

INDEPENDENT ADVICE BASED ON INDEPENDENT RESEARCH

ON-FARM ASSESSMENT OF GRASS SILAGE

How to take the silage sample

Core the silage pit at 2-4 points diagonally across the pit. Discard the first sample at each point. Be careful that all the moisture is not squeezed out of the sample, resulting in a high DM than the actual.

Direct Assessment

Dry matter

Silage DM content for silage with DM <30% can be estimated by squeezing a handful of silage:

Amount of Squeezing	Dry Matter
Juice easily expressed by hand	Less than 20%
Juice expressed with difficulty	20 – 25%
Little or no juice expressed but hands moist	25 – 30%

Dry matter in drier chopped silages may be estimated by taking a handful of silage and compressing it tightly for ½ minute before suddenly releasing hand pressure and noting the effect on the silage “ball”.

Ball Shape

Ball Shape	Dry Matter %
Ball retains its shape and some free juice is expressed	Less than 25%
Ball retains its shape but no free juice is expressed	25 – 30%
Ball slowly falls apart	30 – 40%
Ball rapidly falls apart	Greater than 40%

Preservation

Fermentation	Colour	Smell	Comment
Good	Bright, light green	Fruity / vinegary	
Poor	Very dark olive grass		High pH
	Very light colour		Low pH

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Where to take the sample? – Don’t take it at the top of the pit – take it in the middle of the pit

DM = 18-20% pH = 3.8–4.2

DM = 20-24% pH = 4.2-4.4

DM = 24-28% pH = 4.4-4.6

DM = 28%+

pH = Up to 4.7

INDEPENDENT ADVICE BASED ON INDEPENDENT RESEARCH**Feeding value**

Dry matter digestibility

1. Does it come out in layers? Suggest that it's well compacted which is good for preservation and also likely to have a lot of leaf in it.
2. Roll it up in a ball in your hand – does it roll up well and is soft in your hand rather than a lot of stem pricking your hands
3. Visual look at the % of leaf compared to stem – if there is stem, is it dead material or hard stem or soft stem
4. Are the grasses mostly perennial ryegrass? Or is there a significant proportion of weed grasses?

Visual Assessment of Feeding Value, based on leaf content

Leaf & Stem Content	DMD %
Very leafy – no stem visible	76%+
Leafy – some stem visible	72-75
Leafy with some flowering stems	68-71
Moderately leafy with large numbers of flowering stems emerging	64-67
Stemmy – grasses at about flowering stage	60-63
Stemmy – grasses post flowering stage	< 60

INDIRECT ASSESSMENT:

Animals throwing up cuds suggests low pH, less than 3.8. This is due to the acid profile of the forage and is not the same as acidosis. Acidosis is a build-up of acid in the rumen as a result of the rapid fermentation of starch / sugar based feedstuffs.

Animals in poor body weight / dairy cows losing conditions suggests low digestibility forage and possible poor preservation results in low dry matter intake

Where intake is being measured, poor intakes achieved indicates possibly low dry matter, poor preservation (pH and ammonia levels) and / or low digestibility

Refusals of silage indicates poor preservation

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