

Planning now to improve forage utilisation will be vital to maximising the benefits of higher milk prices and moderating the effect of higher feed prices to improve margins next winter

COULD YOU USE FORAGE BETTER?

Improving forage utilisation by feeding more of the forage you produce and extracting the maximum nutritional benefit will help reduce the cost of feeding cows according to Georgina Chapman from liquid feed specialists ED&F Man.

"Even allowing for increased fertiliser and fuel costs, forage can still be the cheapest feed for dairy cows as well as being the feedstuff they are designed to eat," she comments.

"In 2021, on a three-cut grass silage system producing 12t/ha of utilised dry matter, the cost per tonne of dry matter was £87/t. This year, allowing for higher input costs, this is anticipated to be closer to £128/tDM.

"At an average of 10.8MJ/kgDM, a tonne of grass dry matter will produce enough energy for 2037 litres/tDM. So in 2021, the cost to produce milk from silage would be 4.27ppl, rising to 6.28ppl this year. This is a big increase, but still represents a low cost per litre.

"When you consider that a litre produced from concentrates at £270/t works out at closer to 13ppl, you can see why maximising forage utilisation is so important for margins. Taking control of feed costs with forage will be particularly important this year given the uncertainty building as a consequence of the political instability in Ukraine."

Ms Chapman advises there are three core elements to improving forage utilisation. The first is to reduce waste allowing more of the forage made to be fed. The second is to improve intakes so cows are consuming more forage while the third is to supplement effectively to promote better rumen function and fibre digestion.

Dry matter losses in the silage making

process still represent a significant drain on dairy farm profitability and the challenge is to focus on improving all stages of the process to reduce losses in the field, during time spent in the clamp and at feed out.

"There are farmers achieving very low levels of waste which results in more, and usually better quality, forage being available as the basis for the overall diet. Yet average dry matter losses are around 10%. Each 1% reduction in waste means you will have 10kg/DM more available to feed per tonne of silage dry matter made, so it will pay to focus on management to cut waste and save on purchased feed.

Ms Chapman says that achieving high intakes and ensuring forage is well digested is the next crucial stage. "Once you have invested in the forage, it is important to maximise the return on that investment. Cows need to be encouraged to consume large quantities of forage and crucial to this is ensuring good rumen health and function. It is important to maintain a stable pH with good populations of fibre-digesting micro-organisms and feeding molasses-based liquid feeds can play a significant role."

Cane molasses is a complex product which contains sugars and numerous organic acids. The sugar fraction is a combination of different sugars including sucrose and glucose which are the important six carbon sugars. "Six carbon sugars are proven to be more beneficial to dairy cows than the five carbon sugars found in fermentation co-products, wheat syrup, processed feeds and silages.

"They are more highly rumen fermentable and more effective at improving fibre digestion, increasing microbial protein production and stimulating rumen fungi."

She says cane molasses-based liquids also have a significant impact on the rate of rumen fermentation. By promoting faster and more active fermentation, they will increase rumen throughput and drive dry matter intakes.

A review of 11 independent feeding trials found that when molasses based liquid feeds are added to the TMR, increasing the sugar content from 3% to 6%, dry matter intakes were increased on average by 1.1kg/day and milk yield by 1.5kg/day.

Ms Chapman advises ensuring the diet is presented well, correctly mixed and pushed up regularly. She emphasises the importance of following the filling sheet produced by the nutritionist, using the correct filling order and ensuring mixing times are correct. Never overload the feeder wagon as this will impact on the quality of mixing. The objective is to ensure a consistent feed and to minimise diet sorting which is a common cause of reduced rumen health and increased nutrient waste.

When rumen pH is compromised through diet sorting, there can be a dramatic decrease in intakes and nutrient utilisation. Ms Chapman explains that molasses based liquid feeds can help reduce the incidence of sorting and unlike starch-based feeds they have been shown not to decrease rumen pH.

Steps should also be taken to maximise intakes of TMR and buffer feeds during the summer which are both at risk of heating during hot weather, increasing the risk of aerobic spoilage.

"When forage is exposed to the air, the bacteria present begin to grow and ferment the feed. This results in the feed heating up, the production of distinct off odours and deterioration of feed quality. The end result is reduced

feed intake, poorer animal performance and increased feed wastage.

"A 5% reduction in DM due to heating in the TMR would mean a loss of around 1.0kg DM per cow per day in a typical herd. If half of the lost DM is from forage, this equates to a 200-cow herd wasting 100kg of forage DM per day, which at an average of 30% DM equates to 330kg/day of fresh silage or 10 tonnes per month wasted.

"To prevent ration heating, adding Fresh-Guard which is a ration conditioner to the liquid feed in the diet will cut bacterial growth, reduce heating and maintain intakes.

Ms Chapman emphasises that the financial benefits from paying close attention to forage utilisation can be significant. For a farm carrying a 200-cow herd producing 4400tDM of grass silage a year, she calculates that each 1% saving in dry matter through reduced waste or improved utilisation adds up to an extra 44tDM available to feed. This is enough to produce 88000 litres or save over 40 tonnes of concentrates, worth around £10,800.

"By increasing fibre digestion and maintaining rumen health, molasses-based liquid feeds can help increase dry matter intakes which will be important to make better use of silage. Combined with taking steps to reduce silage waste, this can help reduce the requirement for purchased feeds and help maintain margins."