System switch improves efficiency

During the past three years the management system at one Gloucestershire-based unit has been totally re-engineered, moving from all-year-round to block calving. We spoke to the farm manager to find out more about the reasons behind the change.

TEXT PHIL EADES

When Andrew Eastabrook took over as farm manager at Hartpury University and Hartpury College, in January 2017, the herd was averaging around 10,000 litres on an all year-round calving and housed system. And, on paper, this appeared to be a successful herd. But, looking beyond the headlines, Andrew could see that yield was dependent on a high-input/high-cost system with a feed rate of around 0.4kg per litre. "We were feeding large amounts of concentrates at the expense of forage," he explains. "While we were producing plenty of forage, it wasn't being fully utilised. The system was also impacting on herd health with lameness and mastitis issues, as well as a higher than desirable incidence of displaced abomasum."

He adds that there were also calf disease problems, predominantly due to the buildings being occupied all year round, with no chance for a break. "I was also concerned that an all-year-round calving herd didn't dovetail effectively with the other enterprises on our mixed farm", says Andrew.

He had worked on block calving units before and he likes the focus it allows. "With a tight block, everyone can concentrate on calving, then on breeding cows or other tasks, while releasing staff as required for forage making, lambing, or harvest as required.

"Grass growth also tends to tail off here in the summer and early autumn, and an all-year-round calving system was making it difficult to graze cows. So, we made the decision to move to tight autumn-block calving set up."

Caroline Groves:
"A clear plan and attention to detail have contributed to the herd's success"

Forage intakes

Now, two years later, the cows are calving in a 12-week block between August and October, feed rate has reduced to 0.3kg per litre, forage intakes have increased from 8kg DM/cow/day to more than 14kg DM/day, and milk from forage is 4,000 litres per cow. That's a fivefold increase, up from 800 litres.

Andrew says that three major elements were essential for the effective change of system. The first was to tighten calvings into the block. The initial stage was to consider the herd on a cow-by-cow basis. "Around 15%

COMPANY PROFILE

Name	**Andrew Eastabrook**
Location	**Hartpury University and Hartpury College, Gloucestershire**
Herd size	**260 cows, plus 150 followers**
Average yield	**9,127 litres of milk, at 3.98% fat and 3.37% protein**

of the herd tested as 'red' for Johne's disease, so these cows left the herd. Cows that already calved in the block timeframe were put back in calf, while cows that calved in the three months prior to the target block were allowed to milk on so they calved in the block."

Cows with no chance of 'going around' but were good quality cows were put in calf for spring and sold as fresh calvers to generate a cash flow.

Heifers were all served to calve in the block, which meant that some were calving for the first time at just 21 months old. The oldest calved at 26 months old. This strict approach was followed for two years and, in 2018, 170 cows calved in the block. This year the entire herd calved during the 12-week period. The target is a block of 280 calvings in 12 weeks in 2020.

Tipping point

Andrew explains that the second element was to progressively drive down concentrate use and increase forage intakes. "We started by reducing concentrate intakes by between 0.5kg/day and 1kg/day and boosting forage dry matter to compensate while watching milk yields closely. We saw no change in yields, despite the concentrate reduction, so the exercise was repeated until we got to the tipping point when milk yields started to be adversely affected.

"Today we're feeding 6.25kg of blend per cow – down from more than 12kg. We're happy at this level, but we will monitor milk price and reduce it further if producing marginal litres is uneconomic."

For practical reasons, all housed cows are fed the same ration. Late-lactation cows can be grazed without supplementation and Andrew simply lets them go dry with a reduced risk of being over-conditioned.

The third element behind the switch to block calving has been to improve forage quality and consistency. This meant changing to an opticut system and increasing the hectares of maize grown. Andrew has worked closely with Promar's Caroline Groves and she says that a clear plan and attention to detail have contributed to the herd's success.

"The move to block calving has improved efficiency. Andrew has set metrics to allow him to monitor progress and keep the plan on track. From a high-cost system, he is now producing more than 9,000 litres and feed costs per litre are 11% below the average."

Milk from forage is 50% higher than the average. "And in 2018, despite the dry summer, the herd increased yield by 2% while cutting purchased feeds by 23%. With these figures it's no surprise that they were awarded the southern-area region title, and were national runners up, in this year's Milkminder Manager competition."

Looking forward, Andrew says the focus is to maintain the tight calving pattern. All cows and heifers are now fitted with heat detection eartags and the target is to serve all cows within 80 days of calving. He wants to improve herd health and has made a good start, with Johne's levels now down to below 1%. Block calving has improved calf health because calf housing can be cleaned, disinfected and rested for several months.

Andrew also wants to improve breeding and push the herd into the top 10% for genetic merit. He also wants to breed robust cows and is focussing on milk constituents, ease and speed of milking, calving ease, and fertility.

"An efficient herd is a key part of our role as an education centre and block calving has helped improve the practical experience for our students," he says. "We need to demonstrate high quality management and the herd is a key part of the farm at Hartpury, which will soon be opening an Agri-Tech Centre," he adds. "This centre will demonstrate new technology and monitor its impact on productivity and profitability, giving industry a chance to see technology in action on a commercial farm before making investment decisions." |

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