



# WAIKATO/BAY OF PLENTY DAIRY

**Key results from the Ministry for Primary Industries  
2012 dairy monitoring programme**

## KEY POINTS

- An exceptionally good season weather-wise saw dairy production lift by 10 percent across the region.
- Net cash income is up only 2 percent on 2010/11; the lift in production offset by a lower milk payment.
- Farm working expenses increased by 9 percent, with increased spending on most inputs, including feed, fertiliser, and repairs and maintenance.
- Net cash income is budgeted to drop 20 percent in 2012/13, largely due to a drop in the milk payout.
- Despite the expected drop in payout for 2012/13, farmers remain confident in the long-term outlook for dairy.

**Table 1: Key parameters, financial results and budget for the Waikato/Bay of Plenty dairy model**

Year ended 30 June	2008/09	2009/10 <sup>1</sup>	2010/11 <sup>2</sup>	2011/12 actual	2012/13 budget
Effective area (ha)	109	112	118	118	119
Cows wintered (head)	314	328	341	345	349
Replacement heifers (head)	61	63	61	64	65
Cows milked 15th December (head)	309	322	335	338	340
Stocking rate (cows/ha)	2.8	2.9	2.8	2.9	2.9
Total milksolids (kg)	101 000	97 000	107 200	117 700	112 000
Milksolids per ha (kg/ha)	927	866	908	997	941
Milksolids per cow milked (kg/cow)	327	301	320	348	329
Milksolids advance to end June (\$/kg)	4.15	5.15	6.20	5.20	4.40
Milksolids deferred payment (\$/kg)	1.00	1.05	0.95	1.39	0.85
Net cash income (\$)	533 983	638 107	820 887	833 504	667 684
Farm working expenses (\$)	386 186	340 915	414 863	452 646	409 689
Farm profit before tax(\$)	-11 177	127 132	255 488	246 496	133 890
Farm surplus for reinvestment <sup>3</sup> (\$)	-46 750	72 462	176 761	87 227	53 427

### 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 The model parameters have been updated as from 2010/11 using the latest dairy statistics. Caution should be used in comparing with earlier published material.

3 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 farm profit after tax plus depreciation plus stock adjustments less drawings.

Table 2: Waikato/Bay of Plenty dairy model budget

	2011/12			2012/13 budget		
	Whole farm (\$)	Per cow (\$)	Per kg of milksolids (\$)	Whole farm (\$)	Per cow (\$)	Per kg of milksolids (\$)
<b>Revenue</b>						
Milksolids	760 770	2 251	6.46	592 845	1 744	5.29
Dividend on wet shares	32 054	95	0.27	35 564	105	0.32
Cattle	42 270	125	0.36	41 053	121	0.37
Other farm income	2 010	6	0.02	1 822	5	0.02
<b>Less:</b>						
Cattle purchases	3 600	11	0.03	3 600	11	0.03
<b>Net cash income</b>	<b>833 504</b>	<b>2 466</b>	<b>7.08</b>	<b>667 684</b>	<b>1 964</b>	<b>5.96</b>
<b>Farm working expenses</b>	<b>452 646</b>	<b>1 339</b>	<b>3.85</b>	<b>409 689</b>	<b>1 205</b>	<b>3.66</b>
<b>Cash operating surplus</b>	<b>380 858</b>	<b>1 127</b>	<b>3.24</b>	<b>257 995</b>	<b>759</b>	<b>2.30</b>
Interest	119 577	354	1.02	103 085	303	0.92
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	9 505	28	0.08	0	0	0.00
Minus depreciation	24 289	72	0.21	21 020	62	0.19
<b>Farm profit before tax</b>	<b>246 496</b>	<b>729</b>	<b>2.09</b>	<b>133 890</b>	<b>394</b>	<b>1.20</b>
Income equalisation	0	0	0.00	0	0	0.00
Taxation	99 694	295	0.85	26 683	78	0.24
<b>Farm profit after tax</b>	<b>146 802</b>	<b>434</b>	<b>1.25</b>	<b>107 208</b>	<b>315</b>	<b>0.96</b>
<b>Allocation of funds</b>						
Add back depreciation	24 289	72	0.21	21 020	62	0.19
Reverse stock value adjustment	-9 505	-28	-0.08	0	0	0.00
Drawings	74 360	220	0.63	74 800	220	0.67
<b>Farm surplus for reinvestment<sup>1</sup></b>	<b>87 227</b>	<b>258</b>	<b>0.74</b>	<b>53 427</b>	<b>157</b>	<b>0.48</b>
<b>Reinvestment</b>						
Net capital purchases	28 024	83	0.24	55 460	163	0.50
Development	8 788	26	0.07	0	0	0.00
Principal repayments	42 905	127	0.36	0	0	0.00
<b>Farm cash surplus/deficit</b>	<b>7 509</b>	<b>22</b>	<b>0.06</b>	<b>-2 033</b>	<b>-6</b>	<b>-0.02</b>
<b>Other cash sources</b>						
Dividend on dry shares	0	0	0.00	0	0	0.00
Introduced funds	0	0	0.00	0	0	0.00
New borrowings	0	0	0.00	0	0	0.00
Off-farm income	7 436	22	0.06	7 000	21	0.06
<b>Net cash position</b>	<b>14 945</b>	<b>44</b>	<b>0.13</b>	<b>4 967</b>	<b>15</b>	<b>0.04</b>
<b>Assets and Liabilities</b>						
Farm, forest and building (opening)	4 040 000	11 953	34.32	4 040 000	11 882	36.07
Plant and machinery (opening)	144 748	428	1.23	123 036	362	1.10
Stock valuation (opening)	801 511	2 371	6.81	811 016	2 385	7.24
Dairy company shares	484 544	1 434	4.12	532 004	1 565	4.75
Other farm-related investments (opening)	0	0	0.00	0	0	0.00
<b>Total farm assets</b>	<b>5 470 803</b>	<b>16 186</b>	<b>46.48</b>	<b>5 506 056</b>	<b>16 194</b>	<b>49.16</b>
Total liabilities (opening)	1 750 990	5 180	14.88	1 708 085	5 024	15.25
<b>Total equity (assets-liabilities)</b>	<b>3 719 813</b>	<b>11 005</b>	<b>31.60</b>	<b>3 797 972</b>	<b>11 171</b>	<b>33.91</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 farm profit after tax plus depreciation plus stock adjustments less drawings.

Table 3: Waikato/Bay of Plenty dairy model expenditure

	2011/12			2012/13 budget		
	Whole farm (\$)	Per cow (\$)	Per kg of milksolids (\$)	Whole farm (\$)	Per cow (\$)	Per kg of milksolids (\$)
<b>Farm working expenses</b>						
Permanent wages	60 502	179	0.51	61 880	182	0.55
Casual wages	7 436	22	0.06	7 480	22	0.07
ACC	2 399	7	0.02	2 052	6	0.02
<b>Total labour expenses</b>	<b>70 337</b>	<b>208</b>	<b>0.60</b>	<b>71 412</b>	<b>210</b>	<b>0.64</b>
Animal health	26 364	78	0.22	26 180	77	0.23
Breeding	16 224	48	0.14	16 660	49	0.15
Dairy shed expenses	9 126	27	0.08	8 500	25	0.08
Electricity	14 196	42	0.12	14 620	43	0.13
Feed (hay and silage)	53 200	157	0.45	44 000	129	0.39
Feed (feed crops)	0	0	0.00	0	0	0.00
Feed (grazing)	33 696	100	0.29	34 237	101	0.31
Feed (other)	50 600	150	0.43	32 400	95	0.29
Fertiliser	49 325	146	0.42	37 885	111	0.34
Lime	3 718	11	0.03	3 060	9	0.03
Freight (not elsewhere deducted)	4 056	12	0.03	4 080	12	0.04
Regrassing costs	5 746	17	0.05	5 440	16	0.05
Weed and pest control	3 380	10	0.03	3 400	10	0.03
Fuel	9 464	28	0.08	9 860	29	0.09
Vehicle costs (excluding fuel)	15 210	45	0.13	14 620	43	0.13
Repairs and maintenance	35 828	106	0.30	30 940	91	0.28
<b>Total other working expenses</b>	<b>330 133</b>	<b>977</b>	<b>2.80</b>	<b>285 882</b>	<b>841</b>	<b>2.55</b>
Communication costs (phone and mail)	3 380	10	0.03	3 468	10	0.03
Accountancy	5 408	16	0.05	5 576	16	0.05
Legal and consultancy	3 718	11	0.03	3 842	11	0.03
Other administration	3 380	10	0.03	3 468	10	0.03
Water charges (irrigation)	0	0	0.00	1 000	3	0.01
Rates	14 872	44	0.13	15 470	46	0.14
Insurance	8 450	25	0.07	8 840	26	0.08
ACC employer	4 686	14	0.04	5 019	15	0.04
Other expenditure <sup>1</sup>	8 281	25	0.07	5 712	17	0.05
<b>Total overhead expenses</b>	<b>52 176</b>	<b>154</b>	<b>0.44</b>	<b>52 395</b>	<b>154</b>	<b>0.47</b>
<b>Total farm working expenses</b>	<b>452 646</b>	<b>1 339</b>	<b>3.85</b>	<b>409 689</b>	<b>1 205</b>	<b>3.66</b>
<b>Calculated ratios</b>						
Economic farm surplus (EFS <sup>2</sup> )	281 074	832	2.39	151 975	447	1.36
Farm working expenses/NCI <sup>3</sup>	54%			61%		
EFS/total farm assets	5.1%			2.8%		
EFS less interest and lease/equity	4.3%			1.3%		
Interest+rent+lease/NCI	14.3%			15.4%		
EFS/NCI	33.7%			22.8%		
Wages of management	85 000	251	0.72	85 000	250	0.76

**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 WAIKATO/ BAY OF PLENTY DAIRY MODEL IN 2011/12

The cash operating surplus for the Waikato/Bay of Plenty dairy model decreased by 9 percent compared with 2010/11. While production was up, this was more than offset by a lower payout and higher farm working expenses.

### REVENUE UP, JUST

Net cash income for the model increased by 2 percent on 2010/11 to \$833 500. While production was up by 10 percent, the payout for the season dropped to \$6.05 per kilogram of milksolids, down 21 percent compared with 2010/11. The total milksolids payout was, therefore, similar to that received in 2010/11. Net cattle income was up 18 percent to \$38 700 as a result of improved beef schedules, and revenue from dividends on wet shares was up 18 percent compared with 2010/11.

Total milk production for the model climbed to 117 700 kilograms of milksolids – 997 kilograms of milksolids per hectare or 348 kilograms of milksolids per cow. On the monitored farms, production varied from 596–2070 kilograms of milksolids per hectare and 224–473 kilograms of milksolids per cow.

### A good season

The favourable autumn in 2011 resulted in good levels of pasture cover and cow condition leading into winter 2011. June and July were particularly wet, resulting in poor pasture utilisation and many farmers had difficulty in minimising soil and pasture damage. Spring 2011 was especially favourable, resulting in a longer than usual period of peak cow production and more than usual silage being made. November 2011 was quite dry, but throughout the summer most areas had sufficient rainfall to maximise pasture growth. In many areas, second or even third cuts of silage were made to maintain pasture quality.

With excellent levels of milk production, the majority of farmers decided not to over extend the milking season, opting to dry off at an appropriate time to rebuild pasture cover and cow condition. Cow condition leading into winter 2012 is considered above average at around 4.5 or better, and pasture cover levels would be average at around 2000–2200 kilograms of dry matter per hectare.

Summer crops grown on dairy farms were generally average to below average in terms of yield.

Ironically, this was due to either dry conditions during establishment in November or extremely wet conditions in December. Maize yields have also been highly variable because of the weather conditions.

### FARM WORKING EXPENSES UP

Total farm working expenses for the model increased by 9 percent compared with 2010/11, although on a per kilogram of milksolids basis, it dropped from \$3.87 to \$3.85 due to the increased production. On the monitored farms, farm working expenses per kilogram of milksolids varied from \$2.23 to \$6.02.

### Supplementary feed still a major cost

Total feed costs increased by 3 percent; expenditure on hay, and especially silage, made on the farm increased by 225 percent, offset by a 40 percent reduction in bought-in other feed (mostly palm kernel). It is estimated that the average dairy farm purchased nearly 2 tonnes of dry matter per hectare of supplement, which equates to 10–15 percent of the diet.

Supplementary feed prices were typically as follows:

- palm kernel – \$250 to \$280 per tonne including transport;
- silage bales – \$80 per bale;
- maize silage – 32 cents to 36 cents per kilogram of dry matter in the stack;
- hay – \$80 per bale.

Total feed costs for the model were \$1.17 per kilogram of milksolids, 30 percent of total farm working expenses. For the monitored farms, expenses on feed varied from 37 cents to \$2.15 per kilogram of milksolids.

### Fertiliser application held

Farmers are now generally very aware of the need to use a nutrient budget when planning their fertiliser spend, and most fertiliser company recommendations closely follow nutrient budget information. The majority of dairy farms are at or above optimum soil nutrient levels and, in many cases, farmers are actively mining their soil fertility reserves or making better use of effluent to minimise fertiliser requirements.

Fertiliser expenses rose 11 percent in 2011/12, but much of this is accounted for by price rises rather than increased rates of application. Expenditure on lime also rose, up 11 percent, with half of the monitored farms applying lime. For the 2011/12 model, fertiliser application was equivalent to: 117 kilograms of nitrogen per hectare, 28 kilograms of phosphate per hectare, 29 kilograms of potassium per hectare and 35 kilograms of sulphur per hectare, which would be considered a below-maintenance application.

### Most other costs increase

Most other farm working expenses increased in 2011/12, a combination of either increased volume and/or unit price increases. See Table 4.

### Debt servicing down

Debt servicing costs for the model dropped 5 percent, resulting from a combination of a drop in interest rates and debt being repaid. For the monitored farms, debt servicing ranged from \$0 to \$3.38 per kilogram of milksolids, with an average of \$1.09 per kilogram of milksolids. Total term debt across the monitored farms varied from \$0 to \$42 per kilogram of milksolids, with an average of \$17.09 per kilogram of milksolids.

The depreciation cost dropped 30 percent, a direct

result of recent tax changes, which now exclude a range of buildings from being depreciated.

### NET RESULT DOWN ON 2010/11

Farm profit before tax dropped 4 percent compared with 2010/11 – the slight rise in net cash income offset by the higher farm working expenses. A much higher tax payment is shown for the model (a husband and wife partnership), a direct result of the higher income in 2010/11 and 2011/12, and a high terminal tax flowing through from 2010/11. The result of this is farm profit after tax dropping 35 percent in 2011/12 compared with 2010/11.

Spending on capital jumped 73 percent as a result of an increased spend on Fonterra shares, flowing through from the increased production in 2010/11. Development expenditure is up slightly as farmers spend more in this area, especially on effluent treatment systems. The model also makes a principal debt reduction on its term debt following a similar action in 2010/11. Of the monitored farms, 30 out of 45 (67 percent) made debt repayments in 2011/12.

The model finishes the year with a cash surplus of \$7500, down 93 percent on 2010/11 and shows an essentially “break-even” situation. In noting this, many farms have gone into the 2012/13 season in credit in their seasonal finance account.

Table 4: Waikato/Bay of Plenty dairy model farm working expenses

Expense item	Increase (%)	Range of expenses on the monitored farms (c/kgMS)
Weed and pest	12	0–11
Fuel	18	2–31
Vehicle expenses	30	3–50
Repairs and maintenance	11	2–86
Rates	8	4–23
Insurance	20	1–20

Note: c/kgMS = cents per kilogram of milksolids.

## BUDGET FINANCIAL PERFORMANCE OF THE WAIKATO/BAY OF PLENTY DAIRY MODEL IN 2012/13

The cash operating surplus for the model is budgeted to decrease by 32 percent in 2012/13. The major factor causing this is a drop in the seasonal payout to an expected \$5.50 per kilogram of milksolids.

### REVENUE EXPECTED TO DROP 20 PERCENT

Farmers are budgeting for a 5 percent decrease in production for 2012/13, given the good conditions prevailing in 2011/12. This, combined with the forecast drop in payout, will see income from milksolids drop 22 percent in the 2012/13 budget. Net cattle income will also drop as farmers budget on lower beef prices based on expectations of lower schedule prices.

Income from the dividend on wet shares is budgeted to go up 11 percent based on an

expectation of some increase in payments.

Overall, net cash income is budgeted to be down by 20 percent.

### FARM WORKING EXPENSES BUDGETED TO DROP

In general, farmers are budgeting to decrease farm working expenses by 9 percent. A major component of this is a reduction in feed costs, with hay and silage expenditure down 17 percent, based on an expectation of less supplementary feed being made on-farm, and bought-in feed expenses down 36 percent. Part of the background to this is that many farms were carrying significant reserves of supplementary feed into the 2012/13 year.

Fertiliser expenditure is expected to drop 23 percent, as farmers budget for a reduced spring application in light of reduced cash flows, and have put on hold any autumn application until it is clear where the payout and income is sitting as they go into the autumn. Repairs and maintenance have been reduced by 14 percent as farmers again budget cautiously. Administration and standing charges are expected to increase by at least the anticipated consumers price index, and some expenditure has been budgeted for under “water charges” in expectation of consent costs in the Waikato under Waikato Regional Council’s variation 6.

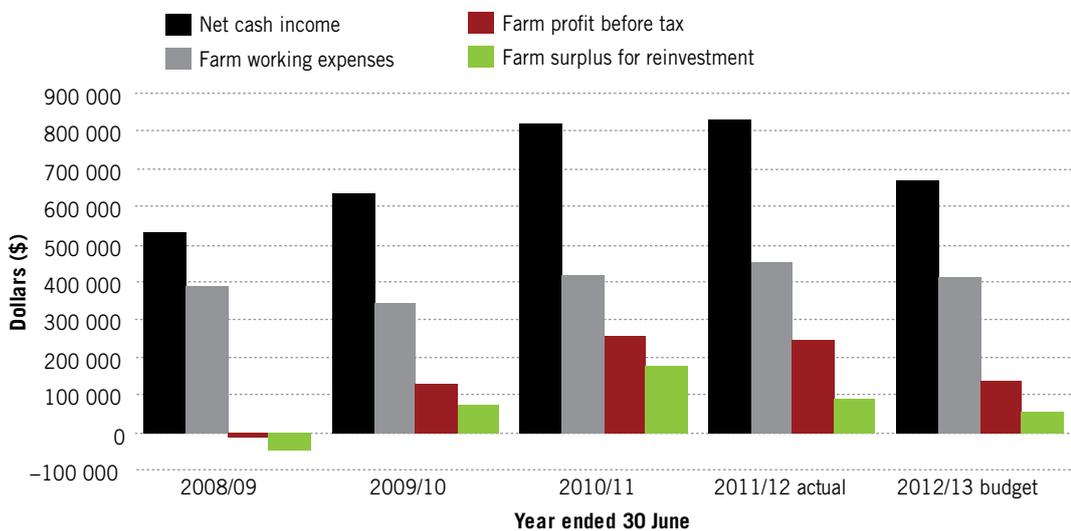
Debt servicing costs are expected to reduce again, down 14 percent because of lower interest rates and debt repayments.

## NET RESULT

Budgeted farm profit before tax is down 46 percent on the 2011/12 year, although with lower tax payments, due to the lower income, farm profit after tax is down 27 percent. Drawings are held relatively constant, with capital purchases being the only other big expenditure item. This mostly relates to the cost of purchasing extra Fonterra shares following the increased production in 2011/12. The cash deficit is \$2000 and, based on this, few farmers are budgeting for any development expenditure or principal debt reduction.

While concerned at the drop in the payout and the impact of this on the budgets, farmers are still confident about the future of dairying.

Figure 1: Waikato/Bay of Plenty dairy model profitability trends



## INFORMATION ABOUT THE MODEL

The Waikato/Bay of Plenty dairy model represents nearly 4990 dairy farms in the Waikato and Bay of Plenty regions. The model is a seasonal supply farm based on an average property of 118 hectares, milking 338 cows and producing around 110 000 to 115 000 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.

Please note that several budget parameters were changed for the 2010/11 year based on the latest available dairy statistics. Care should be taken in comparing current data with that published previously.

For more information on the model contact [phil.journeaux@agfirst.co.nz](mailto:phil.journeaux@agfirst.co.nz)

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