

GRASSLAND DEVELOPMENT CENTRE CANOLFAN DATBLYGU TIR GLAS

409.02 ON-FARM ASSESSMENT OF GRASS SILAGE

Silage analyses are carried out by a number of commercial and feed company laboratories. It is particularly important to have a full analysis for optimal livestock performance and when developing rations. However, some basic indications of silage quality can be done on farm. The following factsheets provided guidance for on farm assessment of grass silage.

DRY MATTER (DM)

Silage DM content for silages with DM <300 g/kg can be estimated by squeezing a handful of silage:

Amount of squeezing	Dry matter (g/kg)
Juice easily expressed by hand	<200
Juice expressed with some difficulty	200-250
Little or no juice expressed but hands moist	>250

DM in drier chopped silages may be estimated by taking a handful of silage and compressing it tightly for half a minute before suddenly releasing hand pressure and noting the effect on the silage "ball":

'Ball' shape	Dry matter (g/kg)
Ball retains its shape and some free juice expressed	<250
Ball retains its shape but no free juice is expressed	250-300
Ball slowly falls apart	300-400
Ball rapidly falls apart	>400

METABOLISABLE ENERGY AND PROTEIN CONTENT

These may be assessed in relation to a visual assessment of the leaf stem content:

Leaf & stem content	ME (MJ/kgDM)	CP (g/kgDM)
Very leafy- no stem visible	12	180
Leafy- some stem present	11	160
Leafy with some flowering stems	10	140
Moderately leafy with large numbers of flowering stems emerging	9	120
Stemmy – grasses at about flowering stage	8	100
Stemmy – grasses at post flowering stage	7	80

pH

All silages can be measured with pH (litmus) paper by putting 10g of silage in 90mls of water in a polythene bag and then mashing gently in your hand for 2 minutes and dipping litmus paper in the liquid. Portable pH meters may also be used.

GUIDE TO TYPES OF FERMENTATION

Fermentation	Colour	Smell	Texture
Good	Bright Light green-yellow	Fruity or vinegary	Firm Soft tissue not easily rubbed from fibres
Satisfactory	Light brown	No strong smell	Fairly firm
Poor (Butyric)	Olive green	Strong offensive	Slimy - soft tissues easily rubbed from fibres
Overheated	Brown to dark brown	Caramel /tobacco	Dry very friable

FURTHER INFORMATION

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