

Maximising calf health and minimising mortality

With around 8% of calves either still born or dying within 24 hours of birth, we share some tips and pointers on early care. Giving them the best possible start will maximise calf health and reduce mortality.

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Many producers would get a shock if they looked at the mortality statistics for calves from birth to 24 months old, according to SRUC vet Colin Mason. Speaking at Cargill's recent seminar on the 'myths of calf rearing', he pointed to statistics that show that nearly 8% of calves are still born, or die shortly after birth, and 3.4% die between a day and a month old. He attributes these mortality rates, and much of the variation in growth rates seen in calves, as a direct effect of a poor start in life and the disease challenge they face.

"See what's happening out there," he says, referring to work carried out by Bristol Vet School. It shows a range in growth rates for dairy heifers, from birth to two-years old, that range from 0.58kg LW per day to 0.75kg LW per day.

"Pneumonia and scours are the main challenge we face," he adds. "A survey of dairy farms, reported by the Royal Veterinary College, shows that 46.5% of calves were affected by pneumonia and 48% were affected by scour. We should establish what is acceptable here. Pneumonia treatment rates in the top quartile of rearing herds are less than 30%, which might be considered a good target, but I would like to see this a lot lower."

He adds that calves encountering a slow or difficult birth are more prone to disease. "And if they are starved of oxygen then there will be a build up of lactic acid in the new-born calf that will affect vigour, heart and lung function, and its ability to suck and absorb colostrum.

"It is essential that calves receive the required immunoglobulins from colostrum within six hours of birth to protect them from disease – what's known as passive transfer of immunity."

Adequate protection

US data suggests that 20% of calves experience failure of passive transfer of immunity. And 40% of calf mortality is associated with failure of passive immunity. "So teasing out the important factors on farm that contribute to this will allow corrective measures and monitoring to be carried out, to ensure calves have adequate protection in the early stages," Mr Mason says.

Examples of this include the importance of colostrum cleanliness and of ensuring that collection and storage facilities are scrupulously clean. "If the equipment or colostrum itself is contaminated during handling and storage, its quality can be compromised," he adds. "In a study on Irish dairy units, more than 50% of colostrum had total bacterial counts above the recommended level."

Mr Mason says that calving pen cleanliness is another important area in maintaining calf health. "We encourage producers to make enough space available – 1.25m² per 1,000kg of average milk production is ideal – so cows and their new-born calves have plenty of space. And these should be well bedded and cleaned out every two weeks, depending on the herd's calving pattern."

The issue of snatch calving is a point of debate, but



Colin Mason:

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it may be required to reduce the risk of disease transmission – certainly where Johne's disease or Salmonella are an issue. "In fact, a number of trials have shown that snatch calving at six hours or so leads to less vocalisation and looking for the dam or calf, than taking the calf away between one and four days old.

"There's a growing body of evidence of a distinct advantage to calf health by snatching calves earlier and before they form a bond with the dam."

Health challenges can still account for significant losses – around 3.5% – in calves aged between one and 15 months old. "Environmental factors can play a part in young calves."

Social stresses

Clean, dry, draft free and well-ventilated housing is required to keep calves healthy, and it's also important to avoid cold stress, because the calf will divert energy to maintenance rather than growth. "Small modifications such as keeping pens separated from an outer wall and solid partitions plus deep bedding – enough to ensure that the calf's legs are not visible – will keep calves warm and comfortable. Calf jackets are becoming increasingly popular for the colder months."

Social stresses can also affect calf health. Stress levels can increase when calves are moved and put into new groups, or the feeding regime is changed. All can make the calf more susceptible to disease. "Although we know that the longer a calf is in isolation, the slower it is to adapt to a feeding system, and that feed intakes are better in groups of calves, this has to be balanced with the disease risk," says Mr Mason. |

Tips to maximise calf health

- Calf health starts before birth
- Colostrum quality and timing is crucial
- Reduce rumen drink
- Maximise colostrum hygiene
- Ensure calving environment is clean
- Consider the effect on health of calf housing, environment, social stresses