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## WELCOME back to Nourishing News!

To benefit our valued customers, we have re-launched our newsletter. It is filled with practical information from our nutrition team for your farming business as well as keeping you up to date with the latest specials and news from Keenan.

Please complete the form on Page 5 to advise us of your preferred means of receiving Nourishing News.

## Shot and Sprung Grain

2010 what a good year, has it been too good? Are we facing a weather affected harvest? We've already seen trying conditions for haymaking. What issues will we face as end users of grain if a suggested wet harvest does come to fruition? The first scenario which will be faced will be shot and sprung grain and secondly if the weather continues to be unkind Mycotoxins can appear and cause further problems.

So what issues will we be faced with? Unfortunately for the grain grower it will be worth less. We've all heard the saying "You get what you pay for", it is cheap for a reason but what impact will this have feeding it to stock for production purposes? Shot & sprung occurs when an excess of moisture at the point of maturity is available for the grain to semi-imbibe (absorb moisture) at this point the germination process has started where-by in severe cases a visible sprout can be seen however generally the swelling of the seed cracking the seed coat often occurs. Initially (day 1) 30% more metabolisable energy (ME) can be present as the starch through

the germination process is converted by enzymes to sugars which appears as the sprout emerges from the seed. However by day 3 the ME content will be the same as unsprouted grain and within a week will be 60% of its original value so as the sprout dies due to the inevitable drying of the grain the sugars are bleached from the sprout. With the above mentioned information it could be said



that this weather damaged grain is worth approximately 60% of good grains. Keep in mind that when formulating diets a certain amount of energy density is required for certain production criteria's, if this cannot be met then a lower production output can only be achieved. For example if a milking cow requires 230 megajoules (MJ) of ME/day, by introducing a lower ME grain giving her only 220 MJ/day one of two things can occur; pro-

duction can drop by 1.5 – 2.5 litres or she will milk more of her back thus causing issues later in the lactation period. The easiest way of knowing the quality is checking the bulk density of the grain as it gives an indication of the energy density of grain.

A simple guide is listed below:

Wheat: If the bulk density is below 70kg/hl then the energy level will decline

Barley (Feed): If the bulk density is below 60kg/hl then the energy level will decline

Triticale: If the bulk density is below 67kg/hl then the energy level will decline

Sorghum: If the bulk density is below 70kg/hl then the energy level will decline.

**In summary if the correct diet formulation cannot be achieved due to wrong decisions on feed purchases then this will have a direct impact on feed conversion and profitability.**



# Northern NSW Beef Feedbunk Tour

## 12th & 13th October 2010



Mobile feed troughs designed by Trevor Jellicoe, "Teangi" Guyra, offer a simple and effective solution for paddock supplementing and finishing.

A group of pro-active beef farmers from Northern NSW attended the second Keenan Beef Feedbunk tour, held this year. The two-day tour involved farm visits demonstrating Keenan beef feeding systems and allowed participants to see cattle before and after slaughter at Cargill abattoir, Tamworth.

The tour kicked off at Bob Jamieson's property "Rivendell", Inverell, where the group were able to view the PACE system in action, making a Mech-fiber™ ration to precise weight and mixing revolutions. The mix was assessed in the trough for its physical attributes including chop length, density, moisture, and particle distribution.

Keenan nutritionist, James Bjorksten commented, "it's critical to consistently present a Mech-fiber™

ration with ideal physical characteristics and to monitor and manage feed out delivery to drive improved performance on feed".

"The PACE system allows feeding operators to assess residual feed in the feed trough before making their next load and adjust the quantity of feed delivered to each pen accordingly". This information is entered into the

PACE software and uploaded to the weigh box, where the batch weight is automatically calculated. This ensures that only the required quantity of ration is mixed in the wagon and each pen of cattle receives the required amount of feed depending on their appetite.

Since the introduction of the PACE system at "Rivendell" on the 10<sup>th</sup> September, 2010 average daily live weight gains in the feedlot have lifted from 1.58kg/d to an impressive 2.47kg/d with a feed efficiency of 215kg/t DM (FCR of 4.65:1). This has reduced cost/kg gain from \$1.89 to \$1.21.

A pen of cattle destined for the Woolworths trade were inspected on the hoof at "Rivendell" during the farm visit. The same pen of cattle was viewed in lairage and again over the hook on the kill floor at Cargill abattoir the next morning. This live to dead exercise enabled the group to see the finished product, to hone their live assessment skills and to learn some important facts about the impact of nutrition and management carcass quality and meeting carcass specifications. The pen of 55hd averaged 500kg live-weight, 265kg

HSCW, 10mm average pH fat and yielded 53% of full weight.

Other Keenan farm hosts included Jon Cumming and Trevor Jellicoe of Guyra, Tom Woolaston of Somerton and Kevin Weiss of Bundurra. A range of topics were covered during the farm visits including methods of paddock feeding, self-feeder and trough designs, feedlot pen and containment yard design, feed storage facilities, the soda grain process, importance of longer, functional hay and straw, as well as the value of feedlot compost.

A common theme for all farm visits was the importance of measuring cattle performance on any feeding system and to minimize cost/kg live weight gain. Keenan farmers are reducing their cost/kg live weight gain and boosting margins by improving utilization of pasture, home grown and purchased feeds. Feeding a Mech-fiber™ ration is integral to this process.



Farmers inspecting the Mech-fiber™ ration produced by the PACE system at "Rivendell", Inverell.



Bruce Picone of Tallawanta, Moree presented on the value of feedlot compost for boosting biological activity of soils and reducing the requirement for synthetic fertilizer.

# Managing the Risk of Ryegrass Staggers

With a wetter than average summer and autumn predicted graziers should be aware of the risk of ryegrass staggers. Perennial and hybrid ryegrass contains an endophyte (*Neotyphodium lolii*) which is held within the plant for approximately 5 to 6 months peaking during summer and autumn months. The endophyte and plant have a mutually beneficial relationship- the endophyte produces chemicals (called alkaloids) which help to protect the plant from insect attack and may make it more drought tolerant, while the plant provides the endophyte somewhere to live (i.e. inside the plant) and nutrients for it to survive. The alkaloids produced by the endophyte include Peramine, Ergovaline and Lolitrem B. Lolitrem B is the main alkaloid that causes the problems with the health of your stock.

Symptoms typically develop 7 to 14 days after stock start grazing toxic parts of the plant and include:

- Behavioural changes, animals become more flighty or nervous
- Slight tremor of the head and twitching of muscles in the neck, shoulder and flank
- Nodding of head and jerky limb movements
- Swaying and staggering
- Stiff stilted gait
- Collapse, extension of head, arching of back, rigid tetanic extension of legs
- Leg and trunk stiffness causing hesitancy in movement
- Tendency to fall, stand with legs splayed out
- May kneel on forelegs or 'dogsit' on hind legs
- Collapse, flexion rather than extension of legs

## Some strategies to reduce the risk of ryegrass staggers include

- Try to avoid animals grazing close to the ground
- Block grazing with balanced fertiliser moving stock on a daily basis
- Renovate pastures using some clover and other varieties of pastures
- Consider feedlotting when toxicity is at high levels



Figure 1. Sheep affected with Perennial Ryegrass 'Staggers'

Source: DPI website ([www.dpi.vic.gov.au](http://www.dpi.vic.gov.au))

## Stress

Stress is a term commonly used today, and something as a nutritional advisor we don't know where to go or how to respond when we meet with the phenomenon, either in the paddock, on the feedpad or at the kitchen table. But to be sure we have come across a lot of it this past spring, still currently seeing a lot of it but more importantly stress has been a fact of life on farms around the world for years and centuries. Half the battle I see in my meager experience is realizing that you're not alone and that a lot of compatriots are in the same boat.

So quickly to say that there is a strong relationship between stress with the pasture plant in the paddock and possibly some of the stress that your experiencing at the Milk \$\$ income level. Some causative factors are within your control but there are a lot that are out of your control. Please do not be afraid to ask for help or guidance from both, technical farm advisors, like Keenan Mech-fiber™ Specialists, and personal advice that may be the meeting and talking through issues off farm with friends or other professionals in the agri-industry.

So what has been the cycle of events that have been experienced on farm, currently and during this past Spring? Earlier in the season in the paddock, the grass was stressed with a grey reddish colour due to the intensity and longevity of the cold and wet. That colour has changed to a normal green hue now in the paddocks but unfortunately the stress levels experienced by the grass plant to date has led to a rapid seeding of pasture swards which are highly fibrous (>45% NDF) and low in both energy (<10.5mjME) and protein (<20%CP) density. This has led to lower production response from the herd in the milk vat where targeted supplementary feed was not practiced to maintain a predictable performance. The follow on from a lower production (milk yield, fat yield and protein yield) response has been an effect on a less than ideal cash flow response to your business - And the summer holidays are coming!

For professional help in relation to stress related issues you can call the beyondblue helpline on 131114, otherwise we would also suggest finding your local Rural Counselling Service which you can find by searching 'Rural Counselling Service' in Google and clicking on your relevant location.

# Managing Partial Mixed Rations on Pasture Based Farms

This past autumn through to the end of this spring has offered mixed fortunes to dairy farmers. With more rain, higher water storage levels and a predicted, higher than average summer rainfall to come it will lead to a good extended grazing season. However, dairy farmers are facing greater challenges managing partial mixed rations (PMR) for optimum milk response as feed quality in the paddock declines during the season.

With the possibility of grazing more mature pastures for longer it is important for this feed to be properly supplemented to maintain cow performance and subsequent milk income. For example if cows are grazing ryegrass swards after seed development the energy density of this feed will have declined from 12mjME to 10-11 mjME/kg dry matter (DM) and can continue to decline as the plant matures and goes to seed.

Many dairy farmers will take advantage of this extra paddock feed in a number of ways. The response is often to drop out supplementary feeding on the feed pad in favour of more questionable quality grazed pasture along with higher levels of slug feeding concentrates in the dairy bale. Maintaining grazing intakes greater than 14kgs DM cannot be consistently achieved. However, dairy cows on a pasture and concentrate program present a challenge for cows, nutritionists and farmers alike, due to ever fluctuating pasture quality, availability and an unpredictable milk yield response.

Milk production and milk components are often lower on a pasture and concentrate system due to an inconsistency in total dry matter intake (DMI) and a seriously compromised rumen, for functionality and rumen health to convert all feed consumed efficiently. Feed conversion efficiency has fallen by as much as 20% this season to date where a balance PMR ration approach to managing herd performance has not been followed. This is leading to significant knock on effects on milk yield and dairy business cashflows around the country.

Where a targeted approach has been taken on farm to graze pastures at an ideal 2600-2800kgs dry matter (DM) per hectare pre grazing cover, and this diet balanced with a quality Mech-fiber™ PMR, herd performance has been maintained along with making full utilization of this valuable grazing resource on the dairy milking block. Any pre grazing cover higher than this (2800kgs DM/Ha) should be immediately harvested as a quality milking pasture silage for use later in the season while also having these paddocks returning quickly to the grazing cycle on the farm.

A quality Mech-fiber™ PMR provides the advantage of a more uniform ration throughout the grazing season producing a predictable milk response from a uniform and healthy rumen. This will minimize rumen digestive problems coming from associated slug feeding of concentrates or unbalanced dietary pasture, therefore providing a higher milk production, milk fat and protein yield. Mech-fiber™ PMR's have also been shown to maintain better cow condition, better reproductive response and an improved health status for your herd.

Consistent monitoring of pasture quality and intake is required for a PMR system to feed your cows optimally, while reducing feed waste on the feed pad and through the digestion process in the rumen. The Keenan PACE system offers the advantage of being able to adjust cow numbers up or down for the amount of mix required to suit the feed available in each paddock while presenting the ideal Mech-fiber™ PMR ration every day.

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