



Eke out supplies without compromise

We offer some timely tips and pointers on how to ensure that feed and forage stocks support milk production, as well as herd health and fertility, right through until spring turnout.

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With still around 100 days until most cows are likely to be out day and night, it's vital to review all rations to ensure cows are fed effectively and that feed stocks will be sufficient to see herds through until turnout.

"Many units entered the winter with less-than-ideal forage stocks as a result of the difficult grass-growing season and the need to open clamps early to supplement grazing," says ED&F Man's Georgina Chapman. "And silage quality varies considerably, which has affected how well cows have milked."

She adds that with continued pressure on milk prices and margins, now is the time to audit feed stocks and modify diets to ensure cows are fed as cost-effectively as possible.

"The sooner changes are made the smaller those changes will need to be, which is important as the rumen can take up to two weeks to adapt to changes in the diet. The bigger the changes the more slowly the rumen will adapt, impacting performance."

Ms Chapman urges producers to measure all clamps to get an accurate picture of available stocks, making adjustments for expected wastage. She also stresses the need to analyse clamps regularly throughout the winter. "There is significant variability in forage quality and composition, with differences between cuts and even fields within the same cut. "Wide ranges in dry matter

are impacting how much silage needs to be fed and how quickly clamps are emptying."

Drier silages, with lower lactic acid and higher volatile fatty acid (VFA) levels, are more prone to yeast and mould development, which can increase the risk of heating and spoilage. This further compromises ration quality.

Ration conditioner

As diets heat up, palatability and ration quality declines, making cows less enthusiastic eaters. Signs of heating include reduced dry-matter intakes, increased wastage, reduced animal performance and an unpleasant smell. Ms Chapman says that in these cases it will be worth considering adding Fresh-Guard, a ration conditioner that has been proven to prevent ration heating. By reducing undesirable microbial activity, it has been shown to increase dry-matter intake, improve animal performance and reduce feed waste. ►



Georgina Chapman:
"Ensure stocks last until turnout and avoid drastic changes"

◀ It can be added to any ED&F Man bulk liquid feeds. “Digestibility values have varied significantly this year suggesting that some silages offer lower feed value. Be prepared to fine-tune diets to take account of these factors but also look closely at how forages will perform in the rumen as this will influence the choice of supplements.”

For effective feed efficiency, the diet must supply the nutrients required by the rumen microbes – both carbohydrates and protein. The rate of fermentation must also be addressed. If rumen microbes are provided with the correct nutrients fermented at the right rate, then they will be supplied with a continuous source of food to optimise fibre digestion and drive dry-matter intakes.

Correct balance

“It’s important to look at the levels of both total and rapidly fermentable carbohydrates and protein in forages and adapt diets to achieve the correct balance. Typically this winter we are seeing that total fermentable carbohydrates are adequate, but the proportion of rapidly fermentable carbohydrates has declined,” says Ms Chapman.

In practice this means that while cows are consuming similar carbohydrate levels, the speed and efficiency of rumen fermentation is compromised. This, in turn, will impact rumen throughput and dry-matter intakes.

“The problem is made worse if both total and rapidly fermentable protein levels are reduced, which restricts rumen microbial activity and also the production of microbial protein – the most important protein source for the cow.”

Armed with the latest forage analyses and estimates of available stocks, Ms Chapman says it will be possible to re-evaluate rations to ensure stocks last through to turnout and to avoid drastic changes.

She says producers should prioritise silage for freshly calved cows if stocks are low, reducing inclusion rates to later-lactation cows that are in calf, replacing forage with a proportion of straw.

“Straw is harder for rumen microbes to digest, which can lead to reduced intakes and suboptimal performance,” explains Ms Chapman. “Straw feeding, whether partially or fully replacing grass silage, presents challenges in palatability, digestibility, and protein availability. But high protein molasses blends can help overcome these issues by enhancing fibre digestion and providing rapidly fermentable energy and rumen degradable protein.”

Independent research at the South West Dairy Development Centre has shown that replacing 7.5kg of grass silage with 1.5kg of wheat straw and 1.5kg of Regumix, a highly palatable molasses-based liquid that’s rich in protein and energy, maintains production while preserving valuable silage stocks.

“Assuming 100 cows were put onto the straw-and-molasses diet, the saving would be 23 tonnes of grass silage per month, which could be crucial at the end of the winter feeding period,” says Ms Chapman.

“When implementing straw-based rations, a two-week adaptation period is recommended, as well as gradual dietary changes, a good water supply and additional mineral supplementation.

“It is also important to ensure adequate rumen-degradable protein is supplied,” she adds.

Where silage stocks are adequate, but the analysis shows that the rumen supply of fermentable energy and protein needs balancing, molasses-based liquid feeds can be a useful and rumen-friendly source of crucial rapidly fermentable carbohydrates.

While ground cereals are good value this winter for providing rapidly fermentable carbohydrates, excessive starch feeding can increase the risk of sub-acute ruminal acidosis (SARA). “To mitigate this effect, aim to increase the sugar levels of the ration to between 6% and 8% using a molasses-based liquid feed to replace starch while holding overall starch and sugar levels.

Research shows that using a molasses-based liquid feed helps maintain an optimal rumen pH environment. When fed a high-sugar diet (8% of dry matter) versus a low-sugar diet (2.6% of dry matter), cows spent 75% less time in acidotic conditions (pH<5.8).

Molasses blends deliver rapidly fermentable sugars that energise rumen microbes more efficiently than starch, improving rumen function and overall ration digestibility. If rapidly fermentable protein is also low then molasses blends, including regulated release proteins, will improve rumen synchrony and help maintain rumen efficiency.

Synchronised supply

ED&F Man’s molasses blends are formulated to deliver a synchronised supply of energy and protein, helping to offset the shortfall in rapidly degradable protein and optimise microbial protein production.

“Moving into the second half of the winter, it will be essential to formulate diets to ensure forage stocks last until the expected turnout date, and to avoid sudden and significant changes that will disrupt performance.

“Then by paying attention to rumen-fermentation parameters it will be possible to help cows make the best use of the diet and produce milk as cost-effectively as possible,” Ms Chapman concludes.

“Incorporating a molasses blend into the ration can significantly boost intakes due to its liquid nature and low substitution effect. Molasses blends are highly palatable, encouraging animals to eat more – an essential driver of milk yield.” |



Molasses-based liquid: feed helps to offset nutritional shortfalls