

What's 'best practice' when feed

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Defra created a furore and caused a lot of confusion when it said, incorrectly, that feeding calves less than four weeks old just once-a-day was illegal. So here's a timely recap on best practice when it comes to feeding and weaning young calves.

text **Rachael Porter**

Good calf-rearing husbandry is essential to maximise growth and health. But good isn't good enough if you're planning to take the once-a-day milk feeding approach. It has to be excellent, according to Provimi ruminant specialist Philip Ingram. "Producers must guard against potential health and welfare problems before opting for once-a-day feeding of calves," he says. "While it is clear within EU legislation that calves must be inspected twice a day and fed twice a day there seems to be a grey area when it comes to the age of calves at which they can move from feeding milk or calf milk replacer twice a day to feeding it just once a day with the 'second feed' being solid food."

Defra said that one month of age is the minimum for this transition and cited the increased diagnosis of calves with abomasal disorders, such as ulcers, as being related to once-a-day feeding.

"But, legislation aside, we must consider the options and implications of feeding young calves with milk or calf milk replacer once or twice while they are still very young," says Dr Ingram. "In my experience, moving to one milk feed a day can create a number of problems in young calves. It is really important that producers consider the implications and decide if they are suited to managing a once-a-day system."

Maintaining the proper level of calf husbandry and inspection is one of the most important considerations. "Even if calves are fed milk once a day they must still be checked twice daily. Calves fed milk twice a day will automatically be checked at each feed. If a calf does not come to drink it will be very obvious that something is not quite right and action can be taken," he says.

"And we have to appreciate that achieving the correct intake of milk powder becomes more complex with once-a-day feeding of milk," adds Dr Ingram. "A young calf's stomach can only hold a certain amount of liquid so it must receive the correct intake of milk powder and all its

nutrients within that volume to prevent a reduction in performance.

"This is usually far easier to achieve in two daily feeds. If only one milk feed is fed then the concentration rate of milk powder may have to be increased. Feeding too much liquid in one feed can increase the risk of bloat and scours."

Potential pitfall

While some producers may look to save labour by offering milk once a day, Dr Ingram sees this as another potential pitfall.

"The very young calves will still need twice-a-day milk feeds so it becomes more complicated if slightly older calves have one milk feed but of a different mixing rate. This is a juncture at which an error can be made."



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In reality, the majority of producers will typically find that feeding milk or milk replacer twice a day or through an automated machine is the safest and most appropriate way to feed calves until weaning.

“In our experience the units that successfully feed milk just once a day have excellent husbandry right through the calf rearing system. And these units typically do not move to once-a-day milk feeding until the calf is at least three weeks old.

“And with any system, it must be remembered that encouraging rumen and gut development is important in the early stages. This can be achieved by offering fresh solid food as early as day three, maintaining a clean supply of water and including gut conditioning packages, such as Provimi's

NuStart, both in the milk replacer as well as in the solid food.” Irrespective of whether it is outside the terms of the EU Directives or the Farmed Animal Welfare Regulations or not, Frank Wright Trouw Nutrition International's John Twigge believes that once-a-day feeding is in no-one's interests.

Bad practice

He adds that calves cannot eat sufficient solid food in the first four weeks of life to constitute a feed and that under feeding calves in the first weeks of life is a bad management practice that can increase the cost of heifer rearing.

“On all too many units the aim with calf rearing seems to be to feed them as cheaply as possible irrespective of what this means for performance and health,” he says. “The objective revolves around feeding minimal milk replacer and getting calves onto dry feeds quickly. Some producers argue that providing dry



Milk feeding: it's easier to meet calves' nutritional needs when fed twice a day



Milk bar: feeding milk little and often reduces digestive stress

feed means that calves are being fed twice daily even if they only get one feed of milk.

“But the calf is born as a mono-gastric and requires milk for maintenance and tissue growth during early life. Frequent feeding of milk allows the rumen to develop. Until the rumen is functioning at an optimum level, the calf’s nutritional demands must be met by frequent feeding of a quality milk replacer.”

He says that infrequent feeding of high volumes of liquid causes the abomasum to distend and may cause milk to flow back into the rumen leading to rapid fermentation and bloat. Little and often feeding offers less digestive stress, more efficient food conversion and a more contented calf.

“Heifer rearing has to be viewed as an investment, not a cost, but I often hear producers say ‘we always feed less than one bag of milk powder per calf’. Yet the cost of extra milk powder is almost negligible compared to the £1,300 it typically costs to rear a heifer.”

Mr Twigge adds that one bag per calf equates to around 500g of powder per day, which is below the requirements of a modern larger dairy calf, particularly as they have the potential to grow much more quickly in the first 12 weeks of life. He believes optimum growth is achieved when feeding between 700g and 900g of

powder per day as multiple feeds for six weeks followed by gradual weaning.

In trials following calves through to adulthood, calves fed on a higher milk powder system were served younger, entered the herd sooner, produced more milk and had greater longevity.

Early rumen development

NWF Agriculture’s Rupert Stafford says that producers should look carefully at what is in the milk powder they buy a product to deliver optimum growth and improved calf health rather than cutting corners as this is a false economy. He advises only considering milk replacers with a minimum 65% total milk solids and to avoid added soya bean, which is often used to cheapen the product.

“Choose a milk replacer formulated to ensure that calves get off to the best possible start and use it in accordance with the instructions. Make sure it is mixed to the correct concentration and that feeding hygiene is high to ensure calves get a consistent and clean feed. A low quality feed, fed once a day, is not going to benefit anyone in the long run,” he adds.

Volac’s Georgina Cox agrees that some clarity is needed re feeding young calves milk just once a day. “It’s a grey area as there no mention of the type of feed – is it milk or is it solid feed?” What’s

important, she says, is feeding calves to promote early rumen development, to give them the best possible start. Feeding the heifer calf enough energy and protein during the milk feeding period will help ensure she has adequate body size at first breeding and has a better chance of calving at 24 months. “It is essential to provide solid food – a good quality calf starter and straw – on an ad-lib basis, as well as clean fresh water from the start. We encourage milk feeding calves twice a day until calves are consuming sufficient solid feed, which is typically at around three or four weeks of age.”

Miss Cox says a once-a-day feeding system can be used effectively as part of a step weaning programme for calves, reducing the amount of milk being fed over a period of time. “The weaning transition should be gradual and led by how much solid feed the calf is eating. If she’s not eating enough, her growth will be checked. So it’s vital that it’s closely monitored.

“Rather than weaning at a fixed time, it is best done when the calf is consuming a minimum daily target of 1kg of solid feed for three consecutive days. Some calves achieve this at around five weeks, while others will take almost eight weeks to consume this amount. “Remember that your calf naturally consumes milk for at least this length of time,” she adds. |