

Attention to detail at clamp face is key to reducing spoilage

'Facial' awareness

The higher dry matter and pH of some first-cut grass silages means that clamp management will be key to ensuring that spoilage is kept to a minimum this coming winter. We spoke to two leading nutritionists to find out how they think producers can best keep waste to a minimum.

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Reduced acidity and increased dry matter, revealed in the results of analysis of the first 850 first-cut grass silage samples by Trouw Nutrition GB, could create issues on some dairy units this coming winter – particularly where clamp management could be improved.

So says Harpers Feeds' ruminant nutritionist Bruce Forshaw, who explains that higher dry matter silages – those above 30% – can be more difficult to consolidate at clamping. "It's vital to remove as much oxygen as possible through rolling and to keep it out with airtight and well-sealed sheeting. And, when you open the clamp for feeding, there can be spoilage issues because the higher dry matter silage is not as stable as a wetter forage."

Ideally, producers will have sheeted up using an oxygen barrier sheet – which is similar to cling film – under the conventional plastic sheeting.

"I advise all my clients to use it and 75% of them do. The anecdotal evidence from them suggests that they see virtually no aerobic spoilage when they use oxygen barrier

sheeting and the additional cost – typically between 30p and 40p per square metre – is easily paid for by the reduction in silage waste."

Clamp-face management

Since this higher dry matter, higher pH silage is already in the clamp, it's how producers manage the clamp face when they start to feed out that's going to be key to minimising spoilage and losses. "Retrospectively, there's not much producers can do now with regards to clamp filling, additives and using additional covers. But there's plenty that they can do once they open the clamp to protect their investment," adds Mr Forshaw.

He says that using a block cutter to remove silage from the clamp face is vital, rather than digging or pulling the silage out with a bucket or grab. "Maintaining a close, tight clamp surface is key to preventing spoilage. Using a cutter, and making sure it's sharp, will 'seal' the surface of the clamp as silage is removed."

He's seen photographs taken with a thermal imaging camera of clamp faces where either block cutters or buckets

Table 1: Initial first-cut grass silage analysis 2016 (source: Trouw Nutrition GB)

	2014 first-cut average	2015 first-cut average	2016 first-cut average
dry matter (%)	28.4	30.0	31.2
crude protein (%)	13.6	14.3	14.5
ME (MJ/kg DM)	10.5	11.0	10.8
pH	3.9	4.0	4.1
NDF (%)	49.9	47.0	50.0
lactic acid (g/kg)	64.3	62.6	46.9
intake potential (g/kg ML)	93.2	99.4	98.5





Thermal imaging: 'clean cut' clamps show minimal levels of heating and this means less spoilage



Bruce Forshaw: "Use sharp block cutters to remove silage from the clamp face"



Tom Goatman: "Silage stability could be more difficult to control this winter"

have been used to remove silage. "There's considerably more heating where buckets or blunt cutters have been used. And where silage has been 'torn', rather than cut sharply and cleanly, from the face there is also evidence of heating. And this heating means spoilage.

"So check that your block cutter is sharp and that silage is cut and not torn. Get your angle grinder out!"

Mr Forshaw adds that the best faces he's seen are those where self-propelled wagons with a miller head are used to take silage from the clamp. "These remove silage a little at a time – literally by the centimetre – and always leave a clean-cut, tidy, tight and compacted clamp face. But they're expensive and not in use on many units. Sharp block cutters are the next best thing."

Silage stability

Trouw Nutrition's ruminant specialist Tom Goatman agrees that silage stability could be more difficult to control this winter. Early indications are that silages are, generally, drier at 31.2% DM compared to 30.0% in 2015. Lactic acid is considerably lower at 46.9g/kg DM compared to 62.6g/kg DM in 2015 and pH analysed at 4.1 compared to 4.0 in 2015.

"The combination of drier crops with higher pH and lower lactic acid content may be more prone to reduced clamp stability and increased aerobic spoilage at feed out.

"So well-maintained block cutters should be used to keep clamp face spoilage to a minimum," he says. "And producers should also take care when pulling back the sheeting to access the silage face. They should avoid exposing too much silage – just enough for one block-cut depth across the face is ideal.

"Producers are good at this particular aspect of clamp management – I rarely see silage sheets pulled back further

than they need to be. But I would like to remind producers not to stand on the edge of the clamp face and to 'keep off' as much as possible. This can loosen up the silage at the clamp face and allow oxygen to get into the silage and cause spoilage."

He adds that good hygiene or 'housekeeping' at the clamp face is important. "Don't leave loose silage lying around – make sure you clear up spillage because as this will spoil and can then become a source of contamination.

"And the same applies to silage in the feed trough. TMRs comprising higher dry matter and less acidic silage are also more prone to spoilage. So keep rations as fresh as possible – mix and feed out as required and avoid, for example, mixing the evening before. And clean waste and rejected feed out of the troughs daily."

In-feed additive

Mr Forshaw says that where heating and spoilage in the feed trough is an issue, producers should consider adding a stabiliser to the TMR. There are several 'stabilising' additives on the market that can be added to TMRs to prevent spoilage. "If you think spoilage could be a problem on your unit this coming winter, talk to your nutritionist."

Second-cut silages have also been made in 'challenging' conditions on many units, with cuts being taken later due to changeable weather.

"So the expectation is that this will produce similarly dry and high pH silage to first cut.

"There will be more bulk than first cut – first-cut yields were down on 2015 due to the cold and late spring – which will help to bolster forage stocks.

"But good clamp management, to reduce waste and help eek out supplies, should still be a top priority on units that are looking to maximise milk from forage this winter." |