



IGER Grassland Development Centre

Monitoring of Grass Quality for Ensiling



Reporting on samples collected on **30th April 2007**

Producing a high quality, well fermented, stable silage will only be possible if the grass at cutting time is of suitable quality.

Targets

High sugars (above 3%@20%DM) to provide an energy source to drive fermentation

- *low nitrate N% (below 0.1)* to prevent the production of ammonia nitrogen that will increase buffering capacity and restrict fermentation
- *D value* – the digestibility of grass is directly related to its energy level – target above 67D for growing/fattening animals and dairy cows.

This weekly GDC update will allow you to gauge how swards are progressing across Wales - to help you make the best quality silage. The majority of samples are currently from lowland dairy farms – as the weeks progress the samples will increasingly come from beef/sheep farms and from higher altitudes

GDC GRASS TEST RESULTS (April 30th 2007)

Crop type/ Test	Older PRG Leys	Organic Ley (Kent)	Hybrid and IRG Ley	Younger PRG Leys
Dry Matter	17.7	21.6	17.8	19.7
D value	69	69	70	72
Crude protein %	19.9	15.9	17.7	24.8
Nitrate N %	0.02	0.01	0.01	0.01
Soluble sugar %@20% DM	3.3	4.1	4.0	3.1

(Figures above are the average from samples received from all farms this week)

Quality Issues

Monday started with a few isolated thundery showers in the southwest and cloudy weather. Most areas were dry although chilly at first then warming in the afternoons. Nights have been dry and clear, temperatures have been low; 3-5° C. Night temperatures have tended to depress the sugar levels in the early mornings this week, although by the afternoon they have been rising due to the sunshine. Daytime temperatures have been around 19–22°C. Dry, sunny and warm days have characterised the week although windy at times- for those cutting for silage this weather has aided wilting the crop.

Silage crops were cut this week from very the young perennial and Italian ryegrass leys. Grass samples had higher nitrate contents than last week, in some cases due to early applications of slurry being topped up with bagged N perhaps underestimating the N that the slurry had contributed to the sward.

Where nitrate N levels are low (<0.01-0.02%) and protein levels high (22.4 -23.8) protein has been bound up in the leafy crop after slow uptake of N, further boosted by applications of sulphur in some cases. There is a risk that N might become more mobile if the weather gets wet, resulting in an increase of non protein nitrogen components. It's advisable to use an additive to improve fermentation on these crops.

Clamp management for crops like this is important; crops should be wilted for 24 - 36hrs and consolidated well in the clamp with further layers of grass added on top in the clamp.

Crops which have high sugar content should be cut in the afternoon when the sugar contents are high.

The decision remains for others whether to cut today (Fri/Sat 5th May) or wait until next week after the unsettled weather that is forecast has passed through. The risk of losing D value is low- possibly 2 units and crops are still leafy and not going to head.

Sulphur levels

There were no results for sulphur this week; however we expect some for next week.

Atmospheric deposition has declined significantly in recent years – resulting in many areas of the country no longer receiving enough sulphur to adequately supply a multi-cut system. Last year our early samples all came back indicating a sulphur deficiency – suggesting that an application of sulphur ahead of the 2nd cut would result in increased yields. This application may be from the bag or in the form of slurry; 50m³/ha of slurry will supply around 20kg/ha of available SO³ – which would supply enough sulphur for the following silage crop.

Additive use

It is recommended that where silages are high quality targeted for growing/fattening stock or milking cows that an additive should be used to maximise protein quality. Additives would be advisable on all silages where conditions may restrict rapid fermentation; low sugars, high nitrates, wet crops and poor harvesting conditions.

A good inoculant (one with a million + bugs/gram dry matter) will help to achieve a good fermentation in wet conditions – there should be no need to resort to an acid unless there are high nitrates or significant soil contamination.

Weather forecast

For the latest 5 day forecast follow this link

http://www.metoffice.gov.uk/weather/uk/wl/wl_forecast_wind.html

Making big bales?

For a demonstration and up to date research on making big bale silage, come along to the IGER /HCC Farming Connect open day on May 9th at Plas Gogerddan, Aberystwyth SY23 5AW

Tel Jessica Longworth 01970 823024 or go to

<http://www.iger.bbsrc.ac.uk/Practice/GTT/Events.htm>

For more information contact:

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The Grassland Development Centre, based in IGER is managed by the Welsh Assembly Government as part of Farming Connect.

