

FORAGE FOUNDATIONS NO.1

Don't let silage variability undermine production this winter



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Forage analysis: NIR4 Farm

With silage typically accounting for 40-70% of daily feed intake when cows are fully housed, variations in silage quality can have a massive impact on cow performance. Yet although most recognise that feed value often differs markedly from clamp to clamp and between the various cuts of grass silage, the substantial variation within a single clamp or across a clamp face is largely overlooked when formulating rations.

According to data generated last winter using NIR4Farm – a revolutionary portable spectrometer capable of real-time on-farm feed and forage analysis – key parameters like dry matter (DM) can vary by as much as 10% from the top to the bottom of each clamp, and by as much as 5% from side to side.

For a cow being fed 40 kg freshweight of grass silage daily, even a 2.5% reduction in silage DM from one day to the next can cut DM intake by 1kg, energy intake by 11MJ and milk yield by 2 litres/day!

This variation isn't just in the DM content, and it isn't just an isolated example.

Every aspect of silage quality that affects feeding value – such as levels of digestibility, crude protein, fibre, lactic acid and volatile fatty acids – can vary. A study by Trouw Nutrition back in 2013 found that grass silage NDF also varied by around 10% across a single clamp face, whilst energy density differed by 1.6MJ ME/kg DM and crude protein by 3%.

Combine these differences and the potential day to day impact on cow nutrient intake – and subsequent performance – is huge.

Yet until now, silage sampling and analysis typically has focused only on producing average values for the whole clamp face, with ration formulations adjusted several days later when the results arrive. Even daily on-farm adjustments are reactions to yesterday's intakes, yesterday's milk production and yesterday's silage quality.

That's now set to change – new portable analysis equipment like NIR4Farm is making it possible to monitor and adjust rations daily based on measured trends in silage quality variation, not spot samples after the fact.

It's a new era for ration optimisation, and a new era for precision feeding.

**For more information or a free silage quality assessment sheet
phone 028 9447 3478.**

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