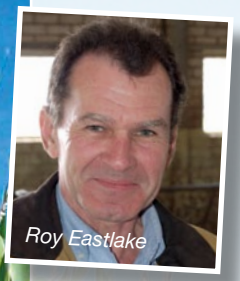
BIOTALK
Delivering forage and nutrition technologies
August 2011

A SEASON TO PLAN... and KEEP PLANNING!!


Roy Eastlake

Dairy farmers face some difficult decisions when planning diets this winter, according to Biotal National Technical Support Manager Roy Eastlake.

"On many farms there are real concerns regarding forage stocks," Mr Eastlake explains. *"Early cut grass crops are good quality but light, while in most parts of the country later cut crops yielded better but quality was down."*

With grass silage he stresses it is vital to assess exactly how much is in the clamp and how well it will feed. He advises getting an analysis completed, working out the dry matter available per cow per day and then be prepared to shop around to balance the diet.

In general wholecrop cereals matured very quickly and yielded better than expected so again an analysis and assessing how much dry matter is available makes good sense.

"Maize growth has been very variable, with most farms having some good fields as well as some poor fields. The recent warm spell might allow more crops to kick on.

"Walk crops to estimate the fresh weight yield and base your initial ration planning on a realistic expectation of what the crop will yield."

Mr Eastlake urges farmers to take all steps to reduce waste with maize crops this year. *"If forage stocks are tight it is vital that the maximum yield of forage is harvested and is then available to feed the cows.*

"A large proportion of maize crops are still not treated with an additive but research has shown repeatedly that treating maize with a Biotal inoculant reduces dry matter losses in the clamp by up to 50%, improves the silage feed values and greatly reduces the risk of aerobic spoilage when the clamp is open.

"If stocks are low make sure you conserve all you can."

In this issue

Come and see us at the
Dairy Event and Livestock Show
6th & 7th September
NEC, Birmingham Stand FF-395

Maize is all about ME

Maize growers should seek the highest possible yields of energy per hectare to drive increased production of milk and meat, according to Syngenta Seeds Maize Specialist, Nigel Padbury. With the continued high costs of bought-in feed, home grown forage maize now offers dairy and beef farmers an even more attractive proposition.

"The key to profitable milk yields and livestock growth rates will be achieving the highest possible energy output per hectare, combined with silage quality and digestibility to increase intakes in the ration," he advises. *"Growers must look at a maize variety's yield of metabolisable energy (ME) per hectare to get the maximum return from the crop."*

Mr Padbury believes that for too long the emphasis for forage maize production has been focused on just cobs and starch content, when the leaf and stem component of the true forage maize type will deliver 50% of the energy in the clamp, and is crucial for overall digestibility. He highlights that the very high energy yielding variety, NK Bull, builds a rapid early season cob development, but also retains the valuable leaf and stem digestibility when other varieties start to fall away.

"As a result it consistently delivers a higher energy yield per hectare at harvest than other varieties, and it retains the high energy levels over an extended period in the autumn – giving growers greater flexibility in harvest timing whilst still achieving high quality forage."

The 2011 Descriptive List shows NK Bull produces an ME yield of over 230,000 MJ/ha – with an ME content of 11.52 MJ/Kg DM. Other maize varieties on the list typically average ME yields of around 211,000 MJ/ha. Since dairy cows require approximately 5.3 MJ of energy to produce one litre of milk, at a milk price of 26ppl every additional 5000 MJ/ha of energy from the maize variety is worth over £245 extra output per hectare, with equivalent improvements in growth rates for beef producers.

"The financial performance of high energy maize reinforces the importance of selecting the right variety and the need for good ensiling techniques to maintain quality," says Mr Padbury. *"The right combination of early cob development and digestible plant matter can aide efficient clamping and help produce a higher energy diet."* For optimum digestibility growers should be looking to take maize off the field at 30-32% plant dry matter, with kernels at the doughy stage. With NK Bull, this is earlier than the Descriptive List rating would suggest, he adds.

Syngenta will be highlighting the incredible ME of NK Bull at the Dairy Event and Livestock Show on the 6th and 7th September. For more information visit the Syngenta Seeds stand or go on line www.syngenta-crop.co.uk


Nigel Padbury

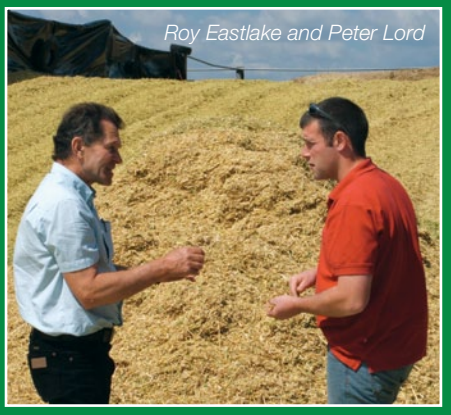
New silage centre of excellence established

Biotal and Hartpury College near Gloucester have entered into an agreement to establish a silage centre of excellence based at the college's farm.

The College Farm is run by Velcourt Ltd and currently has a 270 cow dairy unit as well as a 400 ewe flock. It grows and utilises a range of different home grown feeds and forages.

"In the light of rising purchased feed prices, it is essential that dairy farmers make best use of forages," explains Biotal's Roy Eastlake. *"The aim of the Centre of Excellence is to demonstrate the benefits of best practice in all aspects of the production and utilisation of top quality forages."*

Farms manager Peter Lord believes the initiative will benefit dairy farmers. *"There is tremendous scope to improve production of forage and through our work with Biotal we hope to promote proven methods to improve feed efficiency and high welfare standards."*


Roy Eastlake and Peter Lord

Live yeast – a solution to forage challenges

Including live yeast in dairy cow diets could help increase production and help offset problems resulting from the challenging forage season, according to Brian Doran, Biotal Head of ruminant products.

"Adding rumen-specific live yeast to the diet can have a significant impact on rumen function, reducing the risk of acidosis, improving fibre digestion and together these can lead to better health and higher milk yields, through feed efficiency" Mr Doran explains.

The rumen contains a vast population of micro-organisms which digest the feed. Some bugs are beneficial to the cow while others are detrimental. Effective digestion requires larger populations of the beneficial micro-organisms, reduced numbers of the detrimental microbes and the maintenance of an optimum pH with as few fluctuations as possible.

Adding rumen specific live yeast can significantly improve conditions in the rumen by developing the conditions that stimulate the growth of the beneficial bugs, particularly those involved in digesting fibre, while limiting the numbers of the less beneficial ones.

However yeast products are different. The activity of live yeast will vary depending on the actual strain of live yeast. All Biotal SC yeast products contain the rumen specific live yeast Saccharomyces cerevisiae CNCM I-1077 which is proven to give the greatest improvement in rumen efficiency and the best regulation of pH.

Feeding Biotal SC yeast has been proven to:

- Reduce problems with acidosis
- Improve fibre digestibility
- Increase milk yields
- Improve overall nutritional health

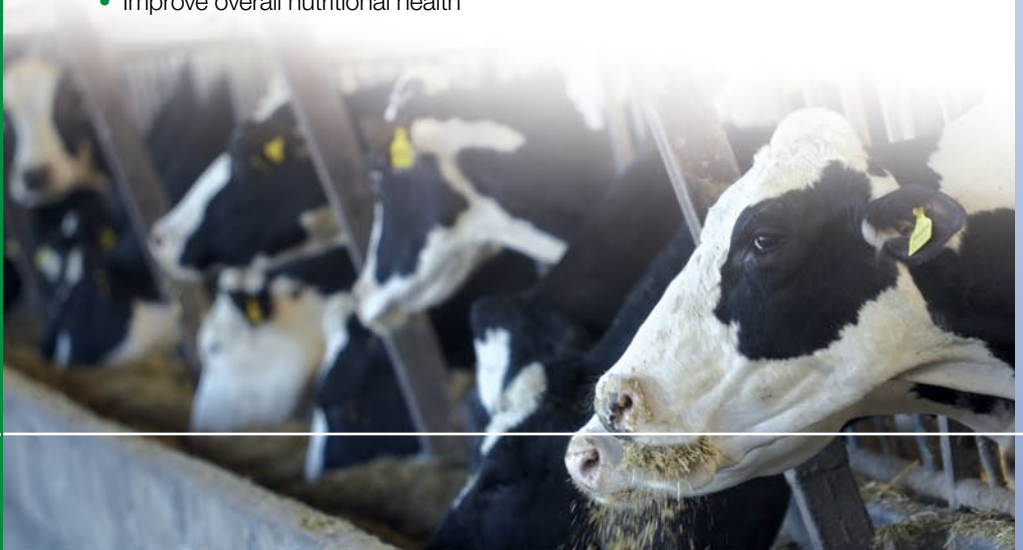
"This winter farmers are facing a range of feeding challenges and the inclusion of yeasts could help get the best from diets, making full use of forages and reducing the need for purchased feeds. "Where farmers are faced with wet, acidic grass silages the inclusion of a live yeast will help reduce the effect of silage on rumen pH and reduce the risk of acidotic conditions. It will also help stimulate intakes.

"Where grass yields are down and wholecrop and maize silages make up a higher proportion of the total forage it will be important to keep watch on starch levels. Too much rumen degraded starch can lead to a fall in pH but including Biotal SC yeast will allow higher starch levels to be fed without compromising rumen health.

"In situations where overall forage stocks are low and lower 'D' value forage is fed or where alternative forages such as wholecrop and maize forms a large part of the diet live yeast will help improve fibre digestibility allowing the maximum feed value to be realised.

"Finally there have been reports on an increased risk of mycotoxins this year. Mycotoxins can reduce the effectiveness with which the diet is used and can be a particular problem in higher dry matter forages. In these cases it will be beneficial to include **Biotal SC toxisorb** *which delivers the benefits of yeast and also addresses the problems associated with mycotoxins.*

"Making full use of forage and maintaining high levels of rumen health will be vital if margins are to be maintained this winter. Adding Biotal SC yeast to the diet will help reduce the impact of variable quality forages and help cows deliver to their potential this winter," Mr Doran concludes.



Early grass silage results

The results of the first grass silage samples show that on average silage quality is encouraging.

While dry matter is generally good, there are some wetter samples particularly in the north and some variation in 'D' value. Overall, however, silages look like they will feed well and provide the basis for good rumen health and performance provided the diet is balanced according to Lee Gresham Biotal Forage products manager.

Dry matter content and ME levels are similar to previous years while crude protein content is slightly higher.

"Biotal treated silages are well made and should be stable, reducing the risk of clamp spoilage and heating, both of which contribute to dry matter losses. It's proved worthwhile this year using an additive with so many dry silages."

Early grass silage results

	July 2010	July 2011
Dry Matter (%)	31.9	32.5
Crude Protein (%)	13.4	14.7
'D' Value (%)	70.1	70.8
ME (MJ/kgDM)	11.2	11.3
pH	4.1	4.2
NH3N	4.6	2.7
NDF (%)	48.4	46.6
VFA (g/kg)	27.4	26.8
Lactic Acid (G/kg)	71.3	65.0

Source: Frank Wright Trouw Nutrition International

Rumen health and intakes drive output

Maximising forage intakes to sustain high yields of quality milk and maintain cow health is the key management objective of North Down dairy farmer Neville Chambers.

Neville runs a 170 cow dairy herd and rears all his replacements at Ballykeel Road, Moneyreagh. *"The herd is becoming increasingly cross bred with 35-40% of cows now Montbeliarde,"* Neville explains. *"Heifers currently entering the herd are all cross bred with Fleckvieh, Swedish Red and Shorthorn all used. These are now all being served with Holstein."*

The herd averages 8,600 litres per cow at 4.2% butterfat and 3.3 % protein.

"The farm grows a mix of forages as Neville believes a mixed forage diet helps encourage higher intakes. This year 38 acres of spring wheat and 18 acres of naked oats were grown with 1kg of red clover per acre included in some of the wheat area," explains Jonathan Hawthorne Agronomist with local merchant Joseph Morton Ltd.

The normal rotation sees cereals undersown with grass in the fifth year to establish grass swards for silage with the aim of keeping silage swards young and productive. Slurry is separated on the farm with 2000 gallons/acre applied using a trailing shoe during the second week of March followed by a high potash fertiliser including Sulphur. The solid manure is applied to the arable area.

This season 124 acres of grass were cut during the second week in May with 110 acres harvested the last week in June and 70 acres again in August.

Neville has used **Biotal wholecrop gold** or **Biotal wholecrop legume** to treat his Wholecrop cereals for the past fifteen years. This year's grass silage is treated with **Biotal supersile**.

The whole herd goes out to grass in early April until mid/late September. A TMR comprising 50/50 grass silage/ wholecrop plus a concentrate blend is fed during milking and this includes **Biotal SC emerald**, a specific yeast product designed to help improve protein capture in diets high in rapidly degraded protein such as grazed grass.

In winter the ration is balanced to about 17% crude protein using a high protein blend with 40-45 kg/head of forage including 10kg of wholecrop. The herd is split into 3 groups, high yielders, lower yielders and dry cows. The top group receives a base ration through the feeder wagon for M+35 litres which is topped up in the parlour at 0.35 kg/litre.

Joseph Morton Ltd also supply **Biotal SC platinum**, a live yeast supplemented with organic selenium and zinc which is included in the winter diet to help promote better rumen health and increased fibre digestion. The organic selenium and zinc help in the control of cell counts.

"Since adding **SC platinum** *to the diet, milk output has increased by over two litres per cow per day during the winter months and it is part of my overall strategy for keeping cell counts under control,"* Neville continues. *"This is our second year using Biotal SC farm pack in the grazing season and we have seen fewer stomach upsets and dung is not as loose as before."*

Jonathan Hawthorne (left) and Neville Chambers

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