

# Macalister Demonstration Farm

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## NEWSLETTER 40

Monday October 4<sup>th</sup> 2010



Extension projects at the MDF are funded by Dairy Australia, Sustainability Victoria and Department of Agriculture, Fisheries and Forestry, with support from GippsDairy.

**IT'S FREE!**

### Sustainable Farm Families Workshop

**Last chance for Registration  
Call 51411 712 NOW!**

Join us as a Sustainable Farm Families workshop participant to discuss healthy living, health issues and stress management for farmers. Every participant will receive a free health check as well as a one-on-one session with a health professional to discuss results and map out a healthy lifestyle plan. Follow up health checks will be programmed in October 2011 and 2012.

**9.30 am-3 pm Thursday & Friday, October 14<sup>th</sup> & 15<sup>th</sup> 2010  
Macalister Demonstration Farm**

### DPI ACTIVITIES

#### MID Irrigation Efficiency Incentive Program

Spring funding round: October 4 to November 4 2010

Incentives available for: Irrigation Farm Plans, Reuse systems, Spray irrigation conversions from flood irrigation  
For more information contact Sarah Killury at the DPI Maffra on 5147 0800

#### Centre Pivot and Linear Move Irrigator Course

A course for anyone thinking of purchasing or improving the management of Centre Pivot and Linear Move irrigators  
The course cost of \$545/person is fully reimbursed through FarmReady for primary producers.  
When: 10<sup>th</sup>-11<sup>th</sup> November 2010 Venue: DPI Maffra 1 Stratford Road MAFFRA  
Registration required by 27<sup>th</sup> October 2010. Contact Chris Kooloos at DPI Maffra on 5147 0800

## Yellow Rag Bit

Bree Walshe, Dairy Advisor DPI Maffra

### In Calf or Not - Getting Serious About Getting Cows in calf

The following are some questions to ask of your system and your plan for joining this year:

#### Heifer Program

- Are they grown enough for joining? Aim for 355kg for Holstein Friesian.
- Are you mating your heifers early? Remember this is the only group that you can bring forward – giving you a better chance of getting them in calf the following year. In some herds this may be 20-30% of your herd next year!
- Will you synchronise and / or AI the heifers?
- How many Jersey (or low birth weight) bulls will you need? Three bulls per 100 heifers or 4 bulls per 100 heifers if you synchronise to start with.

#### Improving your submission rate

- Are the cows still losing body condition? Do you have enough feed in front of the cows?
- Have you treated your cows for metritis (infected uterus)? In-calf rates decrease with metritis. Remember it is not easy to determine metritis in cows so talk to your vet about which cows could be examined.
- Have you got a plan to address non-cyclers? When will you do it?
- Who will be responsible for heat detection? Improve detection rates by giving someone the job.
- What heat detection aids will you use? Order them early and make sure people know how to use them?
- When will you do your paddock checks for heat detection?

- How are heats recorded – book, board, back of an envelope?
- Clip freezebrands and fix poorly visible eartags - being able to clearly identify cows is important!
- Do you think that synchronising may improve submission rates? When will this be done, by whom and which program / method?
- Have you organised your AI tech for once or twice a day? Let them know if you have any bigger synchronisation days.

#### **Improving your conception rates**

- Is the semen ordered? Have you taken the time to select well-proven bulls for your breeding goals? Check out the information at [www.adhis.com.au](http://www.adhis.com.au) regarding bull fertility.
- Make someone responsible for checking the Liquid Nitrogen Tank regularly.
- Keep the goblet less than 5cm from the top of the neck of the tank. Use tweezers to get the straws out.
- Take a refresher on handling semen straws. Check your water bath is accurate for 32-38°C. Can you identify the bulls quickly without lifting the goblet out of the neck of the LN2 tank? No? – change your system.
- When is your Mating Start Date (MSD)? How long will you AI for? Practice AI on some cull cows before MSD.

#### **Bull Management**

- InCalf RULES OF THUMB; 3 bulls per 100 cows OR 4 bulls per 100 cows if you have used synchronisation
- How many cows to mate at the START of mating? Make sure you have enough bulls ready.
- Are the bulls fertility tested? Have bulls VIBRIO vaccinated and vaccinated and tested negative for BVDV (Bovine Viral Diarrhoea Virus) so that the bulls don't get infected from a positive BVDV cow in the herd.
- Are the bulls in good body condition? Skinny bulls have very poor sperm quality.
- Will you train the bulls to stay in the paddock or off the dairy yard?
- Recommended bull rotation is between 4-7 days.
- Are they virgin bulls?
- If they are leased bulls, are they virgin bulls that are vaccinated and tested negative for BVDV? If not FORGET about it.
- Have the bulls on farm at Mating Start Date (AI that is) so they can get used to the farm and other bulls, and you can improve their nutrition.
- Is all the staff aware of identifying lame bulls quickly and treating them? Remember a bull with an abscess may end up being sterile for the rest of the season.
- How long will you leave the bulls in for? Less time means higher empty rates, longer mating leads to longer calving pattern.

The information in this edition of the Yellow Rag was taken from a Spring Sessions at the MDF in 2008, presented by InCalf advisor Mark Humphris, Maffra Vet Centre. For further information please contact Mark (5147 1177), a trusted advisor or veterinarian. Or you can contact a dairy extension officer at DPI Maffra on 5147 0800.

## **Nitrogen Fertiliser and Gibberellic Acid Pasture Trial**

### **Objective**

On an established grazed flood irrigated perennial ryegrass dairy pasture:

- compare the effectiveness of Easy N<sup>®</sup>, Green Urea<sup>™</sup>, and granular urea;
- with and without Gibberellic Acid (GA);
- assess effectiveness of Easy N at 3 different rates

### **Materials and Methods**

This trial looked at 462 days of dry matter production comparing twelve nitrogen (N) fertiliser treatment combinations in total, including EasyN at 4 rates 0, 30, 60 and 120L/Ha, Green Urea and straight granular Urea applied at the middle EasyN rate equivalent of 55kg/Ha or 25.5 kg N/ha. All treatments will be applied either with or without GA at 20g/ha during the colder winter period.

The experiment was laid out on a section of grazed flood irrigated perennial ryegrass dairy pasture that was newly sown the year prior. The trial consisted of a randomized block design with 4 replicates of each. The granular treatments were applied by hand, while the liquid treatments were applied using a hand-held boom spray unit. All treatments were re-applied immediately after topping the trial area with a mower post-grazing by dairy cows.

Pasture dry matter measurements were compiled from each plot. A grab sample at harvest from each of the treatments from the first replication of the trial was also sent to the Feedtest laboratory for feed-quality analysis.

## Results

It is worth considering three aspects of the different treatments:

1. The **quality of the grass**. It is best if the energy, fibre and protein levels of the grass produced are improved. (See Newsletter 39)
2. The **quantity of dry matter** the treatment produces. It's good if a treatment can produce a lot of extra grass.
3. The **price of the extra grass**, calculated by dividing the amount spent (the product itself and any application costs) by the extra quantity produced. The price may be higher than grass grown without any treatment, but not so high that other feed alternatives are cheaper.

Extra dry matter production is presented in Table 1. The control plot with no N and no GA added produced 9960.5 kgDM/Ha over the 462 day period. This means that the best performing treatment, EasyN 120 + GA, reached a total dry matter production of 17,317 kgDM/ha.

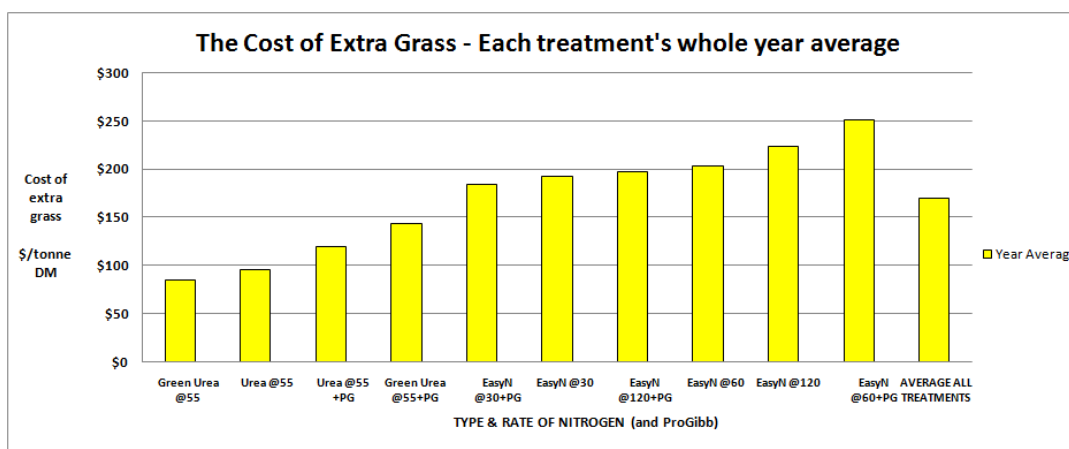
In some seasons the response to treatment was less than the control. Further investigation is warranted to see if other factors were at play during these periods, however it is assumed that ryegrass was not able to produce at this time as production was very low. This highlights that if the plants can't respond, then you may be wasting money applying nitrogen at this time.

**Table 1: Extra dry matter production following treatment over 462 days**

Treatment	Extra kgDM/ha Winter 2009	Extra kgDM/ha Spring 2009	Extra kgDM/ha Summer 09/10	Extra kgDM/ha Autumn 2010	Extra kgDM/ha Winter 2010	Extra kgDM/ha Cumulative	Response kgDM/kg N
EasyN 120	619	3353	1095	166	811	6044	9.1
EasyN 120+GA	696	3602	1914	241	904	7356	11.1
EasyN 60	482	2609	554	117	426	4188	82.1
EasyN 60+GA	356	2602	1122	59	798	4938	96.8
EasyN 30	200	1870	379	56	120	2626	103.0
EasyN 30+GA	299	891	884	62	385	2520	98.8
GrUrea55	651	4269	940	-33	701	6527	129.0
GrUrea55+GA	568	2547	1141	230	752	5237	103.5
Urea55	596	3140	663	120	495	5014	99.1
Urea55+GA	672	3134	1024	235	607	5672	112.1
Control	0	0	0	0	0	0	-
Control+GA	154	210	-388	-27	60	10	-

The cost of extra grass grown as a result of each treatment was calculated for the **whole trial period** of 462 days from winter 2009 to winter 2010. The costs of the fertiliser products are based on Incitec Pivot price list 18 May 2010 RRP Excl. GST. Application rates and GA costs are based on local enquiry. The cost of the extra dry matter produced is presented in Figure 1.

**Figure 1: Cost of extra dry matter produced Winter 2009 – Winter 2010**



When averaged over the whole trial period of 462 days, Green Urea with no GA produces the lowest cost grass (\$84/t), followed by Urea with no GA (\$96/t). This highlights the importance of growing what you can and when you can and utilising every bit of it.

When calculating the cost of dry matter during the different seasons (data not shown), Green Urea was most effective in spring (\$40/t) and summer (\$135/t). Urea was most effective in winter (\$124/t) when compared to Green Urea (\$130/t) and all treatments were relatively expensive in the autumn period.

Easy N created relatively expensive grass, even when applied at three different rates of N element per hectare. This is partly because of the high cost of application (here calculations based on using a spray contractor).

GA only increased dry matter production when nitrogen was also applied. However, the effect of applying GA is inconsistent. For some Easy N treatments it lowers the cost of grass production, but when added to Green Urea, grass produced increased in cost. It was also found there is some antagonistic relationship GA and Green Urea suggesting some interaction between the modes of action of these products.

### Conclusion

Green Urea was shown to be the best option for growing extra pasture dry matter. It can produce a large extra quantity at an acceptable price per tonne. The periods in which Green Urea most outperformed conventional urea (based on \$/t extra grass), was following applications in September, October, November and January.

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*This is a guide only, which we hope you find helpful as a general tool. While Incitec Pivot Limited has taken all reasonable care in the preparation of this guide, it should not be relied on as a substitute for tailored professional advice and Incitec Pivot accepts no liability in connection with this guide. Talk to your local Incitec Pivot Fertilisers' Distributor Agronomist about soil testing and arranging a specific fertiliser recommendation that best suits your needs.*

POSTAGE  
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AUSTRALIA

**SENDER:**



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