

Practical highlights from this year's key industry conference

# Calf to milker – consistent management is vital

Consistency in milk feeding and rationing and a low tolerance of metabolic problems were just some of the topics up for discussion at this year's Large Herd Seminar, held at Tortworth Court in Gloucestershire. CowManagement shares some highlights.

text **Aly Balsom**

## Delivery and mixing are key to ration performance



Trevor DeVries

Inconsistencies in ration mixing and delivery could be compromising cow performance and efficiencies on many dairy units. So said Trevor DeVries, from the University of Guelph, who warned delegates at this year's Large Herd Conference that it was difficult to get cows to perform to expectation if the ration was not mixed or presented right. He asked: "How confident are you that what is delivered on farm is what's formulated on paper?"

"You need to ensure cows receive the ration in a consistent manner and that they consume it in a way that's good for them."

He explained how a study of herds in Canada found the TMR on some units could be over or under delivering on energy and protein by as much as 2% of the total diet.

"How often are you testing the feed components and mixed TMR on farm? Some units test forages once a year, but digestibility can vary. If you're not analysing and reformulating then no wonder you're getting inconsistencies in how cows perform," added Dr DeVries.

He said that ideally the TMR should be regularly sampled as it is being fed out, with samples taken from between 10

and 20 different spots and then mixed and split down to form a sample for testing. "The results will then tell you if variation is occurring and indicate the need to investigate why."

However Dr DeVries said the most concerning findings from the farm study was variation in how rations were being delivered.

"The biggest variation we saw was in particle size. Some farms had 31% variation in the percentage of long particles in the ration across seven days, which is probably linked to how the TMR is mixed," he said.

Every 5% variability in the percentage of long particles in the ration was associated with reduced yields of 1.2kg/day. Greater variation in ration energy density was also shown to negatively affect dry matter intakes with every 0.5% variability associated with a 1kg/day reduction in DMI and a 3.2kg/day reduction in milk yield.

## Calf feeding for a healthy and productive life

Ensuring heifer calves are fed enough milk and other nutrient sources to, at least, double their birth weight by weaning will set them up to produce more milk when they eventually enter the milking herd.

Cornell University's Mike Van Amburgh explained how feeding pre-weaning had a direct impact on the future yield potential of that calf.

"For every 1kg of average daily gain you get before weaning, you will get 1,500kg more milk," he said. To achieve this kind of performance, Professor Van Amburgh urged producers to change their thinking about feeding calves. "Rather than thinking about bottles and buckets, think about megacalories of energy being delivered. You need to feed so many megacalories above maintenance to get performance and that will be



Mike Van Amburgh

affected by different things such as the weather. So speak to a nutritionist for advice," he said.

He also emphasised that the importance of ensuring calves received enough colostrum after birth went far beyond just immunity.

"Immunity is only half the story. Colostrum is also a way for the dam to tell the calf how to absorb and use nutrients," he said, adding that ensuring calves received enough colostrum would help gut function and future performance.

Sandra Godden from the University of Minnesota spoke about the role of pasteurisation in maximising calf performance. She said pasteurising colostrum could help promote better



Sandra Godden

absorption of immunoglobulins (IgG) and improve calf health.

Research showed heat treating colostrum at 60°C for 60 minutes would not negatively affect IgG, would reduce or eliminate bugs such as E. coli and significantly reduce total coliform counts.

"We found a significant reduction in the proportion of calves treated for scouring when they were fed heat-treated colostrum compared to fresh colostrum," said Dr Godden.

Batch pasteurising milk for 30 minutes at 63°C could also kill Johnes' causing bugs. Calves fed pasteurised waste milk instead of milk replacer were found not to be at increased risk of Johnes' infection.



## Low NEB link to top herd performance

Any herd looking to achieve the highest level of performance must work to minimise negative energy balance (NEB) post calving and exercise a low tolerance to elevated blood NEFAs.

Blood NEFAs (Non-esterified fatty acids) rise when a cow goes into NEB post-calving, resulting in the mobilisation of

fat reserves. High levels can have a toxic affect on fertility and liver function.

Vet James Husband, from Evidence Based Veterinary Consultancy, said the difference between good and fantastic herds was achieving consistently low NEFAs across all cows. As such, looking at individual cow performance, rather than herd averages was essential.

"A NEFA level of 0.6 mmol/l in the week prior to calving is a real trigger point, resulting in increased chance of problems such as displaced abomasums," he said. "Below 0.4 is ideal. It's about getting consistently low values in the vast majority of cows. The more cows with higher values the higher the chance of poor fertility and health."

He stressed that it was a misconception that high yielders were always going to have worse NEBs post calving and added that ensuring intakes were maintained



James Husband

would reduce the likelihood that cows would 'crash'. The key was to achieve consistent performance across all cows during the transition period to ensure targets were met and this involved close monitoring of individual cow body condition.

