Weaning preparation

Michelle McGrath, Assistant Programme Manager

Good management at weaning is important for maintaining growth rates and minimising disease. Weaning can be a stressful time for calves as they change from a liquid diet of predominantly animal protein sources to a solid diet of vegetable protein sources. Calves can also become stressed from changes in housing due to a new environment, competition in new groups, and other general husbandry practices like vaccinations. Weaning will be more successful if your calves are only exposed to one stressor at a time.

Regardless of how much milk you are feeding calves or what age they are at weaning, if the rumen is not ready, calves are in for a challenging transition period. Encouraging concentrate intake from a few days of age stimulates the growth of rumen papilla, which are needed for digestion, as a result of bacterial fermentation of the concentrate. For fermentation to take place, the bacteria need a separate source of water, regardless of what milk feeding system is used. It takes two to three weeks for the bacterial population to grow to a number that can efficiently digest concentrate. Concentrates should be highly palatable and of a high nutritional quality. It is best to clean out unfinished concentrates each day and feed to older animals. Calves only need small amounts of roughage, but if fine ground pelleted rations are fed, additional roughage will be necessary for the development of the rumen.

Calves only begin to eat concentrates properly from 3 weeks of age. The amount of concentrate eaten depends on the amount of milk fed. Therefore, as the calf gets older, a balance is required between feeding enough milk for growth while ensuring enough concentrate intake to promote rumen development. Calves should only be weaned when they are eating at least 1kg of concentrate per day for three consecutive days. This will avoid a growth check after weaning. This level of intake is usually achieved by eight weeks of age. When calves suckle cows, they are not weaned for up to 10 months of age. In this scenario rumen development is far slower and so weaning is later.

When weaning calves, it is recommended to use a gradual or stepwise process. This will allow the calf time to adjust to the lower level of milk and increase solid feed intakes accordingly to prevent post weaning growth checks. It is worth remembering that by law, calves must be over 28 days of age before they can be fed once a day. Where calves are being fed manually more than once a day, the first move is to change to once a day feeding approximately 1 month prior to weaning, allowing calves time to adjust to the new regime and further develop their rumen prior to reducing the total volume of liquid fed. Once they are accustomed to one feed daily and consuming concentrates, reduction in the volume of liquid feed can begin. If feeding milk replacer instead of whole milk, it is important that both the solids content and water content of milk replacer are reduced together. Reduction of milk or milk replacer feeding should ideally be carried out over the course of two weeks, reducing the amount of liquid feed every other day. In automatic feeding systems calves can be fed 3-5 times per day and often larger amounts total daily liquid feeds are also offered. In these systems it is far more difficult to ascertain the level of concentrate feed that any individual calf is consuming, therefore weaning should be as gradual as possible. This involves a weaning protocol of approximately four weeks, reducing the amount very gradually.