Photo: Bob Zuur.

2009 PASTORAL MONITORING

WAIKATO/BAY OF PLENTY DAIRY

THIS REPORT CONTAINS THE KEY RESULTS FROM THE MINISTRY OF AGRICULTURE AND FORESTRY'S 2009 PASTORAL MONITORING PROGRAMME.

The Waikato/Bay of Plenty dairy model represents about 5050 dairy farms in the Waikato and Bay of Plenty regions.

KEY POINTS

- The carryover effects of the 2008 drought, combined with variable weather including a very dry autumn in 2009, saw production only recover partially (up 7 percent compared with 2007/08) to 97 500 kilograms of milksolids.
- The reduced payout, down to $5.20 per kilogram of milksolids, saw the model's net cash income drop 28 percent to $519 500, compared with 2007/08.
- The expected $7.00 payout at the start of the season, coupled with carryover effects of the drought, saw farmers spend freely at the start of the season. Farm working expenses were hard to pare back later in the season and farm working expenditure increased in 2008/09 by 16 percent to $3.96 per kilogram of milksolids.
- The higher costs and lower payout resulted in a significant cash loss of $53 800 for the model in 2008/09.
- As a result of the combination of losses in 2008/09 and the lower than expected $4.55 per kilogram of milksolids payout in 2009/10, farmer morale is subdued.

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

YEAR ENDED 30 JUNE	2005/06	2006/07	2007/08[R]	2008/09	2009/10 BUDGET
Effective area (ha)	103	106	106	109	109
Cows wintered (head)	295	304	304	314	314
Replacement heifers (head)	53	55	55	61	61
Cows milked 15th December (head)	292	300	300	309	309
Stocking rate (cows/ha)	2.8	2.8	2.8	2.8	2.8
Total milksolids (kg)	95 000	101 000	91 200	97 500	100 100
Milksolids per ha (kg/ha)	922	953	860	894	918
Milksolids per cow milked (kg/cow)	325	337	304	316	324
MS advance to end June ($/kg)	3.60	3.65	6.62	4.15	3.77
MS deferred payment ($)	0.64	0.50	0.81	1.00	1.05
Net cash income ($)	428 400	453 000	717 500	519 500	499 000
Farm working expenses ($)	263 000	278 900	333 000	386 000	329 600
Farm profit before tax ($)	75 600	45 900	210 000	–25 600	23 900
Farm surplus for reinvestment[2] ($)	13 700	2 900	140 900	–61 200	–4 000

Notes
1 Figures may not add to totals due to rounding.
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 2007/08 will not match that published in *Pastoral Monitoring Report 2008.*

Ministry of Agriculture and Forestry
Te Manatū Ahuwhenua, Ngāherehere

TABLE 2: WAIKATO/BAY OF PLENTY DAIRY MODEL BUDGET[1]

	2008/09			2009/10 BUDGET			CHANGE
	WHOLE FARM ($)	PER COW ($)	PER KG MILSOLIDS ($)	WHOLE FARM ($)	PER COW ($)	PER KG MILSOLIDS ($)	BETWEEN 2008/09 AND 2009/10 (%)
REVENUE							
Milksolids	495 800	1 605	5.09	479 800	1 553	4.79	–3
Cattle	28 700	93	0.29	24 500	79	0.24	–15
Other farm income	0	0	0.00	0	0	0.00	..
LESS:							
Cattle purchases	5 000	16	0.05	5 200	17	0.05	2
Net cash income	**519 500**	**1 681**	**5.33**	**499 000**	**1 615**	**4.99**	**–4**
Farm working expenses	**386 000**	**1 249**	**3.96**	**329 600**	**1 067**	**3.29**	**–15**
Cash operating surplus	**133 400**	**432**	**1.37**	**169 400**	**548**	**1.69**	**27**
Interest	121 200	392	1.24	109 500	354	1.09	–10
Rent and/or leases	0	0	0.00	0	0	0.00	..
Stock value adjustment	0	0	0.00	0	0	0.00	..
Minus depreciation	37 700	122	0.39	35 900	116	0.36	–5
Farm profit before tax	**–25 600**	**–83**	**–0.26**	**23 900**	**78**	**0.24**	**–194**
Taxation	7 800	25	0.08	2 900	9	0.03	-63
Farm profit after tax	**–33 400**	**–108**	**–0.34**	**21 000**	**68**	**0.21**	**–163**
Add back depreciation	37 700	122	0.39	35 900	116	0.36	–5
Reverse stock value adjustment	0	0	0.00	0	0	0.00	..
Off-farm income	10 000	32	0.10	10 200	33	0.10	3
Discretionary cash	**14 300**	**46**	**0.15**	**67 300**	**218**	**0.67**	**369**
APPLIED TO:							
Net capital purchases	14 600	47	0.15	18 000	58	0.18	23
Development	0	0	0.00	0	0	0.00	..
Principal repayments	0	0	0.00	0	0	0.00	..
Drawings	65 500	212	0.67	61 000	197	0.61	–7
New borrowings	0	0	0.00	0	0	0.00	..
Introduced funds	11 900	39	0.12	19 500	63	0.19	63
Cash surplus/deficit	**–53 800**	**–174**	**–0.55**	**7 700**	**25**	**0.08**	**–114**
Farm surplus for reinvestment[2]	**–61 200**	**–198**	**–0.63**	**–4 000**	**–13**	**–0.04**	**–93**
ASSETS AND LIABILITIES							
Farm, forest and building (opening)	4 512 200	14 603	46.28	4 025 600	13 028	40.22	–11
Plant and machinery (opening)	161 100	521	1.65	151 600	491	1.51	–6
Stock valuation (opening)	430 300	1 393	4.41	430 300	1 393	4.30	0
Dairy company shares	562 600	1 821	5.77	456 500	1 477	4.56	–19
Other farm related investments (opening)	0	0	0.00	0	0	0.00	..
Total farm assets	**5 666 200**	**18 337**	**58.12**	**5 064 000**	**16 389**	**50.59**	**–11**
Total liabilities (opening)	**1 500 000**	**4 854**	**15.38**	**1 554 000**	**5 029**	**15.52**	**4**
Total equity (assets-liabilities)	**4 166 200**	**13 483**	**42.73**	**3 510 000**	**11 359**	**35.07**	**–16**

Notes
1 Figures may not add to totals due to rounding.
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
.. Not applicable.

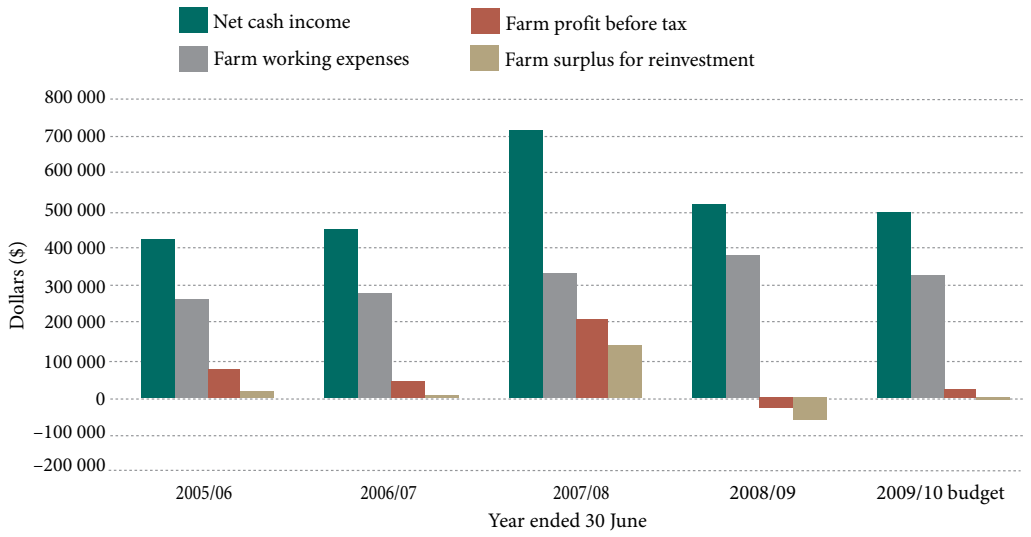
TABLE 3: WAIKATO/BAY OF PLENTY DAIRY MODEL EXPENDITURE[1]

	2008/09			2009/10 BUDGET			CHANGE
	WHOLE FARM ($)	PER COW ($)	PER KG MILSOLIDS ($)	WHOLE FARM ($)	PER COW ($)	PER KG MILSOLIDS ($)	BETWEEN 2008/09 AND 2009/10 (%)
FARM WORKING EXPENSES							
Permanent wages	48 000	155	0.49	48 000	155	0.48	0
Casual wages	4 000	13	0.04	4 000	13	0.04	0
ACC	1 100	4	0.01	1 400	4	0.01	21
Total labour expenses	**53 100**	**172**	**0.55**	**53 400**	**173**	**0.53**	**0**
Animal health	21 800	70	0.22	21 200	69	0.21	–2
Breeding	13 000	42	0.13	12 200	40	0.12	–6
Dairy shed expenses	7 100	23	0.07	6 900	22	0.07	–4
Electricity	11 900	38	0.12	12 000	39	0.12	1
Feed (hay and silage)	40 900	132	0.42	31 300	101	0.31	–24
Feed (feed crops)	0	0	0.00	0	0	0.00	..
Feed (grazing)	36 300	117	0.37	30 600	99	0.31	–16
Feed (other)	45 000	146	0.46	26 100	85	0.26	–42
Fertiliser	51 900	168	0.53	49 900	161	0.50	–4
Lime	2 700	9	0.03	1 400	5	0.01	–47
Freight (not elsewhere deducted)	3 200	11	0.03	2 600	8	0.03	–21
Regrassing costs	5 000	16	0.05	4 200	14	0.04	–16
Weed and pest control	3 000	10	0.03	2 300	9	0.03	–8
Fuel	7 900	25	0.08	7 100	23	0.07	–9
Vehicle costs (excluding fuel)	10 200	33	0.10	9 500	31	0.09	–7
Repairs and maintenance	29 900	97	0.31	20 500	66	0.20	–31
Total other working expenses	**289 800**	**938**	**2.97**	**238 300**	**771**	**2.38**	**–18**
Communication costs (phone and mail)	3 000	10	0.03	3 000	10	0.03	3
Accountancy	4 200	14	0.04	4 300	14	0.04	3
Legal and consultancy	3 900	12	0.04	3 300	11	0.03	–14
Other administration	2 800	9	0.03	2 600	9	0.03	–6
Water charges (irrigation)	0	0	0.00	0	0	0.00	..
Rates	11 100	36	0.11	11 700	38	0.12	5
Insurance	5 300	17	0.05	53 000	17	0.05	1
Other expenditure[2]	12 900	42	0.13	7 500	24	0.08	–41
Total overhead expenses	**43 100**	**140**	**0.44**	**37 900**	**123**	**0.38**	**–12**
Total farm working expenses	**386 000**	**1 249**	**3.96**	**329 600**	**1 067**	**3.29**	**–15**
Wages of management	85 000	275	0.87	85 000	275	0.85	0
Depreciation	37 700	122	0.39	35 900	116	0.36	–5
Total farm operating expenses	**508 800**	**1 647**	**5.22**	**450 600**	**1 458**	**4.50**	**–11**
CALCULATED RATIOS							
Economic farm surplus (EFS[3])	10 700	35	0.11	48 500	157	0.48	
Farm working expenses/NCI[4]	74%			66%			
EFS/total farm assets	0.2%			1.0%			
EFS less interest and lease/equity	–2.7%			–1.7%			
Interest+rent+lease/NCI	23.3%			21.9%			
EFS/NCI	2.1%			9.7%			

Notes
1 Figures may not add to totals due to rounding.
2 Includes Dairy NZ levy and Accident Compensation Corporation (ACC) employer levy.
3 EFS (or earnings before interest and tax) 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.
4 Net cash income.

Symbol
.. Not applicable.

FIGURE 1: WAIKATO/BAY OF PLENTY DAIRY MODEL PROFITABILITY TRENDS



FINANCIAL PERFORMANCE OF THE WAIKATO/BAY OF PLENTY DAIRY MODEL FARM IN 2008/09

The cash operating surplus for the model dropped by 65 percent compared with 2007/08 to $133 400, as a result of both a much lower payout and higher farm working expenditure.

A more direct reflection of dairy farming cash profitability is the farm surplus for reinvestment, which drops in 2008/09 by 151 percent to a loss of $61 200.

MAJOR DROP IN REVENUE

There were three major factors affecting revenue in the 2008/09 season: the carryover effects of the 2007/08 drought, some extreme variability in the weather, and a significant reduction through the year in the milksolids payout.

DROUGHT IMPACTS LINGER

Farms entered winter 2008 in poor condition with pasture covers and cow condition well below desirable levels. This adversely affected production in the early part of the season.

Weather conditions changed dramatically from the dry of the drought to extremely wet, with record rainfall in many districts through June and July. Weather conditions see-sawed between wet and dry over the spring and early summer, and many farms were behind the previous year's production by the end of spring. January 2009 was very dry, but good rainfall in February averted another drought and saw production lift compared with the previous year.

Low rainfall through March and April 2009 resulted in low pasture growth rates and many farmers dried off their herds earlier than anticipated. Without the good February rainfall, farmers in the Waikato and Bay of Plenty would have faced a drought very similar to the one experienced in 2007/08. The exception to this is the farmers on the Central Plateau, who have entered the 2009 winter very much in drought mode.

Overall milksolids production was up 7 percent compared with 2007/08 to 97 500 kilograms of milksolids but still 4 percent down on the 2006/07 production of 101 000 kilograms of milksolids.

PAYOUT REDUCES

At the start of the 2008/09 year, farmers were budgeting on a $7.00 payout. This was reduced to $6.00 and then finally $5.20 early in 2009. The advance payout to the end of June was $4.15 per kilogram of milksolids, with the remaining $1.05 per kilogram of milksolids paid in the 2009/10 year. The $5.20 payout was made up of $4.75 milk price plus 45 cents value added component. The impact of the reduced payout was a 28 percent ($189 700) drop in milksolids return compared with 2007/08.

CATTLE INCOME FALLS

Income from cattle sales dropped as a result of both reduced prices for bobby and four-day-old calves sold for rearing, and reduced schedule prices for cull cows.

Sale prices for milking cows also dropped markedly, from around $2000 to $2400 in 2007/08 to between $1200 and $1300 in 2008/09.

EXPENDITURE CONTINUES TO INCREASE

Farm working expenditure increased by 16 percent, or $53 000, compared with 2007/08, with much of this relating to carryover effects of the drought, especially for bought-in feed. Farm working expenditure equated to $3541 per hectare (compared with $3142 in 2007/08) or $3.96 per kilogram of milksolids (compared with $3.65 in 2007/08).

On the 50 monitored farms, farm working expenditure varied significantly, ranging from $1.91 through to $6.24 per kilogram of milksolids. At the upper end of the scale, 14 percent of farms had farm working expenditure between $4.00 and $4.50 per kilogram of milksolids, 8 percent between $4.50 and $5.00 per kilogram of milksolids, and 16 percent were greater than $5.00 per kilogram of milksolids. At the other end of the scale, 18 percent of the monitored farms had farm working expenditure less than $3.00.

FEED COSTS SIGNIFICANT

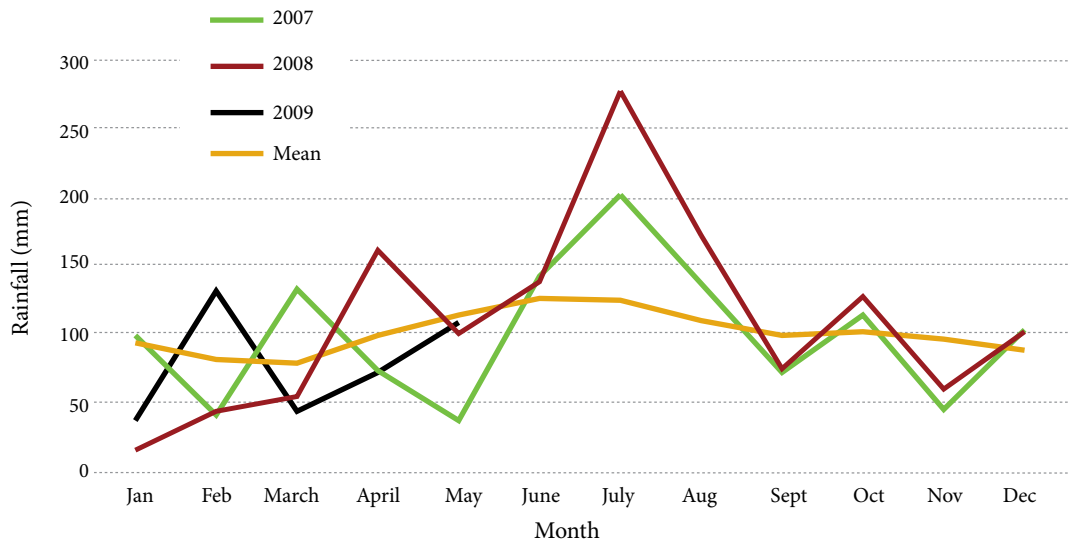
Total feed costs (covering supplements made on the farm and bought-in) increased by 26 percent with grazing costs alone increasing by 23 percent over 2007/08 levels. The total feed cost was $1.25 per kilogram of milksolids, which equates to approximately 30 percent of total farm working expenditure. Most of the increase was due to farmers purchasing bought-in feed, particularly maize silage and palm kernel extract. A lot of this purchasing occurred early in the season due to a continued need for supplements (many farms had low pasture covers and low cow condition) and the high payout expectations at the time.

Record levels of maize were grown this season for both silage and grain. However, the reduced forecast milk price resulted in a significantly decreased demand for maize silage, particularly later in the season. This resulted in a number of farmers pulling out of existing maize silage purchase contracts, creating tension within the industry. The inability of some farmers and contractors to honour contracts is seen as an impediment to developing long-term supply arrangements in the industry.

Maize silage prices per kilogram of dry matter landed in the stack ranged from 42 cents down to 20 cents at the end of the season. Grass silage bales were typically selling for $80 per bale. This is a far cry from the record levels of $200 per bale seen in the 2008 drought. The estimated cost of growing maize was 12 cents to 15 cents per kilogram of dry matter, plus lease costs if any. By the end of the season there would have been many maize silage growers or contractors who were selling maize silage at or below cost.

Palm kernel extract is now an established feed within the dairy sector. The drought of 2007/08 saw many farmers use palm kernel as a supplementary feed for the first time and, after seeing the benefits, are using this as their sole source of supplementary feed. Palm kernel extract prices ranged from $400 per tonne at the peak of demand, down to $230 per tonne in summer 2009.

FIGURE 2: WAIKATO RAINFALL, 2007–2009



OTHER COSTS INCREASE

Virtually all other farm working expenditure increased. Fertiliser spending increased by 19 percent to $51 900, with most of this rise due to the increased unit cost of fertiliser. Farmers applied their usual spring dressings, confident at the time due to the expected $7.00 payout. Very few applied autumn fertiliser as by then, with a $5.20 payout, they could not afford the expense.

The payout drop caught out many farmers with on-farm expenditure. By the time the $5.20 announcement was made, much of their expenditure had either already been made or committed to.

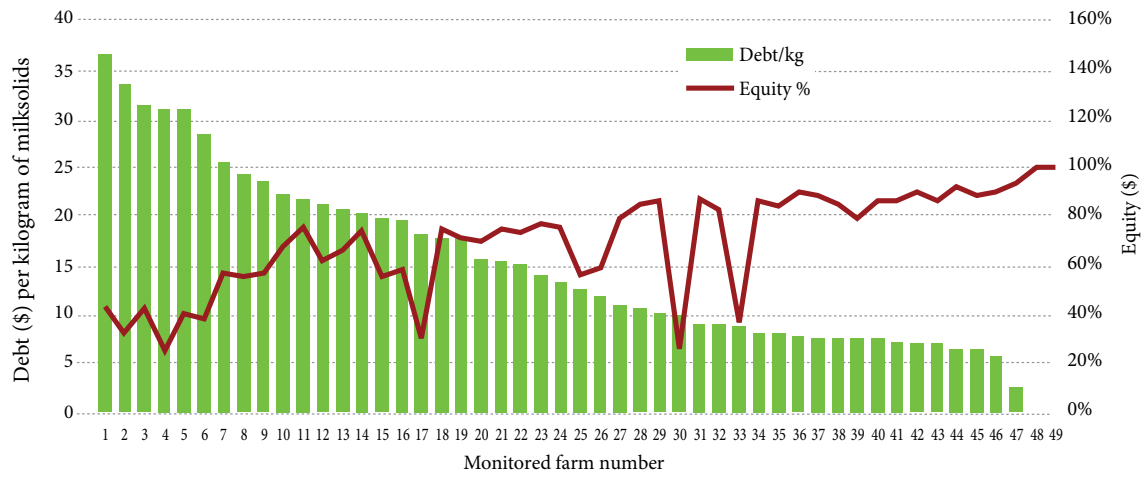
INTEREST COSTS EASE

The one positive for farm expenditure was the drop in interest rates over the year. For the model this gave a 14 percent ($20 200) reduction in debt servicing expenditure compared with 2007/08. While the drop in interest rates was welcome, this was partially offset by much higher overdraft levels on most farms. This was reflected in the model, where the average overdraft level lifted 150 percent compared with 2007/08.

The extent to which farmers benefited from reduced interest rates varied significantly, depending on how much debt was on a fixed term, and whether these mortgages rolled over within the year.

The interest payment for the model equated to $1.24 per kilogram of milksolids. For the monitored farms, interest payments varied from zero through to $3.65 per kilogram of milksolids. Sixteen percent of the monitored farms had debt servicing greater than $2.00 per kilogram of milksolids.

FIGURE 3: MONITORED FARMS DEBT VERSUS EQUITY LEVELS 2008/09

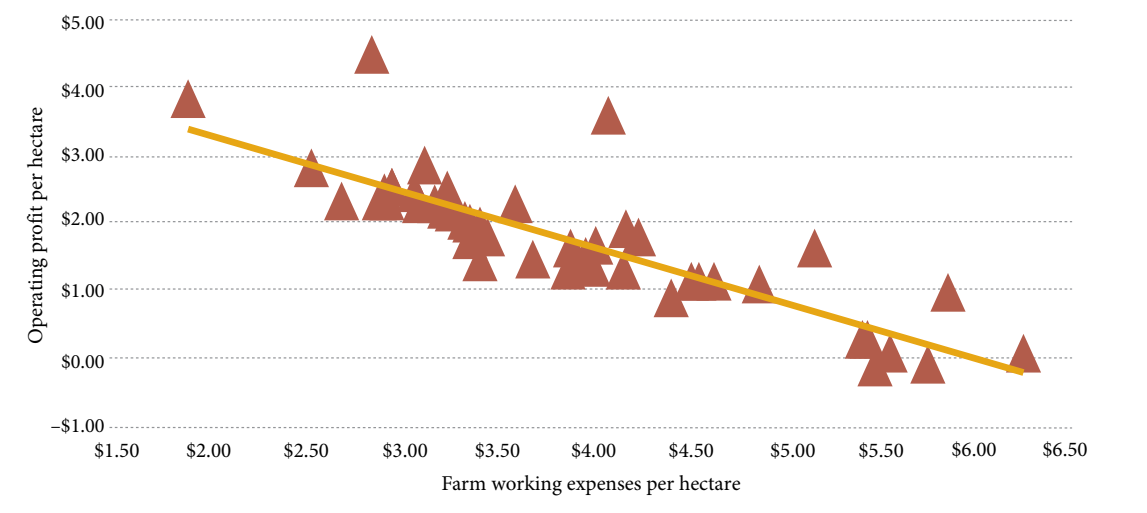


NET RESULT DETERIORATES MARKEDLY

Farm profit before tax dropped by $235 700, compared with 2007/08, to become a loss of $25 600. As a result, provisional tax payable was essentially zero. While farmers would have made provisional tax payments through the year based on 2007/08 income, the assumption within the model was that this was claimed back following the May revision. This meant that the only tax paid was terminal tax flowing through from 2007/08. If provisional tax had not been claimed back within the year, the deficit in 2008/09 would be much higher and a substantial refund would be due in 2009/10. Drawings have also been held close to 2007/08 levels.

The model finishes the year with a cash deficit of $53 800, a 271 percent or $85 300 deterioration on 2007/08. Given very tight overdraft limits, this deficit will be carried over by adding it to term debt. In the absence of off-farm income and some introduced funds, the deficit would have amounted to approximately $76 000.

FIGURE 4: MONITORED FARMS 2008/09 FARM PROFIT BEFORE TAX VERSUS FARM WORKING EXPENSES



BUDGET FINANCIAL PERFORMANCE OF THE WAIKATO/ BAY OF PLENTY DAIRY MODEL FARM IN 2009/10

The model farm's cash operating surplus is budgeted to lift by 27 percent in 2009/10 to $169 400. The drop in milksolids income (as a result of the lower milksolids payment) is expected to be more than matched by farmers' budgeting for a significant reduction in farm working expenditure across the board.

REVENUE EXPECTED TO DROP

Farms within the Waikato/Bay of Plenty region are entering winter 2009 in less than ideal condition. While the average cow condition score is slightly below par, pasture covers are 10 percent less than targeted and very cold weather through May and June 2009 significantly slowed pasture growth. On a number of farms, facial eczema outbreaks have also had an adverse impact. The one redeeming feature is that there are significant levels of supplementary feed on hand.

For 2009/10, monitored farmers were budgeting on wintering similar stock numbers to 2008/09 and a 3 percent increase in milksolids production. This increase will lift production to over 100 000 kilograms of milksolids, (919 kilograms of milksolids per hectare). The range from the monitored farms varied from 351 to 1490 kilograms of milksolids per hectare. The decrease in the payout to $4.55 per kilogram of milksolids and the indicative advance to the end of June 2010 of $3.77 sees milksolids revenue drop $16 100 or 3 percent compared with 2008/09. With an expectation of lower cattle prices, especially for bobby and four-day-old calves, the net cash income for the model is down by $20 400 or 4 percent compared with 2008/09.

SIGNIFICANT DECREASE IN EXPENDITURE BUDGETED

A major feature of the monitored farm budgets is the very tight control farmers are expecting to apply to their farm working expenditure. This was prompted by the lower payout and there is clearly an expectation that expenses must be controlled. The budgeted reductions were very much across the board, with some exceptions such as electricity and rates. The largest projected reduction is in feed expenses (including grazing), which is budgeted to be reduced by 28 percent to $88 000. Bought-in feed expenses is reduced by 35 percent to $53 000.

Fertiliser expenses are budgeted to be reduced by 4 percent, largely reflecting the drop in unit price. Farmers have reduced their fertiliser input over the last two years and are currently looking to lift their sulphur input levels in particular, in 2009/10.

»» TABLE 4: MODEL FERTILISER APPLICATIONS, 2004/05–2009/10 BUDGET

KILOGRAMS APPLIED PER HECTARE OF	N	P	K	S
2004/05	117	46	82	57
2005/06	112	38	69	48
2006/07	125	41	75	51
2007/08	108	42	78	53
2008/09	101	21	48	26
2009/10 budget	95	23	52	49

Repairs and maintenance costs are expected to be reduced by 31 percent reflecting the tight budget. Farm working expenditure falls from $3.96 per kilogram of milksolids in 2008/09, to $3.29 per kilogram of milksolids in 2009/10. While this is very positive in light of the forecast lower payout, it will be a challenge to achieve and in order to restore farm profitability, it needs to be reduced further. Farmers are likely to tightly hold spending through the first half of the season in order to determine which way the season is heading before loosening spending, if at all.

INTEREST RATE CUTS CONTINUE TO HELP

Despite term debt rising and high overdraft levels, the drop in interest rates is expected to start flowing through, with interest payments for the model dropping by a further $11 700 or 10 percent compared with 2008/09.

NET RESULT

The net result for the model is to just break even, with a small cash surplus of $7800. However, this is only achieved by inputs of $10 300 from off-farm income, and $19 500 from introduced funds (sale of surplus Fonterra shares). In the absence of these, the bottom line would have been a cash deficit of approximately $22 000.

A noticeable feature for the model is an approximate one million dollar loss in capital value over the last 12 months or so. Three-quarters of this was gained 12 to 18 months ago by rising land and cow prices, which have now been reversed. An additional $230 000 has been lost over the last two years through the reduced value of Fonterra Fair Value Shares. Overall, dairy farmers are currently facing a very uncertain season in 2009/10.

INFORMATION ABOUT THE MODEL

The Waikato/Bay of Plenty dairy model represents approximately 5050 dairy farms in the Waikato and Bay of Plenty regions. The model is a seasonal supply farm based on an average property of 110 hectares, milking 310 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 50 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.

For more information on the model contact: Phil.Journeaux@maf.govt.nz

PUBLISHER

Ministry of Agriculture and Forestry
PO Box 2526, Wellington 6140, New Zealand
Tel +64 4 894 0100 or Freephone 0800 008 333
Email: policy.publications@maf.govt.nz
Web: www.maf.govt.nz

ISBN 978-0-478-35129-3 (Online)

This report can be downloaded from www.maf.govt.nz

New Zealand Government