



# Macalister Demonstration Farm

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## NEWSLETTER 88

13 May 2014

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Program



*Extension projects at the MDF are supported by Genetics Australia and GippsDairy.*



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### **The value of comparing electricity costs – follow up**

In last month's edition of the MDF newsletter, there was an article describing the advantages of sourcing better electricity costs. As mentioned in that article, MDF elected to talk directly to a range of companies and compare the costs. After securing some very competitive costs, MDF then elected to engage a broker to basically undertake the same task. The purpose of this exercise was to see if there was an advantage of enlisting the services of a broker over doing the comparison yourself. The final result was that the broker was unable to secure any better rates than what had already been achieved through MDF's direct contact with electricity companies. However, if you are time poor then use of a broker would be to your advantage.

# Yellow Rag Bit

Maria Rose, Dairy Extension Officer, DEPI Maffra

## **Managing dairy cattle drench resistance**

I recently caught up with Maffra veterinarian Stephanie Bullen to find out more about her research into the level of dairy cattle drench resistance in the MID (conducted through Melbourne University). The following highlights relevant information that local farmers and service providers involved in the dairy industry have been keen to know more about.

### ***Why is drench resistance in dairy cattle considered to be more of a problem nowadays?***

Compared to sheep, cattle are relatively resistant to the effects of worms after 12 to 15 months of age. Ewes die if they are not drenched, whereas death due to worms is much less common in cattle. However, there is potentially a major threat to current dairy heifer rearing systems which rely heavily on drenching and have limited land availability due to Bovine Johne's disease control measures; often resulting in high exposure to parasites on heavily contaminated pastures.

### ***What were the key aims of this dairy cattle drench resistance research in the MID?***

As there had been no research specifically investigating levels of drench resistance on dairy farms despite relevant cases of drench failure being widely documented, this research focused on the level of resistance to three main classes of drench on 20 dairy farms in the MID. Classified by their mechanism of action, the three drench types tested are more commonly known as;

- 'Mectins' (e.g. Ivomec, Cydectin, Dectomax) - all pour ons or injections
- White drenches (e.g. Panacur, Flukazole) - oral
- Clear drenches (e.g. Nilverm, Nilzan) – oral

This drench resistance testing in the MID was carried out on dairy heifers from May 2013 to April 2014. Groups of 60 heifers per farm were included in the trial. Heifers were allocated one of four treatments; (1) no treatment – control, (2) 'mectin', (3) white drench and (4) clear drench. Faeces were collected from all calves 10 to 14 days after drenching - resistance was deemed present in samples with more than 5 per cent worms remaining following treatment when compared to the control group - treatment (1).

### ***Where is this research up to and what has been the major findings to date?***

Data collection on all farms has been completed. All twenty farms had resistance to at least one drench class with the white drenches being the most common (around four in five farms).

Findings were variable between farms with no obvious pattern; highlighting that it is not as straightforward as predicting whether a farm will have resistance or not based on current management practices. Resistance can be a result of practices conducted 10 to 15 years ago. As a specific example in this research, one farm had pronounced white drench resistance present despite the current owners not having used any white drenches for the last 8 to 10 years.

The next phase of this research is a weight gain trial which will investigate the production cost of drench resistance (i.e. using drenches that are less than fully effective); results should be obtained by mid-2015.

***What are key drench resistance management recommendations farmers should consider?***

The research results to date highlight the need to be pro-active about preserving the longevity of the three major groups of currently available drenches (i.e. 'mectins' as pour ons or injections and white/clear oral ones). There are three strategies worth considering in combination.

1. Use drenches judiciously and only when there is a justifiable need.
2. Ensure accurate dosing (check drench guns, weigh or apply weight tape, avoid use of pour ons which are variably absorbed).
3. Maintain a population of susceptible parasites to dilute 'resistant' genes in subsequent parasite populations by adhering to the following practices;
  - a. Do not drench then move to a clean paddock
  - b. Move to a clean paddock for one day to two weeks then drench (establishes susceptible worms on a new pasture)
  - c. Consider selective drenching approaches such as;
    - drenching of adult cows for a production response only (as clinical parasitism is rare),
    - avoiding drenching low-producing (e.g. carryover) cows as they unlikely to have much of a response, and
    - weighing calves and drenching individual animals below a set daily weight gain target (e.g. 0.7 to 0.8kg/day)

**For further information about this specific research Stephanie Bullen can be contacted at the Maffra Veterinary Centre.**

***Southern Rural Water, Department of Environment and Primary Industries and Macalister Demonstration Farm invite you to travel to Shepparton and attend the WTC Irrigation Expo and visit the Rubicon Factory in Shepparton.***

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**What is on offer?**

*Free* travel to and from Shepparton by bus kindly sponsored by SRW

*Free* entry into the Expo and Rubicon factory

Accommodation on offer at the Parklake Motel, Shepparton -> cost to the participant: \$72.50 pp/twin share or \$130 pp/single (breakfast included)

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**What you will experience at the WTC Expo:**

- \* irrigation industry innovation on show
  - \* discover everything the industry has to offer in irrigation technology under the one roof
  - \* enjoy a diverse program of demonstrations and industry speakers
  - \* hear presentations on the latest in new technology on irrigation methods
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**When: Wednesday 28<sup>th</sup> and Thursday 29<sup>th</sup> May 2014**

Bus departs Maffra DEPI car park at **6.30 am** sharp on Wednesday 28<sup>th</sup> May and scheduled to return Thursday 29<sup>th</sup> May between 6 to 7 pm.

**TO BOOK YOUR SEAT ON THE BUS** please RSVP to Sandie Brown on **0488 175 366** or by email [mdf@wideband.net.au](mailto:mdf@wideband.net.au) no later than **Monday 19<sup>th</sup> May 2014**

Booking accommodation at the Motel is your responsibility – Sandie will provide you with the accommodation details when you book your place on the bus.

## Upcoming events

### Denison Discussion Group

Thursday 8<sup>th</sup> May

Thursday 5<sup>th</sup> June

More information contact Sarah Killury: 0458 004 918

### Newry Discussion Group

Thursday 22<sup>nd</sup> May – evening session – tax issues

More information contact Maria Rose: 0438 282 205

### Focus Farm final field days

Thursday 29 May - Binginwarri Focus Farm

Thursday 5 June - Loch Focus Farm

Friday 20 June - Drouin South Focus Farm

Thursday 3 July - Newry Focus Farm

**Note: Each Field Day will run from 11.00am to 2.30pm Lunch will be provided.**

More information contact John Gallienne: 0407 863 493

## Upcoming courses

1. **Fodder Conservation** (*Making quality Hay and Silage*) Maffra Wednesday, May 7, 14, 28
2. **Manage the Dairy Production System** (*System targets, Performance indicators, Linkages and analysis, Profit drivers, Marginal thinking*) Maffra Wednesday June 4, 11, 18, 25
3. **Grazing Dairy Pastures** (*pasture consumption, its importance, calculating it, factors affecting it, cost of pasture; factors affecting leaf appearance and growth rate; how to count leaves; pasture as a cow feed - quality vs quantity - factors affecting cow intake; reading a pasture; how to graze ryegrass to get GROWTH, UTILISATION, QUALITY and PERSISTENCE; setting up a grazing rotation or pasture wedge; grazing rest time (rotation)decision; the post-graze residue decision; grazing in practice*), Maffra 3 days, 10.30am to 3pm, TBA
4. **Dairy Soils and Fertilisers** (*requirements for plant growth; soil composition - minerals, organic matter, water and air; soil nutrients and how they cycle through the system; soil nutrient testing; fertilisers-straight- blends-NPKS; deciding fertiliser type, rate, application timing; fertiliser calculations, capital, maintenance; fertiliser budgets*) Maffra 4 days, 10.30am to 3pm, TBA
5. **Irrigation Management** (*best practice flood and spray irrigation for pasture performance - understanding soil water plant relationships (soil characteristics, soil water capacity, infiltration, and movement) - deciding when to irrigate - managing water logging; flood irrigation design and layout issues; spray irrigation design and layout issues; assessing irrigation performance*), Maffra Wednesdays, 10.30am to 3pm, sometime in JULY

*for more information contact Frank Tyndall on 0409 940 782 or [ftyndall@ozemail.com.au](mailto:ftyndall@ozemail.com.au)*

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**SENDER:**



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