



Macalister Demonstration Farm

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NEWSLETTER 86

28 February 2014



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



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SPILT MILK – WHAT THE MDF DID WHEN THE VAT FAILED

On 11 January this year a vat load of milk produced by Macalister Demonstration Farm (MDF) was rejected by Murray Goulburn (MG) as unfit due to a break down in the refrigeration plant on the vat. The milk was rejected by MG due to the “high storage temperature not complying with MG’s Farm Milk Quality Policy for milk cooling”.

The quantity of milk lost was 6,300 litres valued at 49.8 cents/litre, equating to a net loss of \$3,137.40.

In endeavouring to find out what went wrong with the vat cooling system, advice was sought from the distributors of the vat who explained that the typical behaviour of the vat in the event of a power shortage is:

When the vat is in cooling mode when the power goes off then when the power is reinstated, the cooling mode will continue, i.e. whatever state the vat is in, when the power goes off, it will return to that state when the power is reinstated, with the exception being that when the vat is in washing mode, it will not return to washing mode when the power is reinstated.

If the vat shuts down due to another fault, i.e. a phase dropping out, a spike in power, voltage browning out etc, could cause the vat to trip. In an instance such as this, the vat needs to be reset manually in order to return to normal function.

By chance, an electrician was on site at the MDF the morning the milk was dumped from the vat. On inspection of the vat, the electrician found that it had tripped its safety switch due to an oil pressure fault. A subsequent report from the electrician stated that the most likely cause of the trip was that the supply authority, SP Ausnet, had a fault in the supply and a single phase dropped out or browned out for a short time. It was also noted that rat damage to cables could cause a vat to trip.

Unfortunately for the MDF, there was no warning system installed on the vat so the tripped switch was not discovered until the milk was due to be collected.

MDF has a Rural Plan Insurance policy which includes a “farm machinery breakdown” clause. Discussions with the insurance agent ascertained that the failure of the milk vat fell within the parameters of the “farm machinery breakdown” clause so MDF has submitted relevant documentation to the insurer. Documentation provided to the insurer included:

- A report from MG stating the quantity of milk lost and its value
- A report from the electrician stating the cause of failure of the vat
- Invoice for the cost of fixing the fault
- ABN Number

There is an excess to pay, but that is minimal compared to the value of the loss. The take home story here is that it pays to have a good warning system installed on your vat to safeguard against faults occurring as experienced by MDF and to have comprehensive insurance which will adequately cover losses as described. Needless to say, since this incident, MDF has had a large red warning light put onto the vat, so that in the event of another tripped switch, the farm manager will be better placed to correct the fault in a timelier manner.

Yellow Rag Bit

Maria Rose, Dairy Extension Officer, DEPI Maffra

Keeping your cows at their coolest in the MID

At the “Cool Cows” panel session held on the Macalister Demonstration Farm, twenty farmers and service providers were involved in discussion to reflect on keeping cows cool based on the recent heat wave experienced. Some very useful information from the day included;

- Under extreme heat conditions, such as those experienced mid-January & early February, cow maintenance energy requirement goes up by 20 to 30% to assist them in keeping cool.
- It doesn't have to be extremely hot for a cow's production to drop. Even at 26 degrees Celsius, cows will be under some form of mild heat stress, which can lower appetite and pasture/fodder consumption.
- A farm water reticulation set- up that can deal with a daily water demand for a 45 degrees Celsius day is crucial. So don't skip on pipe size to ensure adequate flow rate (e.g. bigger troughs are best with a 2 inch pipe line as a minimum) or the number of troughs (e.g. place additional ones at the entry and exit of dairy and laneways).
- Running cows as a single large herd under extreme heat conditions exacerbates competition for water and shade access and stress at milking times; splitting the herd into smaller numbers for grazing and staggering herd through milking can greatly assist in dealing with this problem.
- Additional management strategies at the time of extreme heat conditions that were discussed to be proven as useful, included;
 - manage the area around the trough, avoid bog holes,

- check troughs regularly, especially flow rates by feel - stick your hand in the trough,
- ensure adequate flow rate (cows need 200-250L/day) access,
- use your pivot or fixed sprinklers to cool cows in the paddock,
- keep cows close to dairy if shade is available, so that the distance travelled is also reduced,
- put cows into dairy with sprinklers, and adequate water, shade, and room to move around if suitable,
- keep an eye on staff working in the heat,
- alter milking times to earlier and later in the day to avoid higher day temperatures, and
- consider the following regarding feeding;
 - *use high energy, high digestibility (e.g. Lucerne or Vetch Hay)*
 - *apply night feeding on best pasture and hay*
 - *put milkers in paddocks close to dairy during the day, further away at night*
 - *add appropriate buffers in the diet*
- Additional medium term management strategies around the dairy discussed as worth considering included;
 - provide shade structures, permanent or temporary around the dairy.
 - operate sprinklers with the following in mind;
 - *water spraying out of sprinklers must be large droplets,*
 - *for maximum evaporation effect to cool your cows, run sprinklers at an “ON/OFF frequency” of 3 minutes on and 12 minutes off*
 - *have sprinklers placed both sides of the dairy yard, and*
 - *remember heat stress occurs at temperatures 26°C or greater, so don’t just run sprinklers at extremes of temperature.*
- Relevant aspects worth considering as part of longer term planning, that were discussed included;
 - *when selecting trees species for shade, think about managing falling limbs on fences and how much shade they actually provide;*
 - *think about the appropriateness of your calving pattern, in what ways might it be tweaked?, and*
 - *change how you manage staff during heat stress time, including them directly in the related decision making.*
- Elements discussed as warranting further investigation, included;
 - *more information about trees, tree species, and what assistance is available out there,*
 - *continue to get information out about managing heat stress, leading up to next summer,*
 - *developing a heat load index for media broadcast (like the Sheep Grazer’s Warning), and*
 - *more publicity of the Cool Cows Heat Stress Warning subscription service.*

Finally, a key comment made at the end of the panel session was “*a lot of relevant information on dealing with heat stress in Australian dairy herds is available on Dairy Australia’s Cool Cows website*”. The web address for this site is www.coolcows.com.au

HAVE YOU DONE YOUR WATER BUDGET?

At the Macalister Demonstration Farm a water budget was done in late January. The results of that budget are:

At 25th January 2014

Total Farm Area = 92.5 ha

Total Irrigated Area = 76 ha

Irrigated from the SRW channel = 61.7 ha,

Irrigated from the bore = 14.3 ha (plus some of the 23.3 ha irrigated from LMO 1232)

Current Allocation is:

90% of HRWS = $313.9 \times 90\% = 282.5$ ML

0% LRWS = 0 ML

Water used to 23 Jan was 237.8 ML (channel water) and allocation remaining is 188.5 ML (143.8 ML taken as spill entitlement)

Average water used on the channel supplied area of the farm is $237.8 \text{ ML} / 61.7 \text{ Ha} = 3.85 \text{ ML/ha}$

Estimated water required to reach the end of the season is $3 \text{ ML/ha} \times 61.7 \text{ ha} = 185.1$

Water remaining was 188.5 ML

Given a normal season looking forward and a further allocation to the farm ABA of 67.6 ML the farm seems to be in a strong water position

If you need help preparing a water budget, call Gavan Lamb at DEPI, Maffra on 0428 387 869.

ANNUAL USE LIMITS (AUL) in this current season

In a year like the one we are having, Annual Use Limits (AUL) can come into play on your farm.

Recapping the season so far, irrigation demand remained steady throughout the January/February period with below average rainfall to breakup irrigation patterns. As a result, usage has reached a high with level with an estimated 105,756ML delivered to date including ~44,600ML of Spill entitlement.

Your AUL is the maximum volume of irrigation system water that you can use on a specific parcel of land (your farm). The limit is for the use of water (allocation) from high and low reliability water shares, and/or spill entitlement; it does not apply to groundwater or drainage diversions on-farm.

During very dry years, a seasonal adjustment can be applied for to temporarily increase everyone's AUL by 11% this adjustment is to allow for the higher water loss due to the increased evaporation. The Department of Environment and Primary Industries (DEPI) and the West Gippsland Catchment Management Authority (WGCMA) has just endorsed Southern Rural Water's application to increase the AUL for the MID by 11% until 30 June 2014. This action has been possible as part of "unbundling rules" and is evidence that there is some flexibility to adapt to dry conditions such as we have experienced this year.

The AUL for your farm is expressed as a total figure and varies depending on how efficient water use is. Although the district average of AUL is around the 6ML/Ha level, the maximum on-farm AUL is 9ML/Ha.

Whilst the 11% increase of AUL district wide until 30 June 2014 is only temporary, depending on what your current permanent AUL is on your farm, you may be able to have it increased on a permanent basis.

A very useful guide for irrigators wishing to vary their AUL permanently on their farm, can be found on the SRW web page http://www.srw.com.au/Files/Fact_sheets/Guide_for_AUL_Variation_Applicants.pdf or from the SRW office in Maffra.

MDF TRAVEL AND LEARNING SCHOLARSHIP

Jon has returned from his travels to Tasmania and New Zealand. Why not go to the MDF website and see what Jon saw and learnt whilst on his travels. View the videos by following the link below or, if you have a smart phone, scan in the QR code. Jon welcomes any feedback you may have on the videos he has taken – don't disappoint him!

<http://www.macalisterdemonstrationfarm.com/about-us/mdf-travel-and-learning-scholarship/jon-ryans-scholarship-travels/>

(this will have a direct link to Jon's dairy business website).



Upcoming events

ADHIS Longest Farm Walk on Tuesday 4th March focussing on dairy farmers having a say about the type of cows they want to milk in the National Breeding Objective Review. Starts at Mal Sellen's at 10:30am then Hans Van Wees'.

For more info contact Sarah Saxon on ssaxton@adhis.com.au or 03 8621 4240

Denison Discussion Group 6th Feb - Summer Forages, Max Vera's farm. Contact Sarah Killury, DEPI, 0458 004 918

Boisdale –Newry discussion Group 26th Feb at Iain Stewart's farm. Main Topic is Pasture management - lessons from Tasmania and New Zealand study tours. Contact Maria Rose, DEPI, 0438 28 22 05

Irrigation course running in April. Contact Gavan Lamb, DEPI, 0428 387 869 for more details

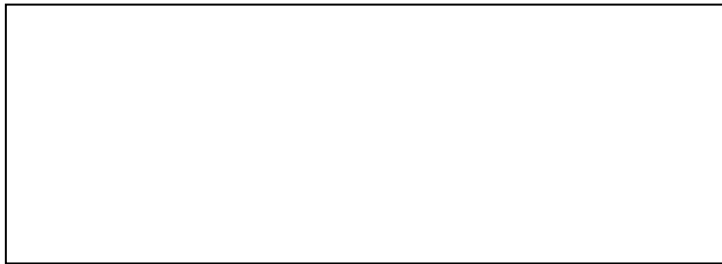
Farmworld 27 – 30 March, Lardiner Park, 155 Burnt Store Road Lardner

Upcoming courses

1. Dairy Cow Nutrition (Cow feed requirements, Rumen function, Feed qualities, Rations, Feed margins) Maffra Wednesdays, Mar 5, 12, 19, 26
2. Fodder Conservation (Making quality Hay and Silage) Maffra Wednesday, May 7, 14, 28
3. Manage the Dairy Production System (System targets, Performance indicators, Linkages and analysis, Profit drivers, Marginal thinking) Maffra Wednesday June 4, 11, 18, 25
4. Managing the Dairy Farm as a Business (Budgets/cashflows, Profit & Loss, Balance Sheets, Financial performance indicators) Maffra Thursdays, April 3, 10, 17, 24 May 1

for more information contact Frank Tyndall on 0409 940 782

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