



Grassland Development Centre

Autumn Grass Quality

Late summer and autumn grass can make very valuable contribution to livestock production including the milking dairy cow. Its quality can, however, be overestimated and the need for, and type of, supplementary feed should reflect a careful assessment of the grass available through this period. Points to note are:

- ***Digestibility(D) or ME Values:*** Leafy grass grown after a summer of good sward management will have high D (70+) and ME(11.2+) values. Look out for values below this which will indicate increasing amounts of stemmy material from earlier rejected grazing.
- ***Crude protein (CP):*** Soil N availability is often high at this time of year and will elevate nitrogen uptake and crude protein to levels above 25%CP in autumn grass. High crude proteins also occur in clover rich herbage and this will be of better nutritional value. Look out for crude proteins above 20% as indicator of need for supplements with readily available energy (eg starch or carbohydrate rich) to mid and early lactation cows.
- ***Soluble carbohydrate (WSC):*** levels decline with shorter and reduced solar radiation. So long as temperatures remain high, grass growth rates place a high demand on sugars for structural growth; later sugar production will also decline at lower temperatures. Low sugar levels result in poorer utilisation particularly of the highly degradable herbage protein and increase the need for supplementary energy. Levels below 10% of DM are considered low in summer but may fall below 5% in autumn grass.
- ***Dry matter (DM):*** levels will vary with the weather and amount of surface water at sampling, but autumn grass is invariably wetter than summer grass and the extra bulk and dilution of nutrients will limit intake and diet utilisation. Autumn grass is typically in range of 12-18%DM.

Results for week of 10th September

The results below illustrate the differences between a range of swards **Hendy, Caernarfon – Dairy farm** – well managed grazing paddock with good ryegrass% but with low clover content – few rejection areas.

Dry Matter%	20.5
D value	73
ME	11.6
Crude protein %	18.7
WSC%	14.8

Dyffryn, Meifod, - Dairy Farm – aftermath regrowth, high ryegrass% and good white clover. Light slurry application

Dry Matter%	19.6
D value	72
ME	11.4
Crude protein %	18.6
WSC%	12.4

Dinas Island, Fishguard – Beef and sheep – old pasture, significant rejection, low% sown species.

Dry Matter%	28.1
D value	64
ME	10.2
Crude protein %	10
WSC%	26

Digestibility and energy (ME) quality of the two high ryegrass content swards was good (72 and 74D) indicating high leaf content and very little stem formation and a lack of dead material. In a poorer sward the difference in energy content is quite large – enough to reduce animal performance by almost 50% (one unit of D generally equates to 5% increase in live weight gain or milk production).

Crude protein levels in all samples were comparatively low, even in a clover sward. This indicates low soil N and poor uptake – due to poor summer conditions. For those who haven't applied nitrogen in recent weeks it is still not too late to realise the benefits of a small application (20-30kgN/ha or 16-24units/acre), as long as ground conditions will allow grazing well into next month.

Conversely, *sugar* levels are holding up quite well with the current sunny spell. As levels drop with shortening day length supplements for early lactation cows will be needed and should have good energy quality.

Dry matters are still high and are helping maintain intakes. These will be quick to drop with a period of wet weather. Be ready to react and possible limit the grazing time of high yielders.

For more information contact:
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