# Farm for the Future



23<sup>rd</sup> February 2022

Ed Pollard, Youlden Farm, North Bovey, TQ13 8RD

#### **Grassland Management**

Luppo Diepenbroek

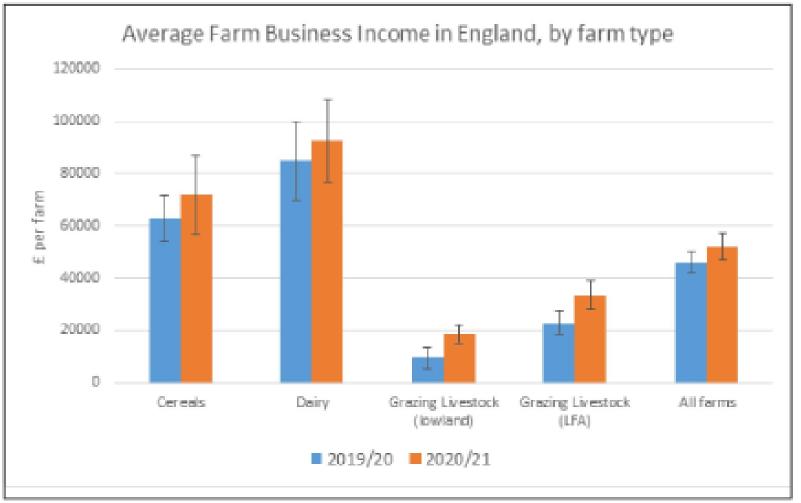
**Straight Line Nutrition Ltd** 





#### Why Manage Grassland?

### To Improve Profits!



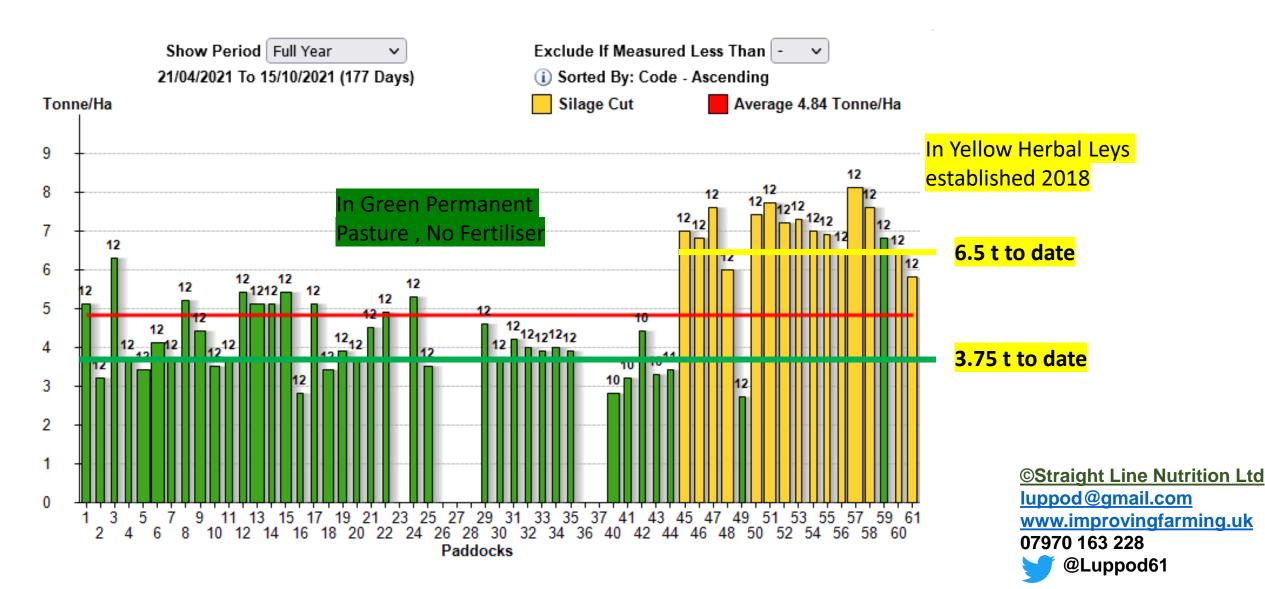
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#### Actual Measured Grass PP VS Herbal Leys production



Source Johnny Haimes, West Sherford AHDB Beef and lamb Strategic Farm 2017-2021





### Forage Quality: silage analysis

Ed and Geoff Pollard:

FWAG SW Herbal Trial: Silage Cut 5<sup>th</sup> May 2018:

(%)

8.8

9.1

ME 10.2 MJ/kg DM	Sample:		species Ley	23/11/18	
Protein 12.7% Intake Factor 107.8 g/kgMLW	Dry Matter, DM	(%)	30.6	31.7	
	NCGD (Digestibility) D value	e (%)	79.4	74	
	Ruminant ME (DM Basis) (MJ/kg) 12.7		12.7	11.9	
	Crude Protein, CP	(%)	20.5	14.7	
	Neutral Dig. Fibre, NDF	(%)	42.5	37.2	

Ash

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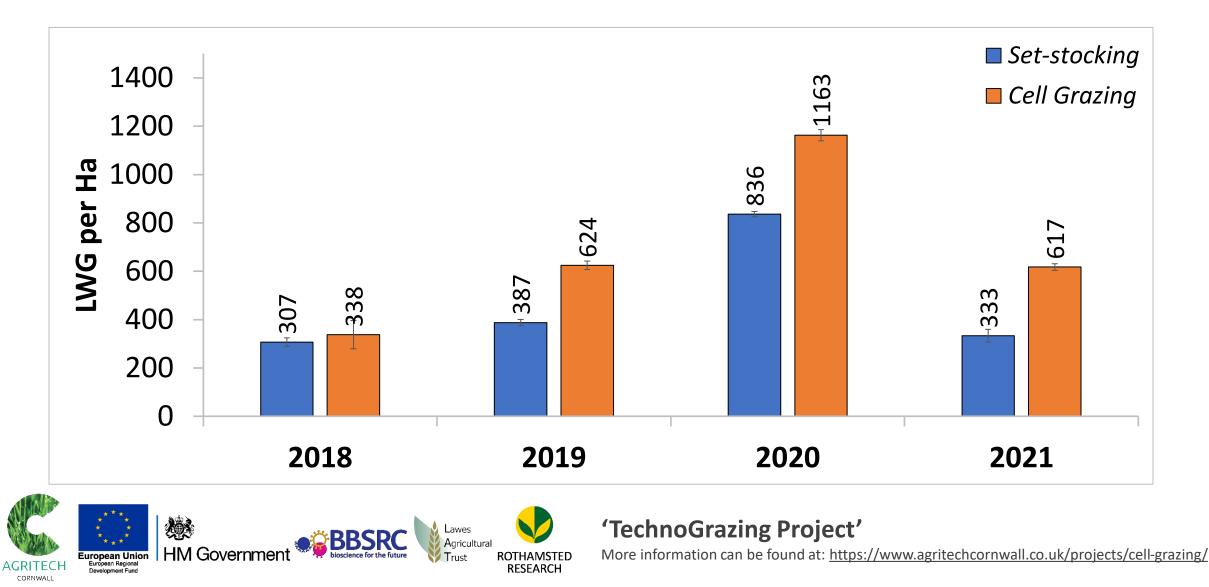
**Rvegrass Analysis** 



#### What does Research Tell Us?



### Productivity per hectare

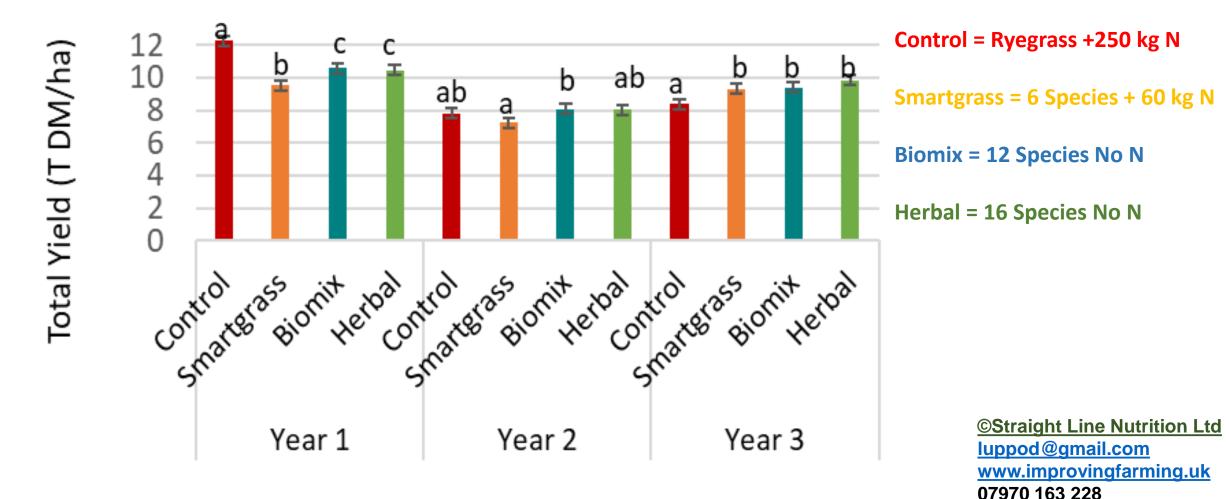




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## 3 Year Research Project on Herbal Ley:

Duchy College, North Wyke and Reading University





### Herbal Ley Selection:

- Mid Tier: Pays £354/ha on GS4 and £115/ha for OP4 (Organic for 5 years)
- 5 Grasses:
  - Perennial Ryegrass, Late Heading Hybrid for grazing
  - Meadow Fesque
  - Tall Fesque
  - Festuloliums (Aber Root)
  - Timothy
    - (Cocksfoot)
    - (Smooth Stalked Meadow Grass)
- 3 Clovers:
  - Red Clover (at least 2 varieties (Aber Claret)
  - Alsike Clover
  - Birds foot Trefoil
  - Little (1/2) kg White Clover blend)
    - (Lucerne)
    - (Sainfoin)
- 5 Herbs:
  - Plantain
  - Chicory
  - Cows Parsley
  - Salad Burnett
  - Yarrow
    - (Common Knapweed)
    - (Oxy Daisy)



#### **Professional Experience**

#### FW Finalist Grassland Manager 2019: Dan Burdett



#### Cockhaise Farm, Haywards Heath, West Sussex

It takes courage to challenge convention, but Dan Burdett is doing just that by pioneering multi-species leys and grazing techniques on his organic dairy farm.

The low-cost, autumn calving unit has been under organic stewardship for 20 years, but productivity began to decline about five years ago, encouraging Dan to look for solutions.



His tonic to low grass output has been to use herbal leys comprising birdsfoot trefoil, alsike, chicory, plantain, cocksfoot and Timothy, alongside high sugar grasses to restore soil health. The deeperrooting varieties are also having the added benefit of maintaining growth when the farm burns off in the summer.

The result is a spectacular sight of biodiversity, with plants attracting an array of wildlife. Soil health has also reaped the rewards, and productivity has more than doubled from 5t/DM/ha grown in 2014, to 12.6t/DM/ha grown last year.



#### Devon and Cornwall Beef & Lamb Monitor Farm launch event

Past Event - booking closed

Tue, 15 February 2022 10:00 AM - 2:00 PM Scadghill Farm, Stibb, Bude, Cornwall EX23 9HN





# Edward Hawkins: Youtube: Harvesting Sunlight https://www.youtube.com/watch?v=CaP3UUEYD5k



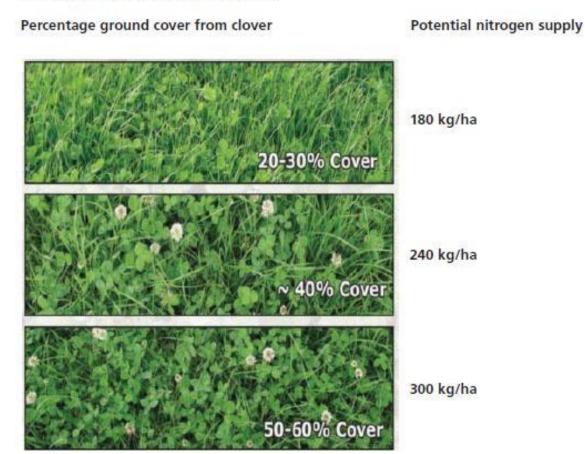
#### What do Above Farms and Research tell us?

#### Importance of clover (RB209):

#### Grazing of Grass/Clover Swards - Nitrogen

Generally little fertiliser nitrogen is needed on swards with an appreciable clover content. On average, a good grass/clover sward will give annual dry matter yields equivalent to that produced from about 180 kg N/ha applied to a pure grass sward. However newly sown grass clover leys may yield even more nitrogen depending on the percentage of clover. It is often difficult to decide how much nitrogen will be supplied from grass/clover as the clover content can be very changeable from year to year and within a given season. The following photographs indicate how to estimate clover content and assess nitrogen supply.

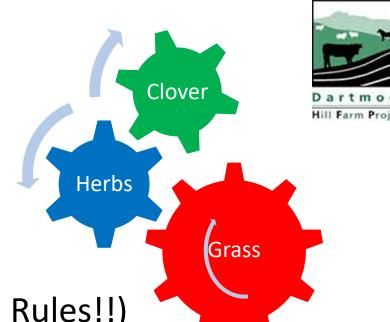
#### Assessing nitrogen supply from clover





### **Biodiversity matters:**

- Improved Yield; Species mutually Supportive:
- Less disease, as same species further apart (Covid Rules!!)
- Benefit Pollinators as in Bees and Butterflies
- Fertiliser Nitrogen Not Required
- Rotational Grazing → Improved Yield/ha



#### Future income Stream?? Carbon!!



#### Letters to the Edit



#### Farm soil subsidies

Sir. There has been considerable discussion of the opportunity to prove agri-environment schemes after Brexit. One attractive idea is payment for outcomes that have put enefit, rather than subsidies based on land area. Soil protection is one area where such monies can be wisely spent. In addition to food production ils provide many environmental benefits, including flood protection, recycling of nutrients, water ification and climate regulation hese benefits are hampered by the continuing loss of soil carbon as scribed in the parliamentary soil health inquiry in 2016.

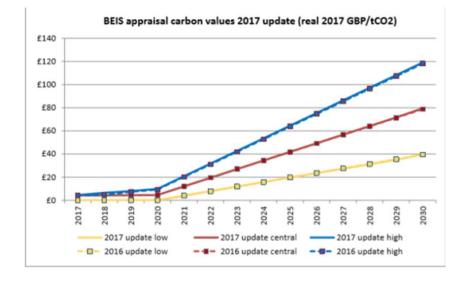
If such a payment is accepted, the issue then becomes what indicator we use to determine soil improvement. During the soil health inquiry, soil organic carbon content was identified as the indicator of soil quality that the scientists agreed on. We also concur that soil organic carbon content should be the measure of choice, and that maintaining or increasing this vital driver of soil health should be financially rewarded.

Imancially rewarded. This would benefit farmers' productivity and enhance the environmental benefits provided by soils to the wider community. PROFESSOR LIZ BAGGS, PROFESSOR RICHARD BARDGETT, PROFESSOR RICHARD BARDGETT, PROFESSOR CAMPBELL PROFESSOR CILIN CAMPBELL PROFESSOR CILIN COLLINS, PROFESSOR TIM DANIELL; PROFESSOR JENNIFER DUNGATT, PROFESSOR BRIDGET EMMETT, PROFESSOR BEIDGET EMMETT, PROFESSOR RETH GOULDING; PROFESSOR RETH GOULDING; PROFESSOR PETER GREGORY; Plus a further 20 professors of soil science at thetimes.coal/Metters

#### Paying farmers for soil organic carbon

Jennifer Dungait @soilhealthexprt · Jan 3 Michael Gove says 'Farmers should be rewarded for organic content of soils.' Hurray! #ORFC19 #soilhealth @MikeGreenSustAg @Luppod61 @sectormentor @ADB0806 @

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Who will pay?

- Polluters/off-setters
- Governments
- Insurance companies
- Consumers

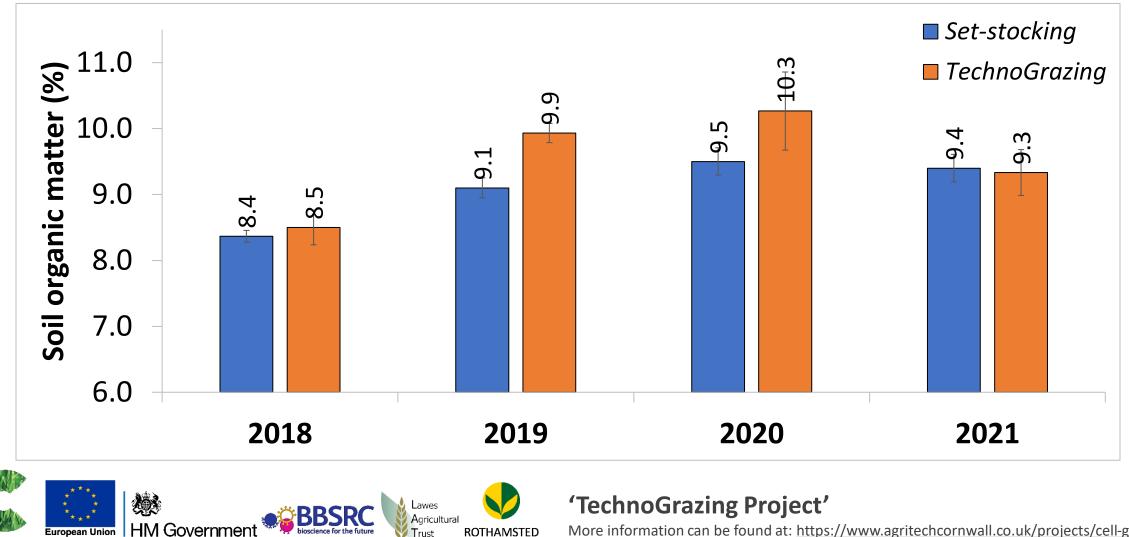




#### What does Research Tell Us?



### Soil Organic Matter



ROTHAMSTED RESEARCH

Trust

European Union

Development Fund

CORNWALL

More information can be found at: <u>https://www.agritechcornwall.co.uk/projects/cell-grazing/</u>

### How to increase Soil Organic Matter ? (SOC)

- Dartmoor Hill Farm Project
- Biodiverse Cropping: Increase Diversity above and Below Ground; Deep Rooting
- Long Rotations: Herbal Leys up to 40-60 days in Grazing Season.
- Build Soil Depth: Increases Soil Carbon Stock
- Reduce Soil Disturbance
- Keep Ground Covered.
- Encourage Above and Below Ground Diversity.
- Use Common Sense Farming (Regenerative) Practices.



#### **Questions and Discussion**

### What would you do differently from today?