

Fine tuning energy and protein ingredients should get milk yields back on track after a shaky start

Banish winter feeding blues

Are you disappointed with herd performance so far this winter? We spoke to two leading dairy nutritionists for their advice on maximising cow performance this winter.

text **Rachael Porter**

Many producers are reporting that milk yields are below winter-ration expectations. They want to know why, and they are looking for advice on how to lift production.

There are two main reasons, according to two leading dairy nutritionists. "In autumn grass quality begins to fall off, in terms of dry matter and intake potential," says Provimi's Philip Ingram. "And some producers have possibly grazed their herds for a couple of weeks longer than is ideal without sufficient buffering to counter the reduction in grazing quantity and quality," he says.

Trouw Nutrition GB's Adam Clay agrees: "There's no problem with cows grazing late into the season, but some producers still expect grazing to provide maintenance plus 10 or 12 litres in September and October and, on most

Adam Clay: "It's vital that producers get 'back to basics' and focus on managing the rumen"



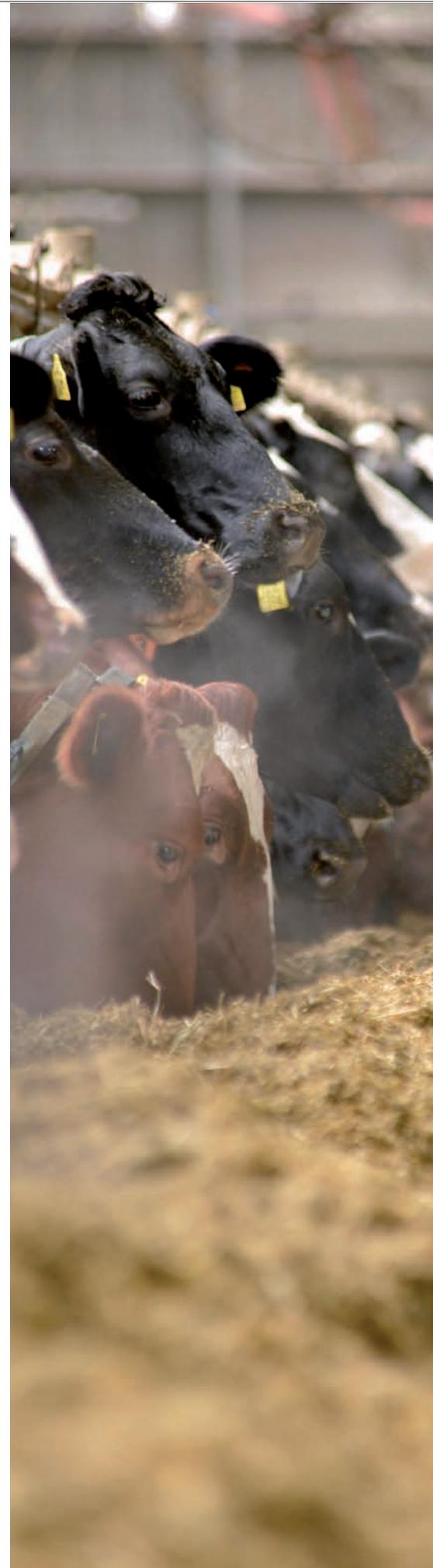
units, that can be a stretch. Not least because there are fewer daylight hours for the cows to graze and, in order to produce that much milk, they need to be consuming sufficient dry matter. And grazing dry matter tends to fall late in the season from around 20% to between 16% and 17%. So they actually need to eat more grass at a time when there is less grazing around and fewer hours to graze. "Buffer feeding at this time is absolutely essential to maintain dry matter intakes," he adds.

Without buffer feeding, cows will lose condition and then, when they're housed on winter rations, they will use some of that ration to regain condition rather than produce milk. "This accounts for the disappointing yields seen on some units when cows are housed for the winter."

Mr Clay adds that these cows, even when they've regained condition, never get back to their peak milk yield for that lactation. That milk yield potential is lost. "So at the back end of the grazing season it's vital to introduce or increase buffer feeding to maintain forage dry matter intakes at between 10kg and 12kg DM – and ensure total dry matter intakes are maintained to prevent condition and milk production losses."

Variable silage

On other units, silage quality will be to blame for poor performance. First-cut grass silage averaged 10.5ME across UK units. And Dr Ingram points out that it's the huge variability that's at the root of many winter feeding problems this year. "Grass silage analysis is all over the place. Some producers have very wet silage and





others have a very dry and stemmy, lower energy forage. We have the two extremes and pretty much everything in between. "Variability is much greater than normal and this year it's more important than ever to make sure you analyse and balance rations accordingly. Some just won't get away with the same feeding regime they've followed in previous years. It's always important to take a close look at balancing rations and more so than ever this year," he says.

"Some silages are wetter and at the low end in terms of digestibility, as well as being high in lactic acid. The latter is a strong acid too and will decrease rumen pH. This will kill off the bugs that drive bacterial breakdown of fibre in the rumen," says Mr Clay. "The intake factor figure – an indicator of intake potential – is also lower for 2014 silage.

"This means that if you've formulating and feeding a diet for a 12kg DM intake of grass silage, intakes could actually be less. For example, a 2kg DMI loss can result in a significant milk yield loss of between four and five litres if not addressed and many producers are, indeed, reporting that their yields are falling four or five litres short for the ration they're feeding." To address this, Mr Clay says it's vital that producers go back to basics and focus on managing the rumen. "Feed for rumen health, which essentially means healthy fermentable rumen bacteria development. This requires an accurate balance of both energy and protein and the quality of these ingredients – the rate at which they're broken down in the rumen – is key. We need them to be synchronised with an accurate balance of both rapidly and slowly fermentable carbohydrates and proteins.

Yield potential

"If there's not enough protein, there's not enough feed for the rumen bugs and you will lose yield potential.

"And if there's not enough energy, then there will be an excess of protein in the rumen and this can have an adverse effect on milk production and fertility."

The 'type' of energy and protein are also important. There needs to be a balance between 'slow' and 'fast' release proteins and carbohydrates. Sugars, for example, take just 30 minutes to breakdown in the rumen, whereas cellulose can take 12 hours or more. Slowly degradable proteins include soya and rapidly degradable include urea.

"All four components are needed in the ration, but the formulation needs to



Philip Ingram: "Huge grass silage variability is at the root of many winter feeding problems this year"

ensure that enough rapidly fermentable carbohydrates are fed to help drive bacterial growth. But if there are too many supplied carbohydrates then that can lead to acidosis or SARA."

Mr Clay says that it's a fine line to tread and the key is to identify the limiting factor in your herd's ration: "See if there's an ingredient that's tipping the balance in either direction.

Limiting factor

He says that once the 'limiting factor' has been identified, the balance can be redressed and negative consequences can be avoided. "If there's too much fast release carbohydrate in the ration, such as wheat or molasses, replacing some of it with maize silage or caustic treated wheat, which are slower to breakdown, could be the answer to supplying more energy without putting the rumen under too much pressure.

"We're looking for a good mix of rapid and slow release energy and protein and a reduction of acid load in the rumen."

Mr Clay says that Rumenac is a programme, which can be 'bolted on' to current formulation software, which calculates how much 'fast' and 'slow' degrading carbohydrate and protein there is in a ration. It helps ration formulation in order to optimise rumen function by getting this balance right. "It's difficult to take a sample of rumen liquor to check that the balance is right. But this programme allows us to do that on paper. It's a model that predicts the production of VFAs in the rumen and, therefore, an indicator of acid load and rumen health." But, he stresses, it's just a management tool. "Remember, the cows are always the final and most important indicator that a ration is well balanced. The cows will soon tell you if you've got it spot on." |