



Fermentable energy key to improving forage utilisation

Take steps to ensure appropriate energy sources are supplied to stimulate rumen microbial activity and to achieve the required throughput to encourage high intakes without compromising rumen health.

TEXT PHIL EADES

Feeding cows efficiently this winter will be crucial to make the most of any improvement in milk prices. And, according to molasses and liquid feed specialists ED&F Man's Georgina Chapman, on many units there are steps that can be taken to drive feed efficiency by looking closely at every stage in the feeding process.

"Feeding efficiently means getting the right feeds to the correct cows in the ideal form to maximise intakes to drive production, while reducing waste to help control costs," she says. "And, with attention to detail, it is possible to improve how efficiently the forages and other ingredients are used."

Georgina Chapman:
**"Raising sugar levels
 creates a more efficient
 rumen fermentation"**



The starting point is to ensure forages are analysed regularly during the winter to check the diet is balanced correctly. Ms Chapman says all clamps should be analysed at least monthly, and certainly whenever the proportion of different cuts in a clamp changes significantly.

Reliable analysis

Silage quality, particularly dry matter, will vary throughout the clamp, this must be taken into account. Armed with a reliable analysis, formulating a ration to promote good intakes, as well as rumen health to encourage rapid rumen throughput and balancing forages with the most appropriate and cost-effective purchased feeds, is possible

"Silages require careful balancing this year. Average analyses for both first and second cuts show high NDF contents, which will have an impact on rumen fermentation. So ensure that appropriate energy sources are supplied to stimulate rumen microbial activity and to achieve the required throughput to encourage high intakes without compromising rumen health," says Ms Chapman.

“The lower acid load combined with a higher fibre index are positive indicators for rumen health, but choice of supplementary energy sources will still be important.” Ms Chapman says molasses and molasses blends can provide a valuable source of fermentable energy to improve fibre digestion. The sugar fraction in molasses is a blend of different types of sugar, including sucrose and glucose, which are the ‘important’ six-carbon sugars. These are proven to be more beneficial to dairy cows than the five-carbon sugars found in fermentation co-products, wheat syrup and processed feeds. “They are more highly rumen fermentable, increasing microbial protein production and stimulating rumen microbes to improve fibre digestion,” explains Ms Chapman. “They promote faster and more active fermentation, which increases rumen throughput and stimulates dry-matter intakes.

Efficient fermentation

“Raising sugar levels in the diet to between 6% and 8%, while holding overall starch plus sugar at between 28% and 32%, creates a more efficient fermentation without increasing the acidosis risk.” Reducing heating, either in the clamp or the feed trough, is also important to reduce wasting what is scarce forage on many units, and also to avoid depressing intakes. She stresses that spoiled and heated silage should not go anywhere near cows.

“Once silage begins to deteriorate it is losing feed value and can contaminate the whole TMR, increasing rejection and reducing nutrient content. This could be a greater problem given the drier silages produced this year, along with the warmer temperatures. So manage clamps to reduce waste and dispose of any spoiled material.”

TMR quality can reduce rapidly due to aerobic spoilage. When forage is exposed to the air, bacteria and other micro-organisms present begin to grow and ferment the feed. This can occur at the clamp face, or in the feed trough after the TMR has been fed out.

“Aerobic spoilage can start as soon as the ration is prepared,” explains Ms Chapman. “The first signs are the ration heating up, usually accompanied by distinct ‘off’ odours. When this occurs the most digestible and valuable nutrients, such as sugars and amino acid, are first to be lost. And the diet will be less attractive to the cows, potentially depressing dry-matter intakes.

“Look critically at the trough before a feed is put out. Check the level of refusal and how the ration is distributed down the length of the trough. If there is a significant level of feed refusal, there is a reason for this and often that reason is heating, particularly if waste silage has found its way into the diet.”

To help prevent aerobic spoilage to the entire TMR, she recommends adding Fresh-Guard, a ration conditioner that has been proven to reduce ration heating to the TMR, which can be added to any ED&F Man bulk liquid feeds. It has been shown to increase dry-matter intakes, improve animal performance and reduce feed wastage, by reducing undesirable microbial activity.

“Planning ahead and taking steps to maximise feed efficiency this winter will be an important and practical way to help improve margins despite rising feed prices,” adds Ms Chapman. |



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