

Macalister Demonstration Farm, Dairy Australia, Extension Project

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Macalister Demonstration Farm Update 271 (Week ending Oct 21, 2011)

The Macalister Demonstration Farm is now milking 294 cows, up from 281, grazing 70 hectares, a stocking rate of 4.2 cows per hectare. Last year at this time, there were 292 milkers, and the stocking rate was 4.2 cows per hectare. The daily allocation for last week was one 28th of the grazing area, and the actual grazing rest time was 28 days.

From the MDF weather station at www.agua.com.au/DPIVic/, the evaporation rate has lifted significantly, peaking at 6.2 mm per day late in the week.

Compared to last week, milk production per cow is slightly down from 2.19 to 2.18 kg milk solids (MS) per cow per day. Litres per cow per day are down from 29.9 to 29.3. Milk fat test has risen from 3.95% to 4.08% (fat yield is up from 1.18 to 1.20 kg per cow per day). The protein test has fallen from 3.38% to 3.36% (protein yield is down from 1.01 to 0.98 kg per cow per day). This time last year, milk production was 31.6 litres, 2.31 kg MS, 1.23 kg fat, and 1.08 kg protein per cow per day. It is estimated that the cow are losing 0.3 kg live weight per cow per day.

The daily pasture consumption from the grazing area is the same at 49 kg dry matter (DM) per hectare per day. The pasture consumption per cow is down from 12.0 to 11.7 kg DM per cow per day. This time last year, pasture consumption was 62 kg DM per hectare per day (which would have included harvested silage), and 13.6 kg DM per cow per day.

1.2 kg nitrogen element, 0.07 kg potassium, no phosphorus, 1.0 mm of irrigation water per hectare per day, no topping, and \$0.19 of pasture renovation, all per hectare per day, have contributed to the current pasture consumption. The daily spend on these pasture inputs is \$2.62 per hectare per day. Based on those cash inputs only, the consumed pasture price is estimated to be \$54 per tonne of dry matter, up from \$51.

Supplementary concentrates include crushed wheat, and a wheat-canola-mineral mix totalling 5.2 kg DM per cow per day, at an average price of \$320 per DM tonne. The cows have access to oaten hay and grass silage (1.1 kg DM per day) and PKE (0.5 kg DM per day) at the dairy.

The Bulk Milk Cell Count has fallen from 102,000 to 62,000. This time last year the BMCC was 120,000.

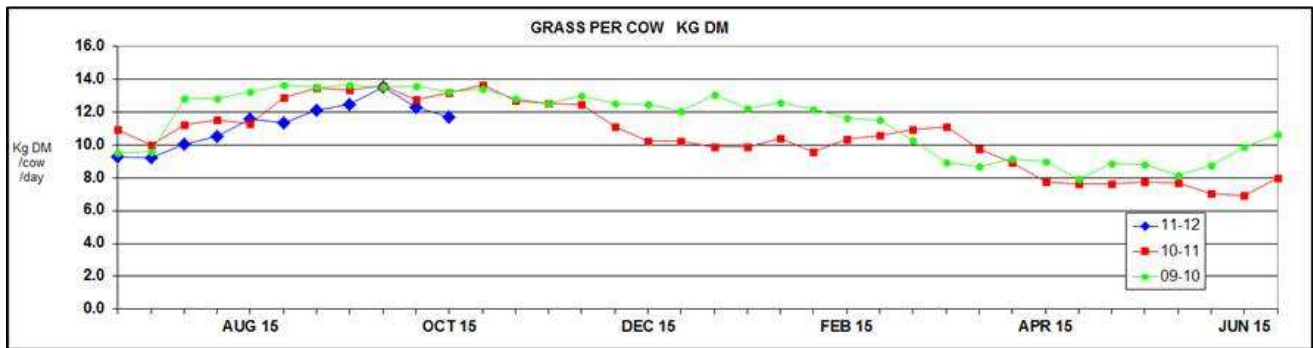
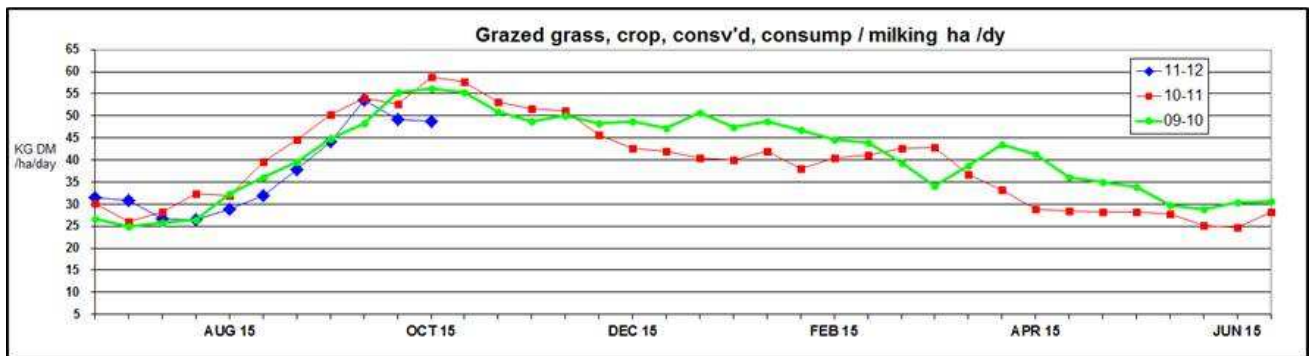
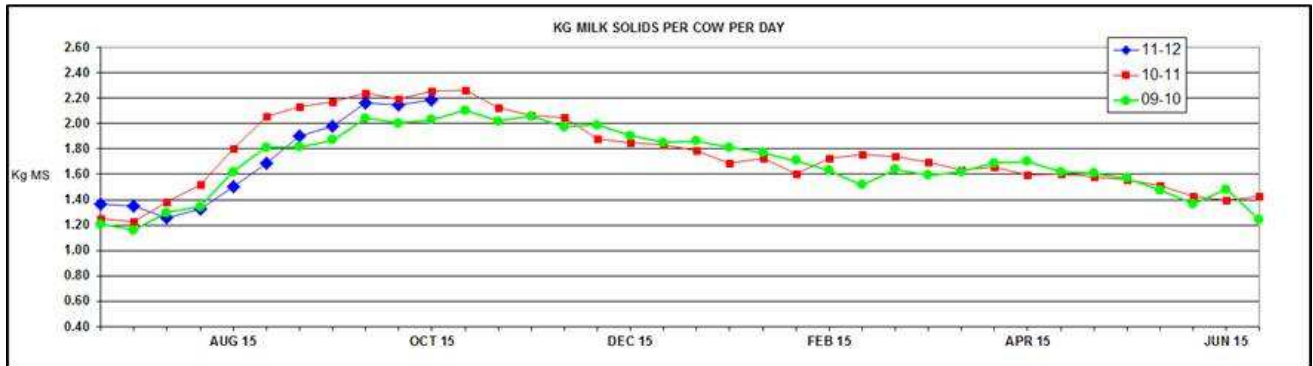
The milk price (less compulsory levies) that the MDF anticipates receiving for the week is \$4.94 per kg milk solids, or 36.8 cents per litre. Milk income per cow per day is down from \$10.93 to \$10.77, made up of \$3.77 for the fat, \$7.76 for the protein, and minus \$0.76 for the litres. This time last year milk income per cow per day was \$11.43.

Feed cost per cow per day (including pasture and supplements) is up from \$2.54 to \$2.59 per cow per day, leaving a Margin over All Feed (MOAF) per cow of \$8.17, down from \$8.39 per day. The margin over all feed per hectare is \$34.21. The whole farm feed margin is \$2,404, up from \$2,357 per day. This time last year the whole farm feed margin was \$2,393 per day.

Recently in the UK I visited one dairy farm where the cows were on a 15 day grazing round and producing 750 kg of milk solids each, another dairy farm that was milking 400 cows and feeding an electricity producing biodigester that needed the equivalent of 700 cows' feed each day, and the best

paddock of ryegrass I have seen for months. The latter had a lot of effluent applied to it, and it made me think: do we supply enough nutrients to our pastures?

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The graphs above show ten days periods, so vary a little from the table below, which shows seven day periods.

WEEKLY FEEDING PERFORMANCE	Last Year	Last week	This week	Units
Week to date:	22-Oct	14-Oct	21-Oct	
Milker graze area	69	69	70	Ha
Milker nos	292	281	294	Head
Stocking rate	4.2	4.1	4.2	cows/ha
Grazing allocation 1/	35	29	28	th of graze area
Average graze rest time	34	28	28	Days
Element N/hectare/day	1.2	1.1	1.2	kg element/ha/day
mm irrigation/hectare/day	2.5	1.0	1.0	mm water/ha/day
Estm'd pasture consmp'n (incl cons'vd forage)	62	49	49	kg DM/ha/dy
Pasture consum'd per cow	13.6	12.0	11.7	kg DM/cow/dy
Daily spend / milking ha	\$3.48	\$2.49	\$2.62	\$/ha/day
Estm'd pasture price	\$57	\$51	\$54	\$/T DM
Conc (incl additives)supp fed/cow	6.0	5.2	5.2	kg DM/cow/dy
Hay/silage supp fed/cow	0.0	0.8	1.1	kg DM/cow/dy
PKE supp fed/cow	0.0	0.4	0.5	kg DM/cow/dy
Estim'd supp waste	3%	4%	4%	%
Conc (incl additives)supp avg price	\$408	\$322	\$320	\$/T DM
Hay/silage supp avg price	\$0	\$216	\$216	\$/T DM
PKE supp price	\$0	\$289	\$289	\$/T DM
Total feed intake/cow	19.4	18.2	18.1	kg DM/cow/dy
Estm'd body cond't'n change	-0.17	-0.30	-0.30	kg LWT/cow/dy
Litres/cow	31.6	29.9	29.3	l/cow/day
Fat test	3.90%	3.95%	4.08%	%
Protein test	3.41%	3.38%	3.36%	%
Fat per cow	1.231	1.182	1.195	kg/cow/dy
Protein per cow	1.076	1.012	0.984	kg/cow/dy
MS per cow	2.31	2.19	2.18	kg/cow/dy
Anticipated final milk price (less levies)	\$4.96	\$4.98	\$4.94	\$/kg MS
Anticipated final milk price (/litre)	\$0.362	\$0.365	\$0.368	\$ per litre
Fat return per cow	\$3.85	\$3.73	\$3.77	\$/cow/dy
Protein return per cow	\$8.41	\$7.98	\$7.76	\$/cow/dy
Volume charge per cow	\$0.82	\$0.78	\$0.76	\$/cow/dy
Milk income/cow	\$11.43	\$10.93	\$10.77	\$/cow/dy
All feed cost/cow	\$3.24	\$2.54	\$2.59	\$/cow/dy
Margin over all Feed/cow	\$8.19	\$8.39	\$8.17	\$/cow/dy
MOAF /ha /day	\$34.67	\$34.16	\$34.21	\$/ha/day
Farm MOAF per DAY	\$2,393	\$2,357	\$2,404	\$/day
MOAF per month	\$72,972	\$71,890	\$73,334	\$/month
Energy density of diet	12.1	12.3	12.2	MJ ME/kg DM
Crude protein % of diet	21.4%	21.2%	20.9%	% CP
NDF Fibre level of diet	32.4%	32.5%	32.7%	% NDF
FCE kg MS per tonne DM food	118	119	118	
Tonne feed /day	5.7	5.1	5.2	tonne DM /day
Milk Return /tonne feed	\$582	\$608	\$611	\$/tonne DM
Average Price of feed	\$165	\$141	\$147	\$/tonne DM
Margin /tonne feed	\$417	\$466	\$464	\$/tonne DM
BMCC	120	102	62	