

Improving the performance of pedigree Jersey young stock

Calf growth back on track

Poor calf performance was hampering the progress of one Northumberland-based Jersey herd, but changes to housing and feeding management systems have increased growth rates and reduced the age of heifers at first calving.

text **James Marshall**

Slipping weight and age targets at bulling and calving, and concerns about calf growth rates, led dairy manager Chris Shipley to rethink calf nutrition at Wheelbirks Farm, near Stockdale. Chris, who manages the 120 pedigree Jersey cows on 162 hectares, owned by Hugh and Tom Richardson, is focused on producing high quality Jersey milk for Wheelbirks' own-brand ice cream, which is manufactured on farm and sold direct to members of the public and via local businesses.

"As well as the ice cream, we also have a license to sell unpasteurised 'raw' milk, which has proven to be an increasingly popular choice among local consumers," explains Chris. "When it comes to milk, we focus on quality and aim for our cows to produce an average of 6,000 litres with a butterfat content of at least 6% and protein of 4%."

80-day weaning

Chris runs a closed herd, breeding all his own replacements, with cows calved all year round. "We store colostrum and have it on hand to give to calves straight after birth," explains Chris. "They then stay with the cow for a few days before being moved to individual pens. Calves then transition as small groups onto an automatic feeder for their first 60 days, with plenty of straw to nibble on. After that, calves are moved again and are encouraged to eat starter pellets and straw, with the aim to wean them completely by 80 days of age."

During the past two years, Chris has been concerned that the calves were not growing as fast as they should, leading to heifers missing bulling and first calving weight and age targets.

"We really need our Jersey heifers to be bulling before 15 months and ready for

first calving no later than two years of age," he says. "The longer it takes for them to get in calf, the longer we wait for them to produce milk and the longer it takes for them to start paying their way." In order to help improve young stock performance, the farm invested in building a new calf shed in 2015, as well as incorporating the wide scale use of calf igloos.

Chris attended a local calf-rearing workshop, where he met ForFarmers'

Michael Duncan. "I was looking for advice on our calf rearing set up and a pair of fresh eyes on our system. Knowing that he was looking to undertake some trials, I invited him to come and work with some of our young stock."

"After an initial planning phase with Chris, I started work on farm in March 2016 – tracking the growth rates of one batch of calves from April and then another in June; digitally weighing every other month," adds Michael.

"It soon became clear that while calves were in good condition, they weren't growing quickly enough to meet their performance targets and this explained why heifers were, on average, calving for the first time at 26 months of age."

Michael reprogrammed the automatic milk feeder that Chris was using and introduced ForFarmers' Omega Gold milk replacer. ForFarmers' VITA Start calf pellets were also offered to young stock.



Calf growth: stimulating rumen development is key to the weaning ration

“Our aim was to establish a high level of growth by maintaining calf health and providing a highly digestible milk feed,” explains Michael.

“We also wanted to encourage rumen development in preparation for growth beyond the milk feeding stage.”

Performance benefits

A third batch of calves was introduced to this management system in September 2016 and their progress was carefully monitored. With the benefits of improved young stock housing already in place, Chris didn't have to wait long to see the benefits in calf performance.

“At six months of age, the most recent group of calves being fed and managed on this system have been performing



Hugh Richardson (left) and Chris Shipley

Table 1: Wheelbirks Farm's average calf weights

batch 1 – old system (April)		batch 2 – old system (July)		batch 3 – new system (Sept.)	
calf age (days)	average calf weight (kg)	calf age (days)	average calf weight (kg)	calf age (days)	average calf weight (kg)
24	33	22	33	22	34
45	40	49	49	47	45
84	57	85	60	80	76
90	60	109	82	106	88
136	82	139	95	133	112



really well,” says Michael. “This batch of calves has grown faster than the two previous groups – some are 20kg heavier than calves were at the same age.”

Since Jersey calves typically grow at around 0.5kg per day, between weaning and eight to nine months of age, Michael assessed that the 20-kilogramme deficit at this key stage would have added at least another 40 days on to the rearing period, with significant financial consequences.

“I estimated that the cost of additional feed, bedding, labour and water during the next stage would average £1.40 per day,” says Michael. “Added to this is the ‘opportunity cost’ of milk that could have been produced that, minus feed cost, can equate to £2.60 per animal per day. This assumes an average daily yield of 20 litres and a margin over feed of 13ppl.”

While just a rough estimate, combining these figures equates to a saving of £4 per heifer per day. Across 40 days, that's £160 per heifer saved for every calf reared on the new programme. “Not a bad return on an investment of just £4 per calf.”

Tracking progress

Understandably, Chris is very pleased with the results and is happy that Michael will continue to track the progress of young stock involved in the trial as they mature.

“Our heifers are the foundation of our herd and we are now in a strong position where we can maintain animal health and growth rates. This means that we can get them in calf, calving down and producing milk sooner. It is a good result all round.” |