

The best return on investment means examining transition-cow rations

# Maximising returns on diet investments

In order to manage variable forage quality, one dairy producer has adjusted his close-up ration to give his fresh calvers the best possible start to their lactation. We spoke to him and his nutritional consultant to find out more.

text **Emily Ball**

**P**roducer Andrew Paterson milks 220 cows, managed on an all-year-round calving system, at Woodend Farm in Balfour, Stirling, and has to cope with some pretty wet conditions.

“On average we get more than 1,830mm of rain a year here, and sometimes, like in 2015, we get substantially more,” he says. “In 2015, cows were turned out at the beginning of June and were back in for most of July and August because conditions were just too wet.”

## Regular analysis

The high rainfall has a huge effect on the quality of the grass silage that Andrew makes. “I try to get in early for first-cut grass silage, to ensure quality if not quantity, but it’s not always possible and we certainly have more problems with second and third cuts. We often find cuts are late and the crop can, therefore, be mature.”

He uses dry NIR forage analysis and forage mineral analysis to get a clear picture of silage quality and the variability between cuts. Dry matters can be high or low – sometimes as low as 26% or as high as 46%. “Energy and calcium levels can also be hugely variable and protein levels are a real issue for us. We’ve got some of 2015’s second-cut silage in the clamp at the moment with a crude protein at 8%.

“With these quality variabilities it can be an uphill struggle to keep transition cows on a balanced ration. We were suffering a bit with metabolic problems after calving and I felt cows lacked energy right at the beginning of their lactation,” he adds.

ForFarmers’ technical manager Philip Ambler began working with Andrew three years ago and started by reviewing the herd’s technical and financial performance.

“We sat down and reviewed the progress made at the unit,” says Philip. “It was all about working out where to concentrate Andrew’s efforts in the future. The milking herd was performing well and we identified the transition period, particularly the close-up period, and heifer rearing, as two areas that could have a significant impact on future performance.”

## Colostrum yield

Research shows that more than 80% of health and performance problems occur due to management or nutrition issues during the transition period. It also highlights the effect diet in the transition period can have on colostrum yield and quality and, therefore, the subsequent performance of the calf.

“Forage quality, particularly protein levels, were a real issue for the transition diet and it was only Andrew’s close attention to detail that meant cases of milk fever and retained cleansings weren’t becoming a significant problem,” says Philip. “Milk yields seemed to be taking a while to get going once cows had calved, and we both felt the key lay in the close-up diet.”

Both Andrew and Philip insisted that everything added to cow rations had to be justified financially. They looked for the highest rate of return for their investment and the dry period, particularly close up, was ideal.



*Andrew Paterson: “Cows are calving more easily and we’re seeing fewer cases of milk fever”*

“By getting dry-cow nutrition right we can calve healthier cows that ‘hit the ground running’ at the start of their lactation and are more effective when it comes to feed efficiency,” says Philip. “I think of it as having a number of bank accounts with different rates of interest. It makes more sense to invest in the account giving 5% than the account giving 1%.”

He and Andrew made a change to the close-up diet, with the milking ration remaining the same in order to accurately assess any progress made. They kept to the base diet of grass silage, finely chopped straw (to avoid sorting) and the milking blend, and added a ForFarmers TRANSLAC product (complete transition cow compound), which includes a calcium control system to help manage the mineral variations within the forage. Simplicity and consistency were key aims when it came to developing the ration.

## Milk fever

“Close-up cows get the base diet top dressed with 2.5 kg of TRANSLAC Advance for the two weeks before calving,” says Andrew. “With our previous dry-cow diet we had a milk fever prevention index (MPI) of 75 or 78 and this explains why we did see problems from time to time. But with the new ration we’re seeing late 90s if not 100 on the index.

“Since the changes to their dry-cow diet,



*Dietary challenge: dry-cow rations impact on colostrum quality and, therefore, calf immunity and health*

cows are calving down easier. We have fewer issues with milk fever, and I have had between 10 and 15 calves during the past two weeks with no calving difficulties or metabolic problems.

“It’s one of those things you tend not to notice until you realise you keep coming into the shed in the morning and there is another calf born overnight, without any issues,” he adds.

### **Strong start**

He and Philip have also noticed that cows are coming into milk strongly at the beginning of the lactation. “They seem to be starting the lactation fully prepared. Cows yields are peaking

higher and sooner than previously and the lactation curve is flatter, with a slower rate of drop off towards the end.

“We’re not seeing the ebbs and flows in the lactation curve that we used to,” says Andrew “They seem to be coping with the variation in forage quality so well. We’ve kept the milking ration the same, so we know this must be linked to the changes in the dry-cow diet.”

This improved close-up ration has improved colostrum quality and quantity. Andrew has also noticed an improvement in calf growth rates and is seeing fewer scouring calves.

“And we haven’t gone all out to chase that extra milk,” says Philip. “Instead

we’ve sought to identify barriers that were preventing the cows from being able to express their natural potential and looked to correct them – in the most economical way. We provide the cow with the feed she needs to make the most of her natural efficiencies.”

“The costs of issues around calving tend to be hidden, but they are there,” adds Andrew. “Milk production has also become stronger and more consistent and, most importantly for me, I’m milking cows that just seem to be getting on with it. They calve more easily, they don’t have as many metabolic issues around calving, and they hit milk production in fine form.” |