven seedbed
One-pass	Graze tight, apply lime. Slow forward speed at cultivation	Forward speed too fast – rough, patchy seedbed
Direct drill	Graze tight, apply lime and slug pellets. Wait for moist ground conditions (slight cut in ground)	'Trashy' seedbed - no seed/soil contact. Use when ground is dry and hard



## Variety choice

The DAFM publish the recommended list, showing the Pasture Profit Index values and agronomic values of the evaluation on the same table (see <https://www.teagasc.ie/crops/grassland/pasture-profit-index/>).

The Recommended List has evaluated varieties across years and sites and is the only evidence available of the potential performance of grass cultivars in Ireland. Using varieties not on this list is basically poor decision making, as is buying grass seed on price. The varieties you use on the farm, will be there for 8-12 years, choosing to use cheap mixes, with non-recommended varieties will increase the chances of those varieties failing to perform on the farm.

When the decision to reseed is made, the next major decision is selecting the most appropriate grass variety or varieties. The first thing to consider is the primary target use of the field. Is it predominantly grazing or is it generally used as a silage paddock? How much tetraploid should be used? A balance between quality, dry matter productivity and sward density is generally what must be achieved.

The key traits in a seasonal grass based production system are:

- High quality
- High seasonal production
- Good persistency score

## Differences between diploid and tetraploid varieties

<b>Tetraploid varieties</b>	<b>Diploid varieties</b>
Tall upright growth habit	Prostrate growth habit
Create more 'open' sward	Create a denser sward with less "open" spaces
Higher digestibility value	Generally lower digestibility and yield

Combining diploids and tetraploids in a mixture will create a dense, high quality sward – ensure you select varieties which express high performance in the key traits. Increasing the proportion of diploids on heavier soils is recommended to create better ground cover. However, tetraploids should be used on heavy soils. Choosing all dense varieties will compromise DM production and grazing utilisation

## Key points when formulating a grass mixture

- Decide what the end use is – **grazing or silage** – formulate based on this
- Focus on the key traits increase the proportion of the varieties with the key traits
- Minimum of 3 kg of an individual variety
- There should be no more than three to four variety in a grass mix
- Sow 35 kg/ha (14 kg/ac) of seed
- Less than 7 days range in heading date between varieties

## Grazing specific mixtures

- Varieties exhibiting high seasonal (Spring and Autumn) PPI values
- Varieties with high quality sub index values
- Use 40-50 per cent tetraploid varieties in mixtures on dry soils
- Use 15-20 per cent of highly persistent tetraploids on heavy soils
- Small/Medium leaf white clovers for dairy cows/cattle, small leaf white clovers for sheep

## Silage specific mixtures, e.g. 2-cut system

- Varieties which have high silage sub index values
- High level of tetraploid (40%)
- Ensure proximity of heading dates
- Avoid low silage sub index diploids and poorly persistent tetraploids

## Choosing the right white clover cultivar

White clover is used in grazed grassland. White clover cultivars are categorised by leaf size.

### Small leaf white clover

- Lower yielding
- More persistent
- Tolerant of tight grazing, e.g. sheep grazing

### Medium leaf white clover

- Intermediate for yield and persistency
- Suitable for cattle grazing

Large leaf white clover

- Higher yielding
- Aggressive and can dominate a sward

Small leaf white clovers are recommended for sheep grazing and medium leaf white clovers for dairy or beef cattle grazing.

In general to establish a sward with >25% white clover, which is the level required for an animal production benefit, 4 kg white clover seed/ha (1.5 kg/ac) should be included in the seed mix.



### Management of Reseeded Swards

It takes about 11 months for a new sward to establish and settle down; therefore the management of the reseed in this period is important.

#### Management of New Reseeds

	<b>Do's</b>	<b>Do not's</b>
First 8 weeks	Graze at 2-3 leaf stage Spray weeds before grazing Nitrogen and P & K Slug pellets (if required)	Graze at high cover (>1400 kg DM/ha) Do not harvest for silage
Second grazing onwards	Graze at 1,200 - 1,600 kg DM/ha (6-8 cm) Re-spray weeds if necessary	Allow high covers to develop Graze in really dry or wet conditions
Autumn	Keep grazing at 1,200 - 1,600 kg DM/ha Graze off well before first winter (>4 cm) Light slurry application	Overgraze or poach Apply excessive slurry
Second year	Ensure the new sward receives adequate nitrogen Monitor soil P and K status	Overgraze or poach

**Graze the new reseed as soon as the plants do not pull out of the ground. Plants will normally be 6 – 8 cm high.** It is especially important that autumn reseeds are grazed before the first winter.

The first grazing does not have to be completed by the main grazing herd, calves or young stock may be a better option, particularly during poor grazing conditions.

#### **All the benefits of reseeding can be lost after sowing due to:**

- Poor soil fertility - poor establishment and tillering
- Grazing at high grass covers or cutting for silage – tiller/plant death
- Weed infestation (especially docks) – loss of ground cover
- Pest attack (frit fly, leatherjackets and slugs) – tiller/plant death



## Tillering

- Tillering is the production of new grass plants by the main grass plant established from the seed
- The process of grass tillering is critical for successful sward establishment
- Tillering helps reduce the space available for weeds
- To encourage tillering:
  - Apply 40 kg N/ha 3-4 weeks after sowing
  - Graze the reseed when it is about 6-8 cm high
  - Continue to graze the reseed in the first year of production
  - Avoid cutting the new reseed for silage in the first year (if possible)



## Weed Control

- Weeds in new reseeds are best controlled when the grass is at the 2-3 leaf stage
- Docks and chickweed are the two most critical weeds to control in reseeds
- High populations of other weeds such as fat hen, charlock, redshank, and mayweed can cause problems.
- It is essential to control docks and chickweed at the seedling stage and this is achieved by applying a herbicide before the first grazing
- To achieve the best lifetime control of docks in a sward, eradicating the dock at seedling stage in a reseed is the best opportunity
- Herbicide choice for dock control will depend on the presence of clover in the reseed (see Herbicide Guide)
- Chickweed can be a problem particularly where regular grazing is not expected to take place (silage fields), therefore herbicide choice is important
- You should consult your local adviser or merchant representative for correct herbicide choice
- Remember to keep the prescribed cross-compliance records and follow the instructions on the product label



**Seedling dock**



## Reseeding Investment

Reseeding is one of the most cost effective investments that can be made on a grassland farm.

	Projected costs €/acre
Spraying	10
Glyphosate (Gallup 360) (Round-up (2 litre/acre)	16
Ploughing (€30)/ Till & sowing (one pass) (€30)	60
Fertiliser (2 bags × 10:10:20)	37
Fertiliser spreading	10
Levelling	10
Rolling	10
Grass seed	60
Post emergence herbicide sprays	30
Spraying	10
<b>Costs (ex- post emergence sprays)</b>	<b>253</b>

### Useful Links

#### National Recommended List - sources

DAFM <http://www.agriculture.gov.ie/publications/2018/>

Teagasc <http://www.teagasc.ie>





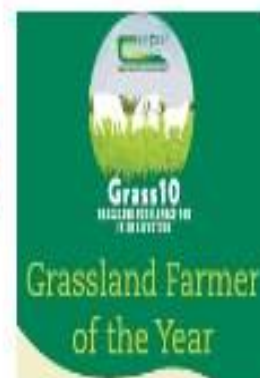
## Grass10



To increase the amount grass eaten to 10 T DM/ha  
& Achieve 10 Grazings per paddock per year

### Where is Dairy Grazing??

- 8 ton Grass DM Eaten/ha (NFS)
- 7 Grazings per Paddock/yr (PBI)



### Ryan Farm Grassland Farmer of the Year Winner 2018



#### Farm Details:

- Owned Land: 40 ha
- Leased Land: 32 ha
- Milking Platform: 40 ha
- Meal Fed (kg/cow):
  - 2017: 970
  - 2018: 1210

#### Stock Numbers:

- Cows (EBI€): 147 (€166)
- Replacements 0-1: 40
- Replacements 1-2: 30

#### Financial Performance (c/l) '18:

- Variable Costs: 13.7
- Fixed Costs: 7.5

Year	Cows No.s	Farm Stocking Rate LU/ha (Milk Platform)	Herd EBI €	Milk Solids/ha (kg/ha) Milking Platform	Six Week Calving Rate %
2014	79	2.13 (2.7)	185	1300	67
2015	97	2.17 (3.3)	206	1729	79
2016	108	2.29 (3.7)	156	1836	76
2017	120	2.36 (4.1)	145	2236	94
2018	135	2.47 (3.4)	155	1846	85
2019	145	2.47 (3.7) est	166	2035 est	84







# Regional Category Winner Grassland Farmer of the Year



## Dairy Herd Performance Report Jan - Dec 2018



Herd Owner: MICHAEL RYAN

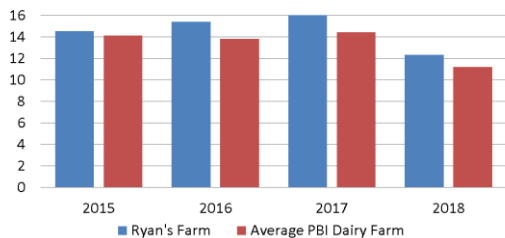
	Your Herd	Dairygold Average	Dairygold Top 10%	Your Rank out of 100	Your Star Rating
<b>Milk performance for 2018 (Jan - Dec) based on Dairygold data</b>					
<b>Fat + Protein (Kg/cow)</b> Average Fat and Protein yield per cow for your herd	518	405	518	90%	★ ★ ★ ★ ★
<b>Litres per Cow per Day</b> Avg litres of Milk per cow from Jan - Dec 2018	16.92	14.11	17.8	82%	★ ★ ★ ★ ★
<b>Fat % to end December 2018</b> Weighted average Fat % from Jan - Dec 2018	4.47	4.14	4.4	94%	★ ★ ★ ★ ★
<b>Protein % to end December 2018</b> Weighted average Protein % from Jan - Dec 2018	3.68	3.51	3.65	94%	★ ★ ★ ★ ★
<b>Average Milk Price (cpl) Incl. VAT</b> Average milk price received from Jan - Dec 2018, (Includes Bonuses/Penalties, Excludes Levies)	38.4	35.7	37.6	95%	★ ★ ★ ★ ★
<b>SCC (,000 cells/ml)</b> The weighted average Somatic Cell Count for Jan - Dec 2018	176	n/a	106	55%	★ ★ ★
<b>Fertility &amp; Calving data based on HerdPlus 2018 Calving Report</b>					
<b>Calving Interval (days)</b> Average number of days between successive calvings for cows calved during the period	372	383	364	62%	★ ★ ★ ★
<b>Spring 6 Week Calving Rate</b> Number of cows/heifers calved within the first 6 wks (117) as a proportion of all cows calved during the Spring (137)	85%	68%	86%	89%	★ ★ ★ ★ ★



## PastureBase Ireland (PBI)

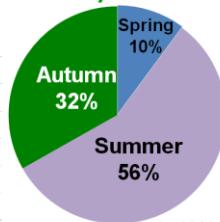


### Grass DM production 2015 – 2018 (t DM/ha)

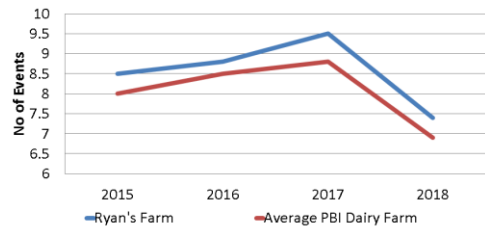


**35 walks completed in 2018**

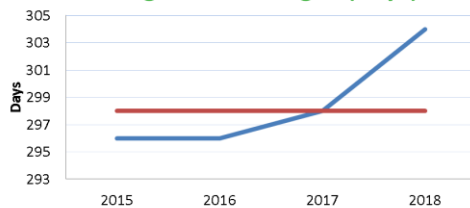
### Grass production by season



### No. of grazings/cuttings per paddock per year



### Grazing Season Length (days)



### Take home messages

- Measurement is key to managing grass
- Potential to grow & utilise more grass
- Target >10 grazings per paddock



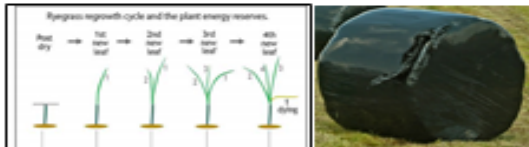


## Ryan Farm Grazing Management



*"Cash is king but grass is gold"*

1. Walks farm regularly  
➤ 2/wk in mid -season
2. Enters LEAFY grass  
➤ 1400 kgDM/ha
3. Grazes sward well: 4cm
4. Surplus grass is baled



Farm Cover (kg/ha)	_____
Farm Cover (kgDM/cow)	_____
Growth Rate (kg/ha/day)	_____
Cover next pdk (kg/ha)	_____
End of 2 <sup>nd</sup> Rotation (date)	_____
N to date:	_____
Meal Feeding (kg/cow)	_____



**Decision Making:**

- Cover/cow
- Growth Vs. Demand
- 1400 kgDM/ha



## Tipperary 3C Grazing Group: Group Members



- Grazing focus group (18 mbrs)
- Farms of different:
  - Soil type, Scale, Cow type & Business Structure
- Meet 12 times/yr on farm (2hrs)
- Operating for 13 yrs
- ✓ Grazing Group Report
- ✓ Increases Confidence
  - ✓ Buddy System
- ✓ Focus is On Decision-Making
- ✓ Learn more about grass

*"Allows us make the most of GRASS!!!"*





## Soil Fertility – 5 steps to setting the farm up to grow grass!



**Ryan Soils**  
 Lime Requirement - 24%  
 Deficiency Soil P - 32%  
 Deficiency Soil K - 59%

**Dairy Soils**  
 Lime Requirement - 50%  
 Deficiency Soil P - 55%  
 Deficiency Soil K - 54%



## Soil Fertility Management



Example Fertiliser targets N-P-K-S 250 – 20 – 40 – 20

Timing	Fert	N	P	K	S
Jan/Feb	N	30	-	-	-
March	N / P / (K) / S	40	12	(24)	8
April	N	40	-	-	-
May	N + S	40			6
Jun	NPK	25	4	8	
Jul	N + S	25			6
Aug	NPK	25	4	8	
Sep	N	25			
<b>Total</b>		<b>250</b>	<b>20</b>	<b>40</b>	<b>20</b>

- 1 Grass utilised drives requirements for P and K
- 2 Front load P in the spring to stimulate early grass growth
- 3 Apply K late in the year where high K applications are required
- 4 Slurry is best suited to low K soils, silage and paddocks cut for surplus grass
- 5 Balance N with S at a ratio of 12 N : 1 S
- 6 Early N will drive spring grass. Target the right fields & soil conditions
- 7 A simple fertiliser plan is essential. Backbone Plan + Simple switches







## Grass Measurement



*"The more I practice, the luckier I get!!!"*



## Setting the farm up to grow & utilise grass!



Investment	Cost	Impact	Annual return%
Increase soil P & K	20 kg/ha of P 50 kg/ha of K	+1.5 t grass DM/ha/yr	152
Reseed farm (8yr cycle)	€650/ha (€260/ac)	+1.5 t grass DM/ha/yr	96
Improve grazing infrastructure	€1000/ha (€400/ac) for roads, fencing & water	+1 t grass DM/ha/yr	58



*"Grazing infrastructure needs to be improved on extremities of grazing platform"*  
Judges Report

### Heavier Soils Require:

- ✓ More P, K and lime due to the soil make up and higher level of rainfall
- ✓ More investment in grazing infrastructure but return is higher
- ✓ Additional investment in drainage systems in some paddocks



# Setting the farm up for future



<b>Case Study: 40 hectare (100 acre) 500,000 litre spring milk dairy farm</b>			
Average grass utilised on farm		7 t DM/ha	
Reseeds bottom performing 1/3 of farm (13 hectare / 33 acres), corrects soil pH; carries out some drainage work and upgrades		€22,500	
Average grass utilised on farm post investment		9 t DM/ha	
Improved on-farm profitability		€14,480	
<ul style="list-style-type: none"> <li>- 65% increase in feed costs<sup>1</sup></li> <li>- 173% increase in Vet/AI costs<sup>1</sup></li> <li>- 128% increase in fertiliser costs<sup>1</sup></li> <li>- 165% increase in contractor charges<sup>1</sup></li> </ul>			
Return on investment	64%	Payback	1.5 yrs
Correct Soil P & K (€225/ha) 152% Annual Return	Reseed (8yr) (€650/ha) 96% Annual Return	Improve Infrastructure (roads; fence; water) (€1,000/ha) 58% Annual Return	

***“Without measurement you cannot improve”***  
Judges Report

Your Self
✓ Good work life balance
✓ Good team (advisor, accountant, co-op, etc.)
✓ Labour supports

Your Herd
✓ High EBI
✓ Good husbandry, high health
✓ Well grown heifers
✓ Saleable stock

Good Practises
✓ PBI, Soil Fertility
✓ Herd Plus, Co –op reports
✓ Profit Monitor, budgets
✓ Farm plan and future objectives





**Grow More,  
Graze More,  
Earn More!**



**Thanks!!**