



IGER Grassland Development Centre

Monitoring of Grass Quality for Ensiling



Reporting on samples collected on 11th June 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. Currently the majority of samples are from beef/sheep farms and from higher altitudes.

GDC GRASS TEST RESULTS (June 11th 2007)

Crop type/ Test	Older HYB/ PRG Ley	Young PRG Ley	Average CHANGE *
Dry Matter	19.1	18.8	1.4
D value	65	70	1.4
Crude protein %	16.6	21.2	2.4
Nitrate N %	0.01	0.01	0
Soluble sugar %@20% DM	2.2	3.2	-0.3

- * this is the change from last week to this week of the average of all results received

Quality Issues

The young PRG ley (3 years old) sampled this week hits the right targets for ensiling: sugars above 3%, low nitrate N % (well below 0.1) and a D value above 67D. The sward retains a high proportion of what was originally sown which is reflected in the quality of the grass.

The older ley (10 yrs old) has around 55% of its original sown species, lower ryegrass content and consequently shows reduced sugar levels, D value and protein levels. Although this sward has been managed well, this highlights the value in managing your swards for silage correctly- it's important that a sward isn't mowed

when it has gone too far into the flowering stage every year as plant tillering can then suffer (energy is put into reproductive rather than vegetative growth) followed by plant density with the resulting ingress of weed species over time into the sward. Cut at the date when 50% of the sward is starting to head. Older swards can be productive provided they are managed correctly when grazed or kept for silage.

Hybrids and Intermediate PRG's have all headed by now so if the sward contains a high proportion of hybrid Italian ryegrasses or perennials then cutting later into June is going to result in lower quality silage if this is first cut. Some farmers who sampled for this report in April and the early part of May have now taken a second cut from their swards, having timed their first cuts to allow for regrowth that will produce a quality second cut.

Late perennial ryegrass varieties are heading earlier this year by up to 2 weeks and the samples returning from analysis indicate that D values are falling week on week by 1 or 2 units.

Sulphur levels

There were no results for sulphur this week.

Sulphur levels of less than 0.25% OR a nitrogen : sulphur ratio greater than 13 indicates sulphur deficiency.

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 all our samples 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

For more information contact:

IGER Grassland Development Centre on 01970 823058

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

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

