Seeking a reliable alternative to acid additives

Add-F has provided the benchmark for forage preservation for many years. So finding an alternative that would perform just as well on a wet farm in Wales was a tortuous process.

Producing quality forage is a cornerstone to the economic success of Carreg-y-Llech Farm in Treddyn, North Wales but achieving the best preservation at the right time and with the right crops has been a process of trial and error.

Edward Morgan *(pictured)* runs the family's 190 milking Holsteins near Mold with his parents, Terrig and Gwyneth, and recalls how silage was historically made on the farm using the original Add-F.

"Dad was a big fan of Add-F because it could preserve any kind of forage and while we did the silage making ourselves we were very happy to continue with this additive," he says.

But four years ago as the family embarked on a modernisation and expansion programme, silage making was put into the hands of a contractor.

"Our machinery needed replacing and the whole process was taking too long so now, although we still mow, ted and put on one tractor and trailer, the rowing up, foraging and buck-raking are done by the contractor." However, the contractor wasn't keen to use a formic acid-based additive, so Edward and Terrig looked into alternatives.

"We used bugs on our grass silage for a while, but I found the silage heated in the clamp, so when we spoke to Bryn Thomas, from Kelvin Cave Ltd, we were happy to try an alternative," he says.

Bryn's suggestion was to opt for the new gold standard which is provided by Safesil – the preservative that's based on human food-grade ingredients.

"Safesil contains sodium nitrite which kills clostridia and other harmful bacteria, and sodium benzoate and potassium sorbate, which are the only commonly used preservatives proven to eliminate yeast activity without compromising fermentation," explains Bryn. "This means it was the only product I could confidently recommend for the difficult conditions which can sometimes occur on this mostly north-facing farm, which rises to 850 feet above sea level and has 900mm rainfall."

With the bonus of a pH of 8, Safesil is completely non-corrosive to skin and machinery, and was more than acceptable to the Morgans' contractor.

"To be honest, moving to the contractor was the best thing we ever did," says Edward. "Around 120 acres of first cut silage is now all made in a day and we make much better quality silage than we ever did before," he says. However, he says there are still inconveniences to endure, largely because of the limited pit space, most notably due to the need to repeatedly open the clamp.

"The sheets came off twice last year, first to add second cut grass and then to add wholecrop wheat, and although we weight it with tiles which are relatively quick to move, this re-sheeting is definitely something I'd rather avoid," he says.

However, despite the three layers of forage and a fairly slow rate of feed-out, Edward says the silage preserved with Safesil has never heated up. Buoyed by the success of the product on grass, he has since introduced it for other forages and says that last autumn was the third year he preserved maize with Safesil.

"It preserves the maize just as well as it does the grass and I'd say it's a particularly good product if you are feeding maize in summer," he says.

However, a question mark still hangs over this marginal farm's ability to grow maize, where winters can close in quickly, harvest can be difficult and yields can disappoint.

Crimped wheat and wholecrop are increasingly seen as alternatives, suiting the farm's water-retentive soils, fitting more comfortably into the crop rotation and being easy to preserve and store.

"Our aim is to do as well as we can in producing milk from forage, but we don't shy away from feeding concentrates when we're getting a worthwhile response," adds Edward.

However, with a new silage pit due to be built he has every optimism for the future, and believes producing more milk from home-grown feed will continue to raise the farm's bottom line.

Carreg-y-Llech Farm Facts

- Production of 8,500 litres at 4.18% fat and 3.38% protein
- Ration semi-TMR (see box below)
- Milking 190 head, rising to 225 in spring 2014
- 180 acres owned and a further 180 acres rented
- Seasonal milk contract with August to March calving
- Recent investment in an extra 176-cubicle shed, slurry storage and 28/28 GEA parlour
- Milk from forage 2,890 litres; concentrate use 0.31kg per litre

Milkers' ration (fresh weights) for maintenance plus 30 litres

- 24kg grass silage
- 5.5kg whole crop wheat
- 6.0kg maize silage
- 2kg crimped wheat
- 6.5kg blend (25% protein)
- 0.5kg straw (from crimp)
- 100g high omega-3 fish oil
- 250g protected fat (for first five months)