

# CANTERBURY DAIRY

This report contains the key results from MAF's 2010 dairy monitoring programme. Please note that the sample of farms has changed between 2008/09 and 2009/10. Caution should be taken when comparing data between these two years.

## KEY POINTS

- › Milksolids production increased 4 percent in 2009/10 due to the very good summer and autumn conditions. A 1 percent increase is expected in 2010/11 compared with 2009/10 due to slightly more cows and per cow production budgeted to increase.
- › Net cash income in 2009/10 finished up 21 percent to \$1.913 million due to the steadily increasing payout through the season. A further 6 percent increase is budgeted for 2010/11.
- › Expenditure per kilogram of milksolids reduced 10 percent due to restraint by farmers in the first half of the season. However, a 6 percent increase is expected next season due mainly to a price increase budgeted for feed and fertiliser.
- › Farm profit before tax increased from a 2008/09 deficit of \$45 500 to \$376 900 in 2009/10, with a further increase to \$393 200 budgeted for 2010/11.
- › Morale is very high and surplus funds are being channelled into paying off debt and consolidating the business of producing milk.

»» TABLE 1: KEY PARAMETERS, FINANCIAL RESULTS AND BUDGET FOR THE CANTERBURY DAIRY MODEL

YEAR ENDED 30 JUNE	2006/07	2007/08	2008/09	2009/10 <sup>1</sup>	2010/11 BUDGET
Effective area (ha)	203	210	210	210	210
Cows wintered (head)	700	720	733	739	749
Replacement heifers (head)	170	180	183	185	186
Cows milked 15th December (head)	682	691	705	711	716
Stocking rate (cows/ha)	3.4	3.3	3.4	3.4	3.4
Total milksolids (kg)	268 700	286 000	280 100	291 500	295 700
Milksolids per ha (kg/ha)	1 324	1 362	1 334	1 388	1 408
Milksolids per cow milked (kg/cow)	394	414	397	410	413
MS advance to end June (\$/kg)	3.62	6.60	4.15	5.15	5.30
MS deferred payment (\$)	0.50	0.81	1.00	1.05	0.95
Net cash income (\$)	1 187 100	2 234 000	1 575 300	1 912 800	2 019 400
Farm working expenses (\$)	805 500	1 051 100	1 133 600	1 058 100	1 133 200
Farm profit before tax(\$)	99 100	873 000	-45 500	376 900	393 200
Farm surplus for reinvestment <sup>2</sup> (\$)	-37 900	585 700	-74 900	278 700	256 900

### Notes

- 1 The sample of farms used to compile this model changed between 2008/09 and 2009/10. Caution is advised if comparing data between these two years.  
 2 Farm surplus for reinvestment is the cash available from the farm business, after meeting living costs, which is available for investment on the farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.



»» TABLE 2: CANTERBURY DAIRY MODEL BUDGET

	2009/10			2010/11 BUDGET		
	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)
<b>REVENUE</b>						
Milksolids	1 795 400	2 525	6.16	1 844 200	2 576	6.24
Dividend on wet shares	22 900	32	0.08	72 900	102	0.25
Cattle	95 300	134	0.33	103 400	144	0.35
Other farm income	6 000	8	0.02	6 000	8	0.02
<b>LESS:</b>						
Cattle purchases	6 700	9	0.02	7 100	10	0.02
<b>Net cash income</b>	<b>1 912 800</b>	<b>2 690</b>	<b>6.56</b>	<b>2 019 400</b>	<b>2 820</b>	<b>6.83</b>
<b>Farm working expenses</b>	<b>1 058 100</b>	<b>1 488</b>	<b>3.63</b>	<b>1 133 200</b>	<b>1 583</b>	<b>3.83</b>
<b>Cash operating surplus</b>	<b>854 700</b>	<b>1 202</b>	<b>2.93</b>	<b>886 200</b>	<b>1 238</b>	<b>3.00</b>
Interest	410 900	578	1.41	413 600	578	1.40
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	13 900	20	0.05	0	0	0.00
Minus depreciation	80 800	114	0.28	79 400	111	0.27
<b>Farm profit before tax</b>	<b>376 900</b>	<b>530</b>	<b>1.29</b>	<b>393 200</b>	<b>549</b>	<b>1.33</b>
Taxation	100 000	141	0.34	152 700	213	0.52
<b>Farm profit after tax</b>	<b>276 900</b>	<b>389</b>	<b>0.95</b>	<b>240 500</b>	<b>336</b>	<b>0.81</b>
Add back depreciation	80 800	114	0.28	79 400	111	0.27
Reverse stock value adjustment	-13 900	-20	-0.05	0	0	0.00
Dividend on dry shares	0	0	0.00	0	0	0.00
Off-farm income	0	0	0.00	0	0	0.00
<b>Discretionary cash</b>	<b>343 700</b>	<b>483</b>	<b>1.18</b>	<b>319 900</b>	<b>447</b>	<b>1.08</b>
<b>APPLIED TO:</b>						
Net capital purchases	54 900	77	0.19	62 000	87	0.21
Development	50 000	70	0.17	36 000	50	0.12
Principal repayments	63 000	89	0.22	213 000	297	0.72
Drawings	65 000	91	0.22	63 000	88	0.21
New borrowings	150 000	211	0.51	40 000	56	0.14
Introduced funds	0	0	0.00	0	0	0.00
<b>Cash surplus/deficit</b>	<b>260 800</b>	<b>367</b>	<b>0.89</b>	<b>-14 100</b>	<b>-20</b>	<b>-0.05</b>
<b>Farm surplus for reinvestment<sup>1</sup></b>	<b>278 700</b>	<b>392</b>	<b>0.96</b>	<b>256 900</b>	<b>359</b>	<b>0.87</b>
<b>ASSETS AND LIABILITIES</b>						
Farm, forest and building (opening)	9 432 000	13 266	32.36	9 382 000	13 103	31.73
Plant and machinery (opening)	205 300	289	0.70	204 500	286	0.69
Stock valuation (opening)	1 116 700	1 571	3.83	1 130 700	1 579	3.82
Dairy company shares	1 292 700	1 818	4.43	1 317 600	1 840	4.46
Other farm related investments (opening)	0	0	0.00	0	0	0.00
<b>Total farm assets</b>	<b>12 046 800</b>	<b>16 943</b>	<b>41.33</b>	<b>12 034 800</b>	<b>16 808</b>	<b>40.70</b>
<b>Total liabilities (opening)</b>	<b>5 469 300</b>	<b>7 692</b>	<b>18.76</b>	<b>5 556 300</b>	<b>7 760</b>	<b>18.79</b>
<b>Total equity (assets-liabilities)</b>	<b>6 577 600</b>	<b>9 251</b>	<b>22.56</b>	<b>6 478 600</b>	<b>9 048</b>	<b>21.91</b>

**Note**

<sup>1</sup> Farm surplus for reinvestment is the cash available from the farm business, after meeting living costs, which is available for investment on the farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

»» TABLE 3: CANTERBURY DAIRY MODEL EXPENDITURE

	2009/10			2010/11 BUDGET		
	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)
<b>FARM WORKING EXPENSES</b>						
Permanent wages	163 200	230	0.56	168 600	235	0.57
Casual wages	26 200	37	0.09	26 600	37	0.09
ACC	4 800	7	0.02	8 000	11	0.03
<b>Total labour expenses</b>	<b>194 300</b>	<b>273</b>	<b>0.67</b>	<b>203 200</b>	<b>284</b>	<b>0.69</b>
Animal health	58 300	82	0.20	56 200	78	0.19
Breeding	29 200	41	0.10	29 600	41	0.10
Dairy shed expenses	14 600	21	0.05	13 900	19	0.05
Electricity	61 200	86	0.21	63 600	89	0.22
Feed (hay and silage)	115 900	163	0.40	139 600	195	0.47
Feed (feed crops)	0	0	0.00	0	0	0.00
Feed (grazing)	128 000	180	0.44	132 500	185	0.45
Feed (other)	120 900	170	0.41	130 300	182	0.44
Fertiliser	123 100	173	0.42	146 800	205	0.50
Lime	4 200	6	0.01	4 200	6	0.01
Freight (not elsewhere deducted)	8 700	12	0.03	7 100	10	0.02
Regrassing costs	9 000	13	0.03	10 100	14	0.03
Weed and pest control	5 800	8	0.02	6 500	9	0.02
Fuel	20 400	29	0.07	22 200	31	0.08
Vehicle costs (excluding fuel)	23 300	33	0.08	23 400	33	0.08
Repairs and maintenance	61 200	86	0.21	53 500	75	0.18
<b>Total other working expenses</b>	<b>783 900</b>	<b>1 103</b>	<b>2.69</b>	<b>839 300</b>	<b>1 172</b>	<b>2.84</b>
Communication costs (phone and mail)	5 200	7	0.02	5 000	7	0.02
Accountancy	5 500	8	0.02	5 300	7	0.02
Legal and consultancy	6 700	9	0.02	5 000	7	0.02
Other administration	11 700	16	0.04	11 200	16	0.04
Water charges (irrigation)	12 500	18	0.04	13 000	18	0.04
Rates	14 600	21	0.05	14 200	20	0.05
Insurance	11 700	16	0.04	11 800	17	0.04
ACC employer	2 100	3	0.01	14 300	20	0.05
Other expenditure <sup>1</sup>	9 900	14	0.03	10 600	15	0.04
<b>Total overhead expenses</b>	<b>79 900</b>	<b>112</b>	<b>0.27</b>	<b>90 600</b>	<b>127</b>	<b>0.31</b>
<b>Total farm working expenses</b>	<b>1 058 100</b>	<b>1 488</b>	<b>3.63</b>	<b>1 133 200</b>	<b>1 583</b>	<b>3.83</b>
<b>CALCULATED RATIOS</b>						
Economic farm surplus (EFS <sup>2</sup> )	702 800	988	2.41	721 800	1 008	2.44
Farm working expenses/NCI <sup>3</sup>	55%			56%		
EFS/total farm assets	6%			6%		
EFS less interest and lease/equity	4%			5%		
Interest+rent+lease/NCI	22%			21%		
EFS/NCI	37%			36%		
Wages of management	85 000	120	0.29	85 000	119	0.29

**Notes**

1 Includes DairyNZ levy.

2 EFS is calculated as follows: net cash income plus change in livestock values less farm working expenses less depreciation less wages of management (WOM). WOM is calculated as follows: \$38 000 allowance for labour input plus 1 percent of opening total farm assets to a maximum of \$85 000.

3 Net cash income.

## FINANCIAL PERFORMANCE OF THE CANTERBURY DAIRY FARM MODEL IN 2009/10

The cash operating surplus recovered strongly late in the 2009/10 season due to significant improvements in each successive payout announcement and very good grass growing conditions in late summer and autumn.



### MAJOR LIFT IN REVENUE DUE TO MUCH IMPROVED PAYOUT AND GOOD LATE SEASON

Net cash income on the Canterbury dairy farm model was \$1.913 million in 2009/10, a 21 percent increase compared with the 2008/09 season. This was due to the lift in payout and one of the best seasons for milk production for Canterbury dairy farmers. As a result, there was a \$260 800 cash surplus for the 2009/10 season.

The milksolids price for 2009/10 lifted to \$6.10 per kilogram of milksolids through the season in response to commodity prices rising significantly. Fonterra has indicated there will be a deferred dividend of between 12 and 22 cents per share, following an eight cents dividend paid during the season, and that it will retain 20 cents of the distributable profit to strengthen its balance sheet.

Overall, the farm model produced 291 500 kilograms of milksolids, up 4 percent on the 2008/09 result. Per cow production increased 3 percent from 397 kilograms to 410 kilograms of milksolids per cow. Milk production for Fonterra in the Canterbury and North Otago regions increased 12 percent overall compared with 2008/09. This includes conversions, increased scale and increases in on-farm production.

### TOUGH GOING UP UNTIL DECEMBER

Following on from poor profitability in 2008/09, the low forecast payout of \$4.55 per kilogram of milksolids caused farmers to reduce expenditure and stop discretionary spending despite a colder winter than in recent years. While warm early spring weather provided good feeding levels and strong early milk production, the cooler October and November limited grass growth. This added to the need to constrain expenditure, although the lack of growth turned out to be good for improving pasture quality for the early summer.

### BUT IT ALL CAME GOOD IN 2010

The summer was cooler and less windy than usual, which prevented heat stress and kept evapotranspiration low. From late February on, conditions became warmer than average, resulting in one of the best seasons for growing grass.

Rainfall over the growing season was still below average, so irrigation was almost constant but was better able to keep up with the pastures' requirements due to the lower evapotranspiration. Irrigation schemes that are prone to reliability problems were under lengthy restrictions, especially the Waimakariri. However, the restrictions occurred during a period where the water demand from pastures was easing.

There were some concerns that winter feed supplies for grazing would be reduced but this was alleviated in late April by widespread rain across the region. A warm May continued abnormally high pasture growth.

The perfect season was tempered in the last two weeks of May with heavy rain. Some farms dried off earlier than they intended due to pasture damage, cows losing condition and staff morale. As a result, pasture covers have been left in good shape for the 2010/11 season.

The lift in milk income was supported by a stable beef schedule for culls and lifting capital cow value for surplus animals, although bobby calf prices remained at very low levels.

## EXPENDITURE HELD BACK BY POOR EARLY SEASON PAYOUT

With a high cost structure developed from the high payout year in 2007/08, and a lower final payout for the 2008/09 season of \$5.20 per kilogram of milksolids, there were significant cash losses in 2008/09. The low early season advance milk payments for 2009/10 and banks restricting credit availability, created a cashflow crisis for many dairy farms in 2009/10.

Aggressive cost-cutting was carried out in the first half of the season, which is the time of the year when most expenses are incurred on dairy farms. Even as the payout lifted through 2009/10, most farmers retained tight control on their spending in response to financiers tightening credit and with the lessons of how restrictive debt can be fresh in their minds.

As a result of this restraint, farm working expenditure per kilogram of milk solids dropped 10 percent in 2009/10, from \$4.05 per kilogram of milksolids in 2008/09 to \$3.63 per kilogram of milksolids. The decrease was achieved with a combination of lower input volumes and lower prices.

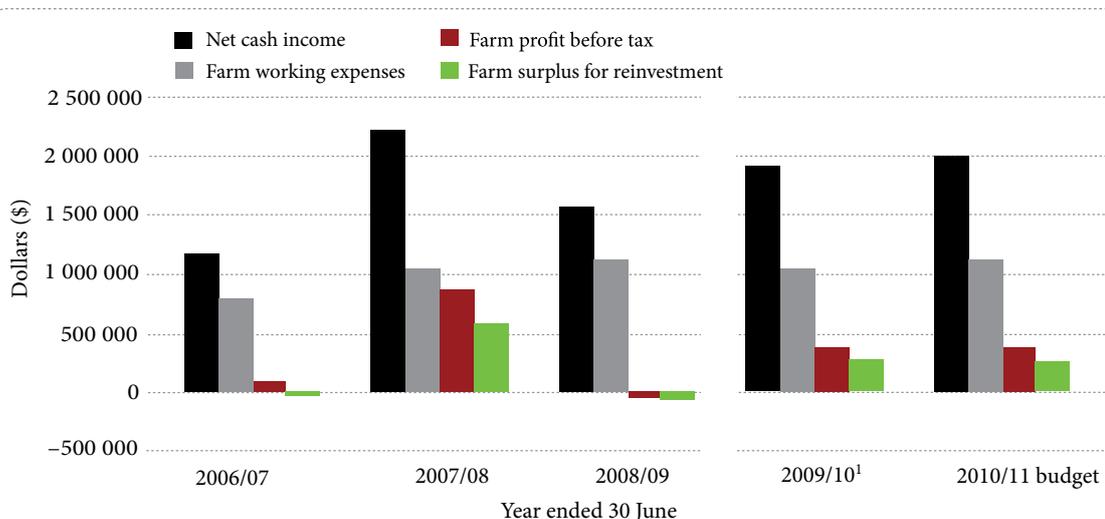
## FEED COSTS FELL FROM THE GLOBAL COMMODITY PRICE BUBBLE INDUCED LEVELS OF 2008/09

Feed expenditure dropped significantly from \$559 per cow in 2008/09 to \$513 per cow in 2009/10. Fewer feed supplements were needed due to the milder spring and prices also dropped due to the increase in feed production on other farm types, in response to the global commodity boom and high prices in 2008.

Winter cow grazing prices dropped 20 percent in 2009/10 from \$25 to \$20 per cow per week, while heifer grazing reduced 15 percent from \$10 to \$9 per head per week, and calves went from \$6.50 down to \$5.75 per head per week. The number of heifers reared has dropped significantly, with no unrecorded animals being reared due to reduced demand.

Palm kernel expeller (PKE) usage, which had climbed during the period of high grain prices in 2008/09, continued to be an attractive option for cash strapped farmers due to its low price in spring 2009 of \$195 per tonne delivered and its on-demand availability. Feed wheat prices which had peaked in autumn 2008 at \$520 per tonne, fell through the 2009/10 season to around \$260 per tonne in late summer.

»» FIGURE 1: CANTERBURY DAIRY MODEL PROFITABILITY TRENDS



**Note**

<sup>1</sup> The sample of farms used to compile this model changed between 2008/09 and 2009/10. Caution is advised if comparing data between these two years.

Maize and grass silage usage was well back on previous years with cheaper alternatives available. Maize contracts were 18 cents per kilogram of dry matter compared to 2008/09 prices around 32 cents per kilogram of dry matter.

#### **FERTILISER PRICES ALSO DOWN**

Fertiliser expenditure was reduced 18 percent in 2009/10 compared with 2008/09. Where soil tests showed it was possible, farmers with high soil phosphate levels applied below maintenance levels. The extensive use of Overseer® has been of benefit, improving the efficiencies of fertiliser use. Both phosphate and urea prices dropped significantly following high prices during 2008/09.

#### **OTHER EXPENSES PUT ON HOLD**

On-farm labour rates were relatively static, as existing staff received minimal rises to cover the increased cost of living. For new staff recruitments, in particular management, the salaries offered were well below previous market levels.

Regrassing expenditure was reduced 41 percent in response to both a cool spring limiting the feed surplus, and hence area available to take out of pasture for regrassing, and farmers tightening expenditure. Expenditure on vehicles (excluding fuel) and repairs and maintenance was down 21 percent in total, due to only essential maintenance being carried out.

#### **NET RESULT IMPROVED SIGNIFICANTLY**

With the strong payout and well-controlled costs, farm profit before tax increased from a 2008/09 deficit of \$45 500, to \$376 900 in 2009/10.

The 2008/09 season finished with a cash deficit of \$74 900, after new borrowings of \$300 000 funded \$215 000 of capital and development expenditure. The end result has improved in 2009/10 to a cash surplus of \$260 900, after share purchases, principal repayments and new borrowings of \$150 000. The intention of farmers is to use this cash surplus to pay back the overdraft and then repay significant amounts from the mortgage.

Capital spending and development expenditure had approximately halved in the 2009/10 farm model compared with 2008/09. Most of the drop in development expenditure was related to less being spent on irrigation and cowshed infrastructure. The only development occurring was the essential infrastructure required for resource consent compliance, for example, effluent system upgrades. Included in the \$54 900 of capital expenditure is the purchase of dry shares from the mid-season extraordinary Fonterra share offer in anticipation of the final season production increasing. Financiers supported borrowing the amount required.

Total debt rose 2 percent to cover share purchases, development and overdrafts. These activities put some strain on financiers and farmers during the early part of the season. Total interest expenditure dropped from around \$415 000 to \$411 000 in the farm model with relief coming from lower interest rates. But this is highly variable depending on individual farmers' arrangements.

Provisional tax has been reassessed in the farm model due to the increase in profitability. However, industry commentators believe that many farmers have not paid provisional tax in anticipation of an improvement in profitability, and therefore could face high terminal tax bills in 2010/11. Offsetting this, many had tax refunds from the losses incurred during 2008/09.

## BUDGET FINANCIAL PERFORMANCE OF THE CANTERBURY DAIRY FARM MODEL IN 2010/11

Monitored farms are expecting the success of the 2009/10 season to continue through to 2010/11. Cash operating surplus and farm profit before tax are both budgeted to rise 4 percent to \$886 200 and \$393 200 respectively.

### REVENUE AND CASHFLOW OUTLOOK GOOD

Net cash income is budgeted to lift 6 percent from around \$1.913 million (\$6.56 per kilogram of milksolids) to \$2.019 million (\$6.83 per kilogram of milksolids). Farmers have budgeted for a further increase in production to 413 kilograms of milksolids per cow.

The opening advance of \$4.30 per kilogram of milksolids, along with strong residual payments from the 2009/10 season, is helping alleviate cashflow issues. Farmers have budgeted the beef schedule to be maintained, with the expectation that the capital market for surplus stock will lift. Bobby calf income is expected to remain low.

Cow condition and pasture covers are well set up for the 2010 spring, although some damage may have resulted from the heavy rains in May. Winter feed supplies on farms are plentiful and there is feed available to purchase.

### EXPENDITURE EXPECTED TO CONTINUE TO BE CONSTRAINED

There remains a strong focus on maintaining tight cost control on farm working expenditure and development. Farmers are motivated to repay debt in response to the tightening of credit in mid-2009. For many farmers, this credit tightening restricted their ability to control their business. This is a situation that many do not wish to repeat, and many also learned that they could often reduce expenses without negatively affecting the business.

Farm working expenditure for 2010/11 in the farm model is budgeted to increase by 7 percent to \$1.133 million compared with \$1.058 million in 2009/10. The monitored farms indicated an expectation of smaller rises, but industry commentators commented that they believe this was overly ambitious as feed and grazing prices began to lift from mid-2010.

Grazing prices are currently rising as a result of increased demand and the higher payout, to levels near the mid-point of prices in 2008/09 and 2009/10. Grain prices are also on the rise as the overhang of supply is used up. Fertiliser prices are also expected to rise, and maintenance phosphate levels need to be reinstated following the pause in 2009/10, so the model reflects a 19 percent increase in fertiliser expenditure. Overheads are expected to rise 13 percent, in particular through ACC increases and water scheme charges.

### NET RESULT USED TO PAY OFF DEBT

Farmers are budgeting for a 4 percent increase in farm profit before tax in 2010/11, from around \$377 000 in 2009/10 to \$393 000. Farmers are intending to apply the potential surpluses to debt repayment, with the support of financiers who have generally tightened up their lending criteria. Capital expenditure and development are budgeted to remain at historically low levels, and drawings are budgeted to fall slightly.

As a result, a small cash deficit is budgeted in the farm model of \$14 100 compared with the surplus of \$260 800 in 2009/10, but a net reduction in debt of \$213 000 is budgeted.

## INFORMATION ABOUT THE MODEL

The model represents approximately 900 dairy farms throughout Canterbury and north Otago that supply Fonterra's Clondeboye plant. It represents a farm that has a mix of spray and border irrigation, and does not own a run-off. All off-farm winter grazing costs are included as feed costs.

The model is created from information drawn from 25 dairy farms and a wide cross-section of agribusiness representatives. The aim of the model is to typify an average dairy farm for Canterbury. Budget figures are averaged from the contributing properties and adjusted to represent a real dairy farm. Income figures include off-farm income, new borrowing and other cash income.

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