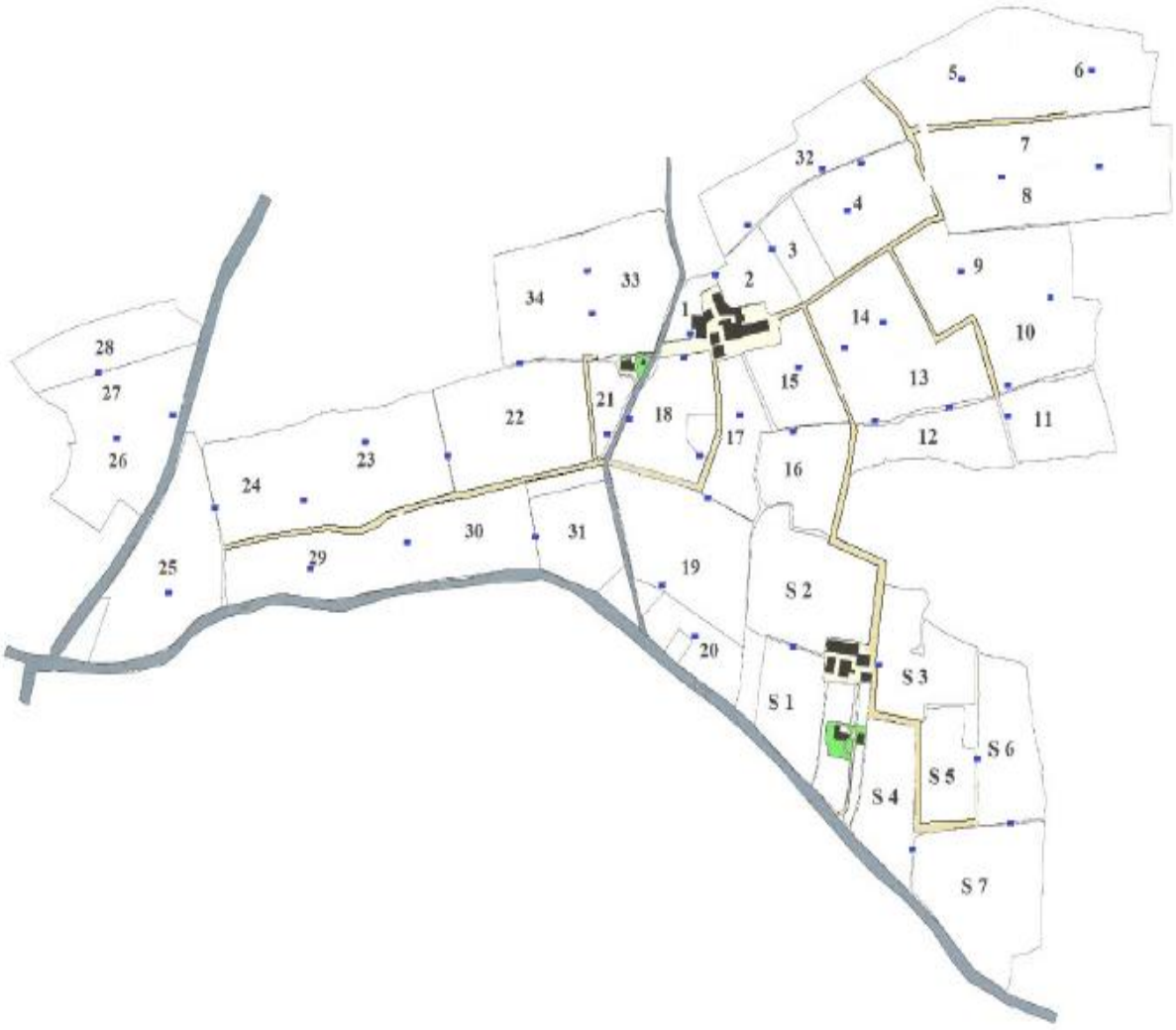
Grassland Farmer of the Year 2017

Leinster Regional Winner

Farm Open day at Heffernan's Farm, Dunnamaggin, Co. Kilkenny

Wednesday 16th May 2018

Heffernan Farm Map



Grass10 Campaign

Introduction

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 €181/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.

Introduction and welcome to the Heffernan Farm

The Heffernan Family
(Billy, Mary, Liam, and Mark)

Farm: c. 200 Ha – 3 blocks

Home: 132 (95 Ha owned, 37 Ha leased)

Outside block 1: 23.5 Ha – all leased

Outside block 2: 37.5 Ha – all leased

The home block is the milking ground.

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

Milk is supplied to Glanbia.

Background

Billy started farming in Caherleske in 1983 having previously qualified as an FAB farm manager and spent 8 years milking 180 cows on a dairy farm in North Kilkenny.

For many years the home block of 45 Ha was farmed as a mixed farm with typically 40 dairy cows, 300/400 breeding ewes, a cattle enterprise and tillage – a mixed farm.

Now the farm is a Dairy Operation and is farmed in a family partnership.

Liam spent a year in Kildalton College, Piltown following which he studied at Clonakilty Agricultural College where he completed a Diploma in Dairy Herd Management. Liam returned home to farm full-time in 2004.

Mark has a degree in Construction Management and Engineering. Mark has also completed an Advanced Cert in Agriculture. Mark returned home to farm full-time in Spring 2011.

Farm History: Dairying

The farm has evolved overtime and has grown in cow numbers over the last decade to become a dairy farm. This is outlined in the table below.

Cow Numbers:

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Cows	56	70	79	102	104	120	144	165	224	295	346	450

Growth in cow numbers has being matched with both an increase in land base but also more grass grown on the farm. Outlined below is the grass production pattern over the last 10 years. There has been a 50 % increase in grass production on this farm.

Grass Grown (tonnes/Ha):

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
t/Ha	12.6	14.3	13.6	15.6	15.9	15	16.5	17.5	16.5	19.0

Grass Management

The farm was a monitor farm under the Glanbia joint programme for 3 years from 2008 to 2010. We began measuring grass in 2008 and have continued to do so ever since.

We walk the farm weekly and twice a week in times of high growth. Last year the farm was walked and grass cover was measured 50 times. This information is then entered into the PastureBase Ireland web-based programme. Pre-grazing covers and cover per cow are 2 key figures we use when making decisions.

The weekly farm cover measurements are also marked onto a farm map which is printed on a white board and located on the wall in the Dairy. This is an essential piece of equipment as all members of the family can clearly view the grass supply on the farm every week and the next paddocks to be grazed.

Discussion Groups

We are active members of our local discussion groups, the Castlehale Discussion Group. Billy was a founding member of the group over 30 years ago. We have benefitted enormously from interaction with other group members and by learning/taking new ideas when visiting other members' farms.

We are also members of the 'Grass 2 € 'grass group. This group is made up of members of our local group together with members of other neighbouring groups. Also while the farm was a monitor farm it was used as a host farm to run 2 grass courses (each attended by 15-20 farmers) over a number of months in each of 2009 and 2010.

We would like to thank our Teagasc advisor Michael Freaney for all his support to us over the years as well as running the local discussion group. We are delighted to have been awarded this prize and would like to thank everyone who has been part of organising the walk today.

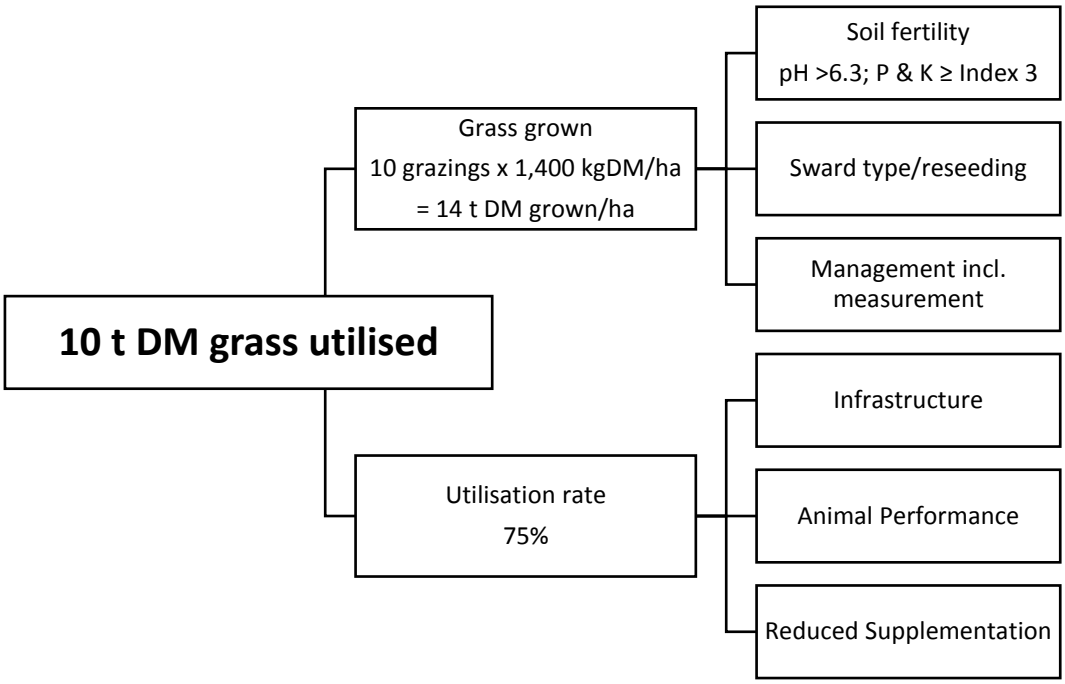
Current Grazing Performance on Dairy Farms

Currently, it is estimated that about 8 tonnes grass DM/ha is utilised nationally on dairy farms (Dillon, 2016). There are major improvements required in areas of pasture production and utilisation. Data from the best commercial grassland farms and research farms indicate that the current level of grass utilised can be increased significantly on dairy farms (greater than 10 t DM/ha utilised – i.e. 14 tons DM/ha grown and 75% utilisation rate).

It is important to recognise that improvements in the level of soil fertility, grazing infrastructure and level of reseeding are in achieving higher levels of grass production and utilisation. However to achieve greater change in the level of grass utilised, farmers will need to upskill their grazing management practices. This means regular measurement of grass cover, using specialised grassland focused software to analyse grass production and, making and implementing grazing management decisions. These are key drivers to increasing grass production on the farm. New technologies are now available which make grass cover assessment and the decision making process much easier.

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

Grass10
GRASSLAND EXCELLENCE FOR IRISH LIVESTOCK

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. Practises used by these famers 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 Heffernan Family are the Leinster Regional winners of the Grassland Farmer of the year Competition 2017.

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 well. 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 40 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 Payne farm in 2017, Connaught/Ulster regional winner of the Grassland Farmer of the Year Competition.

Grazing performance of Heffernan farm in 2017

Grazing Performance	2017
Grass production (t DM/ha)	19
No. grass measures completed/yr	50
No. of grazing's/paddock/year	9
Days at grass	290

The average number of grazing's being achieved 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 Heffernan family are farming about 200ha of land of which about half is leased. Since 2008 the herd size has increased from 70 cows to 450 cows today. Currently there is a stocking rate of 3.3 cows/ha on the milking block and the overall farm stocking rate is around 2.75 LU/ha.

This focus of output and profit on this farm is stemmed from high grass utilization. This Heffernan's fed 550kgs meal/cow in 2017 and the rest of the herds' diet was made up of grazed grass and grass silage. The farm sold over 480kgs milk solids/cow to GII (Glanbia) in 2017 or over 1400kgs milk solids/ha from the milking platform. The target is to sell over 1500 kgs/ha of milk solids from a predominately grazed grass diet.

As with high grass utilization good herd genetics has also a role to play in the high performance of this farm. The herd EBI of this black and white herd is about €110. Calving interval was 370 days in 2017 and the six week calving rate has hovered around 85-90% over the last five years. Compact calving is key to profitability where the Heffernan's can get high numbers of cows to grass early in the spring, which increases the value of milk sales and reduces feed costs. Getting high volumes of cows out to grass in February is first key step to achieving ten rotations. 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.

Investment	Cost	Impact	Annual Return (%)
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

	Do's	**Do not's**
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

Tetraploid varieties	Diploid varieties
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

	Do's	**Do not's**
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

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
Costs (ex- post emergence sprays)	**253**

Useful Links

National Recommended List - sources

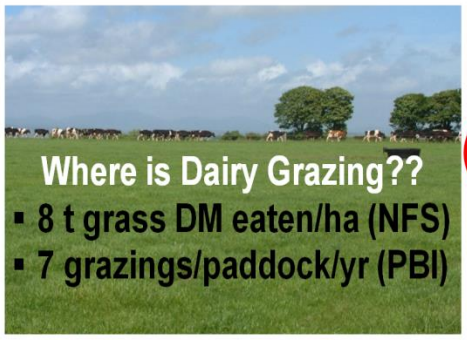
DAFM http://www.agriculture.gov.ie/publications/2018/

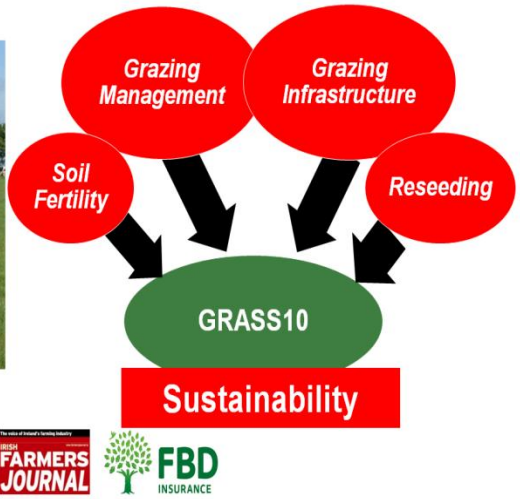
Teagasc http://www.teagasc.ie

Grass10

Objective:

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





PastureBase IRELAND

Grass10 Grassland Farmer of the Year

An Roinn Talmhaíochta, Bia agus Mara, Department of Agriculture, Food and the Marine · Grassland AGRO · AIB · Irish Farmers Journal · FBD Insurance

Heffernan Farm
Grassland Farmer of the Year Winner

eagasc Agriculture and Food Development Authority

Farm History

- Started out with FAB
- Farming here since 1983
- Mixed Farming
- Liam (2004) & Mark (2011)
- 2008: 70 cows & growing 12.6 T DM/ha
- 2017: 350 cows & growing 19 T DM/ha
- Family Farm Partnership
- Discussion Group Members

Farm Target 2018:
1500 kg milk solids/ha
feeding 500-600 kg meal/cow

Farm Details

- Land 200 ha (owned & leased)
  - Home Farm - 132 ha Milking Platform
- Outfarms: (2 out farms) 60ha
  - Replacements and silage

Current Stock Numbers

- Cows - 450
  - Stocking rate – 3.3 on Milking Platform
- Replacements 0-1 yo - 140
  Replacements 1-2 yo - 128

An Roinn Talmhaíochta, Bia agus Mara, Department of Agriculture, Food and the Marine · Grassland AGRO · AIB · Irish Farmers Journal · FBD Insurance

Heffernan Farm
Grassland Farmer of the Year Winner 2017

Farm Details:

- Owned Land: 103 ha
- Lease: 97 ha
- Milking Platform: 132 ha
- Labour: 3 & Relief for 6wks
- Meal Fed (kg/cow): 600

Stock Numbers:

Cows:	450
Replacements 0-1:	140
Replacements 1-2:	128
Bulls:	6

Costs of Production (c/l) 2017:

Total Costs	16.7

Year	Cows No.s	Farm Stocking Rate LU/ha (Milking Platform)	Herd EBI €	Milk Solids/ha (kg/ha)	Six Week Calving Rate %
2008	70	2.66 (0.93)	77	424	72
2014	170	2.58 (2.83)	152	1209	84
2015	247	2.68 (2.23)	154	1091	88
2016	300	2.42 (2.42)	87	1123	83
2017	378	2.76 (2.9)	100	1406	90
2018est	450	2.75 (3.30)	110	1550	90

Regional Category Winner
Grassland Farmer of the Year

Dairy Herd Performance Report

Jan - Dec 2017

Herd Owner: WILLIAM HEFFERNAN

Table 3: Glanbia/ICBF Performance Score Card

	Your Herd	Glanbia Average	Glanbia Top 10%	Your Rank out of 100	Your Star Rating
Milk performance for 2017 (Jan - Dec) based on Glanbia data					
Fat + Protein (Kg/cow) Average Fat and Protein yield per cow for your herd	460	385	478	84%	★ ★ ★ ★ ★
Litres per Cow per Day Avg litres of Milk per cow from Jan - Dec 2017	15.84	13.48	16.5	83%	★ ★ ★ ★ ★
Fat % to end December 2017 Weighted average Fat % from Jan - Dec 2017	4.15	4.11	4.36	64%	★ ★ ★ ★
Protein % to end December 2017 Weighted average Protein % from Jan - Dec 2017	3.6	3.52	3.66	79%	★ ★ ★ ★
Average Milk Price (cpl) Incl. VAT Average milk price received from Jan - Dec 2017. (Includes Bonuses/Penalties, Excludes Levies)	37.8	37.1	39	71%	★ ★ ★ ★
SCC (,000 cells/ml) The weighted average Somatic Cell Count for Jan - Dec 2017	160	159	81	42%	★ ★ ★
Fertility & Calving data based on HerdPlus 2017 Calving Report					
Calving Interval (days) Average number of days between successive calvings for cows calved during the period	370	386	365	78%	★ ★ ★ ★
Spring 6 Week Calving Rate Number of cows/heifers calved within the first 6 wks (348) as a proportion of all cows calved during the Spring (388)	90%	68%	88%	94%	★ ★ ★ ★ ★

Grass to € Grazing Group:
John Ragget, Group Member

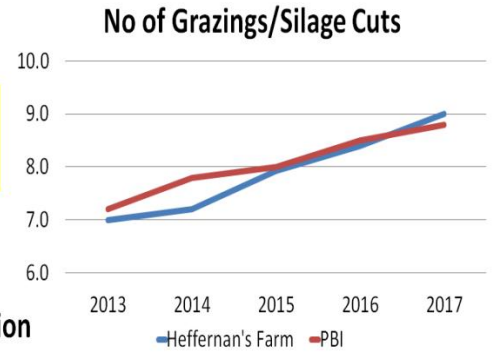
- ➢ Grazing focus group
- ➢ Farmers from different Groups
- ➢ Meet 10 times/yr on farm
- ➢ 1 hour Meeting & Walk Farm
- ➢ Operating for 4 yrs

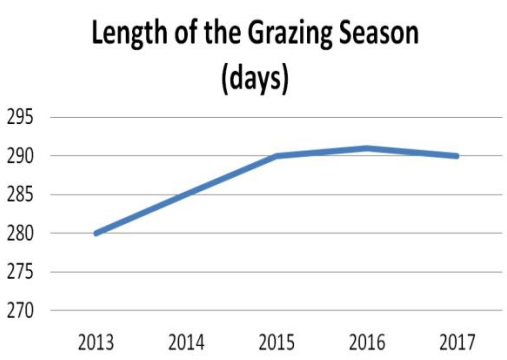
- ✓ Grazing Group Report
- ✓ Increases Confidence
- ✓ Focus is On Decision-Making
- ✓ Learn more about grass

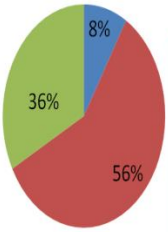
"Allows us make the most of our most valuable asset- GRASS!!!"

PastureBase Ireland (PBI)

50 Walks Completed







Take home messages

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

Reseeding Heffernan Farm

Which method???

All methods effective when completed correctly

Reseeding Tips

- Spring better than autumn
- Prepare a fine, firm seedbed
- Use the Pasture Profit Index €

Soil Fertility at Reseed

- Soil fertility is critical for a successful reseed
- Soil test, lime and appropriate fertiliser (N, P and K)
- Target: pH 6.3, P and K index 3 (lime 2t/acre, 3 bags 10-10-20)

Post sowing management

- Ensure seed bed is rolled following seeding
- +30 Units N/Acre (Weeks 4-5)
- Post emergence spray - 5-6 weeks after reseeding
- 1st grazing: 700 – 1000 kg DM/ha
- Graze every 17 – 21 days (1000 – 1400 kg DM/ha)
- Avoid silage in first year if possible

MCPA Residue Issue

- Multiple exceedances of legal limit for MCPA in drinking water sources
- Pesticide users must comply with the regulations as outlined in the Sustainable Use Directive (SUD)

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

Paddock Size

- ✓ 3 grazings/paddock
- ✓ 2 ha (5 acres) for 100 cows
- ✓ As square as possible
- ✓ Multiple access to paddock

Farm Roadways

- ✓ 4m wide for 100 cows
- ✓ Above the height of the field
- ✓ Not shaded & crossfall
- ✓ Spur roadways if possible

Water System

- ✓ 2 gals/cow
- ✓ Main: 1¼" pipe (100 cows)
- ✓ Central location
- ✓ 5 cows/100 access at 1 time

Grazing Management: The Next 60 Days!!

Farm Map on Whiteboard

PastureBase IRELAND

Growth Period	Grass Grown/Rotn (kg/ha)	Rotn. Length (days)	No. of Rotations	Growth (kg/ha) required/day
Mid Feb to Mid Apr	975	65	1	15
Apr 7 to Aug 5	1400	20	2-7	70
Aug 6 to Aug 31	1625	25	8	65
Sep 1 to Oct 10	1900	40	9	48
Oct 11 to Nov 20	1100	40	10	27
Total Grass production/ha	14000	200	10	

Heffernan Grazing Targets:

- Enter 1400kg Grass DM/ha
- Walk the farm every 5 days

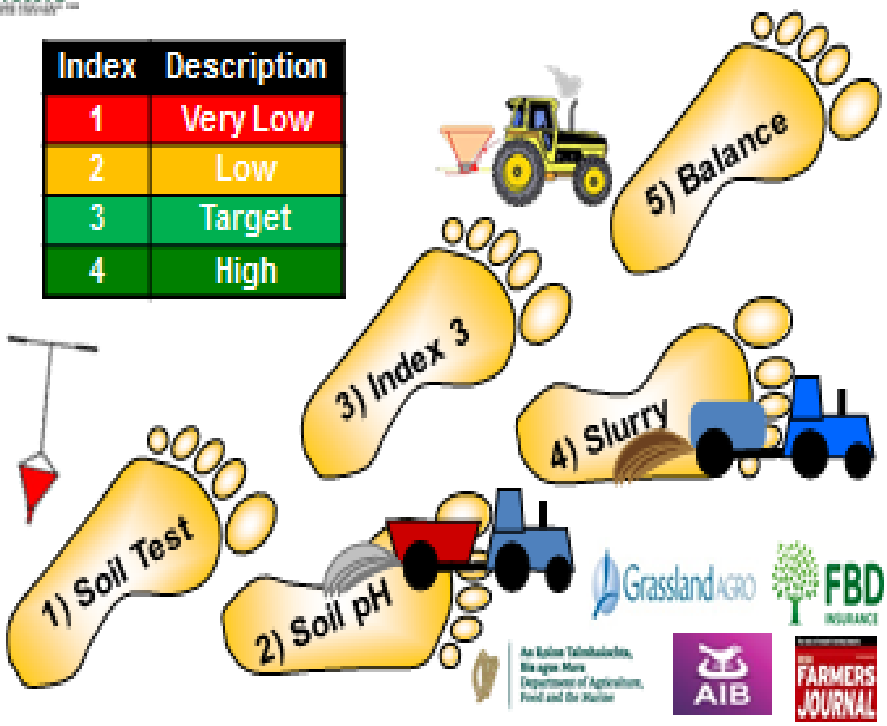
Grazing Decision Making:

- Operate at 160-180/LU
- Growth Vs. Demand
- Farm Cover

"Farm map guides grazing"

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

Index	Description
1	Very Low
2	Low
3	Target
4	High



Heffernan Soils Jan'17

Lime Requirement: 61%

Deficiency Soil P: 5%

Deficiency Soil K: 71%

National Soils:

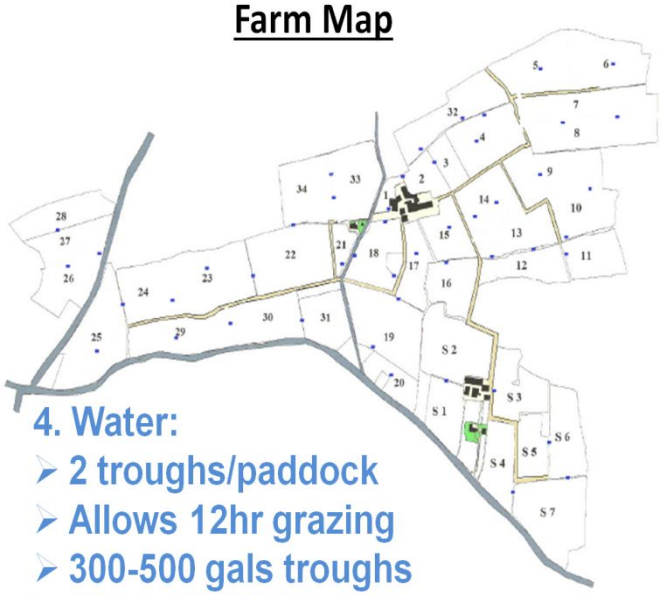
Lime Requirement: 65%

Deficiency Soil P: 62%

Deficiency Soil K: 57%

Heffernan Farm
Grassland Farmer of the Year Winner

Farm Map



Grazing Infrastructure

1. Constant Upgrading

2. Paddocks:
25 in 2018 & 24-48 hr grazing
Multiple Entrances/exits

3. Roadways:
7m wide at yard & 5m at ends
Slig is surface finish
Longest walk is 1.4km to 1.8km
Underpass to 40% of platform

4. Water:
- 2 troughs/paddock
- Allows 12hr grazing
- 300-500 gals troughs
- 32mm to 40mm pipes

Large Herd Grazing Management

- *Main herd is 1 group*
  - *Enter 1300-1400kg Grass DM/ha*
- *Small "hospital" herd (15-20 cows)*
- *Roadways & paddock access*
- *Wide roadways at yard*
- *Free access to grass during main grazing season (36hr grazing)*
- *Use of cow pathways during difficult grazing conditions*