

## RECOVERING FROM A DRY SEASON

### Keep 2006 within its boundaries

- don't let the impact of the drought spread over several years.

### You are not alone

– talk to any dairy farmer in South Australia and you will find they are in a very similar situation as you. So don't be afraid to stick your head over the fence and chat about it.

A significant response from the recent DairySA drought survey indicated for drought recovery, technical information on growing and establishing pastures and animal nutrition was required. Respondents to the survey stated that fact sheets were one of the best ways of receiving information.

### For SA Dairy Farmers:

Autumn/Winter Pasture Priorities	Pg 1
Soil Testing	Pg 2
Dryland Pasture Tips	Pg 3
Cow Nutrition Issues	Pg 4

DairySA has compiled this fact sheet with technical input from pasture specialists Greg Mitchell, Kylie Boston, Megan Beck (Shawyer) and nutritionist Vicky MacDonald. Whilst some of the information is specific to a region, generally it is applicable to all dryland dairy pastures across the state.

### Autumn / Winter Pasture Priorities by Greg Mitchell

This article was written for Hills and Fleurieu dairy farms however information included could be relevant dryland pastures in all regions – so read on!

**To get the best possible pasture growth into winter, dairy farmers should (as always) focus on intensive block grazing practices. In order, other pasture management priorities should be at least reasonable base soil fertility, more aggressive nitrogen usage, and oversowing any thin or damaged pastures.**

As we get further into autumn, all farmers are keen to get pastures growing as quickly as possible. This is great, but don't let cows eat it all off as quickly as it grows. Farmers should be focused on the management needed to optimise pasture cover and supply right through the autumn-winter period. As well as supplying the maximum amount of grass to cows through winter, this approach will best allow pastures to thicken up and recover, and best protect your land against erosion, pugging and worsening weed problems.

The following are (in order of priority) the key elements of best managing pastures into the 2007 growing season;

#### Block Grazing

As always, farmers should be controlling the herd's grazing, with rotations adjusted according to pasture growth. From the opening rains, farmers should be grazing their dryland pastures once every 4 to 5 weeks, with the slow rotation allowing pastures to grow as quickly as possible through autumn, build up plant food reserves, and to generate new grass tillers to thicken up the pasture.

As we get further into the growing season, adjust rotations as best possible to allow grass-based pastures to grow 2 ½ leaves per tiller (or around 2500 kg/ha DM cover) before grazing. Grazing intensity should be adjusted so that cows are leaving an even 5 cm residues behind after grazing.

These same grazing messages have been promoted to dairy farmers for many years. But with farmers desperate for good autumn-winter pasture supply, it has never been more important that we follow these critical block grazing rules. For many farms, extra investment in extra fencing and stockwater points, or extra effort in strip grazing, could well be more valuable than investing in extra seed or N fertiliser.

And remember that if you do invest in extra seed or fertiliser this season, the amount of extra grazing you receive will only be maximised by block grazing in the recommended way.

#### Base Soil Fertility

In the same way, farmers should ensure at least reasonable base soil fertility. Nitrogen is rightly seen as a good fertiliser to quickly boost grass growth. But don't focus on nitrogen at the expense of maintaining good base fertility. Even N fertiliser specialists agree that the best growth responses to N only occur with good underlying soil fertility.



Farmers should first consider their pastures requirements for phosphorus, potash and sulphur, and should consider any soil test information and maintenance requirements with their agronomist to determine what (if any) base fertilisers are required. Ensure any deficiencies are addressed from the start of the growing season.

Simply because it works more slowly to boost pasture growth, farmers can probably defer investments in lime (used to correct soil acidity) until 2008, and re-direct any funds here into other recommended strategies.

### Aggressive Nitrogen Usage

With attention paid to block grazing and base soil fertility issues, many farmers are rightly looking to use heavier N rates to boost autumn-winter growth from grass pastures. Evidence from both R&D programs and progressive dairy farms show that N fertiliser can be profitably used at rates equivalent to 1 kg N/ha/day during the growing season. This is the equivalent of around 65 kg urea/ha/month.

But there are two provisos when using such high rates of N. The first is that high rates are only justified if growing dense, healthy ryegrass or perennial grass pastures. If your pastures are thin or dominated by weeds, it is better to invest in base fertiliser, weed control and reseeding before using high N rates.

The other proviso is that N applications should be made just as individual paddocks are grazed. High N applications rates will boost nitrate levels in pasture growth between around 6 and 18 days after spreading. Grazing pastures during this period will limit the growth response to applied N, and make grazing cows more prone to certain metabolic disorders.

### Reseeding Options

Many farmers may have already been planning to reseed selected areas, with those paddocks prepared for sowing to new perennial or short-term pastures. It's logical to proceed with those plans.

But for any unplanned oversowing or seeding work that farmers deem necessary, it makes sense to only drill in short-term ryegrass. Paddocks earmarked for thickening up will probably have had little/no preparatory weed control work, so perennial pasture sowings here may not be very successful.

In contrast, a short term ryegrass will strike up better (than perennials) under light weed competition, and grow more strongly from seeding. Short term ryegrasses will also be more responsive to early winter applications of N. Paddocks can be better managed for maximum autumn-winter growth in 2007 with this approach, whilst allowing time for better preparation (eg. Weed control, liming, infrastructure work) for perennial pasture seeding if required in 2008.

### Further Information

There are other innovations that farmers could consider to boost autumn-winter pasture growth this year (eg. ProGibb® pasture stimulant, new ryegrass varieties). But the providers of these innovations would agree that best responses are obtained under conditions of effective block grazing and adequate soil nutrition.

Further details on issues in this report are available from DairySA's Forage Skill\$ and 3030 projects, and from commercial and private agronomists. **GREG MITCHELL, Project 3030, [mitchellg@chariot.net.au](mailto:mitchellg@chariot.net.au)**

## Check soil fertility to prepare for recovery

By Allan Fletcher, Market Development Agronomist – Pasture, Incitec Pivot Limited Phone: 03 5662 3575

**“Guesswork or rules of thumb are poor guides for these important decisions.”**

In some paddocks fertiliser applied last year is still visible on the ground however the phosphorus and sulphur supplied by those fertilisers has long since moved out of the granules and into the soil. The remaining granule is predominantly calcium, which is much less soluble.

How much the soil fertility has increased as a result of that fertiliser application is best assessed by a soil test, because it will vary depending on chemical reactions that occur in the soil. Using the Phosphorus Buffering Index (PBI) can help to fine tune decision making and better understand what has happened to any residual fertiliser from 2006. The PBI would also be useful in years to come, as a guide in developing appropriate phosphorus fertility targets and assessing the build up or run down of capital phosphorus.



In a 2005 survey Donna Gibson, based at the Department of Primary Industries, Ellinbank in Gippsland, asked 20 dairy farmers from Bega to rate their paddocks as high, medium or low soil fertility, and then checked their responses using soil testing. Some farmers accurately predicted soil fertility on just 15% of their paddocks, most were out on more than 50% of paddocks and the closest predictions still only got 72% of paddocks right.

### **Dryland Pasture Tips** by Kylie Boston and Megan Beck

The following article by South East FORAGE Skill\$ coaches Kylie & Megan outlines some tips and strategies to consider in managing your dryland pastures coming out of the current dry season.

#### **COMMENCE PLANNING NOW!**

##### **Undertake a feed budget**

Determine feed requirements for expected stocking rates of all stock classes, on a daily, weekly and monthly basis. Calculate likely pasture availability and determine supplementary feed needed to fill pasture gap (allow for fibre requirement in autumn for stock grazing new pasture growth). A feed budget exercise needs to be assessed regularly throughout the year, and this becomes even more essential in a drought year where supplementary feeds are heavily relied upon.

##### **Develop an Action Plan for Each Paddock Class**

Assess all paddocks now for potential pasture base following the break. This will allow a strategy to be formulated for each paddock. Use soil tests to help with this assessment. Look to your feed and cashflow budget, paddock location and soil type for help in deciding what plans are made.

##### *Perennial Pastures*

- *Existing good base of perennial pasture* -ensure the paddocks are not overgrazed whilst waiting for rain, maintain soil nutrient levels and strategically use nitrogen for a faster start-up.
- *Fading perennial pastures* – where perennial tiller numbers are a bit sparse or bare areas around stock camps, weeds can become a problem. Over-sowing with more perennial pastures is an option. If you are going to spray out competitive weeds, the space they occupy must be replaced with pasture otherwise the weeds will come straight back in.
- *Poor perennial base* (very few remaining perennials and mostly weeds) - options are to oversow with annuals and look to re-sow next year, renovate this year or sow to crop.

##### *Last Years Annual Paddocks*

If nothing is done with these paddocks weeds will establish throughout the year. To maintain the good work, it is best to re-establish another pasture. This could be something from as simple as a cheap cereal through to a new perennial pasture.

##### *Sacrifice Paddocks*

Large amounts of nutrients are dumped on a sacrifice paddock which could become an environmental issue if not absorbed by a crop. Therefore it is very important to establish a pasture in these paddocks.

**Weed control** should only be considered where weeds are competing with desired species. Early on some weeds can be useful feed for stock!

**Keep an Eye Out and Monitor** – Keep on top of insects pests like Red Legged Earth Mite, Lucerne Flea and Cockchafers right from the start as any damage early will be magnified through winter. Don't let insects consume what your animals can be eating.

**Grazing Management** of pastures in winter will be critical to achieve maximum spring growth. Set up your rotation on 2.5 - 3 leaves/tiller and begin to create a wedge of feed. Deferred grazing, use of supplementary feeding and the strategic use of nitrogen will be beneficial to build this feed wedge. Leaf makes leaf so ensure post grazing residuals are maintained to maximise the use of the sun's energy.

**For more information** - Horizon Farming: Kylie Boston, 0407 231 547; Pasture Systems Consulting: Megan Beck, (08) 8739 8202, 0428 830 125 or your FORAGE Skill\$ coach or preferred pasture agronomist.



# Possible Dairy Cow Nutrition Issues This Autumn

by Vicky MacDonald, Nutrition Consultant, Meningie Fodder Pty Ltd, Princes Hwy, Meningie 5264

## What cow nutrition issues should I be looking for coming into the Autumn Break?

### Poor Dry Matter Intake in the Dry Period & Poor Cow Body Condition Score at Calving

This may be a problem in herds that have not been able to be fully fed during the dry period due to lack of green grass and poor quality hay. Even if they have been dried off in good condition, weight loss can occur quite easily even if the cows are looking "full" when on cereal hay. Good quality cereal hay can provide maintenance for dry dairy cows as they will be able to eat a reasonable amount but poor quality hay i.e. less than 8.0%CP and 8.0MJ will cause the cows to drop body condition. However, this season's cereal hay is excellent in quality and so cows should do well on it as long as they are given the maximum opportunity to eat as much as they want ie 10-12+kg DM per day. They must be allowed to eat *ad lib*.

### Poor Growth in Pre-Calving Heifers

This will be a big issue this year if growing heifers have not been able to be fully fed over the long dry spring and summer we have just experienced. Time and good feeding post-calving will be our only means of dealing with it. But to some degree poorly grown out heifers will never recover and may eventually be culled for fertility issues and poor milk production in their second lactation.

## What can I do to prevent these issues? What is the best way to deal with this issue if it occurs?

### Monitor Body Condition Score and Dry Matter Intake (DMI) in the Dry Period

DMI pre-calving has a major affect on DMI post-calving. Greater DMI post-calving minimises metabolic disorders and improves fertility due to energy balance. How full do the cows look? Check for rumen distension. Cows need to be full up of quality forage NOT just straw or poor quality hay! Body Condition Scoring is a good tool to monitor weight and 1 BCS (1-8 System) is equivalent to 42kg for the Holstein. Cows may lose up to 0.75kg/day for first 60 days post-calving and then stabilise and start gaining weight until dry off. One BCS costs about 1500 MJ to put on while milking, 2000 MJ when dry. The ideal BCS at dry off and calving is about 5.5 (1-8 System). Remember a thin cow has a greater desire to eat, so feed her!!!

### Feed Your Heifers Adequate Effective Fibre Post-Calving to Avoid Acidosis & Wt.Loss

Feeding heifers enough effective fibre is essential. Grain poisoning is much more likely if heifers are given the same amount of grain in the dairy as the mature cows, as their forage: concentrate ratio in the rumen is so much less. In other words their lower body size relative to the mature cows limits their capacity to take in large quantities of forage. This is compounded by dominance issues in the herd when forage is fed in the paddock so the smaller poorly grown heifers miss out. The end result is greater risk of acidosis and lowered butterfat leading to clinical health issues such as LDAs and ultimately infertility.

## How can I best prepare my cows for maximum production over the autumn and winter period?

### A Balanced Transition Diet is the Best Thing for Good Rumen Function and Max. DMI

The rumen of the dairy cow is a dynamic ecosystem which needs time to adapt to changes in level and composition of the diet. Adaptation involves a change in microbial flora and a change in the structure of the rumen wall. On introduction to high energy diets the size of the rumen papillae increase but take approximately 4 weeks to fully adapt. The papillae achieve their maximum size 6-8 weeks after calving (it takes only 3 weeks with correct Lead Feeding). The freshly calved cow without a good transition diet has a low rate of absorption of Volatile Fatty Acids and hence higher concentrations of Volatile Fatty Acids in the rumen. This leads to lower rumen pH and more risk of acidosis and lowered Dry Matter Intake.

