

# WAIKATO/BAY OF PLENTY 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

- › 2009/10 was another difficult year climatically, with drought declared over the whole region in April 2010.
- › Increases in the payout throughout the year meant that net cash income for the model increased 19 percent compared with 2008/09.
- › Farm working expenditure in 2009/10 decreased 12 percent compared with 2008/09, as a result of farmer caution on spending following a low payout prediction at the start of the season.
- › The outlook for 2010/11 is bright, on the back of budgeted increases in production and payout.
- › Debt reduction remains a key farmer goal for the 2010/11 season.

»» TABLE 1: KEY PARAMETERS, FINANCIAL RESULTS AND BUDGET FOR THE WAIKATO/BAY OF PLENTY DAIRY MODEL

YEAR ENDED 30 JUNE	2006/07	2007/08	2008/09 <sup>R</sup>	2009/10 <sup>1</sup>	2010/11 BUDGET
Effective area (ha)	106	106	109	112	112
Cows wintered (head)	304	304	314	328	328
Replacement heifers (head)	55	55	61	63	58
Cows milked 15th December (head)	300	300	309	322	322
Stocking rate (cows/ha)	2.8	2.8	2.8	2.9	2.9
Total milksolids (kg)	101 000	91 200	101 000	97 000	101 000
Milksolids per ha (kg/ha)	953	860	927	866	902
Milksolids per cow milked (kg/cow)	337	304	327	301	314
MS advance to end June (\$/kg)	3.65	6.62	4.15	5.15	5.30
MS deferred payment (\$)	0.50	0.81	1.00	1.05	0.95
Net cash income (\$)	453 056	717 497	533 983	638 107	677 886
Farm working expenses (\$)	278 909	333 047	386 186	340 915	363 766
Farm profit before tax(\$)	45 906	210 094	-11 177	127 132	134 517
Farm surplus for reinvestment <sup>2</sup> (\$)	2 905	115 930	-46 750	72 462	76 031

### 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 The model parameters have been revised, so the data for 2008/09 will not match that published in the 2009 report.



»»» TABLE 2: WAIKATO/BAY OF PLENTY 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	605 600	1 881	6.24	627 450	1 949	6.21
Dividend on wet shares	8 080	25	0.08	24 250	75	0.24
Cattle	29 375	91	0.30	30 402	94	0.30
Other farm income	0	0	0.00	0	0	0.00
<b>LESS:</b>						
Cattle purchases	4 948	15	0.05	4 216	13	0.04
<b>Net cash income</b>	<b>638 107</b>	<b>1 982</b>	<b>6.58</b>	<b>677 886</b>	<b>2 105</b>	<b>6.71</b>
<b>Farm working expenses</b>	<b>340 915</b>	<b>1 059</b>	<b>3.51</b>	<b>363 766</b>	<b>1 130</b>	<b>3.60</b>
<b>Cash operating surplus</b>	<b>297 192</b>	<b>923</b>	<b>3.06</b>	<b>314 120</b>	<b>976</b>	<b>3.11</b>
Interest	129 756	403	1.34	138 935	431	1.38
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	-4 271	-13	-0.04	-6 070	-19	-0.06
Minus depreciation	36 033	112	0.37	34 598	107	0.34
<b>Farm profit before tax</b>	<b>127 132</b>	<b>395</b>	<b>1.31</b>	<b>134 517</b>	<b>418</b>	<b>1.33</b>
Taxation	29 014	90	0.30	30 464	95	0.30
<b>Farm profit after tax</b>	<b>98 118</b>	<b>305</b>	<b>1.01</b>	<b>104 053</b>	<b>323</b>	<b>1.03</b>
Add back depreciation	36 033	112	0.37	34 598	107	0.34
Reverse stock value adjustment	4 271	13	0.04	6 070	19	0.06
Dividend on dry shares	0	0	0.00	1 000	3	0.01
Off-farm income	7 084	22	0.07	6 440	20	0.06
<b>Discretionary cash</b>	<b>145 506</b>	<b>452</b>	<b>1.50</b>	<b>152 161</b>	<b>473</b>	<b>1.51</b>
<b>APPLIED TO:</b>						
Net capital purchases	15 456	48	0.16	15 456	48	0.15
Development	0	0	0.00	0	0	0.00
Principal repayments	35 533	110	0.37	34 187	106	0.34
Drawings	65 960	205	0.68	69 690	216	0.69
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>28 558</b>	<b>89</b>	<b>0.29</b>	<b>32 828</b>	<b>102</b>	<b>0.33</b>
<b>Farm surplus for reinvestment<sup>1</sup></b>	<b>72 462</b>	<b>225</b>	<b>0.75</b>	<b>76 031</b>	<b>236</b>	<b>0.75</b>
<b>ASSETS AND LIABILITIES</b>						
Farm, forest and building (opening)	4 040 000	12 547	41.65	3 500 000	10 870	34.65
Plant and machinery (opening)	152 109	472	1.57	144 748	450	1.43
Stock valuation (opening)	479 741	1 490	4.95	475 470	1 477	4.71
Dairy company shares	451 470	1 402	4.65	451 470	1 402	4.47
Other farm related investments (opening)	0	0	0.00	0	0	0.00
<b>Total farm assets</b>	<b>5 123 320</b>	<b>15 911</b>	<b>52.82</b>	<b>4 571 688</b>	<b>14 198</b>	<b>45.26</b>
<b>Total liabilities (opening)</b>	<b>1 835 800</b>	<b>5 701</b>	<b>18.93</b>	<b>1 835 800</b>	<b>5 701</b>	<b>18.18</b>
<b>Total equity (assets-liabilities)</b>	<b>3 287 520</b>	<b>10 210</b>	<b>33.89</b>	<b>2 735 888</b>	<b>8 497</b>	<b>27.09</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: WAIKATO/BAY OF PLENTY 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	51 198	159	0.53	51 520	160	0.51
Casual wages	5 474	17	0.06	7 084	22	0.07
ACC	1 399	4	0.01	2 403	7	0.02
<b>Total labour expenses</b>	<b>58 071</b>	<b>180</b>	<b>0.60</b>	<b>61 007</b>	<b>189</b>	<b>0.60</b>
Animal health	23 184	72	0.24	23 828	74	0.24
Breeding	12 880	40	0.13	12 880	40	0.13
Dairy shed expenses	5 796	18	0.06	5 796	18	0.06
Electricity	10 948	34	0.11	11 914	37	0.12
Feed (hay and silage)	21 200	66	0.22	26 220	81	0.26
Feed (feed crops)	12 000	37	0.12	11 180	35	0.11
Feed (grazing)	31 629	98	0.33	31 343	97	0.31
Feed (other)	30 750	95	0.32	28 300	88	0.28
Fertiliser	43 070	134	0.44	45 565	142	0.45
Lime	1 288	4	0.01	1 610	5	0.02
Freight (not elsewhere deducted)	2 898	9	0.03	2 576	8	0.03
Regrassing costs	6 440	20	0.07	5 152	16	0.05
Weed and pest control	2 576	8	0.03	2 898	9	0.03
Fuel	7 406	23	0.08	8 050	25	0.08
Vehicle costs (excluding fuel)	10 304	32	0.11	10 626	33	0.11
Repairs and maintenance	23 184	72	0.24	28 980	90	0.29
<b>Total other working expenses</b>	<b>245 553</b>	<b>763</b>	<b>2.53</b>	<b>256 918</b>	<b>798</b>	<b>2.54</b>
Communication costs (phone and mail)	2 898	9	0.03	2 898	9	0.03
Accountancy	4 508	14	0.05	4 669	15	0.05
Legal and consultancy	3 220	10	0.03	3 542	11	0.04
Other administration	2 576	8	0.03	2 898	9	0.03
Water charges (irrigation)	0	0	0.00	0	0	0.00
Rates	12 236	38	0.13	12 880	40	0.13
Insurance	6 440	20	0.07	6 762	21	0.07
ACC employer	2 115	7	0.02	8 556	27	0.08
Other expenditure <sup>1</sup>	3 298	10	0.03	3 636	11	0.04
<b>Total overhead expenses</b>	<b>37 291</b>	<b>116</b>	<b>0.38</b>	<b>45 841</b>	<b>142</b>	<b>0.45</b>
<b>Total farm working expenses</b>	<b>340 915</b>	<b>1 059</b>	<b>3.51</b>	<b>363 766</b>	<b>1 130</b>	<b>3.60</b>
<b>CALCULATED RATIOS</b>						
Economic farm surplus (EFS <sup>2</sup> )	171 888	534	1.77	189 735	589	1.88
Farm working expenses/NCI <sup>3</sup>	53%			54%		
EFS/total farm assets	3.4%			4.2%		
EFS less interest and lease/equity	1.3%			1.9%		
Interest+rent+lease/NCI	20.3%			20.5%		
EFS/NCI	26.9%			28.0%		
Wages of management	85 000	264	0.88	83 717	260	0.83

**Note**

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 WAIKATO/BAY OF PLENTY DAIRY FARM MODEL IN 2009/10



The cash operating surplus for the model doubled compared with 2008/09 to \$297 200. This result was driven by the increase in the milksolids payout and despite a late summer/autumn drought affecting both the Waikato and Bay of Plenty regions. The farm surplus for reinvestment, at \$72 500, was a significant turnaround from the deficit of \$46 800 in 2008/09.

### REVENUE UP DESPITE THE DROUGHT

Net cash income increased 19 percent compared with 2008/09 to \$638 100 in 2009/10, despite the drought reducing milk production.

### DIFFICULT CLIMATE YEAR

With a very dry 2009 autumn, pasture covers going into the 2009/10 season were well below target levels. This problem was then compounded by an extremely cold June 2009 in most areas, with a record number of frosts for the month in many cases. The impact on pasture growth was very noticeable, with some areas recording little or no pasture growth over this period. The situation was rectified to some degree with a warm August, which saw very good pasture growth rates. This took the pressure off many dairy farm systems, most of which were facing significant feed shortages going into calving.

However, the respite was short and some extremely cold weather in late September and October resulted in an early peak milk production date for most areas. This cold weather also meant little silage was made on many farms.

Below-average rainfall in November resulted in low soil moisture conditions in December and early January. This led to below-average growth rates in most parts of the region, and the feed situation became difficult on many farms. In late January, most parts of southern and central Waikato, Central Plateau and Bay of Plenty received good rainfall. For these areas, this provided some short-term relief. However, in the northern Waikato and selected districts in other areas, this rainfall did not eventuate and soil moisture conditions continued to worsen. As a result, the Waikato region was declared a drought area in early April 2010, with the Bay of Plenty declared a drought area shortly thereafter. As a result, the milking season was cut short by an average of three weeks, with most farmers drying off their herds by mid to late April. The resulting milk production was down 4 percent across both regions.

The drought broke in mid to late May in most areas, with good warm rain. However, pasture covers going into the 2010 winter are well below average – typically at 1700 to 2000 kilograms of dry matter per hectare. Cow condition is also well below target.

### SUPPLEMENTARY FEED READILY AVAILABLE

In contrast with the 2007/08 drought, the drought affected 2009/10 season saw sufficient supplementary feed available for most farmers. In spite of reduced areas of maize silage being planted, there was still a reasonable quantity of non-contracted maize silage available for sale in autumn 2010. Additionally, there was a good supply of palm kernel expeller (PKE), although farmers have had to become accustomed to signing contracts for supply. Although there was a limited supply of grass silage and hay from the Waikato region, due to the poor spring, plenty of supplement was transported in from other areas, particularly the Wairarapa and Taranaki regions. Generally, supplementary feed prices were lower than in previous years, with typical feed costs as follows:

- › Maize silage 26 to 30 cents per kilogram of dry matter.

- › PKE \$240 per tonne.
- › Grass silage bales \$60 to \$80 per bale.

PKE is now an established feed component in most dairy systems, with 85 percent of the monitored farms using PKE at some stage during the 2009/10 season. This has significant implications for the dairy industry if there are any questions as to the supply or price of PKE in the future.

## REVENUE UP FOLLOWING MAJOR LIFTS IN PAYOUT

The opening forecast payout from Fonterra of \$4.55 per kilogram of milksolids caused significant angst and uncertainty within the industry. This placed severe pressure on farmers to manage their finances and most farms were looking at operating at another significant loss for the second year in a row. Increases in international returns saw Fonterra lift the payout substantially through the latter part of the season, to the relief of everybody, to a milk price advance at the end of June of \$5.15 per kilogram of milksolids, and a total for the season of \$6.10, plus a dividend of 20 to 30 cents per kilogram of milksolids. The result, despite the drought, was a 19 percent increase in net cash income compared with 2008/09 to \$638 100.

## EXPENDITURE DECREASES

Total farm working expenses dropped 12 percent in 2009/10, compared with 2008/09, which expressed on a per kilogram of milksolids basis meant it decreased from \$3.82 per kilogram of milksolids in 2008/09 to \$3.51 in 2009/10. In many respects, this is a significant achievement given the upward pressure on expenditure in recent years, and the impacts of the drought. In a large part, the reduction was driven by the low payout announcement at the start of the season, which saw a determined drive by farmers to reduce expenditure.

On the 45 monitored farms, farm working expenditure varied from \$2.01 to \$4.75 per kilogram of milksolids, which is a much tighter range than in 2008/09. Twenty-four percent of the farms had farm working expenditure of \$3.00 or less per kilogram of milksolids.

### FEED EXPENDITURE DOWN

Surprisingly, total feed costs were down 22 percent, compared with 2008/09. This was due to less silage and hay made on-farm, reductions in the unit cost of PKE and maize, as well as a slight reduction in the quantity of feed purchased from 631 kilograms of dry matter per cow, to 554 kilograms of dry matter per cow. Feed costs remain the single biggest farm working expense, making up 28 percent of farm working expenditure. Within the monitored farms, this figure varied from 13 percent through to 49 percent.

### FERTILISER EXPENDITURE DOWN

Expenditure on fertiliser decreased 17 percent on the model farm, due to decreases in the unit cost of fertiliser and a reduction in the quantity applied. Both the model and the monitored farms on average applied below maintenance fertiliser in 2009/10, the second year in a row that this occurred. This is due to a number of factors, including: the initial low payout announcement that saw farmers reduce spring applications; the effect of the drought; and the fact that many farms have high levels of fertility from previous applications. Overall, the model farm applied 90 kilograms of nitrogen, 25 kilograms of phosphate, 48 kilograms of potassium, and 31 kilograms of sulphur per hectare in 2009/10.

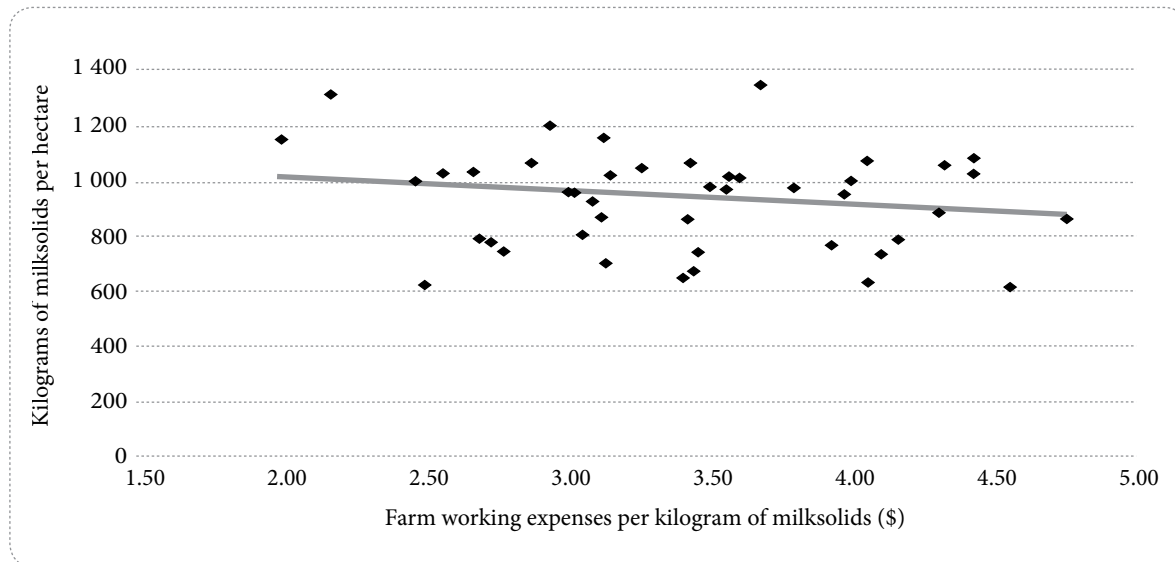
### OTHER SPENDING DOWN

Spending on repairs and maintenance also declined, mainly a reflection of farmer caution both at the start of the season with the low milksolids payout announcement, and at the end of the season due to the drought.

Interest payments eased downwards as a result of lower interest rates. As in the previous year, the extent to which farmers benefited from reduced interest rates varied significantly, depending on how much debt was on

fixed term and whether their mortgages rolled over within the year. The interest payment for the model equates to \$1.34 per kilogram of milksolids. For the monitored farms, this varied from 19 cents to \$3.33 per kilogram of milksolids. Seventeen percent of the monitored farms have interest costs greater than \$2.00 per kilogram of milksolids.

»» FIGURE 1: WAIKATO/BAY OF PLENTY FARM WORKING EXPENSES VERSUS PRODUCTION



## NET RESULT IMPROVES SIGNIFICANTLY

Farm profit before tax for the farm model increased significantly to \$127 100, a large increase from a loss of \$11 200 in 2008/09. Tax payments increased in line with the increased income. Within the farm model, it is assumed that provisional tax was revised upwards towards the end of the year. Farmers who did not revise provisional payments will face significant terminal tax payments in 2010/11.

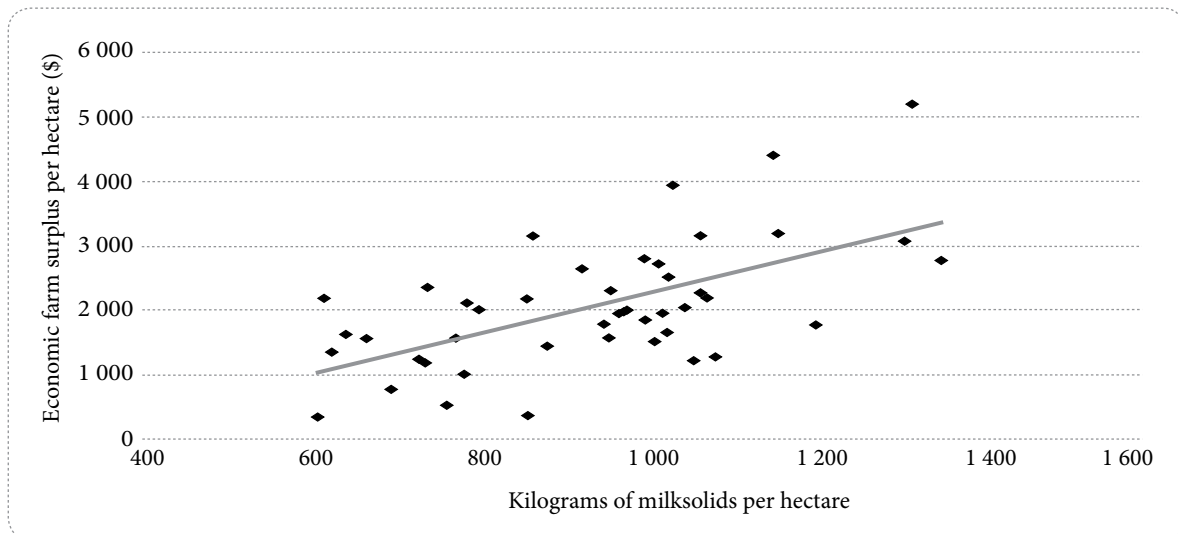
In line with their cautious mood, farmers spent very little on capital items – less than half depreciation levels and almost nothing on development items, with only ten of the 45 monitored farms spending in this area. Principal repayments were up, with 40 percent of the monitored farms making payments. This was reflected in the model – for a long time on interest-only payments – by making principal repayments on half the term debt.

Drawings at \$66 000 were very similar to 2008/09, reflecting farmers' caution on spending.

The farm model finishes the year with a cash surplus of \$28 600, a 171 percent improvement on 2008/09. Farmers said the main use of this will be to reduce overdraft levels and term debt. Of the monitored farms, 24 percent show a cash deficit at the end of 2009/10 and 9 percent show a negative farm surplus for reinvestment.

At the opening of 2009/10, the model had an equity level of 65 percent. By close of the year, equity had reduced to 61 percent. The main driver behind this is reducing land values. While it is difficult to be precise on the value of the farm model due to limited farm sales over the year, land values have dropped. This has been reflected in the model where the value of land and buildings has been reduced by \$1 million from opening 2008/09 to opening 2010/11 – a drop of 23 percent.

»» FIGURE 2: WAIKATO/BAY OF PLENTY ECONOMIC FARM SURPLUS VERSUS PRODUCTION



## BUDGET FINANCIAL PERFORMANCE OF THE WAIKATO/BAY OF PLENTY DAIRY FARM MODEL IN 2010/11

The cash operating surplus for the model is expected to increase 6 percent in 2010/11. An increase in production and milksolids payout is off-set somewhat by increased farm working expenditure.

### REVENUE BUDGETED TO INCREASE

Farms within the region are entering the 2010 winter with pasture covers and cow condition below optimum levels. Despite this, farmers are optimistic about production in 2010/11, budgeting for an average lift of 9 percent over 2009/10. Given the current situation, the model has budgeted for possibly a more pragmatic increase of 4 percent, bringing production back up to the 2008/09 season. This increase in production, along with the expected improvement in payout, sees milk income up 4 percent over 2009/10.

If the 9 percent increase in production did eventuate, this would mean an extra \$25 000 of revenue, but also an extra capital expenditure of \$21 400 to buy in the extra shares required.

Of particular note is the expectation of monitored farmers for 2 percent reduction in the number of milking cows at the end of 2010/11 to be taken into 2011/12.

### EXPENDITURE RETURNS TO ITS UPWARD TREND

Overall farm working expenditure is budgeted to increase 7 percent in 2010/11, increasing up to \$3.60 per kilogram of milksolids. This is mostly driven by expenditure in a number of key items. Total feed expenditure is expected to increase by 2 percent, mostly due to farmers budgeting for increased volume rather than increased costs. Fertiliser expenditure is expected to increase 6 percent, a reflection of farmers budgeting for higher costs, rather than increased volume, although many are applying extra nitrogen over the 2010 winter to boost pasture growth coming out of the drought. Repairs and maintenance spending is budgeted to increase 25 percent as farmers move to catch up on deferred maintenance on 2009/10. Budgeted farm working expenditure per kilogram of milksolids for the monitored farms varied from \$1.99 to \$5.14 per kilogram of milksolids.

Interest costs are budgeted to increase 7 percent in the model, driven by an expectation of increased interest rates over the year. Electricity and fuel are budgeted to increase 9 percent, largely driven by the Emissions Trading Scheme costs.

## NET RESULT

Farm profit before tax lifts to \$134 500 up 6 percent on 2009/10. Spending on capital items remains subdued, at less than half the rate of depreciation. Development expenditure is also minimal. Some principal repayments are budgeted for, as farmers endeavour to reduce debt. Drawings also increase, in part to cover the increase in goods and services tax.

Overall, the budget shows a \$32 800 cash surplus, up 15 percent compared with 2009/10. While there are a number of options for spending this surplus, many farmers are initially likely to hold this as a cash reserve as a hedge against income volatility and to see how the year goes.

»» FIGURE 3: WAIKATO/BAY OF PLENTY 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> The model parameters have been revised, so the data for 2008/09 will not match that published in the 2009 report.

## INFORMATION ABOUT THE MODEL

The Waikato/Bay of Plenty dairy model represents approximately 4990 dairy farms in the Waikato and Bay of Plenty regions. The model is a seasonal supply farm based on an average property of 112 hectares, milking 322 cows, and producing around 102 000 kilograms of milksolids in a normal season. Heifers are grazed off the farm for 12 months. The model is created from information drawn from 45 dairy farms and a wide cross-section of agribusiness representatives. The aim of the model is to typify an average dairy farm for the Waikato/Bay of Plenty region. 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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