

# TARANAKI 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

- › Milk production fell 1 percent in 2009/10 as a result of drought conditions in southwest Taranaki. A 2 percent improvement in production is expected in 2010/11.
- › Income in 2009/10 was well above expectations, increasing 20 percent to \$591 400 due to a substantial increase in the milk payout. A further 5 percent improvement is budgeted for in 2010/11.
- › Expenditure in 2009/10 remained at a similar level to the previous year in response to the low predicted milk payout and low cash flows early in the season. Expenses are expected to increase 7 percent in 2010/11, largely the result of increased spending on feed.
- › The combination of increased income, minimal change in expenditure and reduced interest payments resulted in a \$118 500 improvement in farm profit before tax in 2009/10. A 10 percent improvement to \$165 600 is expected in 2010/11.
- › Taranaki dairy farmers are confident about the long term prospects of the industry and are adapting to the volatility in income that has been occurring in recent times.

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

YEAR ENDED 30 JUNE	2006/07	2007/08	2008/09	2009/10 <sup>1</sup>	2010/11 BUDGET
Effective area (ha)	96	96	96	96	96
Cows wintered (head)	280	284	284	284	288
Replacement heifers (head)	69	69	69	69	70
Cows milked 15th December (head)	265	267	267	267	270
Stocking rate (cows/ha)	2.8	2.8	2.8	2.8	2.8
Total milksolids (kg)	87 900	81 900	90 000	89 100	91 000
Milksolids per ha (kg/ha)	916	853	938	928	948
Milksolids per cow milked (kg/cow)	332	307	337	334	337
MS advance to end June (\$/kg)	3.65	6.62	4.15	5.15	5.30
MS deferred payment (\$)	0.50	0.81	1.04	1.05	0.95
Net cash income (\$)	395 699	651 387	493 030	591 391	621 093
Farm working expenses (\$)	234 517	292 382	300 013	302 400	322 968
Farm profit before tax(\$)	78 652	271 042	32 317 <sup>R</sup>	150 794	165 631
Farm surplus for reinvestment <sup>2</sup> (\$)	27 525	199 056	2 787 <sup>R</sup>	106 452	101 037

### 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.

### Symbol

R Values have been revised to reflect a change in the level of debt structure.



»» TABLE 2: TARANAKI 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	553 365	2 073	6.21	566 945	2 100	6.23
Dividend on wet shares	7 200	27	0.08	22 275	83	0.24
Cattle	34 826	130	0.39	36 273	134	0.40
Other farm income	1 200	4	0.01	1 200	4	0.01
<b>LESS:</b>						
Cattle purchases	5 200	19	0.06	5 600	21	0.06
<b>Net cash income</b>	<b>591 391</b>	<b>2 215</b>	<b>6.64</b>	<b>621 093</b>	<b>2 300</b>	<b>6.83</b>
<b>Farm working expenses</b>	<b>302 400</b>	<b>1 133</b>	<b>3.39</b>	<b>322 968</b>	<b>1 196</b>	<b>3.55</b>
<b>Cash operating surplus</b>	<b>288 991</b>	<b>1 082</b>	<b>3.24</b>	<b>298 125</b>	<b>1 104</b>	<b>3.28</b>
Interest	105 200	394	1.18	100 561	372	1.11
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	2 903	11	0.03	3 719	14	0.04
Minus depreciation	35 900	134	0.40	35 653	132	0.39
<b>Farm profit before tax</b>	<b>150 794</b>	<b>565</b>	<b>1.69</b>	<b>165 631</b>	<b>613</b>	<b>1.82</b>
Taxation	11 540	43	0.13	28 252	105	0.31
<b>Farm profit after tax</b>	<b>139 255</b>	<b>522</b>	<b>1.56</b>	<b>137 379</b>	<b>509</b>	<b>1.51</b>
Add back depreciation	35 900	134	0.40	35 653	132	0.39
Reverse stock value adjustment	-2 903	-11	-0.03	-3 719	-14	-0.04
Dividend on dry shares	0	0	0.00	225	1	0.00
Off-farm income	17 000	64	0.19	17 000	63	0.19
<b>Discretionary cash</b>	<b>189 252</b>	<b>709</b>	<b>2.12</b>	<b>186 537</b>	<b>691</b>	<b>2.05</b>
<b>APPLIED TO:</b>						
Net capital purchases	43 000	161	0.48	40 000	148	0.44
Development	13 400	50	0.15	10 000	37	0.11
Principal repayments	23 417	88	0.26	22 846	85	0.25
Drawings	65 800	246	0.74	68 500	254	0.75
New borrowings	0	0	0.00	0	0	0.00
Introduced funds	0	0	0.00	0	0	0.00
<b>Cash surplus/deficit</b>	<b>43 634</b>	<b>163</b>	<b>0.49</b>	<b>45 191</b>	<b>167</b>	<b>0.50</b>
<b>Farm surplus for reinvestment<sup>1</sup></b>	<b>106 452</b>	<b>399</b>	<b>1.19</b>	<b>101 037</b>	<b>374</b>	<b>1.11</b>
<b>ASSETS AND LIABILITIES</b>						
Farm, forest and building (opening)	4 050 000	15 169	45.45	4 050 000	15 000	44.51
Plant and machinery (opening)	156 000	584	1.75	152 600	565	1.68
Stock valuation (opening)	420 807	1 576	4.72	426 466	1 580	4.69
Dairy company shares	406 800	1 524	4.57	406 800	1 507	4.47
Other farm related investments (opening)	0	0	0.00	0	0	0.00
<b>Total farm assets</b>	<b>5 033 607</b>	<b>18 852</b>	<b>56.49</b>	<b>5 035 866</b>	<b>18 651</b>	<b>55.34</b>
<b>Total liabilities (opening)</b>	<b>1 460 000</b>	<b>5 468</b>	<b>16.39</b>	<b>1 436 583</b>	<b>5 321</b>	<b>15.79</b>
<b>Total equity (assets-liabilities)</b>	<b>3 573 607</b>	<b>13 384</b>	<b>40.11</b>	<b>3 599 283</b>	<b>13 331</b>	<b>39.55</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: TARANAKI 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	36 000	135	0.40	36 500	135	0.40
Casual wages	3 500	13	0.04	4 000	15	0.04
ACC	1 022	4	0.01	1 675	6	0.02
<b>Total labour expenses</b>	<b>40 522</b>	<b>152</b>	<b>0.45</b>	<b>42 175</b>	<b>156</b>	<b>0.46</b>
Animal health	20 012	75	0.22	21 200	79	0.23
Breeding	9 879	37	0.11	10 500	39	0.12
Dairy shed expenses	5 340	20	0.06	6 300	23	0.07
Electricity	10 800	40	0.12	11 500	43	0.13
Feed (hay and silage)	25 270	95	0.28	29 020	107	0.32
Feed (feed crops)	2 190	8	0.02	2 250	8	0.02
Feed (grazing)	29 980	112	0.34	31 500	117	0.35
Feed (other)	20 098	75	0.23	25 948	96	0.29
Fertiliser	52 649	197	0.59	52 649	195	0.58
Lime	3 000	11	0.03	3 000	11	0.03
Freight (not elsewhere deducted)	2 400	9	0.03	2 600	10	0.03
Regrassing costs	2 800	10	0.03	2 800	10	0.03
Weed and pest control	2 500	9	0.03	2 700	10	0.03
Fuel	6 200	23	0.07	6 600	24	0.07
Vehicle costs (excluding fuel)	11 000	41	0.12	11 000	41	0.12
Repairs and maintenance	25 500	96	0.29	27 000	100	0.30
<b>Total other working expenses</b>	<b>229 617</b>	<b>860</b>	<b>2.58</b>	<b>246 567</b>	<b>913</b>	<b>2.71</b>
Communication costs (phone and mail)	3 000	11	0.03	3 000	11	0.03
Accountancy	4 400	16	0.05	4 500	17	0.05
Legal and consultancy	2 000	7	0.02	2 000	7	0.02
Other administration	1 200	4	0.01	1 200	4	0.01
Water charges (irrigation)	0	0	0.00	0	0	0.00
Rates	8 400	31	0.09	8 900	33	0.10
Insurance	6 000	22	0.07	6 500	24	0.07
ACC employer	4 231	16	0.05	4 850	18	0.05
Other expenditure <sup>1</sup>	3 029	11	0.03	3 276	12	0.04
<b>Total overhead expenses</b>	<b>32 260</b>	<b>121</b>	<b>0.36</b>	<b>34 226</b>	<b>127</b>	<b>0.38</b>
<b>Total farm working expenses</b>	<b>302 400</b>	<b>1 133</b>	<b>3.39</b>	<b>322 968</b>	<b>1 196</b>	<b>3.55</b>
<b>CALCULATED RATIOS</b>						
Economic farm surplus (EFS <sup>2</sup> )	170 994	640	1.92	181 192	671	1.99
Farm working expenses/NCI <sup>3</sup>	51%			52%		
EFS/total farm assets	3.4%			3.6%		
EFS less interest and lease/equity	1.8%			2.2%		
Interest+rent+lease/NCI	17.8%			16.2%		
EFS/NCI	28.9%			29.2%		
Wages of management	85 000	318	0.95	85 000	315	0.93

**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 TARANAKI DAIRY FARM MODEL IN 2009/10



The Taranaki dairy model's cash operating surplus increased 50 percent compared with 2008/09, to \$289 000 in 2009/10. This was largely due to an increase in the milk payout, even though milk production levels fell 1 percent from the previous season. Farm operating expenses were kept to levels similar to 2008/09 as farmers curbed their expenditure for most of the season while predictions for the milk payout were low.

### REVENUE LIFTED BY IMPROVED MILK PAYOUT

Net cash income increased significantly on all monitored farms in 2009/10 compared with 2008/09, due mainly to a 25 percent increase in the milk payout. The 2009/10 season's advance payout to the end of June was \$5.15 per kilogram of milksolids up from \$4.15 in 2008/09. This was a significant and welcome improvement on the advance payout predicted at the beginning of the 2009/10 season of \$3.77 per kilogram of milksolids.

Net cash income for the Taranaki dairy model rose \$98 400 (20 percent) compared with the previous year. Cattle income was down slightly (\$3600) on the previous year due to lower calf prices.

### SMALL DECREASE IN MILK PRODUCTION

Milk production for 2009/10 in the Taranaki region fell 1 percent compared with 2008/09. A poor late-autumn in 2009 resulted in farms going into the winter with cows in moderate condition but with below targeted feed levels. Winter conditions were average so this situation continued to the start of calving. However, the early spring was very good and predicted feed shortages did not eventuate. October saw cool weather resulting in only moderate peak milk production levels and generally low levels of surplus pasture to be made into silage and hay.

The early summer period was moderate to good while January was generally dry up until the last week when good levels of rain resulted in good pasture growth and milk production into the late summer. The February to mid-May period was relatively dry especially in the south western area of the region where, following only 40 percent of normal rainfall levels, a drought was declared. Many herds dried off two to three weeks earlier than planned although many others milked on resulting in large feed deficits and below target cow condition levels going into the 2010 winter.

There were no major animal health problems during the year. Mating results were also on par with recent years with empty rates still moderately high at around 11 percent but with a big range across the monitored farms.

### LOWER PRICES FOR CALVES

Cattle income in 2009/10 was down slightly (\$3600) on the previous season, as a result of lower calf prices. The average price for bobby calves was \$7 per head, much lower than the 2008/09 average of \$24. Four-day-old Friesian bull and heifer calf sale prices were also lower at \$70 per head compared with \$110 in 2008/09. Bobby calves account for approximately 80 percent of the calves sold in the Taranaki dairy model.

Works cull cow prices were up slightly (by \$20 per head) but there was less demand for surplus budget and empty cows mainly due to the feed shortage.

### EXPENDITURE KEPT STEADY

Farm working expenses in 2009/10 remained similar to 2008/09 levels at \$3.39 per kilograms of milksolids but were higher than budgeted. Farmers started the year with lower planned expenditure in response to predicted low milk payouts and incomes. As milk payout predictions improved they relaxed a little on this but generally

kept farm operating costs down. There were small inflationary increases in standard operating costs. Expenditure on feed was less than in 2008/09 but more was spent on fertiliser and repairs and maintenance.

#### **FEED EXPENDITURE REDUCED**

Feed expenditure was down \$11 000 (12 percent) in the model compared with 2008/09. Supplementary feed levels made on farm were well down on the previous season due to poor mid spring conditions. Purchased feed levels were similar to 2008/09. Overall feed expenditure was lower due to fewer supplements made as well as lower prices for maize silage, palm kernel expeller (PKE) and meal than in 2008/09. Farmers had budgeted on buying in less feed to reduce expenditure in response to low milk payout expectations even though a spring feed deficit was predicted. Fortunately the good early spring resulted in little need for extra supplements then, but the dry autumn and lower levels of supplements made resulted in a greater need at the end of the season. Despite the feed shortage and good milk prices farmers were reluctant to buy in extra feed and many milked on with some entering winter with big feed deficits.

#### **INCREASED FERTILISER USE**

Fertiliser use increased substantially over the previous season, and was more than was budgeted for at the beginning of the season, as a result of improving milk prices. Expenditure on fertiliser in the model increased 8 percent to \$52 600 compared with \$48 700 in 2008/09.

Regional fertiliser sale volumes were approximately 30 percent up on 2008/09 but not as high as in past years. Fertiliser prices were down compared with the high levels of 2008/09 but were still relatively high compared with recent seasons. Many farmers had planned on low fertiliser use in 2009/10 to reduce expenditure and help balance the budget or reduce the deficit, but as milk payout predictions improved fertiliser use increased.

Fertiliser applications were still below historical levels as farmers followed nutrient budget recommendations and applied no more than maintenance dressings and reduced use on areas receiving dairy effluent. In very high debt situations fertiliser use was still low to help balance the budget.

#### **REPAIRS AND MAINTENANCE AND OTHER EXPENDITURE**

Expenditure on repairs and maintenance rose 28 percent or \$5500 in 2009/10. Farmers started the season planning on essential expenditure only and generally maintained this stance even as cash flow levels improved.

There were minimal changes in overhead expenses with increased expenditure on rates, insurance and accountancy occurring as expected.

#### **SUBSTANTIAL IMPROVEMENT IN NET RESULT**

Farm profit before tax increased 367 percent to \$150 800 in 2009/10 as a result of increased income, minimal change in expenditure and reduced interest payments.

#### **INTEREST AND DEBT SERVICING**

The debt level in the Taranaki dairy model was increased by \$500 000 to better reflect the region's average dairy farm debt level. Total liabilities in the model for 2009/10 are \$1.460 million. The increased debt level has been back cast to 2008/09, increasing the debt level from \$970 000 to \$1.470 million for that year. Farm profit before tax and farm surplus for reinvestment for 2008/09 have been revised to reflect the increased interest payments relating to this change.

Interest paid in 2009/10 was \$22 600 (18 percent) less than in 2008/09 due to lower interest rates on loans as maturing higher interest rate loans were renewed.

### LESS TAX PAID

Tax payments in the model were down \$18 000 in 2009/10 to \$11 500 as a result of the low farm profit in the previous year. Tax payments on the monitored farms were well down on 2008/09 with nearly half the farms paying no tax at all and a few receiving tax credits.

### SOME REINVESTMENT AND PRINCIPAL REDUCTION

The improved profitability allowed for some increased expenditure on development and capital purchases as well as principal repayments. Overall the farm model finished with a \$43 600 cash surplus.

Most of the monitored farms produced moderate to high cash surpluses for 2009/10. This even included the very high debt farms considered at risk, although in these cases many operated at a sub-maintenance expenditure level. Cash surpluses were used initially to clear last season's overdraft and some were used or set aside for extra principal payments and future capital expenditure.

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

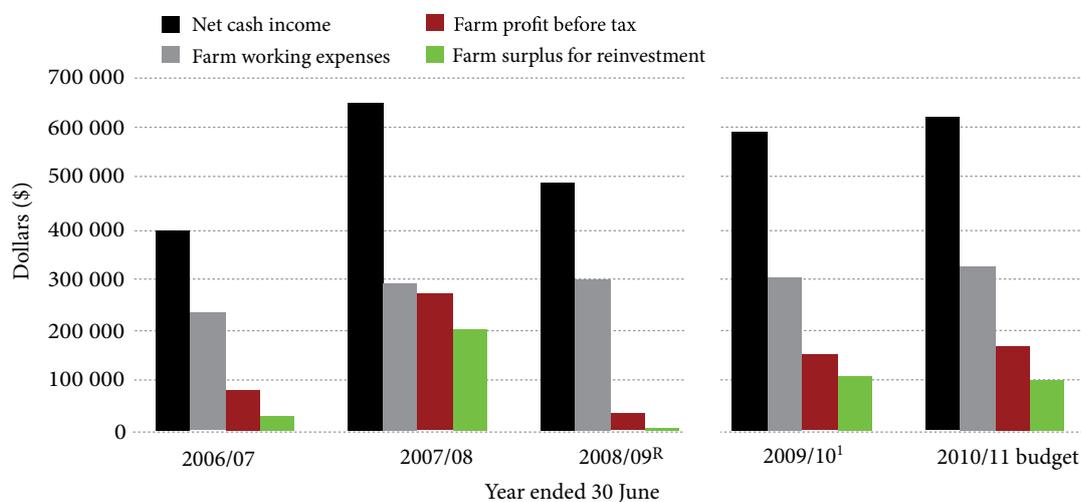
The Taranaki dairy model's cash operating surplus is expected to increase 3 percent to \$298 100 in 2010/11. Increases in production and the milk payout are expected to lift income but it is expected to be largely consumed by rising farm working expenses.

Monitored farmers expect milk payments to increase substantially, but at this stage they are only budgeting on a similar overall milk payout to 2009/10. However, early season advance milk payments are much higher this season, giving farmers more confidence in the end of year result.

### REVENUE EXPECTED TO RISE 5 PERCENT

Net cash income in the model is expected to increase 5 percent to \$621 100 compared with 2009/10. The rise in income is largely due to an expected increase in production (up 2 percent) with the milk payout budgeted at a similar level to 2009/10 when the deferred payment from 2009/10 is taken in to account.

»» FIGURE 1: TARANAKI 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.

**Symbol**

<sup>R</sup> Values have been revised to reflect a change in the level of debt structure.

Minimal improvement (\$1400) in cattle income is expected. A \$30 per head increase to \$100 is expected for four-day-old calves while prices for bobby calves are expected to be unchanged. While the model does not purchase any cows it is expected that prices for cows will increase to around \$1800 per head up from \$1400 per head in the previous two seasons.

At the start of the 2010 winter, feed covers were below target by up to 500 to 600 kilograms of dry matter per hectare, especially in the drought affected areas. Cow condition was also behind target. Monitored farmers expect a 4 percent rise in production in 2010/11 but achieving this will depend on good winter conditions, a reasonably good season or will require more bought-in feed. The model is budgeting on a more modest 2 percent increase in production (1900 kilograms of milksolids) in 2010/11. Milking cow and closing stock numbers are expected to increase 1 percent.

## **EXPENDITURE UP**

Farm working expenses are expected to rise 7 percent compared with 2009/10 to \$323 000. Farmers are expected to increase spending in response to a rise in milk income and a better cashflow and anticipate general inflationary effects including the impact of the energy and transport sector being included in the Emissions Trading Scheme (ETS).

### **MORE FEED BOUGHT IN**

Increased expenditure on feed is expected to be the main contributor to the rise in farm working expenses. Feed expenditure is budgeted to increase 14 percent (\$11 200) compared with 2009/10. More feed is expected to be purchased in spring to help cover a predicted spring feed deficit on some farms. The levels of supplements made on farm are expected to increase back to usual levels and higher purchased feed use is expected in the autumn as farmers milk on to reap the benefits of good milk payouts. Prices for feed are expected to increase due to inflation, energy costs and a higher demand. Grazing prices are expected to remain unchanged.

### **FERTILISER EXPENDITURE STATIC**

Fertiliser use and prices overall are expected to remain the same although some variation in individual fertiliser prices is expected and there will likely be energy and transport cost increases. Most farmers are planning on maintenance fertiliser application rates only. More lime applications are likely if cashflow levels are as good as predicted.

## **RISE IN NET RESULT**

Farm profit before tax on the Taranaki dairy model is expected to increase 10 percent to \$165 600 in 2010/11, aided by the expected increased income and reduced in interest payments.

Interest expenses are expected to fall \$4600 to \$100 600 reflecting the use of the 2009/10 cash surplus to repay the overdraft. Tax payments are expected to be significantly higher, up \$16 700 compared with 2009/10 as a result of the increased profitability in that year.

Drawings are expected to increase with inflation including the effect of a GST increase and the ETS impacts. Farmers planned capital and development expenditure at similar levels to 2009/10 and are likely to increase if payouts are better than budgeted.

The end result is a \$1600 increase in the cash surplus, a 4 percent improvement compared with 2009/10, to a total of \$45 200. Many of the monitored farmers plan to use the surplus to continue reducing debt.

## **LAND PRICES**

Dairy farm sales through the 2009/10 season were very low in Taranaki, with 19 farms sold in the three

months to May 2010 compared with 48 sales for the same period in 2009. Sales have been around \$40 000 to \$50 000 per hectare for average dairy land without shares or around \$45 per kilogram of milksolids. Many wanting to buy land still consider this price relatively high so have not rushed into buying land, expecting that prices may fall further. This could now change as higher milk payouts look more certain.

## FARMER MORALE

Taranaki dairy farmers are confident in the long term prospects of the industry and are adapting to the volatility that has occurred in recent times. Farmers are being semi-conservative in their budgeting to allow for volatility. The 2009/10 season's milk payout has made most farms profitable but a few operations are still financially at risk due to high debt.

Most service industries in the Taranaki region had lower activity over 2009/10 and some very low. However, most have survived and are picking up slowly with improving prospects, although energy projects (oil and gas) in the region have also now gone into a decline in activity.

## INFORMATION ABOUT THE MODEL

The Taranaki dairy model represents approximately 1770 dairy farms in the Taranaki region. The model is based on an owner-operated business with a predominantly cross-bred herd. It does not own a run-off but grazes replacement stock off the farm and buys in 8 to 12 percent of feed used.

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 Taranaki. 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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