

The use of cereals may be appealing this winter, but at what cost?

Be rational with rations

Maximising milk yields this winter offers a chance to benefit from higher milk prices. But with this comes the temptation to increase feed rates and the proportion of grain in the diet.

text **Allison Matthews**

Rapidly fermentable carbohydrates, such as maize and wheat, are key drivers of milk yield and when they are combined with the glucogenic content of the diet a measurable increase in performance can be achieved. But, as Thompsons' dairy nutritionist James

Black explains, dietary changes that affect the rate of the rumen must be the result of an educated decision.

"Although boosting cereal levels will be the right approach for many producers, care should be taken and advice sought to ensure that performance is

not achieved at the expense of animal health. Cereal inclusions of between 5kg or 6kg are possible where the diet is correctly balanced and buffered without any adverse impact, but profitable milk production is only a result of pushing things in a controlled manner. Throwing cheaper concentrates at cows will not necessarily mean more milk production or profit."

Though maize and wheat are classed as rapidly fermentable carbohydrates (RFCs), soya falls into the slowly fermentable category – ensuring that the rumen is moving 24 hours a day. Even though producers have an idea of



what grain is needed to get the best out of their cows, this does not always correlate to what is available in the market place.

Global trade

W & R Barnetts' senior trader Ryan McAuley thinks that by having an understanding of world markets producers can make more informed decisions and challenge their nutritionist about how to feed their herd this winter. "Weather, ethanol, politics and currency all have an impact on the availability of maize and wheat and, ultimately, its monetary value. The price of soya, on the other hand, has been driven mainly by ever increasing world demand, particularly in China. Every month different variables come into effect and create huge volatility for traders, continually moving the goal posts on price.



Ryan McAuley: "Make more informed decisions – challenge your nutritionist"



James Black: "Ensure that additional milk yield is not at the expense of animal health"

"Also maize production has increased dramatically in the Ukraine, Brazil, Poland and Eastern Europe in recent years, which has driven prices in a more favourable direction for buyers," adds Mr McAuley.

Protein levels in a diet can provide a fashionable topic for discussion at farm level, which Mr Black attributes to the increased management problems associated with the modern dairy cow and the cost of soya meal in recent years. "UK diets traditionally contained protein levels of 18% or more, but numerous trials have been undertaken to show that the modern Holstein will operate at a protein level of between 16.5% and 17%, provided the protein quality is sufficient," explains Mr Black.

"Protein is never usually deficient in grass-silage based diets, irrespective of the forage level. Energy is always the limiting factor and, as such, it usually means more kilograms of a lower crude protein percentage ration will deliver the best response. It is likely that, with cheaper cereals, soya will be needed to increase protein percentage in the ration as there will be less space for medium quality protein by-products," adds Mr Black.

But, as Mr McAuley explains, the logistics of a fluid soya market can be sticky to say the least.

"Drought in the US in 2012 meant that there was less soya available from the US for the second half of the season,

pushing all the demand towards the South American new crop in March and April.

"Although Brazil/Argentina/Paraguay reaped record crops, the 90-day wait to load boats in the ports of Paranagua and Santos in Brazil means the practicalities of getting the soya out are a mess.

"This just puts more strain on price and quantity and until the US announces its final yields from this year's crops, the price debate will continue."

Nutrient balance

The success of more milk will ultimately be determined by how well the nutrients are balanced within the diet and a key aim of all producers should be to maximise dry matter intake at all stages of lactation.

"A highly fermentable diet will encourage high dry matter intakes as the flow rate of material will increase within the cow. If this is coupled with a properly balanced diet then more milk will be the result," explains Mr Black

"A minimum level of total diet NDF is required, of which nearly 20% in all cases should be supplied from forage. With higher dry matter and NDF silages it will be possible to increase concentrate levels and improve performance while maintaining sufficient physical and nutritional fibre levels in the diet."

As cereals are cheaper it will be tempting for many producers to overload fermentable energy without adequate effective fibre, which can create problems such as SARA or clinical acidosis.

"In order to maximise milk price on commodity based contracts, producers must consult a nutritionist to ensure that high RFC levels can be reached without compromising rumen function. Although diets will vary with economic pressures, it is imperative that priority is given to the health of the cow," says Mr Black. |

Balanced ration: adding cheaper concentrates to diets will not necessarily mean more milk or more profit

Table 1: Increasing RFC triggers improvements in performance that would be desirable in many herds this year

	herd 1	herd 2	herd 3
RFC	186	217	243
gluco TN	2773	3052	3295
DMI	22	23.1	23.5
milk yield (kg)	32.4	33.9	34.0
butterfat %	4.69	4.62	4.44
protein %	3.46	3.49	3.56