



# Feeder operation critical to rationing accuracy

**Many hours can be spent formulating the perfect TMR, but the ration is ultimately only as good as the mixer wagons and operators that deliver them, warns Hefin Richards of Profeed Nutrition Consultancy**

**Maximising the benefits associated with a TMR comes down to a number of factors including individual ingredient quality, ration consistency, delivery and operator competency. If any of these elements fail, the effectiveness of the ration will be hindered.**

Using a mixer wagon can shortcut the process of feeding cattle, but care must be taken to ensure that each and every wagonload is thoroughly mixed and that it contains all the necessary dietary components needed to provide a balanced ration.

The rumen of an adult dairy cow is essentially a 200-litre anaerobic fermentation vat in which the target pH is 6 or above. As feed enters the rumen it quickly ferments and can become highly acidic. If the pH falls below 5.8, the rumen will be detrimentally affected by the onset of subclinical acidosis.

The natural process of regurgitating and 'cud balling' the fibrous element of the ration produces saliva to neutralise this acid. It is therefore essential all cows within the herd receive a balanced and consistent ration to ensure that adequate fibrous material is supplied for adequate cud chewing to occur.

Typically, there are three main challenges to bear in mind when feeding a TMR:

1. Is the ration mixed thoroughly and evenly? If not, cows will be able to select or reject ingredients according to taste and preference.
2. Have you avoided over processing the fibrous element of the ration? A range of fibre lengths is needed, from long fibres to powdery or liquid elements.
3. Has the ration been fed out evenly along the length of the feed barrier?

Essentially, the aim is to deliver a 'perfect mixture' of ingredients as specified within the herd's pre-formulated recipe. However, on many farms there is often some deviation from the perfect mixture, with the ration delivered, and that which is subsequently eaten, often differing significantly from the formulated ration.

Essentially the three rations; 1) the formulated ration, 2) the delivered ration and 3) the eaten ration, should all be identical, but often, they are not.

This departure from the formulated ration might come about because the farmer decides to substitute a specified ingredient with a cheaper alternative, or because the operator loading the mixer wagon has not configured the ration correctly. Inaccurate weighing of the ration – either through operator or machine error – and ineffective mixing will also reduce the consistency and

balance of the ration. This can result in cows being able to pick and choose between the palatable and non-palatable ingredients put in front of them.

The mixer wagon and its operator therefore play a key role in safeguarding feeding efficiency. Yet the mixer wagon is often one of the farm's least maintained machines, and its operator often lacks the necessary training or understanding of the importance of dietary consistency.

Feed tracking software – which replaces the scrap of paper on which many rations are scribbled – can eradicate an element of operator error, while proper training and mixer wagon maintenance can reduce machine errors.

Greater emphasis should be placed on the importance of how the mixer wagon is used. After all, the annual feed bill (forages & concentrates), for a 300 cow dairy herd could be in excess of £300,000 per year. It therefore makes sense to protect this investment by ensuring that every step in the feeding-out process is properly controlled and monitored.



To find out how mixer wagon technology can improve ration efficiencies, turn to next page