

First-cut grass silage averages, 2016

Grass continued to grow throughout the 2015/16 winter due to the mild weather conditions, however, poor weather during the spring meant grass growth slowed. Improvement in the growing conditions in early May led to rapid growth and very high covers, but combined with limited harvesting windows meant that cutting was delayed in some areas.

Table 1: Initial first cut grass silage analysis 2016 averages (with 2015 figures)

		Averages			
		1 st Cut 2015	1 st Cut 2016	Min	Max
Dry Matter (%)	Measure of what is not water	30.0	31.2	15.4	53.0
Crude Protein (%)	Measure of protein content	14.3	14.5	8.8	22.3
Digestibility (%) (D value)	Measure of percentage of feed that is digestible by the animal	68.6	67.6	58.1	75.8
Energy (ME) (MJ/kgDM)	Measure of usable energy available to the animal	11.0	10.8	9.3	12.1
pH	Measure of acidity	4.0	4.1	3.5	5.4
Sugar (%)	Measure of sugar content	3.5	2.7	0.2	7.7
Ash (%)	Measure of mineral and trace element content	8.9	7.3	2.7	11.4

Source: Trouw Nutrition GB

Higher Dry Matter content was seen this year, increasing from an average of 30% in 2015, to 31.2% in 2016. Furthermore, crude protein levels have remained relatively constant and ME content is slightly lower. It is crucial that before winter rations are planned forage is analysed to allow them to be formulated accurately. Detailed silage analysis can be carried out by independent or feed company laboratories.

Silage fermentation characteristics

As well as the nutritional analysis of the silage, fermentation characteristics are also an important consideration. The amount of ammonia nitrogen present shows the proportion of nitrogen (N), including protein, that has been broken down during ensilage and is the best indicator of silage fermentation. A value of <50g/kg N indicates an excellent fermentation, a stable silage and minimal nutrient loss. Values >150g/kg indicate a poor fermentation.

Total volatile fatty acids (VFA) will be high when there is a poor fermentation. The undesirable VFAs are butyric and to a lesser extent acetic acid. These are associated with high total VFA and give a distinctive and persisting smell to badly made silages.

Lactic acid gives an indication of the quality of forage fermentation with higher levels indicating better fermentations.

For more information on producing quality silage see the Better Returns Programme manual, [Making Grass Silage for Better Returns](#).