

Monitoring helps meet rearing targets

A Healthy Heifers competition provided the impetus for dairy farming clients of XLVets Westmorland Veterinary Group to use their vet to help them improve their calf-rearing protocols and meet breeding targets. Vet Kirsty Ranson reviews how some simple changes enabled farmers to improve growth rates and lower the breeding age of their heifers.

Heifer rearing is an area that we as an industry have neglected for a number of years, believes vet Kirsty Ranson of Westmorland Veterinary Group in Kendal. “Yet heifer rearing costs are the second highest variable cost on dairy farms, averaging out at 2.6ppl. But on units where heifers are performing well, this can be reduced to 2.0ppl.

“Also research has shown that to maximise lifetime milk yields, the optimum age for a dairy heifer at first calving is at 22 to 24 months of age. Calculating back, this means heifer calves need to be averaging growth rates of 0.85kg to 1.0kg/day, so that they can be bred at 13 to 15 months of age, by which time they need to have reached

60% of their adult bodyweight.

“To reduce rearing costs and calve heifers down earlier, dairy farmers need to focus on maximising growth rates in the first eight weeks of a calf’s life.”

Healthy Heifers competition

In September last year, Westmorland Veterinary Group launched a ‘Healthy Heifers’ competition to help dairy farmers re-focus on calf rearing.

Kirsty explains: “We invited farmers to participate, and set targets for various aspects of calf performance, with prizes for the best performers and those who contributed the most data.

“We asked farmers to record all mortalities in calves up to two months of age, and the number of pneumonia and scour cases in each three month period. On some farms, heifer growths were monitored right up to bulling weights and first calvings.

“Vets from our practice would take a look at a farm’s calves during their routine fertility visits. We measured the weights and ages of calves less than two months old and calculated their growth rates. Liveweight was either measured using weigh bands or some farm-



Kirsty Ranson of XLVets.

ers already had—or invested in—a weigh cell for their crush.”

The data from the farms was collated at the Westmorland practice, and as well as helping farmers to see where there was scope for improvement it has enabled benchmarking across the different farms and rearing systems.

Age at first calving

At the start of the competition, there was a wide spread range in the average age of heifers at first calving, with no farms achieving

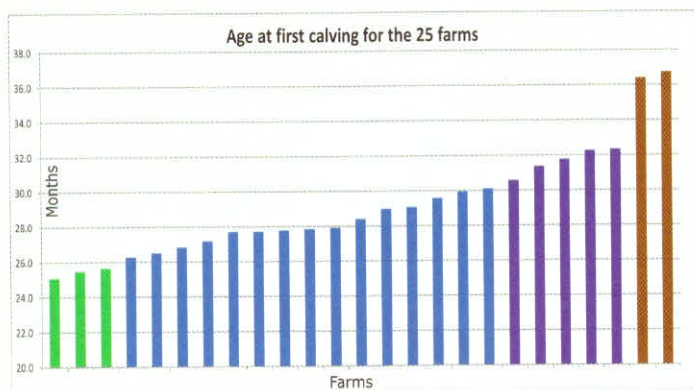


Figure 1: Average age of first calving.

the target of 22 to 24 months. (See figure 1).

"If the farms with heifers calving down at 26 to 30 months of age could reduce this by four months, this would save them approximately £3,660 per 100 cows," says Kirsty. "On farms where heifers were 30 to 36 months of age at the first calving, then reducing this by a year would save nearly £11,000 in rearing costs."

Pre-weaning factors

With Westmorland vets taking a closer look at calf rearing practices, some farms made simple changes which had a big impact on animal performance. In particular, significant improvements were made through revising milk rations and the use of calf jackets.

"Milk replacer was being underfed on many farms," says Kirsty. "In fact, almost all of the farmers in the competition were not feeding enough."

"A common error made was to feed the same amount of milk replacer as whole milk—two litres, twice a day. But if the instructions on the bag label suggest milk can be made up using 125g of powder per litre, this means calves only receive 500g/day of milk powder. This isn't enough to achieve the target growth rates of at least 0.8kg to 1.0kg/day over the first eight weeks. They needed to double the amount of milk powder."

"Calf rearers should also check that the correct amount of powder is being used by weighing it out. A set of electronic kitchen scales is not an expensive investment to make."

Farms where calf jackets were used also had better results for early growth rates. "Once the ambient temperature drops below 10°C, calves must burn energy just to maintain their core body temperature. This diverts energy away from 'powering' their immune system and from growth."

"Fitting jackets to young calves will provide them with insulation, and protect them from draughts so they are not using energy just to keep warm," says Kirsty.

"Because farmers were measuring growth rates, any changes made to the rearing protocol could be more easily seen, and their cost-effectiveness evaluated."

On one farm, calves given jackets grew an extra 100g to 150g/day over the first eight weeks. "With each jacket being used for at least 10 calves, an extra growth of 5kg was achieved for an extra outlay of £2/calf, plus feed costs were reduced."

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Kirsty weigh bands a calf so growth rates can be monitored.

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“Jackets should be made out of breathable fabric, and must be washed in-between calves to prevent disease spread,” advises Kirsty.

Bulling weights

“Heifers are ready for breeding when they have reached 60% of their adult bodyweight. But if you don’t know how heavy they are, how can you make that decision?”

“Weigh-banding is suitable for calves up to 100kg, but after that, a weigh cell is needed. The two best performing farms in the competition had both invested in weigh cells for their crushes, and could make decisions based on accurate weight measurements and not from estimating by eye, or using age as the determinant.”

Results from the start of the competition are shown in Figure 2.

Only three of the 15 farms were breeding from heifers within the optimum range of 55% to 65% of adult bodyweight. “Six farms were leaving it too long before they bred their heifers—so they

were missing the opportunity to get them in-calf sooner and bring down the age at first calving, as well as save on heifer rearing costs.

“Conversely, six farms were breeding from their heifers before they had reached 60% of their adult bodyweight. In doing so they risked problems in the future—difficult calvings and heifers struggling to cope in the herd because of their small size.”

Healthier heifers

Through the increased focus on the calf rearing period, measuring growth rates and monitoring changes, competition participants have improved growth rates and reduced rearing costs. On one farm, the age at first calving has been brought forward by four months, in less than a year.

“Some farmers had been content that their heifers were healthy but hadn’t realised there was scope to accelerate growth rates,” says Kirsty.

“Being able to see how their own farm compared with others



Calf jackets help keep calves warm and improve growth rates.

also proved very thought provoking. For example, among the 15 farms that were recording the incidence of pneumonia, five farms recorded none, but eight were outside the target threshold of 5%, with incidences of up to 38%.

On some farms, pneumonia and scours can be accepted as a normal part of calf rearing. But these diseases are preventable, and as the benchmarking demonstrated, they don’t have to be tolerated. Similarly, calf mortalities at less than 42 days were minimal on seven farms, but on a few were over 10%.

“The measuring and monitoring of growth rates, and recording

of illnesses and deaths, have been fundamental to the success of the competition because it has enabled the value of any changes made to be seen.

“On many dairy farms, the milking herd is the focus, and it can be a struggle to find time for the calves. Striking the right time balance between the two is the key.

“Most of the farms in the competition have continued to have their vet look over the calves at the routine fertility visit. It doesn’t take up a lot of extra time in this way, but it does mean that calves are now getting the attention they deserve, and are reaching breeding age sooner.”

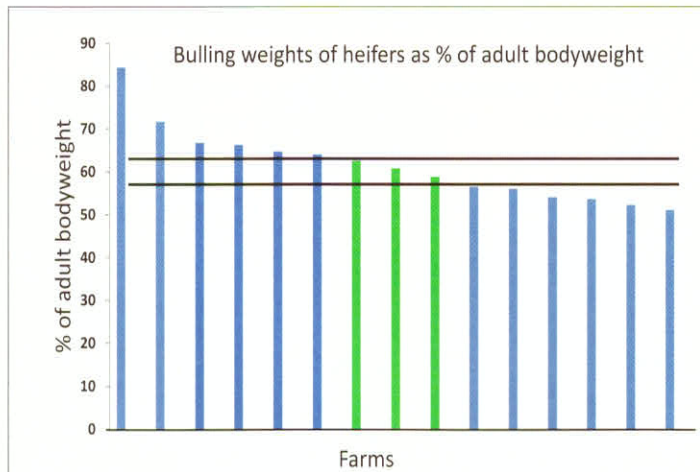


Figure 2: Average bulling weights as percentage of mature weight.

Calf Tracker scheme launched by XLVets

This autumn, XLVets has launched a similar scheme, based on the one run by the Westmorland Veterinary Group, which will help farmers (beef and dairy) to improve calf growth rates in the first eight weeks of life. Called Calf Tracker, the initiative is based on measuring and monitoring five key performance indicators over the two month period—growth rate to weaning, total mortality, pneumonia rate, scour rate, and total protein (to assess antibody transfer from colostrum). To learn more about Calf Tracker, farmers should contact their XLVets’ vet, or nearest XLVets practice.