EXTRA EFFORT REWARDED WITH TOP QUALITY MAIZE SILAGE

Compaction of the maize silage is an important part of the process

NOTHING is left to chance when it comes to maize harvest at The Grange, near Melton Mowbray, where Ben Stroud and his family farm around 500 acres of arable and grass, and milk 200 Holstein Friesians. Growing the maize to feed the 9,500 litre herd, the crop was only introduced after the oilseed rape failed two years ago, but has now become so important that all efforts are focussed on harvesting and preserving it at the highest possible feed value.

This includes doubling up on compaction capacity to exclude air from the clamp; using human food grade preservatives to ensure the quickest and most efficient type of fermentation; and using the most oxygen-impermeable sheeting available to cover the clamp.

The result is that the Stroud family have produced an ingredient for the milking herd's ration which has lifted milk output by £100 per day while at the same time, reducing feed costs by £15 per day. They have no doubt this is due to the switch to high quality maize silage, which they now use in preference to wholecrop wheat. The wheat is now harvested as grain and largely sold off the farm, replacing the oilseed rape they're no longer able to grow due to its susceptibility to damage by cabbage stem flea beetle (CSFB).

So, it's all worked out rather well for the Stroud family, who hope conditions this autumn will allow them to begin maize harvest before the end of September.

Once they get going, their contractor's self-propelled forager will harvest, chop and apply the preservative, Safesil Pro to the maize, before it's carted to the clamp.

"The Safesil is an essential part of the process," says Ben. "We first used it on wholecrop wheat after many years of struggling with several different bug-based inoculants which didn't stop the forage heating.

"The Safesil, in contrast, keeps the forage stone cold from the point of application until it's fed out."

This is particularly important during the summer months when progress across the farm's clamp face is slow, leaving the forage with around 14 days' exposure to air.

"There is no spoilage at the clamp face and it stays cool and stable all the way through," says Ben. "There's also very little effluent, all of which tells me the good stuff is staying in the clamp."

Andy Lee, area manager across the Midlands and East Anglia for feed and forage preservation specialists, Kelvin Cave Ltd, explains the mechanisms behind the cold silage.

"The preservatives in the Safesil range are exactly that," he says. "Unlike bacterial inoculants, which work by encouraging the right type of fermentation but can be inconsistent in doing so, Safesil quickly preserves the forage. It does this by destroying unwanted, nutrient-wasting bacteria such as clostridia and enterobacteria, and providing a clean environment for lactic acid bacteria to achieve a rapid reduction of pH. This preserves the nutrient value and palatability of the forage and keeps it stone cold.

"Even if you have compacted and sheeted your silage brilliantly – which is definitely the case on this farm – when you open it up for feeding and expose it to air, Safesil prevents it heating," he says. "Without Safesil, there's a high chance the face will heat on exposure to air, which is a sign – even if invisible – that yeasts and moulds are growing in the silage, creating aerobic spoilage and consuming valuable nutrition."

Alongside using the preservative – whose components are so safe and effective they are approved for human food use – Ben ensures other processes in silage making are carried out with similar attention to detail.

"You can't over-estimate the importance of good consolidation," he says, remarking that if his contractor does not bring a SilaPactor – a massively heavy compacting implement which is mounted on three-point linkage – he will add his own second tractor on the clamp.

The final key to success is said to be airtight sealing, which he'll achieve this year with the single sheet product, O2 Barrier 2in1. Applied as one sheet, but separating into two after application to form a vacuum seal, it has been demonstrated to reduce oxygen penetration by up to 10 times compared to conventional polyethylene sheets.

The resulting predictability of the silage fermentation at Grange Farm has enabled Ben to produce his forage budgets with remarkable accuracy – something he says he could not achieve if forage quality was not assured.

"We plan to run out of maize silage a few days before maize harvest and at that point we open our first cut grass clamp," he says.

However, under the front of the grass clamp he has already layered some of last year's maize silage – moving around 80 tonnes from the main (850 tonne) maize clamp – to ensure his cattle have year-round access to maize.

"Because the stability of the silage is so good, this works really well and again stays stone cold," he says. "We move it in early May, before making first cut grass silage, and open this clamp around late September, using it for the month before we can open the new season's maize.

"The effort is definitely worth it because maize is so good at driving yield," he says. "But I wouldn't ever consider making the silage without Safesil. Maize is such a valuable feed in terms of milk, I would not risk compromising the amount of milk we get from it.

"Yes, it may look like it costs a lot but that's insignificant when you compare it with the value of the silage and particularly, with the value of the milk," he says. "There's no question in my mind it saves a lot of money in the long run."

For advice on feed and forage preservation, please contact Kelvin Cave Ltd on 01458 252281.