



MASTER GRASS FACTSHEET

Beef and Sheep 2023

START WITH YOUR SOILS -

- › Drainage
- › Dig a hole - assess soil health, earthworm population, signs of compaction
- › Soil test - correct PH, P, K indexes and asses Organic Matter levels

Grass is the cheapest source of feed for ruminant livestock if managed correctly!

Re-seeding

- › Improves yield and quality by introducing new varieties into leys and improved Nitrogen efficiency
- › Higher output/ha and reduced purchased feed
- › Opportunity to address weed burden
- › Break crop (such as brassicas) recommended before full re-seed for best result
- › Oversewing grass and white clover is the cheapest option

Nitrogen still cheap when compared to bought in feed (But don't shout about it!)

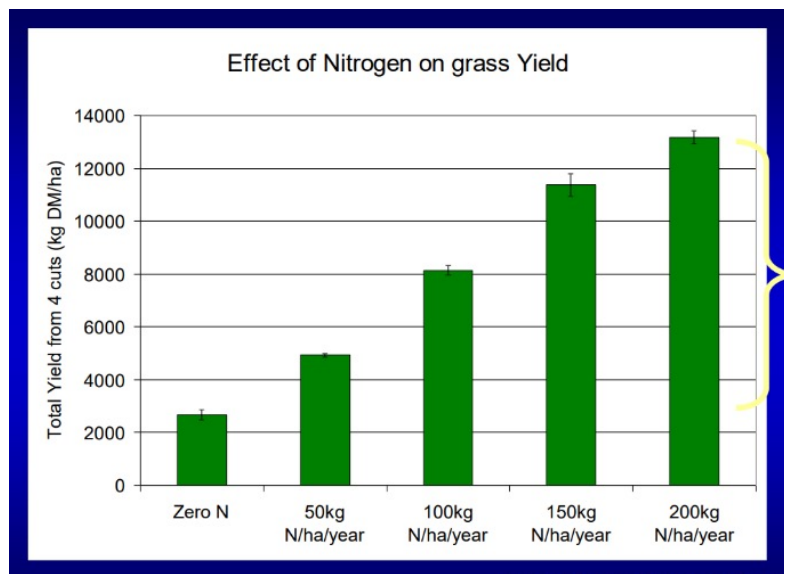


Farm Trials at Harper Adams 2014-2018

- › Adding Red clover to grass mix consistently added >2t DM/ha per year
- › Adding white clover to base mix added >1.5t DM/ha
- › Adding Red + White Clover to base mix added >3.5t DM/ha
- › The highest yielding mix is only 45% PRG, something to think about

Useful Information

- Grass is measured in kgDM/ha
- A Hectare can grow between 4-15tonnes DM/ha
- Growth varies from 0-120kgDM/ha
- Grass cover varies between 1400-5000 kgDM/ha
- Covers= The amount of grass in a field
- Average cover= The average KgDM/ha in a number of fields
- Residual= grass left after a grazing
- Demand= KgDM/Day needed by an animal or group of animals depending on bodyweight and stage of production

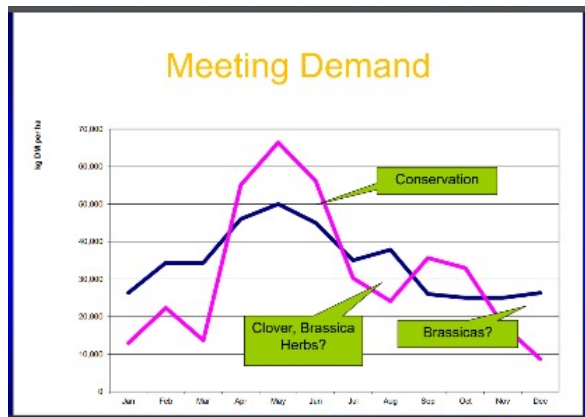


Seed mixes

- › Choosing the right grass seed mix for your system is essential
- › Use the best varieties off the "Recommended Grass and Clover List"
- › Mixed herbal leys- plantain and chicory for better drought resistance?

Measuring Grass

- To supply the right Quantity and Quality of feed at the right time so stock can express their genetic potential.
- We measure grass using a rising plate meter or cut and weight system and record data on farm software such as AgriNet / Farmax etc
- Figures we get include
 - Average Farm Cover: how much grass is on our farm
 - Grass Growth: Increased or Decreased? Is it higher or lower than our demand?



Pink line = Grass growth curve throughout the year
Blue line = Demand of most livestock systems throughout the year.

Production Potential of Managed Grazing

Grazing 'on time' (Days)	Annual Yield (Tonnes DM Ha)	Utilisation *	Total Utilised DM (Tonnes DM Ha)	Producti on Increase
Set Stocking	6	70%	4.2	-
3 - 7	8	80%	6.4	50%
2 - 3	10	85%	8.5	100%
1	12	90%	10.8	150%

Designing a grazing system

- Minimise the number of groups of livestock and increase mob size
- Paddocks are equally sized as possible
- Each paddock has a water supply
- Free software to help - Google maps, Google earth pro, Field Margin etc.

Water Essential for system success

- Pipe size - 20-25mm for sheep / 25 - 32mm for cattle
- Supply through mains / Gravity fed from large holding tank / Solar Pump / Electric pump



(30/5/23) 2 tonnes of Dry Matter of Pasture/ha is Equivalent to:

8 round bales of silage=£360

Or

580kg Ammonia Nitrate Fertiliser= £400

Or

2.2 Tonnes Concentrate Feed= £800

Conclusion: High performing farmers are...

- Innovative
- Business minded
- Effective at benchmarking
- Collaborative
- Effective at controlling costs

Grazing systems Design Rules of Thumb

- Total area = Group Demand (kgDM) ÷ Potential Growth (kgDM/ha)
- Number of Animals required = Area (ha) x Potential Growth (kgDM/ha) / Demand per animal (kgDM/hd)
- Target Rotation Length = Pasture Available (kgDM/ha) ÷ Potential Growth (kgDM/ha)
- Number of paddocks = Rotation Length (days) ÷ Desired Grazing On-Time (days)
- Average Paddock Size (ha) = Total Area (ha) ÷ Number of Paddocks



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