



SILAGE ANALYSIS

Introduction

Silage is forage that has been preserved by acidic fermentation; the objective being to maintain the feed quality and quantity of conserved forage. Types of forage commonly conserved in this manner are pasture, maize, cereal (wheat, barley, oats, triticale) and lucerne. The feed value of the silage made will impact on animal production and if poorly preserved can be detrimental to animal health.

Good quality silage is made from good quality forage providing some rules are followed. Harvest time is one of the critical factors - as plants mature, protein and digestibility decline while fibre (ADF and NDF) increases. Low protein silage will reduce production and growth levels in the animal if the silage makes up a large part of the diet. Feeding silages with high fibre generally reduces the amount an animal can eat in the overall diet (since high fibre levels slow down the rate of passage of the diet through the rumen). Plant stage, conditions at harvest, wilting period and length of chop as well as packing and covering of the stack all impact on how well the fermentation proceeds.

Hill Laboratories provides a comprehensive range of feedstuff testing specifically designed to help farmers assess the feed quality of their silage.

Silage Profile [Silage]

Includes the following tests:

- Dry Matter
- Crude Protein
- Soluble Sugars
- Starch
- Ash
- Acid Detergent fibre
- Neutral Detergent Fibre
- Digestibility (DOMD)
- Metabolisable Energy (ME)
- pH
- Ammonium-N/Total N
- Lactic Acid

Results are presented as a histogram where the crop type is specified and if typical "medium" values are known. The Hill Laboratories Technical Note - Silage Analysis provides more comprehensive interpretation for each test in this profile.

Volatile Fatty Acid Profile [VFA]

The determination of Volatile Fatty Acids (VFA) is a new test offered by Hill Laboratories and complements our existing feedstuff tests. As a result of the complex reactions taking place during ensiling, and various factors affecting the eventual quality of the silage, the VFA profile sheds light on factors not measured appropriately by existing tests. The pH is an indication of the acidity of the silage, but does not give an indication of the organic acid composition that also affects the value of the silage.

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The VFA included in this profile are:

- lactic acid
- acetic acid
- propionic acid
- butyric acid
- formic acid

Extended Silage Profile (EXTSIL)

Mineral composition may also be of interest, particularly where the supplementary feed makes up a large portion of the animal's diet. Analytes include all those in the Silage profile together with Nitrogen, Phosphorus, Sulphur, Potassium, Magnesium, Calcium, Sodium, Iron, Manganese, Zinc, Copper, Boron, Molybdenum, Cobalt and Selenium.

Test options

Profile Name	Lab Code	List price (excl GST)
Silage	Silage	\$75
Extended Silage	ExtSil	\$145
Volatile Fatty Acid	VFA	\$60
Dry Matter + ME	DMME	\$45
Additional tests:		
Dry Matter Only	DM	\$25
Crude Fat	CFat	\$40
Nitrate-N, Chloride	NO3, Cl	\$17 ea

Sampling

A feed sample kit including sealable bags, sampling instructions and request form are available from the laboratory. It is important to differentiate between freshly harvested forage and ensiled material on the request form.

A full sample bag is needed, particularly where mineral composition is also selected. For accurate dry matter results a sealed bag is necessary.

Samples should be sent to the laboratory as soon as collected or should be stored overnight in a refrigerator if this is not possible.

Tick the appropriate boxes on the request form to ensure you receive the desired analyses.

Contact Details

For further information about any of the above tests please contact our client service managers.

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