

Your silage sample results explained

Parameter	Description	Target
Dry Matter %	<p>The quantity of material left in a feed after all the water has been removed by drying. The value is corrected to allow for losses of volatile but nutritionally valuable nutrients during drying, e.g. volatile fatty acids.</p> <p>Low dry matter silages tend to be extensively fermented and will be high in acids and low in rumen structure, reducing intakes. High dry matter silages are more susceptible to spoilage (bacterial and fungal).</p>	25-35%
pH	<p>A measure of the acidity or alkalinity of the silage; pH < 7 = Acidic, pH 7 = Neutral, pH > 7 = Alkaline. Where the pH of grass is above this range, typically as a result of poor or secondary fermentation, undesirable VFA's may have been formed and production may be reduced. Feeding more acidic silages may impair rumen performance, resulting in acidosis, lower intakes and production.</p>	3.5 - 5.0 (depending on DM)
Ammonia	<p>High values are indicative of butyric fermentation and may be associated with high blood and milk urea levels; high blood urea has been both directly and indirectly linked to infertility. Care should be taken in interpreting this term as it is a percent of total N and not a percent of the dry matter.</p>	<15% of Total N
Protein	<p>If high, additional protein tends to be rapidly degradable and may be poorly utilised, especially if there is inadequate rumen available energy in the diet. High milk and blood urea levels have been associated with feeding this type of silage; the latter can have a direct and indirect impact on fertility.</p>	7-20% DM
Metabolisable Energy (ME)	<p>The most important measure of the energy content of silage when fed to ruminants, representing the amount of energy available to the animal after accounting for losses in digestion, gases and urine.</p>	8.0 - 12.0 MJ/Kg DM

Dry Matter Digestibility (DMD)	DMD is the content of digestible organic matter in the DM. It decreases progressively as the forage matures and becomes more “stemmy.” It is a good guide to overall nutritive value.	55 - 75 %DM (depending on the type of stock to be fed)
Lactic Acid	Gives an indication of the quality of the forage fermentation, being produced almost exclusively by the lactobacilli responsible for good silage fermentation and effective preservation. Grass silages typically have lactic acid contents of 60-150g/kg, higher values suggesting more rapid fermentations, better protein preservation and less likelihood of other, undesirable by-products.	80-120g/kg DM
Volatile Fatty Acids (VFA's)	Will be high when there is a poor fermentation. The undesirable VFA's are butyric and to a lesser extent acetic acid. These are associated with high total VFA's and give a distinctive and persisting smell to badly made silage.	Range: 10-90g/kg DM (keep as low as possible)
Acid Detergent Fibre (ADF)	Is a measure of the cellulose, lignin and lignified nitrogen (heat damaged protein) content of the silage. It can be used to estimate digestibility.	300g/kg DM
Neutral Detergent Fibre (NDF)	Is a useful indicator of forage intake potential, which declines with increasing NDF values. A certain level of fibre intake is important in good rumen function. The NDF residues include hemi-cellulose, cellulose and lignin.	500-550g/kg DM
Ash	Indicates the mineral content of the silage. A high value (>10% DM) may indicate soil contamination, which will reduce intake and is likely to have resulted in a silage with poorer fermentation qualities, such as higher acetic and butyric acids and ammonia. High ash content in legume silages is normal due to their higher mineral content.	<8% DM
Oil	Oil is an important energy component of the silage. However, high oil content can interfere with the activity of the rumen microbes.	3 - 5% DM