

# FEED TROUGH

VOLUME 4



Your Levy at Work

MAY 2017

## Stockdale's Feeding System

By Tammy Negus, Agronomist and Dean Maughan, Milne Agri Food Group

### STOCKDALE'S FEEDING TIPS

- Fully feed your cows
- Don't skimp on pasture inputs and management
- Manage the feeding in the change of the season
- Cut forage early to produce good quality silage
- Plan, feed budget and feed test
- Regularly check costs vs. production
- Develop trusting relationships with service providers and business partners

The hosts of the 2017 Dairy Innovation Day is the Lammie family of Stockdale Pastoral, Busselton. Wes and Robin apply the KIS approach (Keeping it simple) to feeding and managing the herd for production. Their good approach to business, fully feeding the herd, pasture management and decision making skills contribute to a good farming system. With a high producing herd of 550 Holstein Friesian cows and a good summer milk price the Lammie's want to hit the mark.

### FOCUS ON PASTURES

With a minimum of 10 years land lease they are comfortable with investing in inputs for optimum pasture production. After soil testing in 2016 they applied 5T/Ha of lime to all paddocks to improve the soil pH. They see the cost recovery on the price of seed and benefits of reseeding a percentage of the farm each year. Contractors are used for spreading and seeding as this frees up Robin and Wes to concentrate on other areas of the business.

Paddocks are grazed on the basis of ryegrass leaf stage and biomass and the rotation is set accordingly. Their stocking rate is high and the pasture is driven by nitrogen during the growing season. The dry cows follow the milking herd to

achieve a target residual and good pasture utilisation in each paddock. Wes mentions that the system ends up with too much pasture in winter and a little short in spring as they lock up silage paddocks.

### FODDER CONSERVATION

They place a high value on the ability to grow and utilise their own fodder. They aim to cut surplus pastures early to get a quality product into the pit. Regular measurements of the silage stack help with the feed budget and they feed test to assess the quality and to help balance the ration.

### CONCENTRATES AND FEEDING IN THE DAIRY

Stockdale's feeding strategy has a strong focus managing the cows diet from summer feed to grass. On the onset of grass they don't drop the concentrate too quickly and feed no less than 4kg pellets per milking. Maximise plus pellets are fed at 11kg/cow/day in summer and 6-8kg of Maximise in winter. Up to 2 kg of milled wheat in the TMR is fed during the day to increase production during the summer/autumn period. The starch in the pellets is a slower release and not a 'big hit' and acidosis risk like wheat can be. The Lammie's comment that Maximise pellets fit their feeding system with a safe product in a package that provides feed testing, good logistics and service.

The dairy feeding system is across the board and not on individual cow production. It's likely that the late lactation cows are being over fed. The Lammie's are comfortable with this strategy to focus on milk production when the milk price, cull price and animal health is better.

Almost every day Robin checks the milk level in the tank and based on the "base" monthly milk price, with no growth milk

incentive, he calculates the return he is getting over and above his feed costs. They are not afraid to increase the concentrates, if the return over the base milk price is reflected by more milk. Robin said that he has never used the growth milk price in this daily calculations and decisions as he knows that it has a finite life.

### WHAT'S NEW FOR 2017

The Lammie's want to push harder for grass production, cut earlier for better forage quality and develop the dairy business. A slurry tank has been purchased to apply liquid effluent from the dairy onto the pasture paddocks in an innovative way to recycle nutrients. They have a focus on making money out of grass and are continually evolving.

The Lammie's show that adopting some of the industry's best practice in growing grass, producing quality fodder, milk and cattle does pay off. For more information attend the session with Dean Maughan, Wes and Robin Lammie at DID - 4th May. Visit [www.milnesagrigroup.com.au](http://www.milnesagrigroup.com.au) for information on Milne pellets and technology and also [www.dairyaustralia.com.au](http://www.dairyaustralia.com.au) for feeding information.



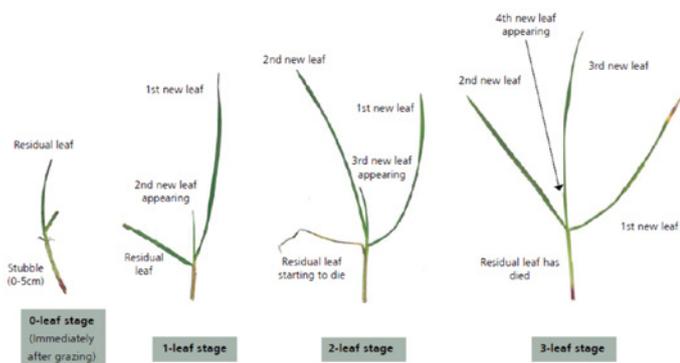
Sarah, Wes and their children in front of the dairy feeding system

# Seasonal reminders from the Hub

## FOR THE Paddock

With autumn rainfall and the winter growing season progressing, there are many things that you need to keep focussed on in the paddock;

- Focus on pastures - establish and manage them well as this is the basis for your feed during the year for grazing, hay and silage.
- Monitor and assess plant growth - understand the biology of the plant, measure pasture leaf stage and assess biomass and residual.
- Pest control - plan and act on insects and weeds early as they adversely contribute to the pasture quantity and quality.
- Annual ryegrass will develop 3 actively growing leaves and on emergence of the 4th, the oldest leaf will decay. See the leaf stage diagram.



- When to start grazing - avoid the temptation to graze too early as this will reduce the rate of pasture accumulation and often pull out young plants. Ideally graze at the 2.5 to 3 leaf stage for annual ryegrass, however a compromise of 1.5 to 2 leaves for the first round is an option.
- Leaf emergent rate (LER) - is largely driven by maximum and minimum temperatures and will set up your grazing rotation
- Setting up the rotation length - use the LER to establish the time it takes for the plant to grow and achieve the desired plant stage for grazing.
- Grazing allocation - the grazing platform divided by the rotation length will help set the daily area allocation. Even at the 3 leaf stage on the first grazing the cover of annual ryegrass will be low and the grazing will need to be light.
- Extra supplementary feeding and sacrifice paddocks are worthwhile to enable deferred grazing.
- Graze cereals at the 3 leaf stage once the plants pass a twist and pull test. Don't leave it too long before grazing as once stem elongation has occurred as the stems are less palatable, regrowth is poor and there is a reduction in utilisation due to trampling.
- Address the nutrient requirements and apply fertiliser as required for the pasture species, soil type, grazing system, environmental conditions and production requirements. Understand your soil test results. Phosphorous should be addressed early close to establishment, potassium, nitrogen and sulphur applied where necessary and plant tissue testing carried in the growing season to assess the nutrient levels.

- Nitrogen requirements - apply the first application after the first grazing. Build a wedge of feed before it gets too wet so that the nitrogen response is most effective. Single applications of 25 - 50 kg/ha of N should be used with 1kg N/ha/day based on the rotation speed as a guide.

Visit [www.fertsmart.dairyingfortomorrow.com.au](http://www.fertsmart.dairyingfortomorrow.com.au) and speak to your agronomist regarding nutrient and pasture pest management. Speak to the hub for assistance with grazing management strategies and for the Rotation Right Tool.

## FEEDING THE HERD

There are many key points to be aware of during this period to ensure the herd maintains good health and holds up lactation momentum.

- Feed budget to assess what you have on hand, and what feed you need to get through this year.
- Pasture is a relatively cheap and quality feed for producing milk so utilise this as much as possible.
- Introducing green feed - the change in diet from a conserved forage/supplement ration to an actively growing ryegrass/supplement ration requires an adaptation period of about a month for the rumen micro flora to adjust and effectively utilise the ration.
- Ration changes - the rule of thumb is not to change a dietary component in any ration by more than 1 kg per cow per day. This will ensure minimal disruption to the rumen microbes and help prevent the negative effects on profit of inefficient feed digestion and metabolic diseases.
- Protein levels - early season ryegrass can have a crude protein (CP) content exceeding 30%, while a high producing dairy cow only requires a total CP content of 16-18%. Make sure you are not overfeeding CP in the diet at this time of the year as its both a waste of money and the cows are wasting energy to dispose of the excess protein.
- Elevated dietary nitrogen (N) is a challenge at this time of year due to the high plant nitrate levels and it has negative impacts on the cows health.
- Neutral Detergent Fibre (NDF) - lush 2 to 3 leaf ryegrass has reduced NDF and coupled with low NDF levels in grain supplements the diet will have a higher risk of acidosis. Make sure the NDF levels in the diet are adequate.
- Minerals matter - there are negative impacts of a high DCAD (Dietary cation anion difference) ration in calving cows and milk fever. High potassium will often result in a positive DCAD so be careful applying K fertiliser in autumn and address the minerals in the ration.
- Grain prices are still low but check for quality and feed test because there is a huge amount of poor quality grain in the market.
- Don't forget the other stock - keep the body condition on cows prior to calving and heifer's growing with smart supplementation.

Consult your nutritionist for advice on your herd and ration. Consider trying Western Dairy's free software program Rumen8 to help you assess your ration at [www.rumen8.com.au](http://www.rumen8.com.au). Visit [www.dairyaustralia.com.au/Pastures-and-feeding/Nutrition.aspx](http://www.dairyaustralia.com.au/Pastures-and-feeding/Nutrition.aspx)

# Improving health and performance in the transitioning cows using immunity breeding values

*Josh Aleri, Lecturer - Production Animal Medicine, Murdoch University*

Murdoch University researcher Josh Aleri, in conjunction with other researchers from The University of Melbourne, CSIRO and The University of Guelph have been conducting a study using on-farm immune competence testing on dairy cows. This will help develop a long term strategy for improving health and performance in the transitioning cows using immunity breeding values.

Immune competency testing is a national herd improvement strategy that identifies and selects animals based on their immune response, and correlates this measure with other health and production traits. Some of the project findings show links between feed conversion efficiency and stress responses. With a fair to moderate heritability of things like immune response it may be possible to select for this in commercial dairy herds in the future.

Transitioning cows are always at a high risk in developing both infectious and nutritional conditions such as mastitis, milk fever, retained membranes, uterus infections, negative energy imbalances and downer cow syndromes. The prevention and treatment of these conditions has mainly focussed on nutritional manipulations and adjustments before, during and after calving. A major risk factor to the occurrence of these

health problems is the animal's genetic component because previous breeding and selection programs of replacement heifers within farms have mainly focussed on production traits with less emphasis on survival and longevity traits. In an effort to improve genetics and survival traits of the transitioning cow using genetics it was important to understand the relationships of individual animal performances and health with immunity.

*Our preliminary studies in heifer calves have shown increased weight gains in some lines of high immune responder groups, and some differences in stress responses. Our findings also showed that adult dairy cows with better feed conversion efficiency tended to have reduced stress responses compared to cows with poorer feed conversion efficiency. This provides evidence that animals with high immune responses not only have better growth rates but also cope better with stressors while on farms.*

We also assessed production parameters such as immune and stress responses and udder health in first lactation dairy heifers. The key finding of this study was the variability of immune and stress

responses within farms and between breeds. For example, Jersey x Holstein-Friesians had better immune responses and reduced stress responses compared to pure-bred Holstein-Friesian heifers.

Our collaborators in NSW (CSIRO) are looking at the relationships between immune competence and various production and health traits in beef cattle and sheep. The traits being investigated include body growth, temperament and resilience. The findings from these studies will also provide more insights on the potential benefits of immune competence testing in the Australian livestock industries.

Immune competence testing is a livestock improvement strategy that is based on an animal's ability to resist disease, and also incorporates other health, production and longevity traits into a weighted selection index. On-farm practices such as good record keeping of health, production and genetics data will provide a strong platform for this research.

For the full article – 'A long-term strategy for improving health and performance in the transitioning cows using immunity breeding values' email us or contact Josh at [J.Aleri@murdoch.edu.au](mailto:J.Aleri@murdoch.edu.au)

## Dimethoate and Omethoate insecticide changes

*Familiarise yourself with these changes so that your dairy farm can be compliant.*

The Australian Pesticides and Veterinary Medicines Authority (APVMA) has recently completed reviews on dimethoate (Danadim, Roger) and omethoate (Lemat) insecticide registrations. These products are commonly in the WA dairy industry for controlling insects in crops and pastures. Due to Occupational Health and Safety (OH&S) and residue issues the APVMA has made various decisions on the products.

Home garden registrations for dimethoate have been cancelled, 1L or less pack sizes have been removed from stores and variations to the label have been made for agricultural use. Dimethoate products bearing previously approved labels can be

supplied and used for a 24 month period ending the 6th of March 2019. There is a permit (PER84247) that is required for the use of this product during this phase out period. One of the variations confirmed is the restriction of pastures, fodder and oilseeds users to early crop emergence stages only for red-legged earthmite and lucerne flea. Further label variations include prohibiting the application of dimethoate by misting/fogging equipment.

Products containing omethoate will continue to be allowed for insect control on flowers, ornamentals and also as a barrier spray for controlling red-legged earth mite, provided all new labels contain the amended

instructions to better protect human health. However, labels on omethoate products can no longer be used in the home garden, on food producing plants, horticultural crops, pastures, grain legumes or cereals. A 12 month phase out period will be allowed to use up stocks of existing products and new labels will need to carry the new safety directions and first aid instructions to protect workers and those entering treated areas.

For alternatives and insect control speak to your agronomist. For the full review, changes and permit visit [www.apvma.gov.au/dimethoate](http://www.apvma.gov.au/dimethoate) or [www.apvma.gov.au/node/26326](http://www.apvma.gov.au/node/26326) email [chemicalreview@apvma.gov.au](mailto:chemicalreview@apvma.gov.au).

# Rumen8 – for easy formulation of dairy cow diets

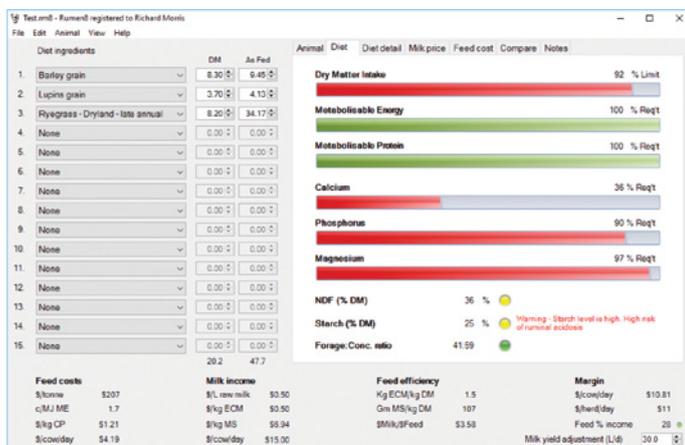
By Richard Morris, Martin Staines and Steve Little, Western Dairy and Dairy Australia

Version 3 of Rumen8, the free Australian nutrition software, has been released and is now better than ever. Rumen8 is now being used by over 500 users world-wide to manage dairy cow diets including the pasture based diets common in the Australian dairy industry.

Rumen8 is owned by Western Dairy and Dairy Australia and has been designed for easy formulation of dairy diets, to ensure the correct balance of energy, protein, fibre, minerals and other nutritional components for Australian dairy cows at different stages of production.

A main feature of Rumen8 is its user friendliness, so that it can be used regularly by dairy farmers to adjust their dairy cow diets with periodic help from a nutritionist. The easy interface allows the user to create and adjust diets to meet production targets and explore impact on financial margins. More sophisticated nutrition models are available but these require more feed information and considerably more time and knowledge to determine suitable diets, restricting their usefulness on farm.

Rumen8 version 3 features many additional functions and is compatible with Windows 10. Here's an overview of the big changes in version 3.



- The window layout has been improved with important financial information always visible. An expanded range of cost, margin and feed efficiency parameters allow better comparisons between diets.
- We have greatly expanded the use of tool tips to explain nutrition information. Just hover your mouse over something to learn more.

- The feed library has been updated and expanded to over 250 feeds, including 100+ pastures specific for different dairy regions, seasons and qualities.
- Animal demand and supply of the minerals calcium, phosphorous, magnesium have been expanded and diet DCAD is now included.
- The number of possible diet ingredients has been increased to 15.
- Multiple feed libraries are now supported.
- Feed mixes can be created and used in multiple diets as a single ingredient.
- Recommended levels for various nutritional components can be set and feedback is provided on their adequacy via traffic lights.
- The Fat: Protein ratio and energy corrected milk have been added to the Animal tab.
- The Forage: Concentrate ratio is now calculated for the diet.
- Concentration and proportion units can be changed to percent by the user in the Preferences.
- The standard cows have been expanded to include 9000 and 10000 litre lactations.
- Days in milk and days pregnant can now be set on a calendar.
- The dry cow period has been split into early and springer mobs.
- A saved diet file (.rm8) have been associated with Rumen8 so can be opened from Windows Explorer.
- The User Guide and Training Manual for Rumen8 have been updated.
- Video tutorials on how to use Rumen8 are now available on YouTube. Simply type Rumen8 in the YouTube search box.

Dairy Australia commissioned and independent evaluation of 11 nutrition models used around the world. Rumen8 (then version 1) performed admirably. You can read the report yourself as it is available from on the Dairy Australia web site (A review of 11 applied dairy nutrition models used in Australia, 2009). Rumen8 version 3 is even better, so why not try it yourself. Find us online [www.Rumen8.com.au](http://www.Rumen8.com.au)

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