

New silage-making practices have slashed forage waste

The Lucas family ensile five cuts of grass as well as maize silage and say using a SilaPactor and Safesil Pro has transformed the forage and silage-making process on their Somerset farm.

The Lucas family from Somerset have introduced a five-cut silage system to their mixed livestock and arable farm, which is part of a strategy to produce the maximum quantity of high quality home-grown feed for their cattle.

Believing that forage is the backbone of their 270-cow, 9,000 litre dairy herd as well as their beef enterprise, Tom Lucas says: "The higher the quality of forage we produce, the less we need to add to balance it and the more of our wheat we can sell."

With 800 acres of combinable crops, 170 acres of maize and 500 acres of grass silage – all of which is run without contractors by the family, including his parents, John and Diane, and three brothers, Dan, Adam and Toby – the team is well placed to formulate all of its livestock rations almost exclusively from home-grown feed.

"It makes no sense to sell something from your farm for £120/tonne and buy something else in for £250/tonne," says Mr Lucas. "You don't need a calculator to work that out."

In fact, by making high quality forage and including home-grown rolled beans, wheat and barley, he only needs to buy in a soya/rape blend, which is included in the dairy herd's total mixed ration at a rate of 4.0kg/head/day (see Table 1 overleaf) plus between 0.47kg and 1.88kg/day in the parlour according to yield (see Table 2 overleaf).

But relying on feeds grown at home on Higher Woodland Farm near Taunton, means it is essential to get the quality consistently high, and taking four cuts of grass silage has long been part of



Farmer Tom Lucas (inset) and the face of his Safesil Pro-treated silage clamp.

that process.

"We increased to five cuts last summer to catch the crop before it goes to seed and declines in quality," he says. "And once it's gone to seed, it's not really bulking up either."

"Now, we've moved our early May cut forward to the end of April and aim to cut every four weeks after that," he says. "Of course, this is weather-permitting but last summer, we had plenty of rain and the grass grew like mad between the cuts."

A further improvement made to the process in 2017 was a switch to the additive, Safesil Pro, to preserve all of the farm's forage.

"We used to get a bit of mould, especially at the top of the maize silage, and had tried a few bacterial silage inoculants in the past but didn't think they made any difference," he said. "So we gave Safesil Pro a try because it had a completely different method of preservation, and I have to say it has worked beautifully."

"There's no doubt about it; it does what it says on the tin – it's a preservative!

"In the past, we always fed the top layer of the clamp to the beef cattle but we only do this out of habit now as there's really no need," he says. "There's no waste at all on the clamp face right up to the top and sides; the silage stays stone cold and there's no waste in the cattle troughs, which we used to spend ages cleaning out."

"I have never had a warm handful and there is never any steam from the forage – whatever the weather," he adds.

Kelvin Cave explains that Safesil Pro is unlike other additives in the farming industry, being formulated with high concentrations of preservatives which are of human food grade quality.

"This preservative has been independently proven to eliminate the activity of yeasts and guarantee prolonged storage stability [Journal of Dairy Science, 94:824-831], which is a guarantee I have never seen given for any other silage additive," he says.



Table 1: Higher Woodlands Farm Premix

	kg/head/day	kg in mix
Home-grown field beans	1.50	176.5
Winter blend (soya/rape)	4.00	470.5
Home-grown rolled barley	1.50	176.5
Home-grown wheat	1.50	176.5
Total	8.50	1000.00

Table 2: Higher Woodlands Farm current feeding plan – milking herd (kg as fed/head/day)

Ingredients	Highs (40 litres)	Lows (25 litres)
Second cut grass silage	15	15
Maize silage (30% starch)	24	24
Hay	1	1
Premix (as on page 5)	8.5	8.5
Parlour mix (as premix - above)	4	1
Nutrients		
Dry matter intake (kg/d)	24.6	22.0
Forage dry matter intake (kg/d)	13.8	13.8
Forage (%DM)	56	63
ME (MJ/d)	294	260
ME (M/D)	12	11.8
Protein (%DM)	17.6	16.7

rolled with tractors your feet sink in,” he says. “But when the SilaPactor has been used, the surface is beautifully firm – almost like walking on concrete.

“We don’t use any more fuel with the weight of the SilaPactor as the JCB now works in a higher gear,” he says. “It’s visibly very different and moves up and down the clamp so much faster because it is working on such a firm surface.”

The overall effect of the two new products is seen, first and foremost, in the complete lack of visible waste, while the rapid and clean fermentation achieved by Safesil Pro minimises invisible losses too. Combining this with five cuts of grass silage and mainly two year Italian and perennial ryegrass leys ensures the highest possible metabolisable energy (ME) right through the season.

“We’re very happy with the way it’s working and have ordered our Safesil Pro for 2018,” he says. “However, if we had to decide between one or the other – the Safesil or the SilaPactor – I think we’d choose the SilaPactor... but luckily we can have them both!”

At the same time as the switch to Safesil, a move was also made on the Lucas’ farm to improve the consolidation of forage in the clamp.

“We had a SilaPactor from Kelvin and another packer implement on trial, and, while you could see both improved the consolidation of the clamp, the SilaPactor was better,” says Mr Lucas.

“We trialled a 2.6 metre version but asked Kelvin to supply a 3m version as we wanted it wider than the tractor to get to the edges of the clamp,” he says.

“The self-propelled forager [a Claas Jaguar 850] brings in the crop so fast it is hard to deal with it at the clamp,” he explains. “We had a JCB on the clamp and one tractor [a 235hp Claas Axion] and couldn’t keep up.

“Now, we still have the JCB but have the 3m SilaPactor on the Claas,” he says. “It doesn’t save us a tractor but makes the process far more efficient.

“If you walk up a clamp which has been

