

Pioneering partnership makes ‘dry’ dairy pay

Dairying on the UK’s driest unit has its challenges. But one Essex-based business has adapted herd management, and adopted zero grazing decades ago, to make the most of early grass.

TEXT RACHAEL PORTER

It’s only May, yet the cracks that have already appeared in soil on John Smith’s Essex-based unit are more like those seen across the UK in August 2018. But he’s used to the challenges of producing milk on what is, officially, the driest farm in the UK. Average rainfall is a meagre 457mm a year and the soil is sandy. But top-quality cows, as well as sound grassland and herd management, mean that the family business, based near the coast at Clacton on Sea, is thriving.

John is the second generation to milk cows at the 135-hectare dairy unit. His father, Philip, founded the Wigboro pedigree herd back in 1975. Herd size grew steadily until it reached 100 head in 2014 – the unit’s full capacity at that time. And then John, who

came back from studying at Hartpury College to join the family business in 2006, says that the business was at a crossroads.

“There’d been no investment in the dairy unit for 35 years and we knew that we either needed to spend some money or sell up. I really wanted to continue with the cows. So we began a significant programme of investment – and expansion,” he says.

New facilities

This meant erecting a new sand-bedded cubicle house, with space for 240 cows; building a new dairy; and installing a 20:40 swing-over DeLaval milking parlour, to replace an ‘ancient’ six-side set up. “We’d got to a point, with the old parlour, where

Split management: low-yielders come in for fresh grass and the higher yielders are fed a TMR



COMPANY PROFILE

Name	: John and Philip Smith
Herd size	: 300 cows
Average yield	: 10,000 litres, at 4.20% butterfat and 3.29% protein
Somatic cell count	: 167,000 cells/ml
Calving interval	: 401 days



we were milking 160 cows and it was in use for nine hours a day. “It wasn’t much fun, particularly if there were fresh heifers to milk,” recalls John.

Re-roofing the old straw yard building, which previously housed the milkers, was also part of the investment programme. This is now used for dry-cow accommodation and calving. And a new heifer rearing shed was completed in 2017. “Our existing young-stock facilities just weren’t good enough to allow us to meet a target age at first calving of 24 months,” explains John.

A small farm, just two miles away, is now rented for rearing young stock and the grassland there has been reseeded and is cut for zero grazing. “We’ve been using a lot of sexed semen, so we have a lot of heifers – about 300 head in total. We keep about 120 there and around 180 on the home unit.”

Philip and John decided to push up cow numbers, to 300 milkers, to give the business more scale and to make it more viable. They’ve achieved this with home-bred heifers and some bought-in maiden heifers.

Genetic progress

Apart from providing more heifers for their milking herd expansion, sexed semen has also speeded up the rate of genetic gain.

“To be honest, a 300-cow herd is slightly larger than ideal,” adds John. “But we’re now in the happy position of being able to sell some surplus stock – young stock and some freshly calved heifers. We have space for 250 milkers, so this will determine the number of heifers for sale.”

The herd calves all year round and is predominantly housed. The low yielders go out to ‘loaf’ on one of two 2.5-hectare paddocks during the summer and are zero-grazed to minimise waste and maximise grass utilisation. The high yielders stay inside and are fed a TMR that John aims to keep as consistent as possible, to avoid nutritional stress. This TMR comprises grass and maize silages, plus an 18% protein blend and minerals. Milk produced by the herd is sold to Arla.

The herd is currently averaging around 10,000 litres, at 4.20% butterfat and 3.29% protein, with an average somatic cell count of 167,000 cells/ml. “The drought in 2018 set the girls back a little, but we’re catching up again now. We had just 457mm of rain in 2018, which is typical. That said, we’ve had

two particularly dry years in a row, which has really focused our minds.

“Our soil warms up quickly in the spring and we do see early grass growth. We endeavour to make the most of this as, come June, July and August, it really starts to slow down and we have to irrigate to keep the grass growing. The large fields can be irrigated during the drier months.”

John explains that their fields of Italian ryegrass, which are cut for silage and zero grazing, are large – typically about 24 hectares. “And some are more than a mile away, at the rented farm, so they don’t really lend themselves to grazing. Because it’s so dry here, it makes sense to cut and carry fresh grass to the cows – there’s no trampling, soiling or rejection issues. This approach helps us to make the most of our grass.”

The Smiths began zero grazing more than 20 years ago. Philip was a ‘pioneer’ of this system and had one of the first and original zero grazing machines. “That was back in the late 1990s and suited our 100-cow herd and system perfectly,” says John. Cutting starts in March and, to help accommodate the demands of a much larger herd, the Smiths have just bought a new zero-grazing machine – a GrassTech GT140. “We started using it this spring – my Dad’s in charge of that. We saw one in action on a dairy farm and were impressed. It has helped to speed up the cutting process and further improve efficient utilisation. It allows us to cut exactly what we need and with greater precision,” he says, adding

Cut and carry: the zero grazing machine can cut up to seven tonnes of grass in just five minutes





▲ *Young stock: the next generation of milkers for the Wigboro herd*

that it harvests a trailer load, of between six and seven tonnes of grass, in around five minutes. The farm, which is based at Wigboro Wick near St Osyth, comprises 460 hectares. The dairy utilises 135 hectares – 95 hectares of two-year grass leys for cutting and silage; six hectares of fodder beet, to feed to the higher yielders; and 28 hectares of forage maize. The remaining land is arable.

The Smiths follow a strict reseeding policy, to maintain and maximise grass and forage output. Grass mixtures, and the varieties they contain, are selected to suit the unit’s marshland and its 50 hectares of lighter land. Drought tolerance is important on the latter this is sown, every year, with a fast growing and high yielding ley mixture, suitable for both zero grazing and silaging, and this is followed with maize. The mixture, called Spitfire and supplied by Procarn, comprises Italian, hybrid and perennial ryegrasses.

“It’s a bespoke mix for our unit and its unique conditions,” explains John.

The three-year leys, on marshland, comprise hybrid and perennial ryegrasses, and festulolium. “We’re looking to take at least three cuts a season from the zero-grazing leys – typically two in relatively quick succession, before dry conditions slow grass growth, and then one later in the season.

“We aim to take two cuts of silage – quality is key here, as well as quantity. Taking a third cut is

difficult because the grass starts to burn off come mid-June.”

The Smiths’ other key focus for success is the herd itself. “We look to breed robust, milky cows with good type, that will stay in the herd for several lactations and are ‘trouble free’.

Breeding programme

They use mainly genomic sires. John says this helps them achieve a faster rate of genetic gain. “We can move the herd forward quicker and I think it’s important to be one step ahead in the game. We’re also planning to start genomic testing our heifers in 2019, so we can breed and rear replacements from only the best cattle in the herd.”

“Our use of young genomic sires has increased during the past few years. We ‘dabbled’ like a lot of others when they were first available and our confidence in the technology and the bulls has grown, helped by seeing some really fantastic heifers on the ground.”

Popular sires that have been used on the herd with considerable success include: Shottle, Agronaut, Explode, Flowrider, Rozzer, and Bestman. Sexed semen has been used on all heifers since 2012, and it’s now used across 70% of the milking herd too.

“We use beef sires – Aberdeen Angus and Hereford – on the ‘bottom’ 30% of the herd.

Looking ahead, John and Philip will continue to focus on using and breeding from the best genetics available, and they will use some embryo transfer to speed up progress.

“We also want to reduce our calving interval, which stands at 401 days, and improve milk yields slightly. We don’t want to milk more cows – for us it’s about quality not quantity.”

The farm may be dry but there’s a rich seam of dairy passion and enthusiasm. “Every dairy unit has its unique set of challenges. It about identifying what they are and then making them work for you.

“We’re able to do this, thanks to our investments and management system, and we’re seeing the herd and business gradually becoming more productive, efficient and resilient each year.” |

► *Dry conditions: soil fissures like this are typical for May at the unit*

