

Macalister Demonstration Farm

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NEWSLETTER

Monday, April 28, 2008



The Macalister Demonstration Farm is a community resource. Like any dairy farm, it is a commercial operation managed to make a profit. We endeavor to run the farm using what might be called “best practice”. Of course there are different opinions on what “best practice” is, and like any farm, many things conspire so that we do not always achieve “best practice”. But in one very significant way we are different from other farms: what we do and our performance is public.

This newsletter will describe what we are trying to do, how we are trying to do it, and how well we are achieving our aims. It is how one farm in the Macalister Irrigation District is travelling. It aims to enliven the discussion on how to dairy farm profitably. You can visit the farm if you like. Your contributions and comments are welcome.



Extension projects at the MDF are funded by Dairy Australia and the Gardiner Foundation with support from GippsDairy. This MDF newsletter is a trial. After a time we will send it only to those who want it. If you know someone who would like to receive the newsletter or you would like to change an address we

have sent it to, or prefer not to receive it, please contact the MDF Board Secretary, Andrea Killeen at the above address. Also, let us know if you would like the newsletter emailed to you.

We largely determine what best practice is by using the information from the many Dairy Australia and DPI packages such as Countdown Down Under, Top Fodder, Feeding Pasture for Profit, Soils and Fertilisers, Dairy Cow Nutrition, Irrigation Management and Planning, and In-Calf. We plan to use information from two new Dairy Australia programs, The People in Dairy and Grains2 Milk.

Many local farmers have been involved with the MDF as board members since 1961. Currently the Board consists of Trevor Henry (Chairman), Danielle Auldish (GippsDairy), Tyran Jones (GippsDairy), Steve Stead, Benn Thexton, Gavan Lamb, and Gary McAinch. Mike and Sarah O'Brien are the farm managers.

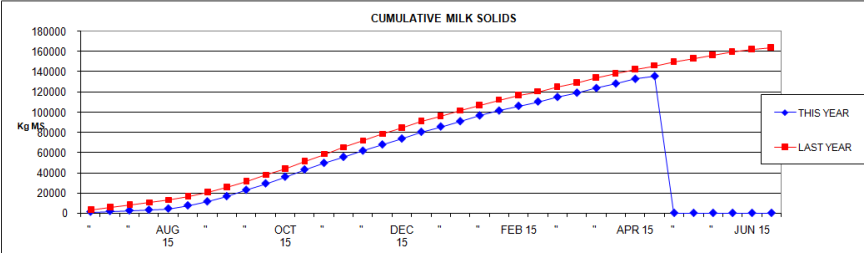
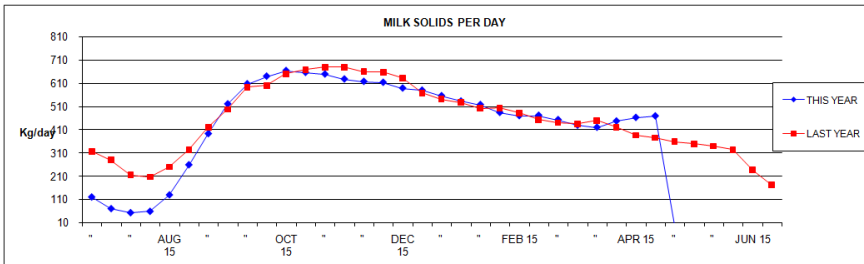
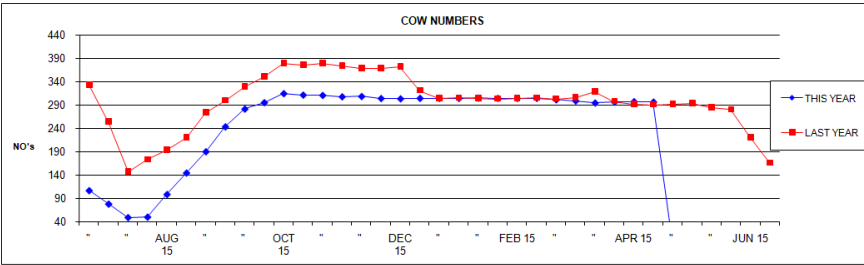
The MDF has many collaborators and supporters: Department of Primary Industry, Dairy Australia, the Gardiner Foundation, Genetics Australia, the Maffra Vet Centre, GippsDairy, National Centre for Dairy Education Australia, East Gippsland TAFE, and Gippsland Herd Improvement. We supply Murray Goulburn.

Each newsletter will outline the milk production and feeding profitability, using graphs, a table of indicators, and a written description. Other issues will be discussed as they arise on the farm.

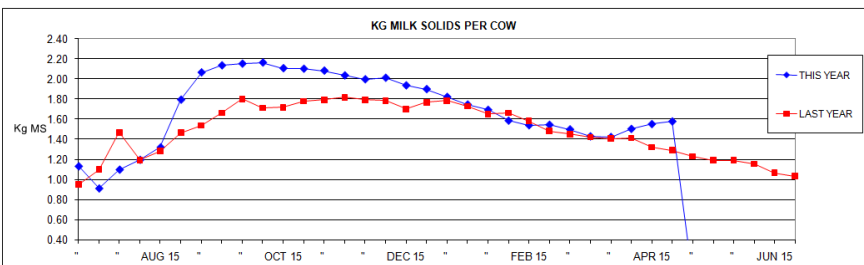
Milk production

The Macalister Demonstration Farm is currently milking 298 cows, on a grazing area of 61 hectares. The cow numbers are now the same as last year, but we milked about 90 less during spring. 13 hectares have been recently laser graded, but is not growing yet.

Milk solids per day has followed last year's for most of the year, but lifted recently to 470 kg MS per day.

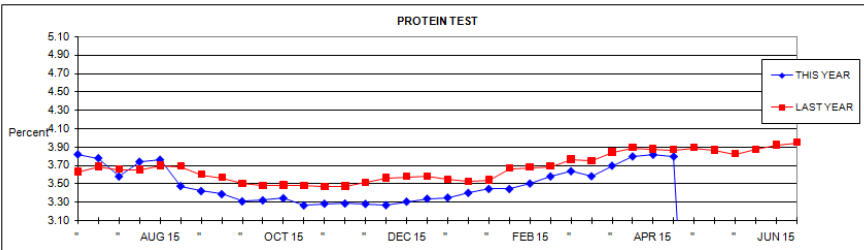


We had aimed to achieve the same total milk solids as last year, even with the lower cow numbers. Unless we finish off the year very well, that target will not quite be met.



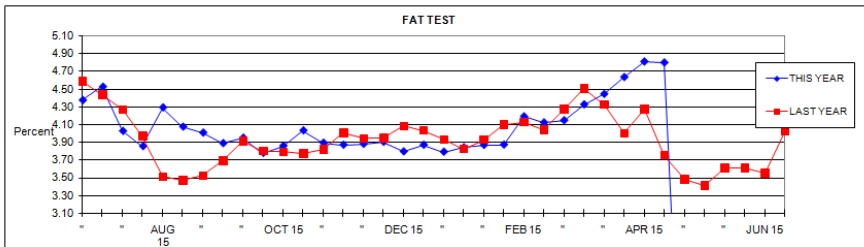
Milk production per cow

Milk solids per cow was significantly higher during the spring, peaking at 2.2 kg MS per cow. From December it followed last year's, but recently has lifted significantly.

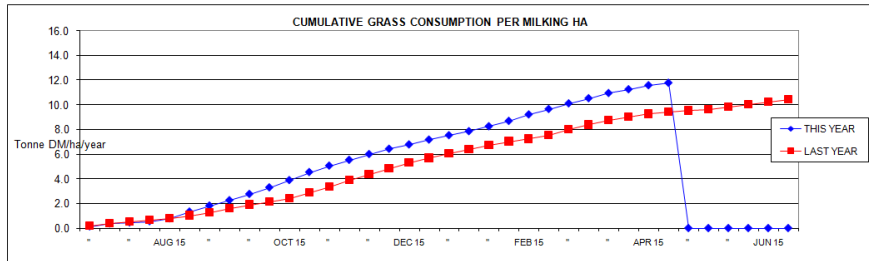
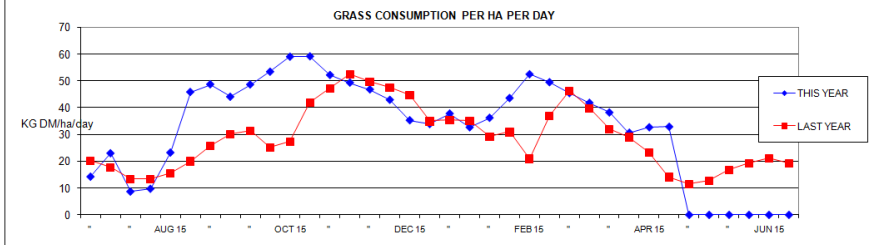


Milk composition

Protein test has been rising steadily since December, but recently it leveled and has fallen a little.



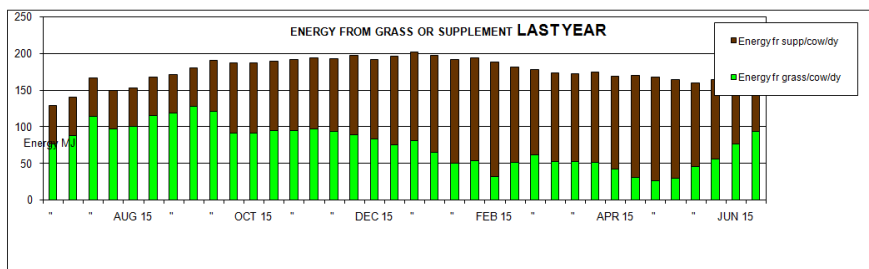
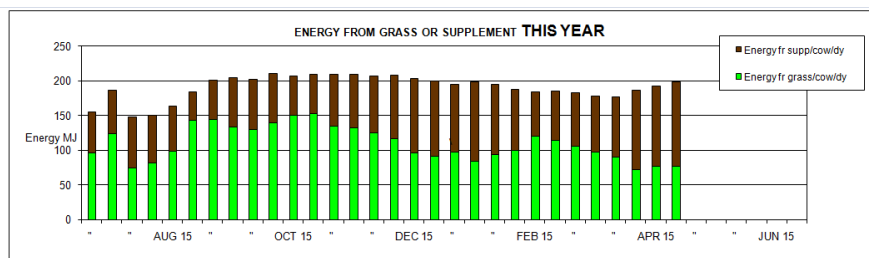
Fat test has recently lifted significantly, probably due to the feeding of PKE.



Grass consumption

This graph shows grass consumed per hectare, including the making of silage, from the grazing area. It was difficult to grow grass in December and January. Grass consumption lifted in February with the rain, then fell during March, but now is steady at 32 kg Dry Matter per hectare per day.

Our target pasture consumption for this year is 13 tonne dry matter per hectare, and we will probably achieve that target.



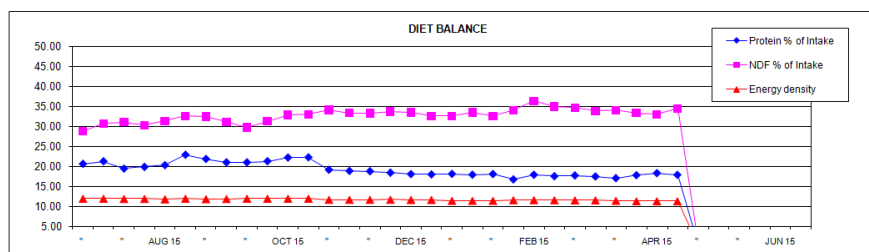
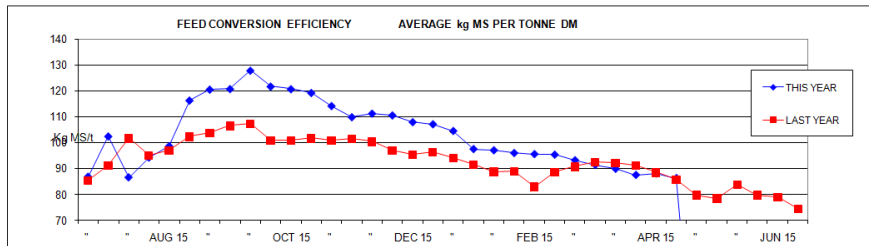
Grass and supplements

These two graphs show the total food (energy) intake per cow per day, as we have travelled through the season, one graph showing this year, one showing last year.

The green bar is grazed grass, the brown bar is supplement. In the table below the relative prices of the two feeds are shown.

In two ways, these graphs are strong indicators of how profitable the feeding is.

1. The total intake is a big driver of how efficiently the cow is using food.
2. The proportion of supplement or grass is a big driver of food price.



Feeding efficiency

Cows get more milk from each tonne of food eaten when they have high intake and when they are releasing body condition. They produce less milk from each tonne of food when the intake is lower and if they are using feed to gain body condition. Because the cows have produced well they have generally made more efficient use of the food this year.

Cows also make more milk from a tonne of food when the food is better quality, the ration is balanced for energy, protein and fibre, and is changed gradually.

WEEKLY FEEDING PERFORMANCE	MDF	MDF	
To date:	19-Apr-08	26-Apr-08	
Milker graze area	61	61	ha
Milker nos	298	297	head
Stocking rate	4.9	4.9	cows/ha
Grazing allocation 1/	40	45	th of graze area
Average graze rest time	35	37	days
Estm'd pasture consmp'n	31	30	kg DM/ha/dy
Pasture consum'd per cow	6.4	6.3	kg DM/cow/dy
Estm'd pasture price	\$127	\$127	\$/T DM

Grazing

The grazing allocation is set at one 45th of the farm. The actual grazing rest time is 37 days.

Pasture feed

The average daily pasture consumption is 30 kg dry matter per hectare. Some supplement waste is always allowed for, to get a better calculation on ration balance and to better calculate the pasture consumed.

The pasture price is calculated each week by estimating the cost of irrigation water, fertiliser, topping, and re-seeding.

Conc supp fed/cow	7.7	7.7	kg DM/cow/dy
Forage supp fed/cow	2.3	2.6	kg DM/cow/dy
Other supp fed/cow	0.9	1.4	kg DM/cow/dy
Estim'd supp waste	5.1%	5.4%	%
Conc supp price	\$521	\$521	\$/T DM
Forage supp price	\$266	\$369	\$/T DM
Other supp price	\$394	\$394	\$/T DM
Total feed /cow	16.8	17.2	kg DM/cow/dy

Supplement feeding

The concentrates include triticale and a high protein mineral pellet. The "other" supplement is Palm Kernel Extract. The silage is relatively poor quality purchased silage.

Total feed intake per cow has risen slightly, from 16.8 to 17.2 kg dry matter per cow per day.

Estm'd body cond't'n change	0.30	0.40	kg LW/cow/dy
Litres/cow	18.2	18.2	l/cow/day
Fat test	4.81%	4.85%	%
Protein test	3.81%	3.79%	%
MS per cow	1.57	1.57	kg/cow/dy

Cow body condition

The cows are estimated to be gaining 0.4 kg body condition per day.

Milk composition

Fat test is climbing while protein test has fallen slightly.

Milk production per cow

Both litres and milk solids per cow have remained the same as the previous week.

Anticipated milk price	\$7.09	\$7.07	\$/kg MS
Anticpt'd milk price	\$0.612	\$0.611	per litre
Milk income/cow	\$11.13	\$11.11	\$/cow/dy
All feed cost/cow	\$5.78	\$6.27	\$/cow/dy
Margin over all Feed/cow/day	\$5.35	\$4.84	\$/cow/dy
MOAF /ha /day	\$26.13	\$23.59	\$/ha/day
Farm MOAF per DAY	\$1,594	\$1,439	\$/day
MOAF per month	\$47,818	\$43,165	\$/month

Feeding profitability

Each cow is producing a daily milk value of \$11.11 and the daily feed cost per cow is \$6.27. Each cow is returning a margin over all feed per day of \$4.84. The whole farm's milk income, less the feed costs (including pasture) is \$1,439 per day.

To get the feed margin into perspective, the farm needs approximately on average \$1,000 per day to pay for everything else.

				Ration balance
Energy density of diet	11.3	11.3	MJ ME/kg DM	Feeds are tested at various times. Pasture quality varies, so calculating energy, protein and fibre levels of the diet involves some guesswork. However, both energy density and protein are probably lower than desired and fibre is a bit high.
Crude protein % of diet	17.8%	17.1%	% CP	
NDF Fibre level of diet	34.9%	36.7%	% NDF	
				Feed turnover and margin
Tonne feed /day	5.0	5.1	tonne/day	The farm is using 5 tonne of dry matter food per day, and making a margin of \$281 on each tonne.
Milk Return /tonne feed	\$664	\$645	\$/tonne	
Average Price of feed	\$345	\$364	\$/tonne	
Margin /tonne feed	\$319	\$281	\$/tonne	

Irrigation

We have three types of irrigation on the farm: flood, bike shift and computer controlled fixed sprays. The bike shifts may have had their last spray for the season. Some of the flood has been recently irrigated. Because we can apply just the right amount of water with the fixed sprays they will be kept going whenever needed. The fixed sprays are usually run at night time because there is usually less wind and the power for pumping is cheaper. However, each section gets an occasional run during the day because it is important to be able to easily check whether all the sprays are operating properly.

Fertiliser

Fertiliser is being applied, soon after each grazing, that is currently every 40 days, at a rate of 130 kg per hectare. The fertiliser composition is a N:P:K:S blend of 32 : 3.4 : 10 : 0.3

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