

Falling average birth weight of Holstein heifer calves demands lower feed rates

Are you overfeeding your new borns?

A study showing a decline in the average weight of heifer calves at birth could result in producers inadvertently restricting calf growth by failing to adjust feed rates. We spoke to a calf nutritionist and a producer to find out more.

text **Lauren Chambers**

The average birth weight of a Holstein heifer calf has fallen by 15kg during the past three years, according to a study carried out by feed manufacturer ForFarmers. Figures show a drop in average birth weight from 51kg in 2012, to 36kg in 2015. There are several reasons behind the decline, which is due to changes in herd genetics. There is an



Birth weights of Holstein calves have declined in recent years

increased use of easy-calving sires and cross breeding, as well as rise in the use of sexed semen, which is leading to more heifers giving birth to heifers. All these factors are contributing to lower birth weights.

And, in response to these findings, producers need to ensure they are reducing initial calf milk feeding rates accordingly. "The rule of thumb is to feed the equivalent of 5% of the calf's body weight for the first 10 days of life, as this matches the capacity of the calf's abomasum," explains ForFarmers' young stock specialist Rachael Kennerley, who led the study.

"Failing to reduce the amount of milk fed per feed, based on lower birth weights, can result in overfeeding and this negatively impacts calf health due to excess milk spilling over from the abomasum into the rumen and can also compromise the calf's longer term growth.

"Once in the rumen, excess milk ferments and produces VFAs and lactic acid. These significantly reduce the calf's rumen pH," she explains.

"This, in turn, can result in rumen acidosis, with scouring, bloat and reduced feed intake being just some of the short-term consequences. In the longer term, this over feeding can also result in calves suffering from impaired growth, inflammation of the stomach lining and increased susceptibility to illness."

Feeding requirements

The figures suggest that the average 36-kilogramme calf should be restricted to 1.8litre feeds from birth, compared to the 51-kilogramme calf that could safely consume 2.5-litre feeds just three years ago. These changes mean that extra care must be taken when feeding protocols are put in place.

Ensuring that feed rates are right early on can also help avoid problems later with weaning. At weaning calves are traditionally grouped according to age, but if smaller and lighter calves have not been identified and fed appropriately early on, by weaning time they will be significantly behind their target weight and at increased risk of bullying from bigger calves. This will also result in low feed intakes and slower growth rates.

For producers looking to maximise early growth rates and secure the long-term performance of their calves, it is vital to recognise this changing calf-weight trend and respond accordingly. "Even within individual units there can be a



Adam Challoner: "Calves are weighed at birth and fed accordingly"

large variation in calf birth weights, with the study showing a range of between 26kg and 47kg on a single unit," says Miss Kennerley. "Producers are, therefore, encouraged to treat calves as individuals and alter feed levels appropriately, rather than sticking to more general feeding plans."

The company's study showed results for Holstein Heifer calves, but with more units looking at reducing cow size through genetics and cross breeding, one Cheshire-based unit is putting the information into practice with their Holstein Friesian cross-bred herd.

Father-and-son partnership, David and Adam Challoner, run their 200-cow herd at New Pale Farm in Manley, Cheshire. The unit follows a twin block-calving system, with one group calving early, between January and April, and the second between August and October.

The calving system was initially set up because it gave heifers a 'second chance' if they weren't big enough to serve for 24-month-old calving. But the focus on heifer rearing during the past few years has helped to ensure that heifers are big enough to serve from 13.5 months of age, so they remain within their block, and avoid unnecessary costs by running into the next block and calving at 30 months old or older.

The family has been working with Miss Kennerley on all aspects of heifer rearing since August 2013 and is seeing great progress following changes to the unit's calf weighing and feeding regimes.

Accurate records

Adam now weighs calves at birth to get an accurate record of weights. This is particularly important because the cross-bred calves on the unit are smaller at birth than a typical Holstein calf. There is also a large variation in birth weights due to the variety of different crosses



Rachael Kennerley: "Overfeeding can compromise calf health"

within the herd. By knowing the average birth weight, which is around 35kg, Miss Kennerley and Adam have been able to work together to tailor the calf diet to make sure the correct amount of milk is being fed. The aim of early feeding is to double birth weight by eight weeks of age and this equates to a daily live weight gain (DLWG) of 0.63kg.

One of the most significant changes to the unit's young stock management has been the introduction of milk replacer.

Individual feeding

Calves were previously bucket fed with waste milk, but Adam now uses ForFarmers' VitaMilk calf milk replacer, fed using a group teat feeder. "We split the calves into pens of six, according to their age and weight, and invested in teat feeders and a tub mixer," he explains. "The powder is easy to handle and the teat feeders are a much simpler way to feed the calves. The group feeders also have individual compartments for each calf to ensure that the slower drinkers get all their milk, and the faster drinkers don't get too much."

With the calves being smaller than a more typical black-and-white calf, they start on four litres per day of milk replacer based on their birth weight. "As the feed rate is quite low, it is fed at a higher concentration – 16% – to get as much energy into the calves as possible," explains Miss Kennerley.

The unit's latest spring-born heifers are doing well and achieved an average DLWG of 0.78kg, which is slightly above target. And more than 90% of them achieved their target weight. "Our aim is for heifers to calve and enter the milking herd by 24 months old and to ensure that they are big enough to perform well," explains Adam. "We feel we are achieving this with well-fed heifers, but are also doing so in the most cost effective way." |