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UNDERSTANDING FORAGE QUALITY

In this month's ruminant nutrition article, Rumenco technical manager David Thornton discusses the importance of forage nutritional analysis and how matching the correct supplement to what is missing in your hay or silage can actually save you money.

Every year hundreds of livestock farmers submit thousands of forage samples for testing, but how many actually act on the results they receive from the laboratory? Unfortunately, relatively few farmers interpret forage analyses fully or use the results to change feeding strategies.

Balanced nutrition is important for efficient livestock protection. Daily nutrient requirements vary depending on the phase of production, so knowing the nutrient composition of feeds and forages and matching them to animal needs at a given stage of production will ensure that nutritional requirements are fulfilled. Forage analysis is a management tool that provides the information needed for proper livestock nutrition. If you really want to make a difference to the bottom line, it really does pay to get to know your forage.

Laboratory testing of forages for nutrient/mineral content and digestion characteristics is an important first step in the process of formulating cost-effective livestock rations. In recent years, there have been numerous changes in forage analysis by commercial testing laboratories. These changes are sometimes difficult to understand and apply at a practical level. As a result, modern forage test reports might sometimes yield more questions than answers.

However, the use of free-access nutritional supplements – such as Rumevite feed blocks or Supalyx buckets – can help enormously by allowing the cow or sheep to determine its own intake, rather than having to eat a rationed concentrate. In practice, an animal consumes more supplement when forage quality is poor compared with when it is good. So intake varies with pasture, hay or silage quality – which is very useful, particularly with systems based on baled silage. The end result by using ad lib feed blocks or buckets is actually a more even performance within a group of animals compared with restricted trough feeding of concentrates.

Mineral Nutrition

Farmers are also encouraged to get their conserved forages and grazing tested for minerals these days. Results gathered from many previous forage samples tested

across northern England and the Scottish Borders indicate problems in trace element content – particularly copper (antagonised by high iron, sulphur and molybdenum contents), selenium and iodine. Using mineral buckets and blocks to balance a ration is just as important as making sure dietary energy and protein levels are correct. And only a forage analysis can tell you what is deficient (or in excess) in order to make a better informed choice of supplement.

Different forages have different mineral analyses but, in addition, soil type and fertiliser regime can also influence mineral make-up within forage categories. The message is: know what you are feeding and then choose your supplement accordingly, selecting only mineral products that address any local deficiency problems.

Grassland improvement, increasing dependence on forages or the introduction of unusual ration ingredients can often change the dietary balance quite markedly. For example, greater use of alternative forages such as brassicas and clovers are likely throw up even more mineral deficits than traditional grazing or conserved forage. On the other hand, the increasingly popular forage chicory is actually very rich in minerals – apart from manganese – so some farms may be able to reduce their level of supplementary minerals, saving money in the process.

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OTHER TIPS FOR IMPROVING FORAGE QUALITY

- Sheep can be wasteful forage feeders, even with good feeding equipment. Sometimes a lot of feed waste isn't down to the sheep, or the feeder design, but the poor quality of the forage. To cut waste, try introducing Rumevite feed blocks as the forage supplement. Rumevite encourages a higher intake and digestion of all types of forage and pasture. The lower the quality of the forage, the higher the improvement.
- Another factor that affects how much a sheep will eat is the size of the feed particles. Sheep ruminate (chew their cud) to break feed into smaller particles. When the particles are small enough, the feed will move from the rumen to the lower digestive tract for digestion and then finally out onto the ground. Low quality forages require more rumination are digested more slowly than high quality feeds. This slows down intake. Some feeds just take up too much stomach room and offer too few nutrients to sustain a pregnant ewe. The result can be impaction when feed stop moving through the gut completely – a serious situation for a ewe and particularly a lamb. Try introducing XP_{LS} yeast culture at 60g/head/day for low D value forages this winter. This will improve forage intake and digestibility.

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Picture of David Thornton:

David Thornton has been with Rumenco for 28 years. He is a respected nutritionist and has helped many beef, dairy and sheep producers maximise the value of home grown forages through cost-effective supplementary feeding of Rumevite feedblocks, Supalyx buckets and the wider range of Rumenco feed products.

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