

New Developments in grassland to make grazing management easier

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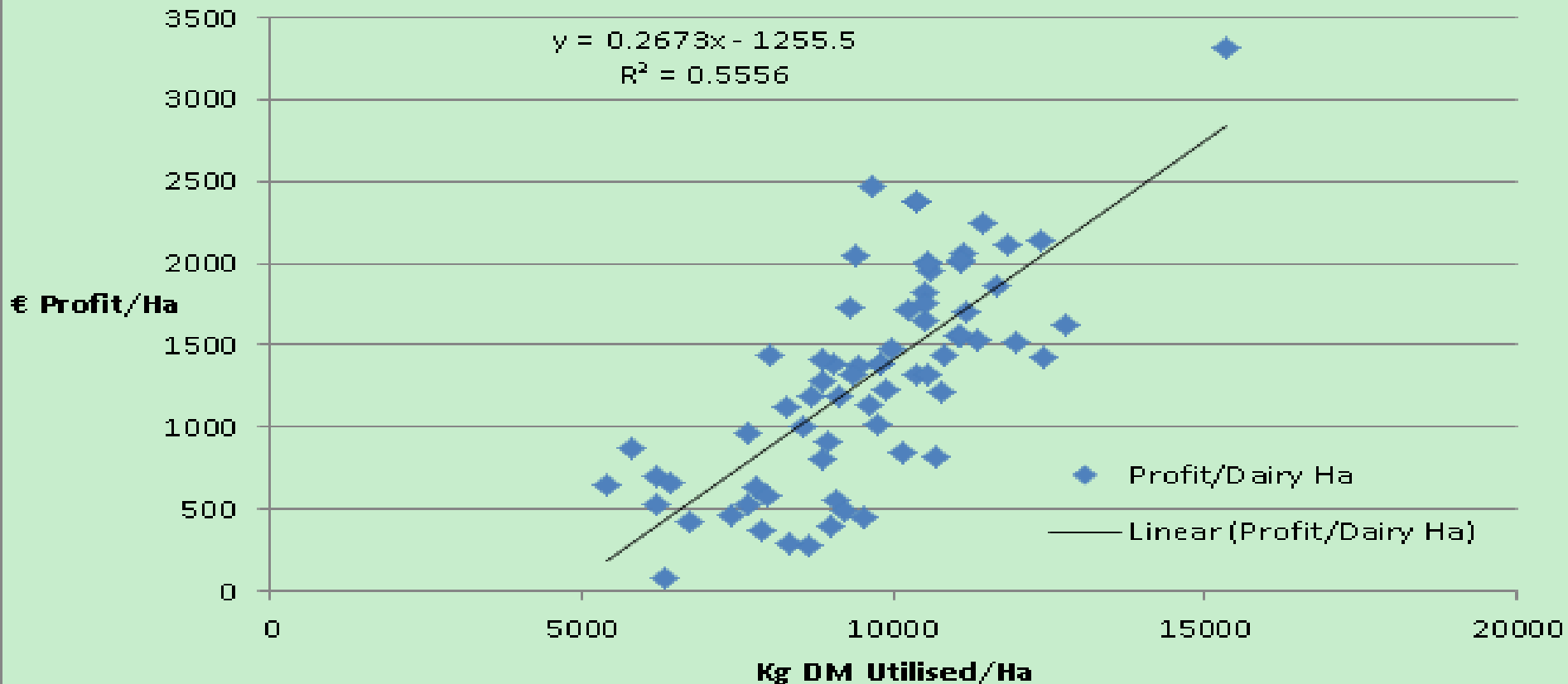
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Key challenges to grassland in Europe

- **Permanent and temporary grassland - 33% and 6% of total utilised Agricultural Area (UAA)**
- **Permanent Grasslands - 57million ha EU (27) and 10 million ha (Temporary)**
- **78 million livestock units of grazing livestock (82% cattle/cows, 14 small ruminants, 4% horses)**
- **Netherlands (3.12), Belgium (3.17), Denmark (2.66) and Ireland (1.4) – highest stocking densities**

Grassland Challenge – Improve Production and utilisation

Profit/Dairy Ha - Kg DM Utilised/Ha



Grass – its value as a Feed

	Total costs (€/t UDM)	No land cost (€/t UDM)	€/1000 UFL	Relative to grass
PRG 2.5 LU/ha (80% utilised)	75	42	73	1.00
PRG 2 LU/ha (75% utilised)	78	40	76	1.04
PRG 1.65 LU/ha (60% utilised)	104	47	107	1.47
First cut silage (6.0 t DM/ha)	185	156	230	3.15
Purchased Barley	188	-	162	2.22

If you fail to plan –you are planning to fail –

Benjamin Franklin

**Applying Grassland Measurement provides
the route to success in Grazing Management**

**Grazing Management is based on
controlling grass demand and growth**

New Grassland Developments



Grazing measurement & management

**Increasing
Grazing
Utilisation**

***Perennial
ryegrass/white clover
pasture***

***Grazing
infrastructure***

- **Web based grassland management**



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Disclaimer This application should be used in conjunction with good husbandry practice and should be used only as a guide to grassland management. The use of this application does not effect any statutory requirements. Teagasc shall not be held responsible for any losses incurred by the end user as a result of the use of this application.

PastureBase Ireland

- Decision support tool – Front end
- Grassland data base – back end
- Data capture by farmer
- Grassland Measurement – visual assessment or plate meter



Grass Measurements - Grass Wedge

Home Farm Users Farm Options Maintenance Reports

Farm Name Starview

Cover Date 12/07/2016

Save All Cancel Wedge Report

Time left to complete screen: 37:31

Estimations

Livestock

Paddock	Area	Herbage	Paddock Status
17	1.27	1000	Grass
18	1.27	1000	Grass
19	1.27	900	Grass
20	1.27	900	Grass
21	1.33	100	Grass
22	1.17	100	Grass
23	1.39	100	Grass
24	1.54	1100	Grass
25	1.07	1100	Grass
26	0.33	1100	Grass
27	1.57	1200	Grass
28	1.57	1200	Grass

Management Decisions

No. of Cows	215
Residual Height (cm)	4.0
Grass Allocation /Cow (kg DM/cow)	17.0
Dry Matter %	18.0
Rotation Length (days)	19
Concentrate Fed (kg/cow)	0.0
Silage Fed (kg DM/cow)	0.0
Total Livestock (Other)	0

- Allow edit of Target pre-grazing yield (kg DM/ha)
 Show View Options

Report Calculations

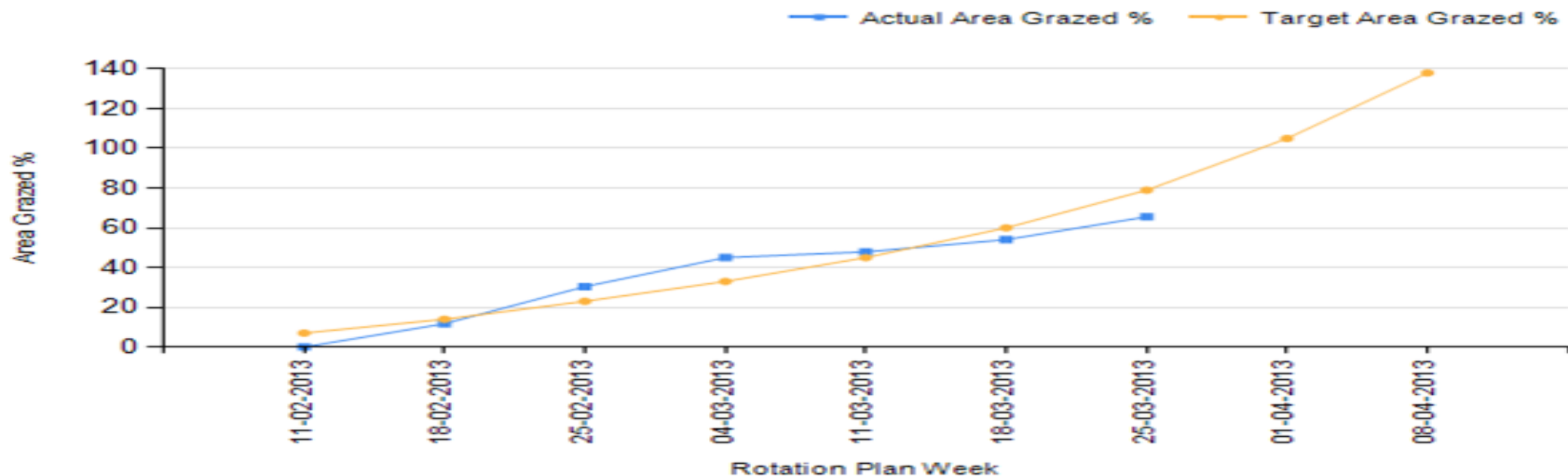
Farm Cover (kg DM/ha)	760
Farm Cover (kg DM/LU)	165
Grass Allocation LU (kg DM/LU)	17.0
Total Livestock LU	215.0
Stocking Rate (LU/ha)	4.60
Growth Rate (kg/ha/day)	105
Farm Demand (kg DM/ha/day)	78
Target pre-grazing yield (kg DM/ha)	1486

Using the Spring Rotation Planner

Example SRP for a 40 ha dairy farm with 100 dairy cows

Week	Rotation (days)	Daily area (ha/day)	Total area grazed by week end (%)
1 st to 7 th Feb	100	0.4	7
15 th to 21 st Feb	82	0.49	23
22 nd to 28 th Feb	73	0.55	33
8 th to 14 th Mar	56	0.72	56
22 nd to 28 th Mar	38	1.06	90
29 th Mar to 4 th Apr	29	1.38	114

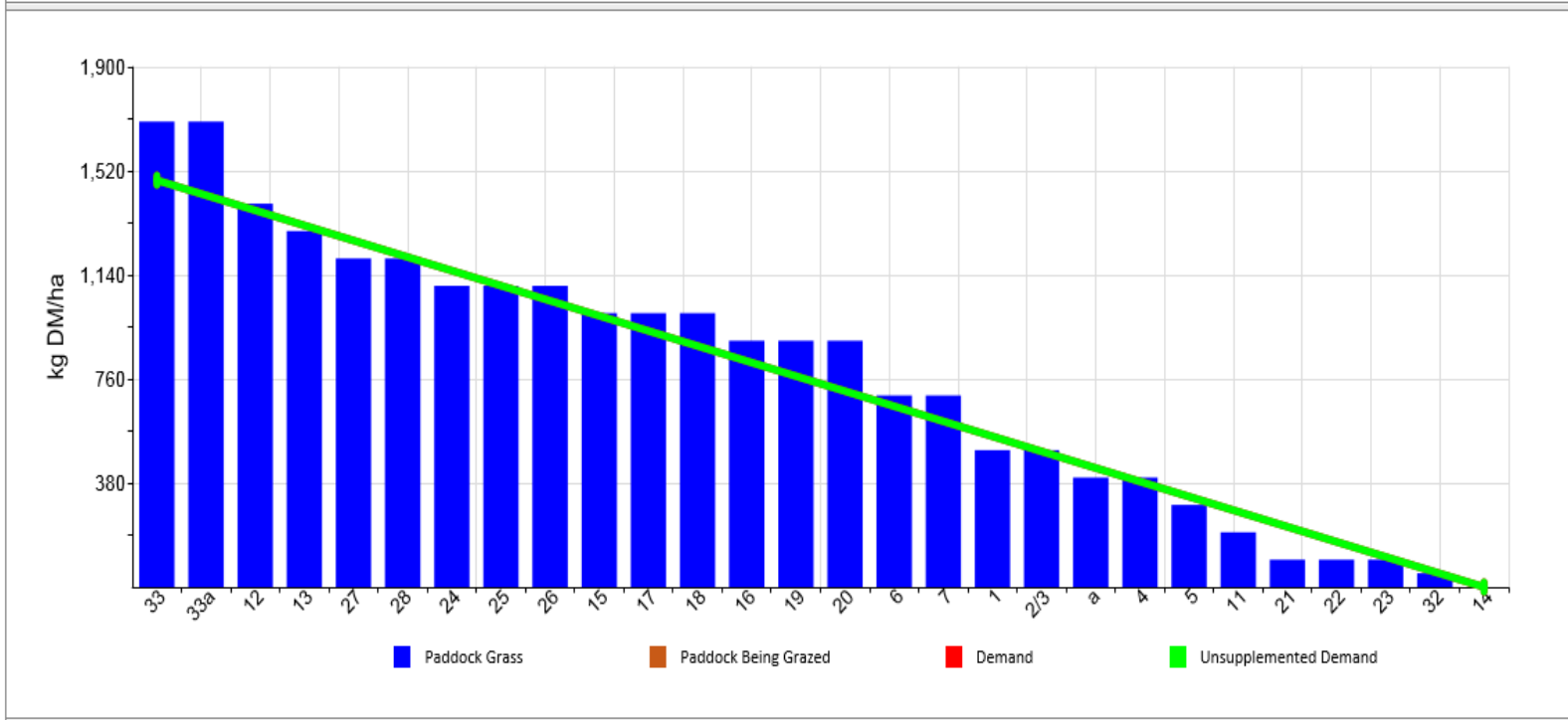
Spring Rotation Plan



Grass Wedge - Mid Season management

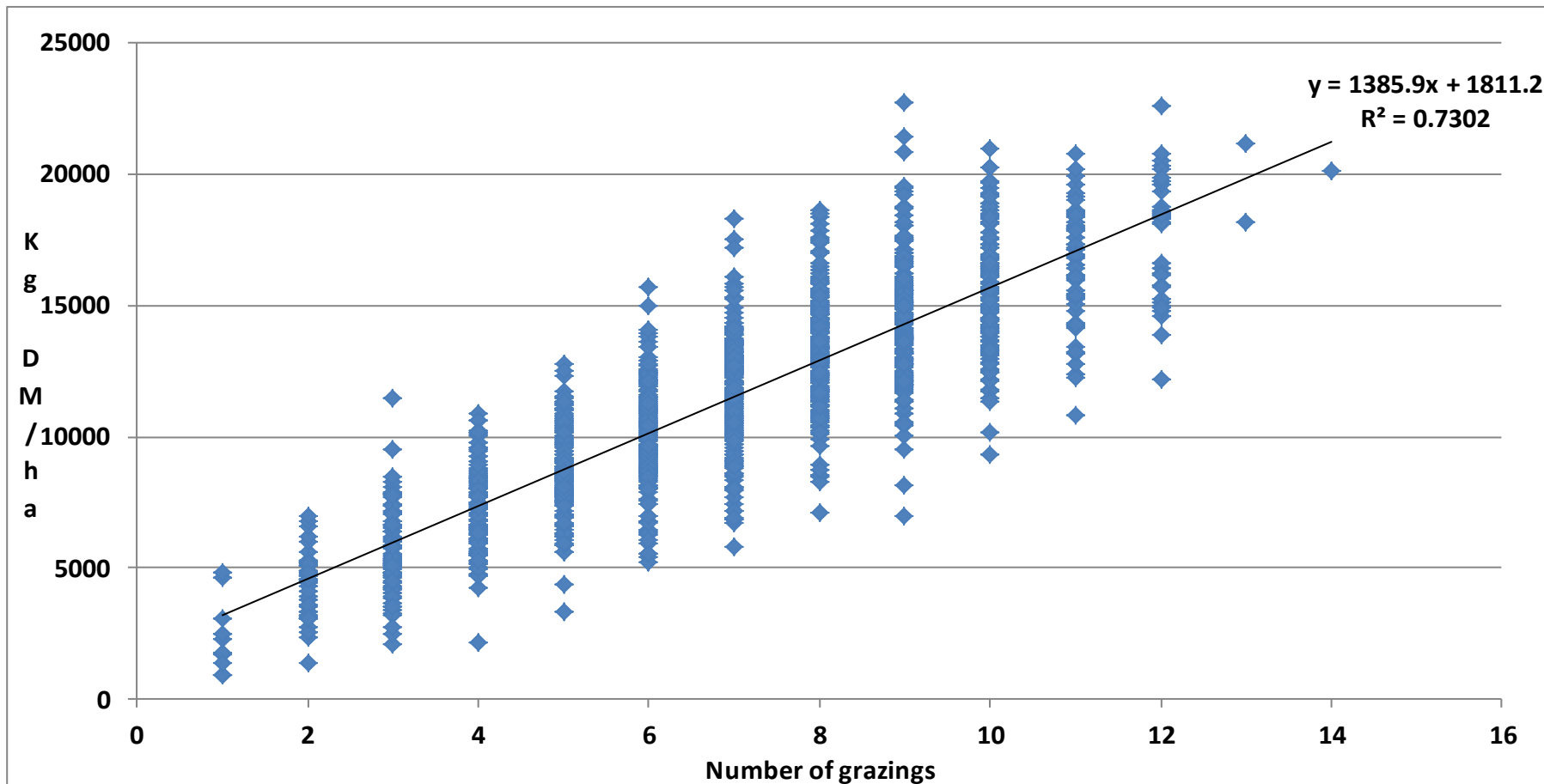
View Options

- | | | | | | | | |
|---------------------------------|-------------------------------------|-------------------------------|--------------------------|----------------------------|----------------------|-----------------------|----------------------|
| Beef/Sheep | <input type="checkbox"/> | Current & Summary Performance | <input type="checkbox"/> | Predicted Days | <input type="text"/> | Predicted Growth Rate | <input type="text"/> |
| Recommendations | <input type="checkbox"/> | Display Spring/Autumn Budget | <input type="checkbox"/> | Farm Walk Management Notes | <input type="text"/> | | |
| Budget in LU | <input checked="" type="checkbox"/> | Display Rotation Plan | <input type="checkbox"/> | | | | |
| Unsupplemented Feed Demand Line | <input checked="" type="checkbox"/> | | | | | | |

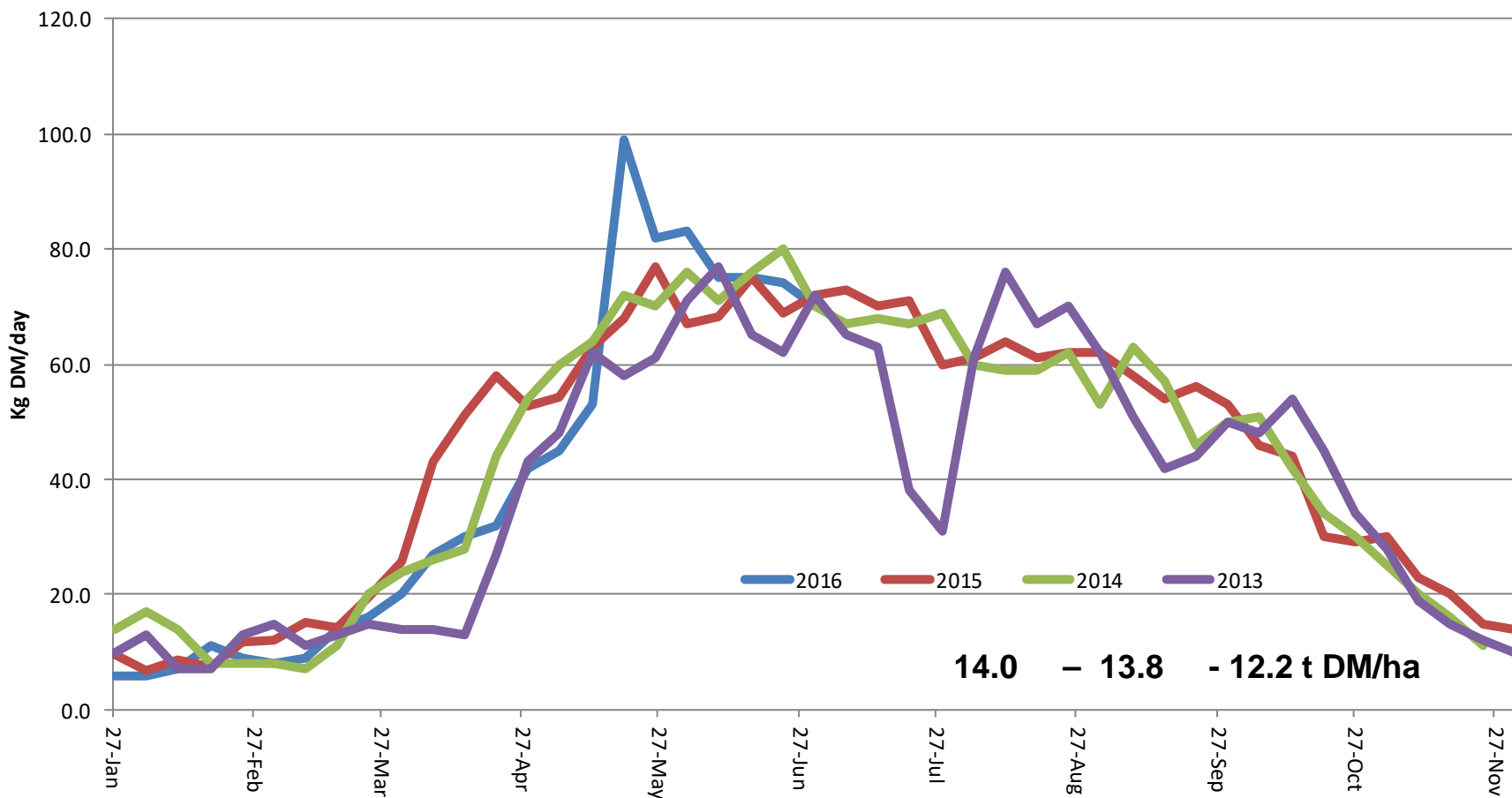


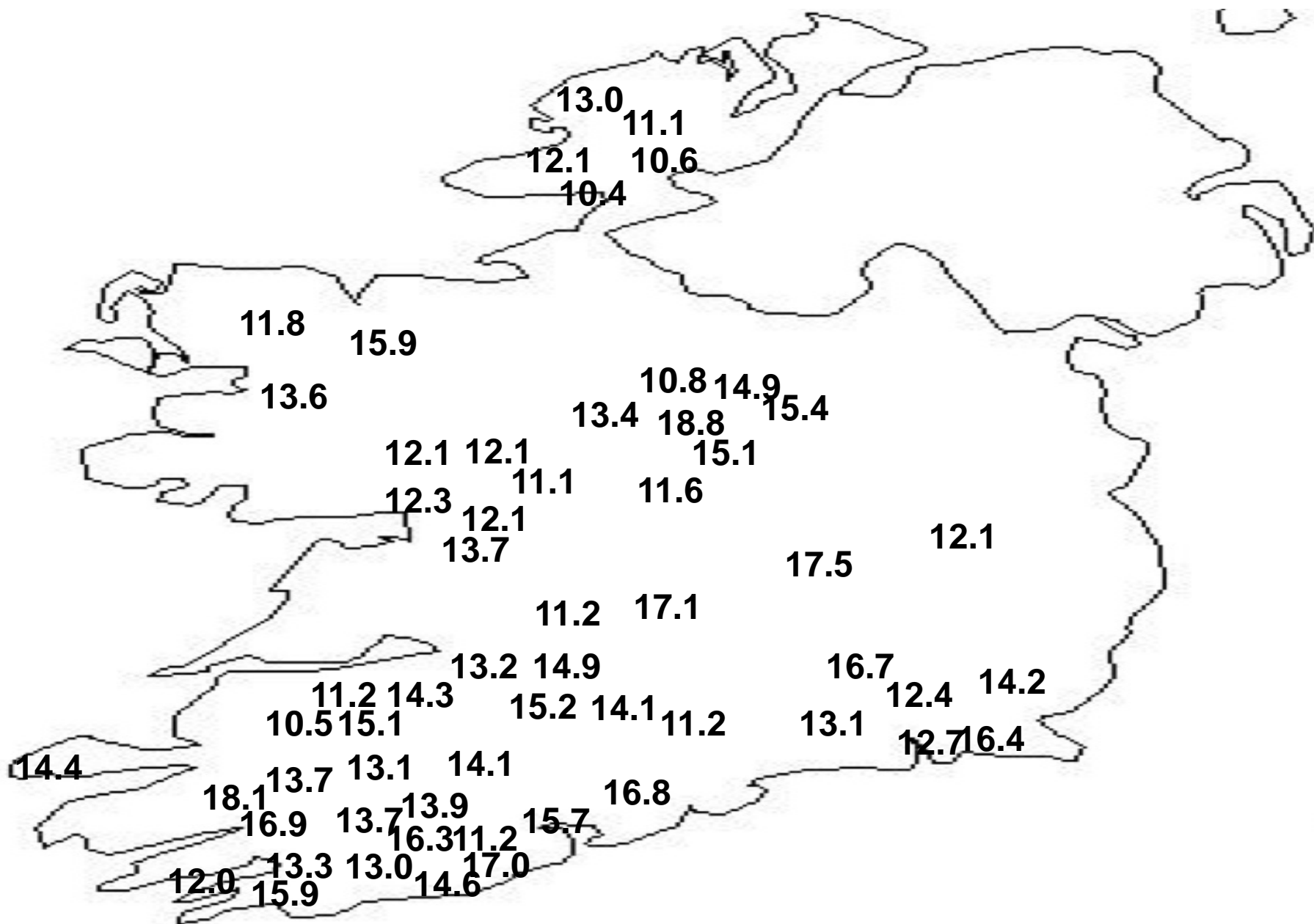
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Number of grazings achieved and its association with total grazing DM production



Benchmarking Weekly, Annual Production





Grazing measurement & management



**Increasing
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***Perennial
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pasture***



***Grazing
infrastructure***

Grazing infrastructure – setting the farm up



Use a back fence

Grazing measurement & management



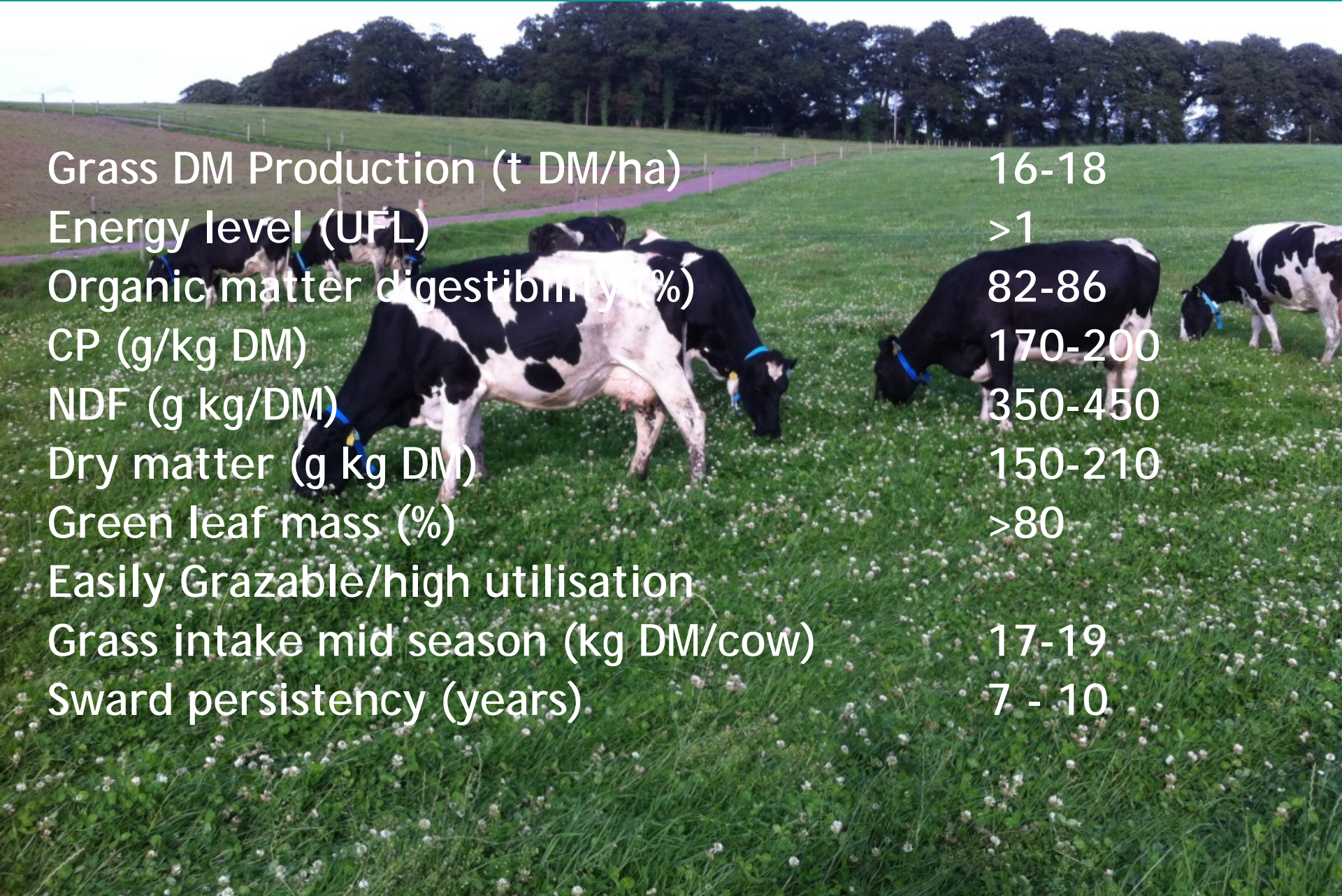
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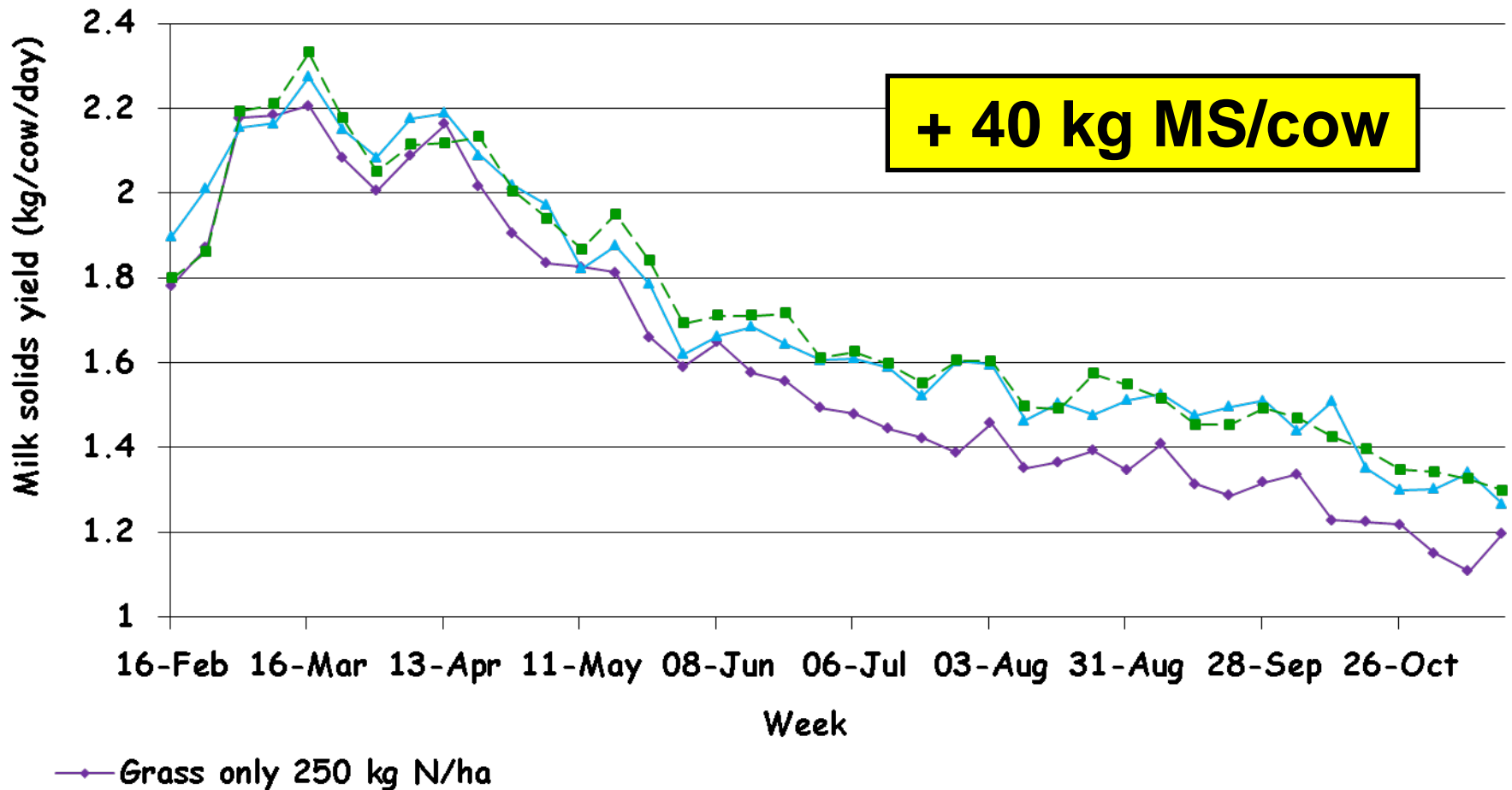
***Grazing
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Requirements of the ideal grazing sward



Grass DM Production (t DM/ha)	16-18
Energy level (UFL)	>1
Organic matter digestibility (%)	82-86
CP (g/kg DM)	170-200
NDF (g kg/DM)	350-450
Dry matter (g kg DM)	150-210
Green leaf mass (%)	>80
Easily Grazable/high utilisation	
Grass intake mid season (kg DM/cow)	17-19
Sward persistency (years)	7 - 10

Milk Production results 2013-2015



Summary and Conclusions

- Success in grassland management is dependant on the farmers attitude to utilising the feed
 - Grassland utilisation is a key predictor of profit
 - Grassland Measurement needs to be integrated to management
 - Grass is different to other feeds, it requires focussed management, adoption of new IT will assist this
 - The adoption of Grazing technology – will assist the improved management and utilisation of pasture
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- A photograph of a herd of black and white cows grazing in a lush green field. The cows are scattered across the field, some in the foreground and others in the distance. The background shows a line of trees and rolling hills under a cloudy sky. The overall scene is a typical rural landscape.