

With the right milk, once-a-day feeding can work for calf and producer

Save time and money

Switching from a twice-a-day milk feeding system to once-a-day could save UK calf rearers around £6 per calf and cut labour input to as little as 23 seconds per calf per day.

text Rachael Porter

The majority of UK producers are still wedded to twice-a-day milk feeding, but a less labour-intensive, more cost-effective once-a-day system can deliver the same performance benefits. So says Bonanza Calf Nutrition's Tom Warren. "There's plenty of research around that shows that calves can be fed successfully on once-a-day feeding systems. Once-a-day feeding retains many of the advantages of twice-a-day, but involves significantly less labour, uses less milk replacer and promotes earlier weaning," he points out.

However he stresses that to secure the cost savings from once-a-day systems, producers must feed the right milk replacer. "Once-a-day feeding is best suited to either whole milk or milk replacers based on skim milk powder. This is because skimmed milk forms a cheesy curd or clot in the calf's stomach that takes more than 14 hours to be digested."

Casein protein

"This clot forms from casein protein produced specifically for the calf in the cow's udder. Milk replacers that claim to contain milk but make no reference

to skim milk powder or buttermilk are unsuitable for once-a-day feeding because they contain no casein protein. These products are usually based on whey and vegetable proteins and are flushed through the calf's digestive system in only a few hours, so are wholly unsuitable for a one daily feeding regime," he explains.

Mr Warren adds that choice of fat and fat level in a specialist once-a-day milk replacer is also important. "By including high quality skimmed milk in our replacers we do not need to push up fat levels.

"A high fat content tends to slow the movement of the milk through the digestive system, which at first sight might seem helpful for a once-a-day system.

"But high fat levels will delay dry feed intake and weaning, which you don't want."

By incorporating four vegetable oils along with the natural milk emulsifiers



found in buttermilk you can improve fat digestion and encourage dry feed intake.

With the nation under quota and milk prices relatively firm, he adds that it makes no economic sense on most farms to feed whole milk to calves.

In addition, calves on whole milk systems need to be between two and three weeks old before they start on once-a-day feeding unless milk replacer is added to the whole milk to increase the solids content of the feed. Weaning is also delayed using whole milk as dry feed intakes are lower.

Rumen development

"But with the right milk replacer, a once-a-day feeding system works fantastically well for both the calf and the rearer. Quite apart from the obvious labour benefits, calves eat more dry feed and their rumens develop more quickly," says Mr Warren.

"This allows weaning to occur a week or two earlier, saving the producer even more time, as well as cutting the amount of milk replacer used.

"Compared with a standard twice daily feeding regime, we estimate once-a-day will save at least 4kg of milk replacer worth at least £6 per calf." |

Once-a-day works well for college herd

Calf rearing in the Lackham herd in Wiltshire is an important part of the farming business and not just because females are destined to be dairy heifer replacements, nor because cross-bred beef calves add significant income. As part of Lackham College, the herd plays an important role in training diploma students in agriculture, and the next generation of producers.

In fact, the importance of the calf rearing enterprise cannot be over emphasised, according to farm manager Philip Steans, who says the calves are 'the crux of the herd' and the bedrock of its future.

"If they are healthy when they are youngsters, they stand more chance of staying healthy throughout their lives," he says. "But if they have problems from an early age, they will tend to succumb to the challenges they face when they're older."

To this end, the herd has recently opted for a once-a-day feeding routine, which Philip is convinced has added significantly to growth rates, health and

general contentment. "We'd fed once-a-day in the past, using the Bonanza Shine product that's designed specifically for the purpose, and we really liked the concept," he says.

"We found the calves were more content than when they were on twice-a-day feeding, they grew better and had far less digestive upsets.

"On twice-a-day, unless you can feed at 12-hour intervals, you are very likely to upset the gut as you're adding new milk on top of undigested feed," he adds.

By contrast, the Shine once-a-day product is formulated to be slowly digested and form curds in the calf's abomasum, where the milk will be retained for considerably longer than traditional powders.

The buttermilk, skimmed milk powder and vegetable oils in its formulation are responsible for this effect and single the product out from other milk replacers which are largely based on whey.

"A further attraction for us is that you can mix it with either milk or water,"

says Philip. "We definitely don't want to feed dumped milk to the replacement heifers, but are happy to do so for the beef calves.

"So the Holstein heifer calves get theirs mixed with water and the cross-bred beef calves get theirs made with cows' milk.

"Although we don't weigh the calves, I have no doubt that their growth is better, and their coats really do shine – which is always a good indicator."

But good stockmanship is even more fundamental than the feed, according to Philip, and he is full of praise for Richard Ingram, whose role includes calf care. "Once-a-day feeding lapsed under previous changes of staff, but Richard has been happy to take the once-a-day feeding back on and we have seen things improve since we started with this routine around a year ago."

The system today involves feeding colostrum for the first four days, introducing creep from day four and ensuring the creep feed is removed and

completely refreshed on a daily basis so it never becomes stale.

Clean water and straw are always available and the calves are said to be 'nibbling creep' by day 10, which is earlier than with a twice-a-day system.

Shine once-a-day is fed from day four and is always given warm at between 38°C and 40°C – the temperature of a healthy calf.

"I think this is very important for the health of the gut," says Philip. "If you start changing either the quality or the temperature of the feed, I am sure you upset the microflora of the gut."

Housed in groups of five at first and 10 when they're older, the milk is dispensed through Wydale five-teat feeders.

"We've tried a variety of systems over the years, but we're extremely happy with this one," he says.

"Apart from the health and performance, it also saves at least an hour of labour a day for our 170-cow herd, which is worth around £15 a day and certainly adds up over the course of a year."



Farm manager Philip Steans (left) and stockman Richard Ingram