

NORTHLAND 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

- › Total production for the season on the Northland dairy model decreased over 7 percent to 72 000 kilograms of milksolids in 2009/10, due to an extended period of drought that began in November 2009 and lasted until May 2010.
- › Despite the drop in production in 2009/10 net cash income increased 16 percent to \$489 200 compared with \$423 000 in 2008/09. This was due to a 23 percent increase in the payout for 2009/10 to \$6.20 per kilogram of milksolids.
- › Farm working expenses were initially constrained in 2009/10 on an expectation of a sub-\$5 payout; but as the drought became more severe spending on supplements increased substantially. However, total farm working expenses in 2009/10 increased 1 percent or \$4000 compared with 2008/09 to \$286 600.
- › A cash deficit of \$20 000 for 2009/10 is less than the deficit of \$42 600 in 2008/09. However, this result is still disappointing when compared with the surplus of \$29 900 budgeted for this model in June 2009.
- › By the end of the difficult season farmers were mentally and physically exhausted, but remain positive about the long-term prospects for the industry, and are showing cautious optimism for 2010/11. The expected cash surplus for 2010/11 is \$23 600.

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

YEAR ENDED 30 JUNE	2006/07	2007/08	2008/09	2009/10 ¹	2010/11 BUDGET
Effective area (ha)	121	121	121	121	121
Cows wintered (head)	278	275	275	278	279
Replacement heifers (head)	66	73	69	70	70
Cows milked 15th December (head)	268	268	274	276	278
Stocking rate (cows/ha)	2.2	2.2	2.3	2.3	2.3
Total milksolids (kg)	77 816	79 372	77 785	71 950	79 850
Milksolids per ha (kg/ha)	643	656	643	595	660
Milksolids per cow milked (kg/cow)	290	296	284	261	287
MS advance to end June (\$/kg)	3.65	6.62	4.05	5.15	5.30
MS deferred payment (\$)	0.55	0.81	1.00	1.05	0.95
Net cash income (\$)	359 600	626 900	423 000	489 153	539 562
Farm working expenses (\$)	200 500	255 500	282 600	286 607	309 843
Farm profit before tax(\$)	75 700	242 900	22 800	59 394	91 214
Farm surplus for reinvestment ² (\$)	28 000	129 300	-12 800	15 874	50 220

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: NORTHLAND DAIRY MODEL BUDGET

	2009/10			2010/11 BUDGET		
	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)
REVENUE						
Milksolids	452 217	1 638	6.29	491 558	1 768	6.16
Dividend on wet shares	6 350	23	0.09	17 988	65	0.23
Cattle	33 187	120	0.46	32 617	117	0.41
Other farm income	1 000	4	0.01	1 000	4	0.01
LESS:						
Cattle purchases	3 600	13	0.05	3 600	13	0.05
Net cash income	489 153	1 772	6.80	539 562	1 941	6.76
Farm working expenses	286 607	1 038	3.98	309 843	1 115	3.88
Cash operating surplus	202 546	734	2.82	229 719	826	2.88
Interest	125 823	456	1.75	121 513	437	1.52
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	1 106	4	0.02	1 378	5	0.02
Minus depreciation	18 435	67	0.26	18 370	66	0.23
Farm profit before tax	59 394	215	0.83	91 214	328	1.14
Taxation	10 849	39	0.15	9 841	35	0.12
Farm profit after tax	48 545	176	0.67	81 373	293	1.02
Add back depreciation	18 435	67	0.26	18 370	66	0.23
Reverse stock value adjustment	-1 106	-4	-0.02	-1 378	-5	-0.02
Dividend on dry shares	0	0	0.00	1 855	7	0.02
Off-farm income	15 000	54	0.21	15 000	54	0.19
Discretionary cash	80 874	293	1.12	115 220	414	1.44
APPLIED TO:						
Net capital purchases	18 000	65	0.25	12 000	43	0.15
Development	10 000	36	0.14	5 000	18	0.06
Principal repayments	22 839	83	0.32	24 575	88	0.31
Drawings	50 000	181	0.69	50 000	180	0.63
New borrowings	0	0	0.00	0	0	0.00
Introduced funds	0	0	0.00	0	0	0.00
Cash surplus/deficit	-19 965	-72	-0.28	23 645	85	0.30
Farm surplus for reinvestment¹	15 874	58	0.22	50 220	181	0.63
ASSETS AND LIABILITIES						
Farm, forest and building (opening)	2 279 000	8 257	31.67	2 279 000	8 198	28.54
Plant and machinery (opening)	122 900	445	1.71	122 465	441	1.53
Stock valuation (opening)	413 230	1 497	5.74	414 336	1 490	5.19
Dairy company shares	358 752	1 300	4.99	358 752	1 290	4.49
Other farm related investments (opening)	0	0	0.00	0	0	0.00
Total farm assets	3 173 882	11 500	44.11	3 174 553	11 419	39.76
Total liabilities (opening)	1 648 200	5 972	22.91	1 596 761	5 744	20.00
Total equity (assets-liabilities)	1 525 682	5 528	21.20	1 577 792	5 676	19.76

Note

¹ 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: NORTHLAND DAIRY MODEL EXPENDITURE

	2009/10			2010/11 BUDGET		
	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)
FARM WORKING EXPENSES						
Permanent wages	0	0	0.00	0	0	0.00
Casual wages	19 500	71	0.27	25 000	90	0.31
ACC	535	2	0.01	827	3	0.01
Total labour expenses	20 035	73	0.28	25 827	93	0.32
Animal health	16 500	60	0.23	19 000	68	0.24
Breeding	8 900	32	0.12	11 800	42	0.15
Dairy shed expenses	6 900	25	0.10	7 250	26	0.09
Electricity	11 300	41	0.16	12 300	44	0.15
Feed (hay and silage)	5 250	19	0.07	12 750	46	0.16
Feed (feed crops)	6 500	24	0.09	6 500	23	0.08
Feed (grazing)	24 240	88	0.34	27 240	98	0.34
Feed (other)	44 100	160	0.61	17 200	62	0.22
Fertiliser	43 420	157	0.60	58 529	211	0.73
Lime	4 500	16	0.06	5 025	18	0.06
Freight (not elsewhere deducted)	2 000	7	0.03	2 300	8	0.03
Regrassing costs	4 500	16	0.06	3 000	11	0.04
Weed and pest control	4 100	15	0.06	4 200	15	0.05
Fuel	12 600	46	0.18	14 000	50	0.18
Vehicle costs (excluding fuel)	12 800	46	0.18	12 500	45	0.16
Repairs and maintenance	30 000	109	0.42	38 000	137	0.48
Total other working expenses	237 610	861	3.30	251 594	905	3.15
Communication costs (phone and mail)	2 900	11	0.04	3 000	11	0.04
Accountancy	4 200	15	0.06	4 500	16	0.06
Legal and consultancy	2 200	8	0.03	2 200	8	0.03
Other administration	2 200	8	0.03	2 400	9	0.03
Water charges (irrigation)	0	0	0.00	0	0	0.00
Rates	6 700	24	0.09	7 050	25	0.09
Insurance	6 200	22	0.09	6 400	23	0.08
ACC employer	2 115	8	0.03	3 997	14	0.05
Other expenditure ¹	2 446	9	0.03	2 875	10	0.04
Total overhead expenses	28 962	105	0.40	32 422	117	0.41
Total farm working expenses	286 607	1 038	3.98	309 843	1 115	3.88
CALCULATED RATIOS						
Economic farm surplus (EFS ²)	115 479	418	1.60	142 982	514	1.79
Farm working expenses/NCI ³	59%			57%		
EFS/total farm assets	3.6%			4.5%		
EFS less interest and lease/equity	-0.7%			1.4%		
Interest+rent+lease/NCI	25.7%			22.5%		
EFS/NCI	23.6%			26.5%		
Wages of management	69 739	253	0.97	69 746	251	0.87

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 NORTHLAND DAIRY FARM MODEL IN 2009/10



The cash operating surplus for the Northland dairy model increased 44 percent from \$140 500 in 2008/09 to \$202 500 in 2009/10. This was largely due to an increase in payout from \$5.05 to \$6.20 per kilogram of milksolids and despite a drought-related 7 percent decline in total milksolids production.

Farm working expenses increased 1 percent or \$4000 to \$286 600 for 2009/10 compared with \$282 600 in 2008/09. The farm surplus for reinvestment was \$15 900 compared with a deficit of \$12 800 in 2008/09. This indicates that despite the drought, profitability improved in 2009/10.

It is estimated that the 2010 drought cost the farm model at least \$67 000 through reduced production and increased costs.

LIFT IN REVENUE AFFECTED BY THE DROUGHT

There were three main factors affecting revenue in the 2009/10 season, these included:

- › the lift in payout;
- › the purchase of supplementary feed; and
- › the worst drought in 65 years.

MILK REVENUE INCREASED

Most farms started the season well, with milk production ahead of budget until October, when the weather turned cold. This was followed by a dry November, which turned into a drought over the summer and autumn of 2010. This reduced milksolids production for the season to 72 000 kilograms of milksolids, which was 7 percent lower than in 2008/09. This drop in production was more than offset by an increase in payout, and the total cash revenue from milk production at \$452 200 was 15 percent (\$57 800) higher than 2008/09.

CATTLE REVENUE SIMILAR

Cattle revenue for 2009/10 remained similar to previous years at \$33 200 compared with \$32 200 in 2008/09. Most farmers responded to the drought by culling cows earlier, so were unable to benefit from the increase in beef prices later in the season. Bobby calf values remain low and farmers continue to view beef sales as a minor part of their income.

THE 65-YEAR DROUGHT

April and May 2009 were unusually cool with pasture growth rates at approximately 50 percent of the average, leaving pasture covers below target at the end of May 2009. Despite a difficult June, pasture growth in July and August 2009 was exceptional and by late August many farms had identified surplus pasture to be harvested as silage.

October 2009 was a difficult month being cool and wet, which hampered cultivation and delayed planting of summer crops. The onset of dry conditions meant that 20 percent of these late sown crops had not germinated by January 2010. Other crops that did germinate had 30 to 50 percent lower yields and provided limited grazing for summer production.

November was a dry month across most of Northland and by December the impact of the drought was being felt, particularly on the east coast. The traditionally summer-safe areas of Okaihau and Puhipuhi were particularly affected.

By late January, the Far North, Whangarei and Kaipara districts had been classified as a medium-scale drought event. Given a large part of the season was still to come, the majority of farmers chose to purchase feed rather than dry off cows, preserving the chance to keep milking once it rained.

Sporadic rainfall through February and March brought some relief to localised areas, but a lack of follow-up rain saw the drought continue into April for most areas and into May for Kaitaia, Dargaville and Rodney. By mid-April 394 farms had dried off compared with only 43 farms in the 2008/09 season.

EXPENDITURE INCREASED DUE TO PURCHASE OF FEED SUPPLEMENTS

Farm working expenses increased 1 percent or \$4000 compared with 2008/09, but expenses per kilogram of milksolids increased 10 percent, from \$3.63 in 2008/09 to \$3.98 in 2009/10. Feed supplements saw the largest increase in expenditure and fertiliser the greatest decrease.

FEED SUPPLEMENTS

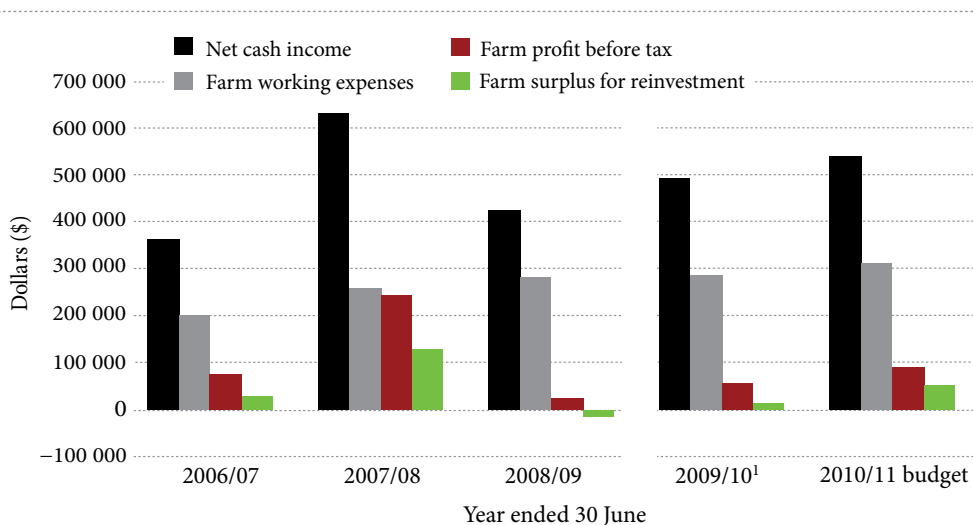
Feed costs increased by \$21 300 (27 percent) compared with 2008/09. Less hay and silage was made but three times the amount of palm kernel expeller (PKE) was purchased.

Good growing conditions in the Waikato and parts of the lower Northland region meant silage was readily available. As the season progressed and silage became more difficult to source, PKE became the dominant feed purchased, with many farmers feeding up to 50 percent of the milking cow diet as PKE. For the farm model, expenditure on purchased feed in 2009/10 at \$44 100, was more than twice the amount during the 2008/09 season. This represents 130 tonnes of PKE or about 400 kilograms per milking cow. It is estimated that the supplement produced an extra 9500 kilograms of milksolids and without this input total milksolids for the season for the farm model would have been down 15 000 kilograms or close to 20 percent. This figure is consistent with the results of farmers who fed no supplements. For the farm model the \$39 000 investment in PKE returned about \$60 000 in extra revenue.

OTHER EXPENDITURE

Fertiliser expenditure reduced 16 percent to \$43 400 in 2009/10 compared with \$51 400 in 2008/09. The saving made from reduced fertiliser spending was used to purchase feed. Spring fertiliser was reduced to

»» FIGURE 1: NORTHLAND DAIRY MODEL PROFITABILITY TRENDS



Note

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.

minimise cashflow pressure. The fertiliser and nitrogen applied following the rain in April accounted for most of the fertiliser expenditure in 2009/10.

Budgeted savings on repairs and maintenance were offset by greater expenditure on water systems through the drought. Wages stayed the same in an effort to manage costs.

Animal health expenditure was similar to prior years at \$16 500, with farmers choosing to take preventative action such as dry cow therapy.

Capital purchases were minimised at \$18 000 and mostly went towards bunkers and feed out trailers. Tax payments were up 274 percent to \$10 800 in 2009/10 compared with \$2900 in 2008/09. This increase assumes that farmers have re-assessed their provisional tax on the back of the improved payout. If this has not been done, they will face significant terminal tax payments in 2010/11.



NET RESULT IMPROVED DESPITE THE DROUGHT

Although the cash operating surplus increased 44 percent to \$202 500 in 2009/10, the farm model finished the year with a cash deficit of \$20 000; however, this is an improvement on the cash deficit for 2008/09 of \$42 600.

The capital structure of the farm model has altered on the advice of industry experts to better reflect the situation in Northland. Total debt has been increased to \$20 per kilogram of milksolids for the average production over the past few years; and represents a debt of \$22 per kilogram of milksolids for the 2009/10 season, a figure that also more accurately reflects the monitored farm sample.

Debt servicing on the model has changed to have 40 percent of the total debt on interest-only mortgages. This reflects the fact that there are some farmers with all their debt on an interest-only basis.

While there have been few farm sales in the region against which to compare the capital value of the farm model, the model shows a 10 percent (\$250 000) decrease in capital value to reflect the estimated decline in farm values in 2009/10.

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

Pasture cover was low across all farms in Northland in May 2010, with average pasture cover estimated at less than 1400 kilograms of dry matter per hectare on most farms. Good growing conditions in May provided modest increases in pasture cover, but these were generally 300 to 500 kilograms of dry matter per hectare below target on the first of June. However, very good pasture growth rates in June, at 30 to 40 kilograms of pasture dry matter per hectare per day, lifted pasture covers on most farms by about 300 kilograms per hectare.

Cow condition is generally good across the region, largely due to an extended period of supplementary feeding and an earlier drying-off. Better cow condition at calving is expected to increase milk production in the spring and provide a boost to reproductive performance.

Empty rates were higher than usual across the region, with vets in Dargaville and Whangarei estimating that the empty rate would average between 15 to 18 percent across the region, well up on previous years.

In contrast to cow condition, there is concern about how young stock have grown through the drought. Generally these animals have not benefited from the same level of supplementation and this is expected to impact on production and herd fertility over the next two years.

MAJOR LIFT IN REVENUE EXPECTED

Net cash income is expected to increase 10 percent in 2010/11 lifting from \$489 200 in 2009/10 to \$539 600 in 2010/11. A cash surplus of \$23 600 is expected compared with a cash deficit of \$20 000 for the 2009/10 season.

Milk production on the farm model is budgeted to increase to 79 900 kilograms of milksolids, an 11 percent increase compared with 2009/10. Monitored farmers are predicting a 14 percent increase in production for 2010/11, but industry commentators suggested that this figure was on the optimistic side so the farm model estimate was reduced. As a result of the drought, farmers now know that production can be increased economically by feeding supplements hence the confidence they have in increased production for the 2010/11 season.

Farmers are budgeting cattle revenue to be similar to previous years. Revenue from cattle sales net of purchases represents \$0.36 per kilogram of milksolids, or around 5 percent of total revenue, making it a minor part of farm income.

EXPENDITURE BUDGETED TO INCREASE EVEN WITH LESS SPENDING ON FEED SUPPLEMENTS

Farm working expenses are budgeted to increase 8 percent from \$286 600 in 2009/10 to \$309 800 for 2010/11. However, given the budgeted increase in production, farm working expenses on a per kilogram of milksolids basis actually decrease 3 percent down to \$3.88.

Feed costs are budgeted to be 20 percent lower than 2009/10, but up 8 to 10 percent on the long-term average as farmers choose to incorporate more PKE into the farm system. Expenditure on feed crops is expected to reduce in preference to the more reliable response from PKE.

Fertiliser expenditure is budgeted to increase 35 percent as farmers catch up on deferred fertiliser from the last two seasons and make greater use of strategic nitrogen to help insure against summer dry weather.

Wages are expected to increase almost 30 percent as the farm model employs a milk harvester in preference to casual support so the wage cost is budgeted to increase from \$20 000 to \$25 800 for the 2010/11 season.

Repairs and maintenance is budgeted to increase 27 percent toward the end of the season as the farm model catches up on deferred maintenance and makes use of the higher payout.

NET RESULT IMPROVES AGAIN IF PRODUCTION INCREASE IS REALISED

The cash operating surplus is budgeted to increase by \$27 200, a lift of 13 percent compared with 2009/10 and a 64 percent increase on 2008/09.

The cash surplus is budgeted at \$23 600, up \$43 600 on 2009/10, while the farm surplus for reinvestment is expected to increase to \$50 200, an increase of \$34 300 compared with 2009/10. If the budgeted cash surplus is achieved, farmers will likely look to use this for debt reduction.

INFORMATION ABOUT THE MODEL

The Northland dairy model represents about 1200 spring calving dairy herds north of Auckland city. The remaining suppliers are either split calving or 100 percent autumn calving. The farm system is classified as a system 2 farm on the DairyNZ production system basis, with moderate feed inputs brought into the farm in response to a feed deficit, young stock are grazed off and return as two-year olds just prior to calving.

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