Quality grass and forage bring sweet smell of success

The careful introduction of regenerative farming practices and a heavy reliance on home-grown forage and feeds has helped keep a Somerset dairy's two herds and its raw cheese manufacturing business in optimal health.

▲ *Richard Calver (inset) and some of the cheeses maturing at the Westcombe Dairy.*

When you're making farmhouse Cheddar from unpasteurised milk, every input and practice can feed through to its flavour. From the species of grass in the swards to the choice of additive to conserve the silage and from the products chosen to clean the cows' teats to each individual ingredient in the total mixed ration. All come together to create the distinct flavours of a raw, artisan cheese, every one of which must be continuously and carefully balanced to retain the consistency of product customers expect.

Add in the need for profitability, scrupulous hygiene, high standards of animal welfare and a growing desire to practise regenerative farming, and it becomes ever more of a challenge to keep each target on track.

But this is the reality for Richard Calver of Westcombe Dairy, near Shepton Mallet in Somerset, where farmhouse cheese has been made on and off, since the 1890s.

He says: "The business is like a Post Office sorting office. Advice comes in from every direction and you have to decide how you will pull it together. And once you diversify, there are even more layers."

Stepping up to the challenge, having taken on the farm in the 1960s - first as a partner and tenant and later as an owner - he resumed cheese-making after a break, in the late 1990s. Joined in 2000 by his son, Tom, trained chef and former apprentice cheese-maker, the duo perfected the cheeses - both Cheddar and Caerphilly - for which Westcombe Dairy is now renowned.

Today, the farm comprises 800 acres (324ha) - of which 700 acres (283ha) are owned - and 380 milking Holsteins, transitioning to a blended Shorthorn and milking across two herds.

Producing around 140 tonnes of cheese every year, the cheese-making business is described by Richard as 'small, but with the agility to adapt'. Selling around 50% of its milk to Barber's Farmhouse Cheesemakers and making its own branded cheese with the remainder, he says: "Barber's make in a day what we would make in a year."

With production for his two herds averaging just under 9,000 litres at 4.3% fat and 3.5% protein, Richard feels lucky to have recruited a farm manager whose focus is on regenerative farming and whose passion is for flavour.

Nick Millard came to the farm in 2018, having studied agriculture at university, completed a dissertation on the effects of cow nutrition on the sensory properties of farmhouse cheeses, and worked in the UK and France with a cross-section of dairy herds.

At the heart of Nick's ambition to improve the farm, the herd and ultimately its cheese production, is a primary focus on producing quality grazing and forage - the driver of business success.

Gradually converting all grazing to herbal leys, these are known to impart a depth of flavour to cheese.

"The Neal's Yard cheese buyer asked what had happened after we'd turned the cows out on to the herbal leys," says Nick. "She loved the flavour."

With herbal leys comprising over a dozen species including chicory, plantain, timothy, cocksfoot, sainfoin, lucerne, red and white clovers and some fescues and perennial ryegrasses, the deep rooting nature of the swards achieved noticeably greater water retention and productivity in last summer's drought.

"It began with an earlier turnout than usual, on 22 March, although this was assisted by new tracks and easier access," says Richard. "And as the summer progressed, the herbal leys stayed green while everything else turned brown."

This was enhanced by rotational grazing, arguably closer to mob grazing, with large groups moved on to a small area each day.

"We mostly went into covers of around 4,000kg DM/ha and out at around 1,800kg DM/ha," says Nick, remarking that the tightest stocking rate was 130 cows on 0.6ha for a 12-hour grazing.

The upshot was that the herd on the herbal leys consumed some 10kg freshweight/cow/day less buffer silage than the other.

"That amounted to 315 tonnes of silage saved," he says, citing further advantages including lower fertiliser use, which contributed to just 18 tonnes of nitrogen being used last year across the whole farm.

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A soil sample (dug from the ground on 7 February) is examined by (L to R) Nick Millard, Dr George Fisher, Richard Calver and David Warner of Kelvin Cave Ltd.

Dr George Fisher, independent grassland consultant who visited the farm as part of a package of measures offered by Kelvin Cave Ltd, expands on t his observation.

"Leys comprising a variety of species have actually been found to capture and store more carbon than a typical ryegrass ley," he says. "This has been observed by researchers at Reading University, who speculate that amongst the contributory factors is a more diverse root mass which encourages a prolific soil microbial biomass, adding more organic matter more quickly - and therefore carbon - to the soil."

Also advising the Westcombe team about the optimal timing for their minimal nitrogen applications and weighing up the benefits of ploughing or spraying in a range of situations, he offers further guidance on how the farm's regenerative approach can optimise output from its cutting leys.

"The leys for silage are basically ryegrass and clover but we've added other species to help with drought resistance," says Nick, who uses Kelvin Cave's Safesil Pro, containing human food grade preservatives, for silage preservation. "We can't take any chances and the most important thing for us is that silage is preserved without spoilage or waste.

"The silage smells amazing and the cows perform exceptionally well on it; we're happy that its quality enhances the flavour of the cheese," he adds.

Reiterating the importance of a constant flavour, Richard remarks that the milking herd is housed by night through summer and winter, to achieve the continuity of flavour achieved from a consistent and high-quality forage.

"There's also the issue of pathogenic bacteria such as listeria," he adds. "As an unpasteurised cheese-maker, it's essential that we use a preservative which will avoid contamination."

Conversely, there are some ingredients the team has learnt not to feed, including protected fats and feed-grade urea which will spoil flavour or texture. However, a small quantity of hay is considered essential, both lifting butterfat and adding to depth of flavour.

Other products in everyday use, both of which are considered to play a role in shaping the final product, include ground straw bedding which is said to suppor ipening spores and the use of wood wool in the pre-milking routine.

"This is considered the gold standard in French raw milk cheese dairies," says Nick. "And several studies have also shown that, due to quicker milk let-down, it takes 15 minutes per hour off milking time."

Every effort is also made to home-grow as much feed as possible and with the abandonment of maize around four years ago, an alternative had to be sought.

"We didn't like the soil erosion caused by maize, it was expensive to grow and we had to use sprays I did not want to use," says Richard. "So, now we grow a mixed crop of barley, peas and vetches, which is preserved as high-quality wholecrop silage with Safesil Pro.

"The difference is stark between a field of maize which appears sterile compared with the mixed crop which is buzzing with wildlife," he adds.

With every ingredient of the total mixed ration grown on the farm - barring a treated rape meal blend and minimal in-parlour concentrates - finances too are in optimal health.

Margin over all purchased feed is £3,085/cow/year (34.6p/litre) and this includes home-grown crimped wheat in the ration, preserved with Kelvin Cave's

Nick Millard says the high-quality silage imparts a good flavour to the cheese.

CrimpSafe 300, treated as a bought-in ingredient.

"The milk is also sold internally at 1p per litre more than we get from Barber's," says Richard. "We feel the extra we do to enhance the cheese is worth the extra penny."

The rolling average milk price at 44p/litre in February 2023 compared with 32p/litre at the same time in 2022, also impacted the dairy herds' profit.

"The farming profits have been good but this means the cheese margins were relatively lower," he says. But the balance should move to favour the cheese manufacturing business in 2023 as the milk price heads down, starting with a drop of 3.8p/litre in March.