

# Macalister Demonstration Farm

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## NEWSLETTER 64

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### SOLAR HOT WATER – DOES IT STACK UP?

Power prices are going up and will only keep going up after the arrival of the carbon tax in July. Is there a way to control rising costs at the same time as reducing carbon emissions?

Ferial Zekiman of Tinamba installed solar hot water panels on her dairy in 2006 and later installed heat pumps to try and reduce her rising power bills. Was it worth it? Did she get the returns?

As part of the Dairy Australia Future Ready Dairy System project Ferial has agreed to host a field day at her property where Gabriel Hakim (AgVet Projects), Darold Klindworth (DPI) and Neil Baker (Macalister Demonstration Farm) will dissect energy use at the dairy and investigate the business case for investment in a range of energy saving options. The investigation will include a full energy audit of the dairy as well as a look at milking management to identify further energy saving measures.

**Where:** Zekiman's Dairy Tinamba-Rosedale Rd (4km south of Tinamba – look for signs)

**When:** **Friday March 23<sup>rd</sup> 2012 at 10.30am**

**What else?** You get a free lunch!

### Yellow Rag Bit

Gavan Lamb, Irrigation Agronomist, DPI Maffra

### The Broker or the Auction?

Bruce, a new farmer to the MID, had just bought a small farm (for the right price!) which didn't come with much water. After doing a water budget he realised that it really needed another 100 ML of high reliability water share to make this block productive.

So now that he had his head around the volume he needed, Bruce put in a call to his water broker to keep an eye out for some water.

As Bruce caught up with his new neighbours he asked them what he might have to pay for permanent MID water. No one really knew but Bruce was reminded that at the first SRW Water Auction it went for as high as \$2,400 a ML! Another neighbour commented that he shouldn't go by that price because that was back when the drought was raging. Besides, at the 2011 SRW Water Auction a fair bit of water had been passed in as it didn't meet the reserve. This left Bruce scratching his head.

As if by coincidence, at that moment his water broker phoned to say that he could get 100ML of permanent water for him at \$1,200 per ML, significantly cheaper than a few years ago. The trouble, Bruce found out, is that this water came with Delivery Share which adds up to about \$5,000 of fixed costs each

year for the 100 ML (\$50 a ML per year). With the upcoming SRW Water Auction on the 22<sup>nd</sup> March, Bruce wondered if he should 'jump on this bargain' or wait to see what the 'auction water' went for. As the 'auction water' doesn't come with Delivery Share he liked the idea of not having to pay this annual fee.

The way he figured it, if he could get water at the auction for say \$1400 per ML his capital outlay would be \$200 per ML more. This would mean that after just 4 years ( $\$200 \div \$50$ ) he would be ahead. But if he had to pay \$1800 per ML at auction it would take him 12 years to break even, compared to the broker's cheaper water.

After talking this over with his wife Sue, Bruce decided to wait for the SRW Auction to see what the water was going for. Sue quickly pointed out that he may get caught having to pay a casual users fee of around \$60 per ML because the farm had very little existing Delivery Share. Bugger thought Bruce, back to the shed to think a bit more!

## **Macalister Demonstration Farm Profitability Project**

The MDF reports each week in the Gippsland Times and on AusdairyL. The weekly report contains information on the current production and margins, but also discusses other happenings that may be of interest. Many people who receive this MDF newsletter every three weeks miss the weekly reports. So, some bits and pieces of the weekly stories are repeated here.

### **Dec 30, 2011**

The wheat was tested last week. The bulk density was 75.7 kg/hectolitre, dry matter was 88.5%, the metabolisable energy was 13.5 MJ/kg DM, and the crude protein 10.3%.

The Bulk Milk Cell Count has fallen from 96,000 to 85,000. This time last year the BMCC was 98,000. The average BMCC for the period ending 20/12/2011 was 87,000, giving the farm a factory ranking of 9th out of 381 farms.

### **Jan 6, 2012**

For three days, due to a malfunction, the cows got none of their normal 6.5 kg of wheat supplement. Using the averages for the week the cows fell 2.9 litres. They got 2 kg less supplement. They ate 1 kg more grass. The litre to supplement response was -1.45 litres per kg feed. This is a large response. The response would have got worse if the loss of supplement had continued. Even though the milk price rose due to January's price, the margin fell (see below).

The average BMCC for the period ending 31/12/2011 was 93,000, giving the farm a factory ranking of 9th out of 381 farms.

### **Jan 13, 2012**

A few cows have been getting milk fever and we have not been happy with grass growth for some time. Thinking that it never hurts to have fresh eyes and minds look at what we are doing, we asked two trusted people to visit, one a feed expert, and one a fertiliser expert. Both issues involved farm inputs and it certainly got the focus onto the basics. The feeding suggestion was that we were not doing the mineral calculations properly and simply not feeding enough calcium in the cows' diet. The grass growing suggestion was that the pasture looked like it was lacking potassium and phosphorus. These inputs will be adjusted and the outcomes reported over time.

Green urea is supposed to reduce nitrogen loss to the atmosphere. It did show a better response in our pasture trials. Although about \$100 more expensive than urea, we are about to try it.

## **Jan 20, 2012**

The Tracker project analyses twenty farms in the Macalister Irrigation District. For the ten day period to Jan 10<sup>th</sup>, the highest MOAF per cow was \$6.38 and the lowest \$4.00. A two dollar difference per cow is a lot of money. Over a 300 day lactation this is \$600 per cow, and to a 200 cow herd, \$120,000 for the year. The highest MOAF per hectare was \$27.51 and the lowest \$15.52. The highest pasture consumption was 51 kg DM per hectare per day and lowest was 26 kg DM. The highest milk per cow was 1.95 kg milk solids per cow and the lowest was 1.28 kg.

## **Jan 27, 2012**

Currently, milk is mostly quoted as “dollars per kg of milks solids” (MS) or “cents per litre”. Some of us oldies still like “dollars per kg of fat”. When we were being paid for the fat only, “dollars per kg of fat” was fine, because more fat produced always meant more money received. Now that two components of milk, fat and protein, are paid for, and one component of milk, the litre volume, is charged for, a fat price alone, a litre price alone, or even a milk solids price alone, all send a distorted message on how one might get more money for an amount of milk. It is possible to sell more milk solids, by having a lot more fat and a lot less protein, and receive less money. It is possible to sell more litres, with a lower fat and protein test, and receive less money.

The most accurate, although cumbersome, method to quote milk price, is to quote all three component prices at the same time. So the MDF is currently receiving an announced milk price, with compulsory levies deducted, of \$2.96 for a kg of fat, \$7.42 for a kg protein, and minus \$0.026 for a litre.

The BMCC average for the ten day period ending 20/01/2012 was 86,000, which gave the farm a factory ranking of 6th out of 378 farms.

## **Feb 3, 2012**

The BMCC average for the ten day period to 31/01/2012 was 94,000, which gave the farm a factory ranking of 8th out of 377 farms

## **Feb 10, 2012**

The MDF has chosen the “traditional” system of milk payment. However, the other systems are always being examined to see if they might return a higher margin. Now that milk production from September to January is fixed, any farm that has selected the Domestic Incentive (DI) payment system knows how much milk is required, in the next five months, to meet the various levels of DI payment. A judgement and effort can be made to target a level. Leaving the chase too late may mean that milk per cow falls irretrievably, making targets impossible to achieve. Some farmers, who have chosen DI, have made their DI target more difficult by producing very well in the recent five months.

The DI milk price jumps up in stages: above 40% milk in the DI period gains about an extra 1 cent per litre; 41% about 2.3 cents; 42% about 3.5 cents; and 43% about 5 cents extra. 5 cents extra seems very attractive! By only just making into the next stage gets that price rise. If the next stage appears miles away, it may not be worth the chase.

Feeding more supplements per cow is an option to get more milk per cow to reach a higher DI level. Profitable feeding generally means supplying as much grass as possible, so for the next 5 months, fertiliser, irrigation and grazing management is crucial (isn't it always?). After the best efforts at grass supply, if the herd can eat more, without wasting too much grass, give it to them.

Another way to get more milk is to milk more cows. Buying cows for a short period is probably extreme, but carefully choosing each cow's drying off date, in June, and possibly reducing each cow's normal dry period, is a method that will hold cow numbers higher.

Another manipulation in June could be to suddenly shorten the grazing rotation. This will supply more grass at the last minute. There are some short term/long term issues here. Reducing the cow's dry period, and shortening the grazing rotation may mean lost milk or lost grass in July, mindful that July's milk, and half of August's, is in next season's DI milk.

#### **Feb 17, 2012**

Grain quality is important. ASW1 wheat is supposed to weigh at least 750 grams per litre. It should have no more than 5% screenings (material passing through a 2 mm slotted screen after 40 shakes). Small grain is difficult to crush properly and is likely to pass through the cow and wasted. The MDF now has a 2 mm screen. Arrange with Frank to bring a litre of grain to the farm for screening testing.

A few cows had been getting milk fever. An assessment of the calcium in the diet found it to be about half the recommended rate. A different pellet, with the recommended rate of calcium, has now been fed for a few weeks and there have been no milk fevers since.

The BMCC average for the ten day period to 10/012/2012 was 106,000, which gave the farm a factory ranking of 8th out of 374 farms

#### **Feb 24, 2012**

70 Australian Dairy Conference participants visited the farm on Tuesday. It rained and the paddocks were wet. A few stalwarts insisted on a short walk, and got drenched. Most of time was spent explaining how the farm analyses and reports on its performance, and discussing the MDF carbon emissions project.

The BMCC average for the ten day period to 20/02/2012 was 102,000, which gave the farm a factory ranking of 9th out of 372 farms.

#### **Mar 2, 2012**

February had 102 mm of rain. February 2011 totalled 106 mm. March has had 70 mm already. Rain for the 12 months to date totals 873 mm (34.4 inches) and for the same 12 months last year totalled 693 mm (27.3 inches). Spinner cut drains in the paddocks do not run if rain is light, even if it rains over an extended period. Last week the cuts were pouring the water off the end of the bays.

To help the cows keep their grass intake up during the wet weather, they have been offered more paddock area, shortening the grazing rotation a couple of days. There is plenty of grass on the farm. Even so, grass intake has dropped. The level of grain in the diet compared to grass is high, near the limit. The calculated fibre level in the diet is 30%, a bit low; one cow has suffered from acidosis. So, to avoid the diet fibre level falling even more, although suspecting milk production would fall, as the wet weather set it, the amount of grain was lowered by 1 kg.

**PERFORMANCE TABLE**

**MDF and Tracker group (18 MID farmers)**

	20-Feb 2012  MDF	20-Feb 2012 TRACKER GROUP AVERAGE
Stocking rate	4.0	3.6
mm irrigation water /ha/day	3.6	1.7
Kg N element applied /ha/day	1.2	0.5
Kg P element applied /ha/day	0.0	0.05
Kg K element applied /ha/day	0.05	0.13
Renovation (\$/ha/day)	\$0.19	\$0.15
Topping (\$/ha/day)	\$0.44	\$0.09
Grazing allocation rate	30	30
Average grazing rest time	<b>30</b>	<b>28</b>
<b>Pasture consumption/ milk ha/dy</b>	37	34
DMI grass /cow/dy	9.3	9.1
Daily spend / milking ha	\$4.62	\$2.39
Pasture price (\$/t DM)	\$126	\$65
Total supplements kg DM/cow/dy	7.9	7.2
ALL purch feed PRICE \$/t DM fed	\$327	\$327
Total DM Intake /cow/dy	16.9	16.0
Milkers Body Condition Change (Lwt /dy)	0.13	0.07
Litres /cow/dy (incl calf)	25.0	21.3
<b>Milk Solids /cow/dy</b>	<b>1.80</b>	<b>1.62</b>
Milk price (less levies) (\$/kg MS)	\$5.36	\$5.16
Anticipated Milk price (\$/litre)	\$0.39	\$0.40
Anticipated Milk income/cow	\$9.67	\$8.37
All feed cost/cow/day	\$3.76	\$2.77
Anticip Margin over all Feed/cow/day	\$5.92	\$5.60
Anticip MOAF /ha /day	\$23.50	\$20.33

Yr roll Milk Solids /cow	545	511
Yr roll Grass consump t DM/ milk ha	14.3	12.9
Yr roll MOAF per cow	\$2,039	\$1,924
Yr roll MOAF per hectare	\$9,363	\$8,289

Frank Tyndall 0409 940 782

## Irrigation for Dairy Pastures Course

This informative course is for dairy farmers who want to grow more grass, improve irrigation skills, use water better and find out about the latest irrigation technologies. A tensiometer (soil moisture monitoring tool) will be given to each participant.

**The 3 day course will be held in Maffra on Wednesdays: 4<sup>th</sup> April, 11<sup>th</sup> April and 18<sup>th</sup> of April, 10am to 2:30pm. There will be 2 on-farm days to follow.**

**The course will cost \$280 per participant and is eligible for farm ready funding.**

This is an accredited course run by DPI and the National Centre for Dairy Education Australia (NCDEA). The course will be presented by Gavan Lamb (DPI) and Frank Tyndall (NCDEA).

For more details or to register for this course please contact Janice Dowe at DPI Maffra on 03 5147 0800.

**Registrations close Friday 23rd March 2012.**

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