



NORTHLAND DAIRY

KEY RESULTS FROM MAF'S 2011 DAIRY MONITORING PROGRAMME. Please note that several budget parameters have changed between 2009/10 and 2010/11. Caution should be taken when comparing this year's publication to previous years. Refer to the budget table footnotes for more detail.

KEY POINTS

- › Total production in the Northland dairy model increased nearly 7 percent to 79 000 kilograms of milksolids in 2010/11. This was mainly due to excellent late-autumn weather following the drought at the end of 2010.
- › Net cash income in 2010/11 increased by 24 percent to \$619 900 compared with \$499 800 in 2009/10. This reflected the increased milksolids production, the 24 percent increase in the payout to \$7.50 per kilogram of milksolids, and a 30 percent increase in cattle revenue.
- › Total farm working expenses increased by 7 percent to \$311 100, which included a change from casual to permanent labour, and are expected to increase further in 2011/12 to \$344 900.
- › Even allowing for the increase in farm working expenses, the Northland dairy model has gone from a significant farm cash deficit in 2009/10 to a \$66 600 surplus in 2010/11. The farm cash position falls to a breakeven situation in 2011/12 mainly due to increased tax payments and some increase in farm working expenses.
- › Despite coming out of a drought at the end of 2009/10, and into another in the spring of 2010/11, morale is generally high. The increase in milk price, along with better pasture conditions in the late summer and autumn has buoyed farmer confidence. This confidence is tempered with caution; farmers still remember the precipitous drop in milk prices during the 2008/09 season and are more focused on debt reduction and consolidating their position than expansion or development. Although there is a budgeted cash deficit for 2011/12, farmer morale remains high for this season.

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

YEAR ENDED 30 JUNE	2007/08	2008/09	2009/10 ^{1, R}	2010/11	2011/12 BUDGET
Effective area (ha)	121	121	121	121	121
Cows wintered (head)	275	275	287	288	293
Replacement heifers (head)	73	69	70	70	73
Cows milked 15th December (head)	268	274	280	282	282
Stocking rate (cows/ha)	2.2	2.3	2.3	2.3	2.3
Total milksolids (kg)	79 372	77 785	74 000	79 013	80 593
Milksolids per ha (kg/ha)	656	643	612	653	666
Milksolids per cow milked (kg/cow)	296	284	264	280	286
MS advance to end June (\$/kg)	6.62	4.05	5.15	6.20	5.60
MS deferred payment (\$)	0.81	1.00	1.05	0.95	1.30
Net cash income (\$)	626 900	423 000	499 815	619 852	615 005
Farm working expenses (\$)	255 500	282 600	291 852	311 057	344 940
Farm profit before tax(\$)	242 900	22 800	64 811	188 534	141 908
Farm surplus for reinvestment ² (\$)	129 300	-12 800	20 566	120 740	51 220

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

Symbol

R The model parameter has been revised so the data for 2009/10 may not match that published in the 2010 report.



»» TABLE 2: NORTHLAND DAIRY MODEL BUDGET

	2010/11			2011/12 BUDGET		
	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)	WHOLE FARM (\$)	PER COW (\$)	PER KG OF MILKSOLIDS (\$)
REVENUE						
Milksolids	560 181	1 986	7.09	554 038	1 965	6.87
Dividend on wet shares	19 980	71	0.25	23 704	84	0.29
Cattle	43 411	154	0.55	35 663	126	0.44
Other farm income	0	0	0.00	5 200	18	0.06
LESS:						
Cattle purchases	3 720	13	0.05	3 600	13	0.04
Net cash income	619 852	2 198	7.84	615 005	2 181	7.63
Farm working expenses	311 057	1 103	3.94	344 940	1 223	4.28
Cash operating surplus	308 794	1 095	3.91	270 065	958	3.35
Interest	113 825	404	1.44	118 110	419	1.47
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	11 935	42	0.15	8 590	30	0.11
Minus depreciation	18 370	65	0.23	18 638	66	0.23
Farm profit before tax	188 534	669	2.39	141 908	503	1.76
Income equalization	0	0	0.00	0	0	0.00
Taxation	19 729	70	0.25	44 055	156	0.55
Farm profit after tax	168 805	599	2.14	97 852	347	1.21
ALLOCATION OF FUNDS						
Add back depreciation	18 370	65	0.23	18 638	66	0.23
Reverse stock value adjustment	- 11 935	-42	-0.15	-8 590	-30	-0.11
Drawings	54 500	193	0.69	56 680	201	0.70
Farm surplus for reinvestment¹	120 740	428	1.53	51 220	182	0.64
REINVESTMENT						
Net capital purchases	20 155	71	0.26	24 250	86	0.30
Development	10 152	36	0.13	10 434	37	0.13
Principal repayments	23 836	85	0.30	22 044	78	0.27
Farm cash surplus/deficit	66 597	236	0.84	- 5 508	- 20	-0.07
OTHER CASH SOURCES						
Dividend on dry shares	1 620	6	0.02	296	1	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	17 000	60	0.22	17 000	60	0.21
Net cash position	85 217	302	1.08	11 788	42	0.15
ASSETS AND LIABILITIES						
Farm, forest and building (opening)	1 720 000	6 099	21.77	1 720 000	6 099	21.34
Plant and machinery (opening)	122 465	434	1.55	124 250	441	1.54
Stock valuation (opening)	562 562	1 995	7.12	574 497	2 037	7.13
Dairy company shares	361 600	1 282	4.58	361 600	1 282	4.49
Other farm related investments (opening)	0	0	0.00	0	0	0.00
Total farm assets	2 766 627	9 811	35.01	2 780 347	9 859	34.50
Total liabilities (opening)	1 615 361	5 728	20.44	1 572 796	5 577	19.52
Total equity (assets–liabilities)	1 151 266	4 083	14.57	1 207 551	4 282	14.98

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

Please note that several budget parameters have changed between 2009/10 and 2010/11. These changes have been made to better reflect the financial position of the farm. New and adjusted definitions include farm surplus for reinvestment, farm cash surplus/deficit and net cash position. Caution should be taken when comparing this year's data to previous years.

»» TABLE 3: NORTHLAND DAIRY MODEL EXPENDITURE

	2010/11			2011/12 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	42 000	149	0.52
Casual wages	22 000	78	0.28	0	0	0.00
ACC	721	3	0.01	843	3	0.01
Total labour expenses	22 721	81	0.29	42 843	152	0.53
Animal health	17 778	63	0.23	17 730	63	0.22
Breeding	10 272	36	0.13	10 235	36	0.13
Dairy shed expenses	7 032	25	0.09	7 132	25	0.09
Electricity	11 943	42	0.15	12 464	44	0.15
Feed (hay and silage)	8 350	30	0.11	9 347	33	0.12
Feed (feed crops)	6 000	21	0.08	6 060	21	0.08
Feed (grazing)	32 300	115	0.41	34 320	122	0.43
Feed (other)	47 220	167	0.60	48 592	172	0.60
Fertiliser	42 800	152	0.54	46 680	166	0.58
Lime	3 600	13	0.05	3 840	14	0.05
Freight (not elsewhere deducted)	2 212	8	0.03	2 257	8	0.03
Regrassing costs	4 978	18	0.06	5 037	18	0.06
Weed and pest control	3 714	13	0.05	3 949	14	0.05
Fuel	13 432	48	0.17	14 104	50	0.18
Vehicle costs (excluding fuel)	13 037	46	0.17	13 298	47	0.17
Repairs and maintenance	30 420	108	0.39	31 512	112	0.39
Total other working expenses	255 088	905	3.23	266 558	945	3.31
Communication costs (phone and mail)	3 042	11	0.04	3 119	11	0.04
Accountancy	4 346	15	0.06	4 433	16	0.06
Legal and consultancy	2 323	8	0.03	2 402	9	0.03
Other administration	2 291	8	0.03	2 377	8	0.03
Water charges (irrigation)	0	0	0.00	0	0	0.00
Rates	7 111	25	0.09	7 495	27	0.09
Insurance	7 032	25	0.09	7 898	28	0.10
ACC employer	4 258	15	0.05	4 914	17	0.06
Other expenditure ¹	2 844	10	0.04	2 901	10	0.04
Total overhead expenses	33 248	118	0.42	35 539	126	0.44
Total farm working expenses	311 057	1 103	3.94	344 940	1 223	4.28
CALCULATED RATIOS						
Economic farm surplus (EFS ²)	236 693	839	3.00	194 214	689	2.41
Farm working expenses/NCI ³	50%			56%		
EFS/total farm assets	9%			7%		
EFS less interest and lease/equity	11%			6%		
Interest+rent+lease/NCI	18%			19%		
EFS/NCI	38%			32%		
Wages of management	65 666	233	0.83	65 803	233	0.82

Notes

1 Includes Dairy NZ 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 MODEL FARM IN 2010/11

A 24 percent increase in net cash income more than compensated for a 7 percent increase in farm working expenses and the model finished the season with a cash surplus of \$66 600, a significant improvement on the deficit of \$30 400 in 2009/10.

The cash operating surplus for the Northland dairy model increased 48 percent to \$308 800 in 2010/11. This was attributable to increased production, an increase in the payout from \$6.20 to \$7.50 per kilogram of milksolids and a 30 percent increase in cattle revenue.

MAJOR LIFT IN REVENUE DESPITE DROUGHT AND FLOOD

The farm model's net cash income increased 24 percent in 2010/11 as a result of the lift in payout, increased production and strong recovery of pastures from drought and flood.

MILK AND CATTLE REVENUE INCREASED

The revenue for milk increased by 21 percent to \$560 200 in 2010/11. Despite fewer stock sold, revenue from cattle sales increased \$10 100 to \$43 400 driven by a rise in the beef schedule for cull cows. Bobby calf values remained low.

PRODUCTION INCREASED DESPITE SEVERE WEATHER

Western areas of Northland experienced a wet, cold start to spring which depressed pasture growth and resulted in milk production being 2.4 percent below the 2009/10 season in mid-September.

Rainfall declined markedly in October, coinciding with crop paddocks being sprayed out and putting pressure on pasture cover during mating. By November, pasture growth rates had suffered and, despite feeding supplements, milk production declined further.

By early December, soil moisture deficits were approaching 130mm in some western areas and around 100mm in eastern areas. Pasture covers and quality continued to decline and concerns about the availability of PKE (palm kernel expeller) prompted some farmers to commit to long-term PKE contracts. The drought broke in mid-December and pasture growth responded quickly to the favourable conditions with milk production also increasing.

January saw a surge in pasture growth with farmers harvesting hay and silage as surplus to replace silage used in the drought in 2009/10. Then a low pressure system brought 80 to 120mm of rain to the region followed a week later by Cyclone Wilma, bringing 100 to 270mm of rain in 36 hours. Many low lying areas were flooded and required significant regrassing.

The dry weather returned in February and the remainder of the autumn was characterised by stop-start pasture growth. Many farmers continued to supplement with PKE, encouraged by the positive production response and increasing milk price.

There was a significant increase in facial eczema, particularly on ryegrass dominant farms, along with severe rust damage to pasture.

Most farms took advantage of the favourable autumn and unusually warm start to winter with proactive use of nitrogen and supplementary feed, resulting in a 7 percent increase in milksolids production to 653 kilograms of milksolids per hectare for 2010/11.

MODEST EXPENDITURE INCREASE

Total farm working expenses increased 7 percent in 2010/11 to \$311 100, or \$3.94 per kilogram of milk solids. Farmers generally held back on spending, despite a reasonable cash operating surplus in 2009/10. This was a reflection of some uncertainty around the milk price and a desire to repay debt. Farm working expenses on monitored farms ranged from \$2.57 to \$5.57 per kilogram of milk solids.



Casual wages increased by 11 percent, generally reflecting increases in wages rather than more labour being employed.

Animal health costs increased 6 percent as a result of the high levels of facial eczema meaning extra zinc dosing was required on many farms. The higher payout has also encouraged farmers to be more proactive with drenching and mineral supplementation, and also more use of Dry Cow Therapy and mastitis treatment with the retention of high somatic cell count cows.

Breeding expenses increased 14 percent, reflecting more CIDR (controlled internal drug release) and semen use associated with the lower reproductive performance in the 2010/11 season.

Insurance premiums increased by 12 percent attributed to rises in insurance across the country as insurance companies refinanced post-Canterbury earthquake.

More stringent regional council requirements for effluent management contributed to capital purchases increasing 12 percent to \$20 200.

Silage expenditure returned to a more typical level, up 57 percent compared with 2009/10 to \$8400. The bulk of this increase was in silage made on-farm and reflected the warm, moist periods at the end of summer and through autumn. Industry advice suggests that the general quality of the silage is poor.

An increase in grazing expenses from \$24 500 in 2009/10 to \$32 300 in 2010/11 was the result of the increased cost to obtain grazing contracts. This was due to the combination of consecutive droughts hitting sheep and beef properties hard and strong schedule prices for sheep and beef reducing the supply of grazing land. Total feed costs on the model were \$330 per cow, with the monitored farms ranging from \$85 to \$539 per cow.

NORTHLAND DAIRY HAVE A MUCH BETTER YEAR

Despite droughts, flooding and a fairly variable season in terms of grass growth, profitability substantially improved in 2010/11 and profit after tax increased 191 percent to \$188 500.

Tax payments nearly doubled between 2009/10 and 2010/11, reflecting the high income in both years. Within the model, provisional tax for 2010/11 was reassessed to try and flatten out the impact.

»» FIGURE 1: NORTHLAND DAIRY MODEL PROFITABILITY TRENDS



Notes

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.

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.

After accounting for drawings, depreciation and stock value adjustments, the farm surplus for reinvestment increased to \$120 700, compared with \$20 600 in 2009/10.

BUDGET FINANCIAL PERFORMANCE OF THE NORTHLAND DAIRY MODEL FARM IN 2011/12

Pasture covers and cow condition scores are excellent going into the 2011/12 year due to an unusually warm May extending pasture and kikuyu growth. Many farmers are also continuing to feed PKE and have contracts to continue this into the budgeted year.

Veterinarians and industry professionals are reporting the worst mating in 7 years with empty rates averaging 17 percent (and up to 60 percent in some cases). This is likely to have significant flow-on effects for the industry in the 2011/12 year and 2012/13 year as demand for replacements potentially exceeds supply and restrictions on culling decisions are required. The poor reproduction results are influenced by the drought in 2009/10 and also reflect the difficult feed situation farmers faced in October and November in 2010.

Farmers are also concerned about the sub-clinical impacts of facial eczema and the long-term impact the potential liver damage will do to future production.

The cash operating surplus is expected to drop by 13 percent to \$270 100 as a result of an increase in farm working expenses and a drop in the milk payout and beef schedule prices.

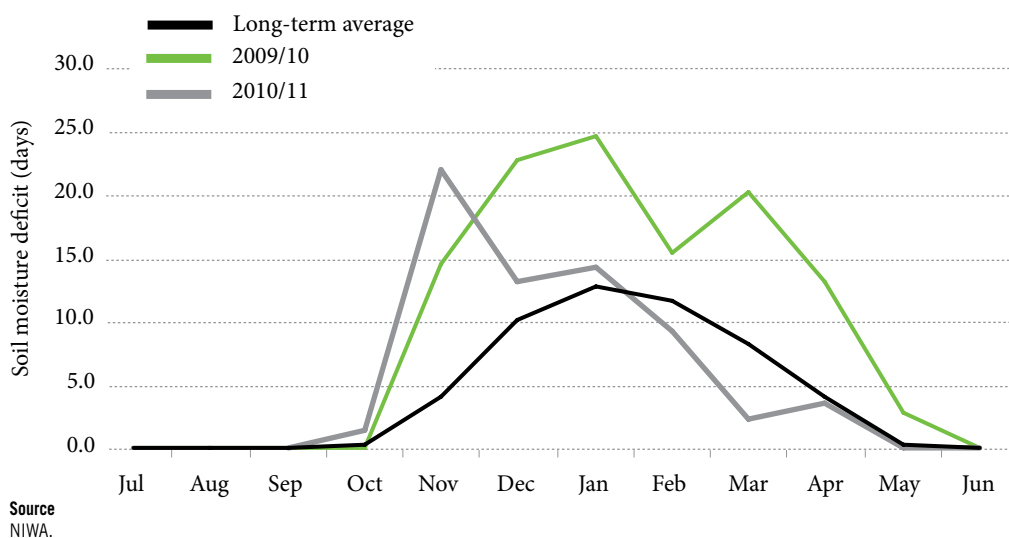
An increase of 11 percent in farm working expenses is anticipated with almost all expenses increasing with price rises. Farmers are also expecting to do more repairs and maintenance, and to increase fertiliser and lime use as Northland recovers from two droughts.

A move from using casual labour to employing full time labour is expected to drive total labour expenses up 89 percent in 2011/12 and accounts for 6 percent of the 11 percent increase in farm working expenses.

REVENUE EXPECTED TO DECLINE

A 1 percent decline in net cash income (to \$615 000) is due to a lower budgeted milk price in the 2011/12 season compared to the 2010/11 season. However, the model is budgeting for a 2 percent increase in production to 80 600 kilograms of milksolids in the 2011/12 season, assuming conditions will remain favourable (that is, the region won't be hit by another adverse event).

»» FIGURE 2: SOIL MOISTURE DEFICIT FOR NORTHLAND IN 2009/10 AND 2010/11



Cattle revenue is also predicted to decrease in 2011/12, by 18 percent to \$35 700 and due to an expected drop in schedule prices. Other farm income of \$5200 is expected from rent for a permanent employee in 2011/12 which has not been in the model previously.

EXPENDITURE INCREASES AS FARMERS CATCH-UP

Farm working expenses are budgeted to increase 11 percent to \$345 700 in 2011/12.

Feed expenses are budgeted to increase by 4 percent, driven by expected price increases for PKE, silage and grazing. Expenditure on feed crops is expected to remain relatively static with farmers preferring to use PKE with its more reliable response. Weed and pest control is expected to increase by 6 percent to \$32.60 per hectare as farmers try to offset higher weed populations in “open” pasture as a result of two dry seasons.

Fertiliser and lime expenditure is predicted to increase by 9 and 7 percent respectively as farmers continue maintenance fertiliser use and the use of strategic nitrogen to insure against summer-dry weather. The increase is driven by the price of fertiliser rather than increases in volumes applied as farmers increasingly use effluent as a nutrient source with the help of nutrient budgets.

Wages are budgeted to increase by 91 percent in 2011/12 due largely to an intention by over half the survey sample to employ permanent labour compared to casual labour in the past. A significant motivator for this is that farmers are ageing, and many are consequently looking to employ a manager. While mooted as part of the budgeting process, farmers will review this as the 2011/12 season progresses.

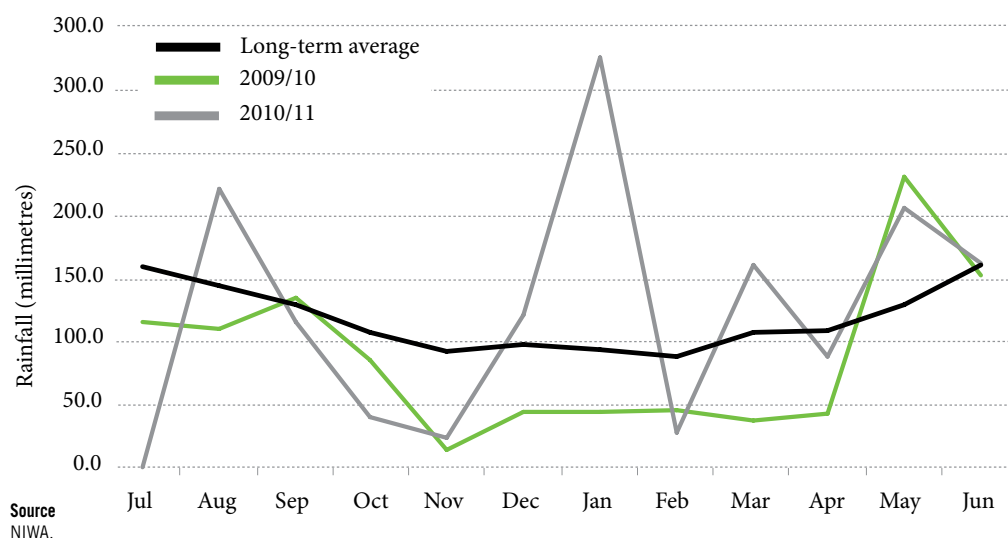
NET RESULT DECLINES WITH HIGH TAX PAYMENTS BUDGETED

The cash operating surplus is budgeted to decrease by 13 percent compared with 2010/11 to \$270 100. This is due to expected declines in revenue and increases in farm working expenses.

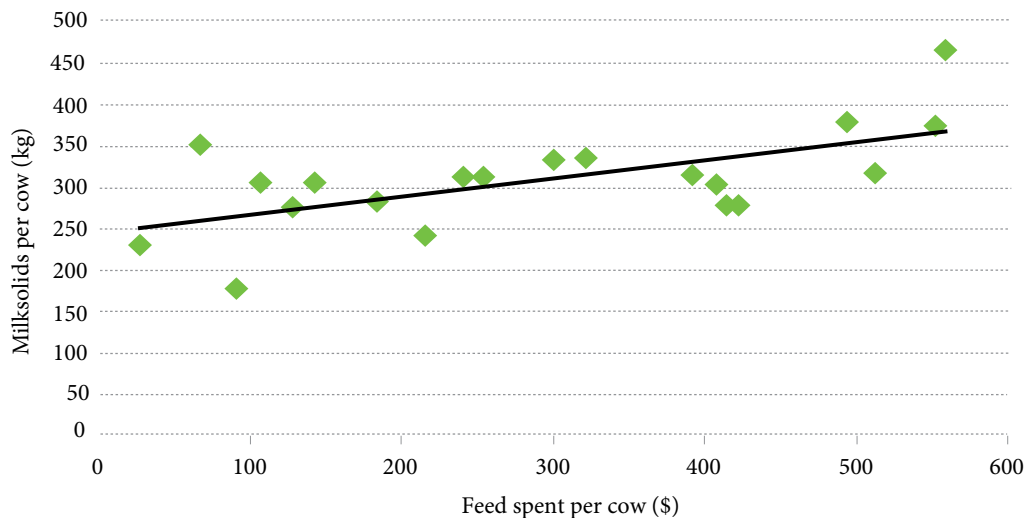
The cash surplus is budgeted at \$5500, down \$72 100 on 2010/11, while the farm surplus for reinvestment is also expected to fall significantly to \$51 200, a decrease of nearly 60 percent from \$120 700 in 2010/11. Farmers are budgeting to increase net capital purchases by 20 percent and development by 3 percent, largely due to effluent management and also continuing to pay debt principal resulting in a cash deficit.

With a farm profit before tax in 2010/11 of \$188 500, farmers anticipate making voluntary tax payments in 2011/12 to manage their tax bills. For the model, a tax payment of \$44 100 is expected for the 2011/12 year, which decreases the risk for 2011/12 but pushes the liability into 2012/13 which is also budgeted to have a high provisional tax bill. Despite a budgeted cash deficit for 2011/12, farmer morale remains high.

»» FIGURE 3: RAINFALL FOR NORTHLAND IN 2009/10 AND 2010/11



»» FIGURE 4: FEED PURCHASED PER COW COMPARED TO MILK SOLIDS PER COW FOR NORTHLAND IN 2010/11



INFORMATION ABOUT THE MODEL

The Northland dairy model represents about 1100 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.

Please note that the two of the sample farms changed between 2009/10 and 2010/11. Caution should be taken when comparing data between these two years.

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