

Get more bites for your bucks

Manage the rumen to make more efficient use of grazing

With fertiliser, concentrate and other input prices soaring, it's never been more important to utilise grazing as efficiently as possible. We offer some pointers on how to ensure that your herd makes the most of your grass this season.

While grazed grass may still be the cheapest food for dairy cows it does present some nutritional challenges that need to be overcome, according to Crina Ruminants' Adrian Packington.

"But these challenges are well worth overcoming as making better use of grazed grass could be worth as much as an extra three pence per litre produced over the summer," he says.

Under typical UK conditions it is perfectly feasible to achieve high milk yields on grazing based systems, but it requires careful management and close attention to meeting the needs of the rumen. Grass does not always provide either sufficient energy or the ideal balance of nutrients for high genetic merit cows.

The main problem is that grazed grass is

high in rumen degradable protein and relatively low in fermentable energy and this causes some real difficulties in the rumen.

"Producers who get the most from grazing this spring and summer will be those who pay most attention to optimising the conditions in the rumen," he says.

Inefficient converters

Dairy cows are relatively inefficient converters of grass protein into milk with only about 25% of grass protein typically being captured by the cow, particularly where there is a shortage of rapidly fermentable energy to achieve the required rumen synchrony.

To maximise the conversion of grass into milk, Mr Packington is advising

Resist the urge to skimp

Soaring concentrate costs mean that grass is set to be a far more valuable crop for producers this coming season. "And while fertiliser prices have also risen, grass is still a valuable and economic feed on units across the UK," says British Grassland Society director Jessica Buss.

But she urges producers not to skimp too much when considering reducing fertiliser applications, despite the temptation due to their increased price: "It's vital that the grass crop gets the nutrients it needs if you're going to get the most from it this season. And don't just think about nitrogen – potassium, phosphorus and sulphur are important for good grass growth too."

Producers should make sure they're up to date with their soil's fertility status. "Carry out a field test so fertiliser applications can be carefully targeted and cost effective. It's also worth considering whether compaction, weeds or the age of the sward might be limiting grass growth and its response to fertilisers.

"And try to get those cows out and grazing as soon as possible – get that grass working for you. Look at the grass – not the calendar. In many areas grass has already started to grow this year, so see if you can turn your herd out a little earlier than usual, maybe for just for a couple of hours a day, and start cutting back on your concentrate use."



Rumen management: it is possible to achieve high milk yields on grazing based systems

producers to focus on two elements in the rumen. "The first is to ensure you are providing sufficient energy for the rumen microbes. The second is to limit rumen ammonia levels, caused by high levels of soluble protein in grass. Otherwise the impact is that more protein is lost as ammonia."

Excess ammonia is converted into urea by the liver before being excreted via the blood and urine. "This is a very energy expensive activity. Converting ammonia into urea takes as much

Timely tips on how to get more from your grazing

- Get cows out for just a few hours a day from February onwards. This saves on concentrates, silage making, bedding and labour. When it's wet, bring cows in when they stop eating as this is when they start to poach ground.
- Graze tightly in April and May because it sets the grazing block up for the rest of the season, encouraging a continued supply of leafy, milky grass throughout the summer.
- Graze tightly in August and September as this clears any grass left over from the summer from the sward and prepares the paddocks for high intakes of good quality leafy

grazing in October and November, as well as good grazing in the following February and March.

- Tight grazing increases the life of the ley – potentially up to 10 years – because perennial ryegrass thrives under disciplined rotational grazing.
- Clover's high palatability results in high intakes and cuts nitrogen fertiliser use. The biggest threat to modern varieties is spraying leys for docks. But clover safe dock sprays do exist and are effective. They are often best used in late March or early April on leys with a high percentage of perennial ryegrass.

(Source: BGS 2008)

energy as producing two litres of milk per day," adds Mr Packington.

The other problem with grazing is that the soluble sugars in grass are very rapidly fermented leading to a fall in rumen pH which, when added to high blood urea levels, can present real health issues.

Rumen pH

Vet Den Leonard, from Cheshire-based practice Lambert, Leonard & May, believes that the consequences of sub-acute rumen acidosis (SARA) are considerable and are associated as much with grazed as housed cows.

"Anything that affects energy availability such as rumen pH or diversion of energy to soak up excess ammonia will have a direct effect on milk yield, ovarian activity and conception rates."

Carrs Billington's Duncan Rose believes the choice of supplementary feeds can often compound the risks of sub-optimal rumen performance. Feeds high in fermentable carbohydrates can increase the acid loading on the rumen and the standard advice has been to use feeds high in digestible fibre, but Mr Rose questions the effectiveness of this advice

for many cows. He says that the most effective ways to address the nutritional problems posed by spring grass rely on taking an approach that can affect the whole rumen.

"It is possible to improve rumen function by inhibiting the bacteria that disrupt protein digestion while encouraging those microbes that slow down the digestion of starches by using products such as Crina Ruminants, so balancing the fermentation rates of protein and energy and improving protein capture."

Additives that affect total rumen activity can have a real impact on performance at grazing, according to Mr Rose. He believes that additives will make real sense this year as concentrate prices are likely to remain high.

"Anything that increases feed efficiency at current concentrate prices will represent a good investment," he stresses. "In the past feed additives have been seen as an expensive extra but as feed prices rise so additives become more cost effective."

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