

Trialling calf protocols for growth

In a bid to improve calf growth rates one high performing dairy unit tested a new feeding protocol, which combines whole cows' milk and milk powder, with some impressive results.

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Calving down at 24 months has been well-documented to make heifers significantly more productive, resulting in higher lactation yields and more lactations. Providing calves with adequate nutrition from birth onward will help them to meet growth targets early in life in order to reach sufficient weight and size to conceive by 15 months and retain good fertility in subsequent cycles.

Producer Tom Gethin milks a large Holstein Friesian herd on 465 hectares at The Gaer, near Welshpool, with an average yield of 11,400 litres at 4.00% butterfat and

3.20% protein. Tom began looking at how he could improve calf management and nutrition on his unit in 2018, following a dairy tour in the US.

Milkers comprise 45% home-reared heifers because the herd has been expanded in recent years. And this meant that Tom needed to take young-stock management seriously.

Quality heifers

Within six hours of birth, calves are given four litres of their own dam's colostrum, which is first tested for quality, and are then placed in a disinfected individual pen for between 12 and 24 hours. They are then fed eight litres of whole cows' milk per day and placed in single hutches until the week before weaning, when they are moved into group pens of seven calves. Calves are given a heifer rearing nut from one week of age to nine months old.

"At six months old we send our heifers to a second farm where they are fed a heifer nut and put out to grass, once they are in calf," says Tom.

"Our aim is for heifers to calve down at 80% of their mature weight, so we look for them to reach the right withers height before going to the breeding shed. Two months before calving, they return to the dairy unit and move in with the dry cows."

In recent years, Tom has worked on expanding the herd, but now he's at capacity the focus has switched to improving cow quality. "Our breeding focus is on health and fertility, so we genomically test all our heifers, serve 90% of them with sexed semen, and put the rest to an Angus beef sire," Tom explains.

Testament to the success of this programme are somatic cell counts at 160,000 cells/ml, a heifer fertility rate of 66%, and heifers calving down at an average age of 23.4 months.

"When we returned from the US trip, we took calves off whey-based powder almost immediately and replaced it with eight litres a day of cows' milk. This reduced rates of scours prior to weaning, but I still wasn't happy with their growth rate of 0.75kg per day," he says. "This was when I asked ForFarmers' Bethan Till to take a look at what we were doing to see what she thought we could do to improve performance."

Calf growth rate

In December 2019, Bethan visited the unit with young-stock specialist Peter Whittall-Williams.

"We looked at Tom's calf rearing protocols and realised that they weren't getting enough milk solids from the cows' milk. So instead of increasing the volume of milk fed to the calves, we thought we could add VitaMilk

Calves are weighed every two weeks with a weigh band until weaning



premium 40% skim-based milk replacer to increase fats and protein levels,” she explains.

“We set up a trial to test its effect on calf growth rate, with the goal of doubling birth weights by weaning and maintaining daily live-weight gains of between 0.7 and 0.8kg.”

Calves in both the control and treatment group were given similar quality and volume of colostrum at birth (measured with colostrum balls), then fed cows’ milk and the same calf grower nut.

The treatment group was also given 50g VitaMilk Premium and fed milk volumes following ForFarmers’ protocols. Both groups had similar average birth weights of 41.5kg and were subsequently weighed every two weeks with a weigh band until weaning.

Calves supplemented with the VitaMilk Premium outperformed the control group. By week two, they weighed nearly 3kg LW more than the control group and 7kg LW more by week eight, at which point

they had doubled their birth weight with an average weight of 87kg.

Staff motivation

By contrast, the control group did not double their birth weight, weighing only 79.8kg by weaning. Calves in the treatment group also achieved their DLWG target with an average growth rate of 0.8kg per day, reaching up to 0.96kg per day in weeks six, seven and eight. “I am really happy with the results of feeding the VitaMilk Premium,” says Tom. “The calves are healthy and strong, so the powder will remain in our calf management programme. “Bethan did a great job of setting up the protocols, training staff and monitoring the calves’ progress, and doing the trial itself has really motivated the staff that care for the calves.

“Our calf rearer has really bought into adding the powder into their milk because he can see the results of using it and it helps him to do his job well.” |

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