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Careful ration balancing and feeding management will be key this winter

Will quality forage offset potential shortages?

First-cut silage analysis shows that quality is good, but summer drought conditions combined with the prolonged winter 2018 feeding period mean that supplies could be short on UK units this year. We spoke to a leading nutritionist to find out more.

text **Rachael Porter**

Results from more than 700 first-cut grass silage samples, analysed by Trouw Nutrition GB, have shown that forages could provide the basis for efficient diets this winter. But they will require careful balancing, according to the company's ruminant technical development manager Liz Homer.

"The first cuts reflect the growing season and the fact that many producers, who cut earlier in the season, have produced some good quality forage," she says. Pre-cutting grass sample testing has also become more popular this year, with producers taking the guess work out of timings. "Fewer producers are booking the contractor by date alone and more are actually analysing multiple grass samples to monitor that all-important NDF level. And when they see it rising they make the decision to cut. That will certainly have helped to improve silage quality."

Feed value

Dry matter is slightly lower but still within the target range. The fermentation characteristics of pH, ammonia nitrogen and VFAs indicate well-fermented crops. Overall feed value is better than last year with improved crude protein and similar ME content and D value.

NDF levels are similar to 2017, but with a lower lignin content. Dr Homer adds that NDF levels in pre-cut grass were typically higher this year and fewer silages have low

NDF content. Again, this could be the result of more precise management, aided by grass sample testing.

"Low NDF and structural fibre was one of the factors blamed for clamp slippage in 2017, so hopefully we will see more stable clamps this year and that will make for easier feeding out."

That said, it will be important to carefully balance this silage in TMR rations. "First-cut silages look to be particularly fermentable in terms of carbohydrates and proteins, which has led to a high acid load," says Dr Homer. "While the forage may be of good quality and you could expect cows to eat a lot of it, producers also need to consider the impact on rumen health, as well as the issue of forage stocks."

Rumen health

"This year's first cut is also low in fibre for rumen buffering, so there will be potential consequences for the rumen. However, there is the opportunity to maximise rumen energy and microbial protein yield from the rumen, so producers can balance performance with rumen bypass sources."

Dr Homer adds that the more detailed NutriOpt Dairy parameters explain how silages will perform in the rumen and they will indicate how diets will need to be balanced to optimise rumen health and production.

Dynamic Energy – a more accurate measure of the energy actually available to the cow – is high this year at 6.7MJ/kgDM. This means that a cow eating 10kgDM of the average silage could produce M+9.4 litres from forage –



Liz Homer: "Producers need to consider the impact of forage quality on rumen health"

almost a litre more than in 2017. "But I really can't stress enough that, in order to achieve this, the diet must be carefully balanced."

Dr Homer says that care will need to be taken if adding rapidly fermentable energy sources, like cereals. "For many herds, a well-balanced diet will require the addition of structural fibre, perhaps fermented wholecrop or less digestible later grass cuts. And, after maximising energy and microbial protein from the rumen, feeds high in bypass starch and protein can be included to complement the high fermentable sources in the forage to meet desired production levels."

Forage stocks

So what about forage stocks for winter 2018/2019? This is the issue over

Table 1: Comparison of first-cut silage analysis results for 2017 and 2018

	average 2017	average 2018
dry matter (%)	31.3	31.2
crude protein (%)	15.0	15.9
D Value (%)	70.4	70.6
ME (MJ/kg)	11.3	11.3
sugars (%)	2.2	2.3
NDF (%)	44.2	45.1
ADF (%)	29.9	30.5
lignin (g/kg)	40.0	26.3
ash (%)	7.9	8.8
oil B (%)	4.2	4.3



Forage stocks: there are concerns about quantities this winter

shadowing forage quality on many dairy units, following an unprecedentedly dry summer. By mid-July, many producers had already opened clamps and begun feeding first cut because there was no grazing available.

Dr Homer says that producers should consider alternatives, if they think they may be short of forage this coming winter. “But the starting point has to be – and I’m still amazed by the number of producers who don’t do this – to assess stocks and work out what you need.”

Forages to consider buying in to eke out supplies include rape straw: “But ensure that it’s dry enough at baling and avoid soil contamination. It can be a valuable source of fibre, but make sure it is mixed well into the diet and that it’s not too stemmy.”

Making and ensiling whole crop is another option. This adds fibre to the diet, which is key for good rumen function. “And maize looks to be flowering already with massive variation in the crop up and down the country. Many crops are stunted and August is the month when grain fill occurs, so some rain now would be ideal, to avoid low starch.”

The resulting silage quality from later cuts of grass may be questionable, but this forage may complement more digestible first cut, if there’s any left in the clamp.

Dr Homer says that it will be more important than ever this coming winter to look beyond ME and MP when rationing. “Consider the whole diet and how it interacts. How fermentable is it? What is the balance of rumen fermentable carbohydrate and protein? Consider rumen health using acid load and fibre index.”

To do this, she adds that it is important to have accurate analysis of forages, raw materials and mill matrixes leading to compound feed formulations. “Using book values is not good enough in these variable times,” she says.

“While grain sources and co-products may have similar starch levels, they don’t all behave the same when eaten by the cow. They have different feed values in terms of energy available to the cow.

“But we really need to look at the forage’s potential to perform when eaten by the cow. This will determine the supplementation that would be the best and most cost-effective option.” |