Photo: Bob Zuur.

PASTORAL MONITORING 2010

LOWER NORTH ISLAND 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

- Reduced pasture production and constrained budgets resulted in a 2 percent decline in milksolids production in 2009/10, but this is expected to reverse in 2010/11.
- Net cash income rose to $790 100 in 2009/10 as the payout was revised upwards during the year. A further 5 percent increase to $827 100 is expected in 2010/11.
- Farm working expenses were reduced to $3.28 per kilogram of milksolids in 2009/10 as farmers curtailed expenditure, particularly early in the season, in line with the low early forecast payout. Expenditure is expected to return to maintenance levels in 2010/11 and along with increasing costs, results in farm working expenses budgeted to rise to $3.71 per kilogram of milksolids.
- A cash surplus of $104 700 was achieved in 2009/10 and was largely directed at reducing the overdraft. A balanced budget is expected in 2010/11 as farmers undertake more capital and development expenditure and opt to repay loan principal.
- Farmers are adopting a cautious attitude to expected payouts and are focussed on achieving cash surpluses and reducing debt.

TABLE 1: KEY PARAMETERS, FINANCIAL RESULTS AND BUDGET FOR THE LOWER NORTH ISLAND DAIRY MODEL

YEAR ENDED 30 JUNE	2006/07	2007/08	2008/09	2009/10[1]	2010/11 BUDGET
Effective area (ha)	130	130	130	135	135
Cows wintered (head)	370	370	370	380	380
Replacement heifers (head)	85	85	85	87	87
Cows milked 15th December (head)	360	360	360	370	375
Stocking rate (cows/ha)	2.8	2.8	2.8	2.7	2.8
Total milksolids (kg)	114 400	113 500	115 500	117 850	121 500
Milksolids per ha (kg/ha)	880	873	888	873	900
Milksolids per cow milked (kg/cow)	318	315	321	319	324
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 ($)	518 831	913 094	638 921	790 123	827 090
Farm working expenses ($)	328 363	422 394	459 934	386 394	451 258
Farm profit before tax($)	35 968	310 850	2 425	211 029	192 920
Farm surplus for reinvestment[2] ($)	1 351	232 947	–84 784	145 229	91 431

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.

Ministry of Agriculture and Forestry
Te Manatū Ahuwhenua, Ngāherehere

TABLE 2: LOWER NORTH ISLAND 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	734 503	1 985	6.23	755 908	2 016	6.22
Dividend on wet shares	9 720	26	0.08	29 463	79	0.24
Cattle	45 500	123	0.39	41 720	111	0.34
Other farm income	5 600	15	0.05	5 600	15	0.05
LESS:						
Cattle purchases	5 200	14	0.04	5 600	15	0.05
Net cash income	**790 123**	**2 135**	**6.70**	**827 090**	**2 206**	**6.81**
Farm working expenses	**386 394**	**1 044**	**3.28**	**451 258**	**1 203**	**3.71**
Cash operating surplus	**403 729**	**1 091**	**3.43**	**375 832**	**1 002**	**3.09**
Interest	160 200	433	1.36	160 300	427	1.32
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	0	0	0.00	8 963	24	0.07
Minus depreciation	32 500	88	0.28	31 575	84	0.26
Farm profit before tax	**211 029**	**570**	**1.79**	**192 920**	**514**	**1.59**
Taxation	40 300	109	0.34	63 514	169	0.52
Farm profit after tax	**170 729**	**461**	**1.45**	**129 406**	**345**	**1.07**
Add back depreciation	32 500	88	0.28	31 575	84	0.26
Reverse stock value adjustment	0	0	0.00	–8 963	–24	–0.07
Dividend on dry shares	0	0	0.00	1 413	4	0.01
Off-farm income	3 500	9	0.03	3 500	9	0.03
Discretionary cash	**206 729**	**559**	**1.75**	**156 931**	**418**	**1.29**
APPLIED TO:						
Net capital purchases	18 000	49	0.15	25 000	67	0.21
Development	6 000	16	0.05	20 000	53	0.16
Principal repayments	20 000	54	0.17	44 869	120	0.37
Drawings	58 000	157	0.49	62 000	165	0.51
New borrowings	0	0	0.00	0	0	0.00
Introduced funds	0	0	0.00	0	0	0.00
Cash surplus/deficit	**104 729**	**283**	**0.89**	**5 062**	**13**	**0.04**
Farm surplus for reinvestment[1]	**145 229**	**393**	**1.23**	**91 431**	**244**	**0.75**
ASSETS AND LIABILITIES						
Farm, forest and building (opening)	5 250 000	14 189	44.55	4 800 000	12 800	39.51
Plant and machinery (opening)	150 000	405	1.27	145 500	388	1.20
Stock valuation (opening)	563 940	1 524	4.79	563 940	1 504	4.64
Dairy company shares	549 180	1 484	4.66	558 220	1 489	4.59
Other farm related investments (opening)	0	0	0.00	0	0	0.00
Total farm assets	**6 513 120**	**17 603**	**55.27**	**6 067 660**	**16 180**	**49.94**
Total liabilities (opening)	**2 090 000**	**5 649**	**17.73**	**1 965 000**	**5 240**	**16.17**
Total equity (assets-liabilities)	**4 423 120**	**11 954**	**37.53**	**4 102 660**	**10 940**	**33.77**

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: LOWER NORTH ISLAND 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	45 000	122	0.38	47 000	125	0.39
Casual wages	20 000	54	0.17	22 000	59	0.18
ACC	1 262	3	0.01	2 756	7	0.02
Total labour expenses	**66 262**	**179**	**0.56**	**71 756**	**191**	**0.59**
Animal health	25 500	69	0.22	27 938	75	0.23
Breeding	12 500	34	0.11	15 000	40	0.12
Dairy shed expenses	8 000	22	0.07	8 500	23	0.07
Electricity	12 600	34	0.11	13 500	36	0.11
Feed (hay and silage)	37 480	101	0.32	43 400	116	0.36
Feed (feed crops)	6 800	18	0.06	7 200	19	0.06
Feed (grazing)	31 668	86	0.27	32 573	87	0.27
Feed (other)	8 200	22	0.07	9 300	25	0.08
Fertiliser	63 412	171	0.54	78 203	209	0.64
Lime	2 650	7	0.02	3 313	9	0.03
Freight (not elsewhere deducted)	3 000	8	0.03	3 500	9	0.03
Regrassing costs	6 400	17	0.05	8 650	23	0.07
Weed and pest control	2 000	5	0.02	3 000	8	0.02
Fuel	12 900	35	0.11	14 000	37	0.12
Vehicle costs (excluding fuel)	11 000	30	0.09	11 500	31	0.09
Repairs and maintenance	35 000	95	0.30	45 000	120	0.37
Total other working expenses	**279 110**	**754**	**2.37**	**324 575**	**866**	**2.67**
Communication costs (phone and mail)	3 000	8	0.03	3 150	8	0.03
Accountancy	4 500	12	0.04	4 500	12	0.04
Legal and consultancy	4 000	11	0.03	4 000	11	0.03
Other administration	2 500	7	0.02	2 500	7	0.02
Water charges (irrigation)	0	0	0.00	0	0	0.00
Rates	13 700	37	0.12	14 400	38	0.12
Insurance	7 200	19	0.06	7 800	21	0.06
ACC employer	2 115	6	0.02	14 202	38	0.12
Other expenditure[1]	4 007	11	0.03	4 374	12	0.04
Total overhead expenses	**41 022**	**111**	**0.35**	**54 926**	**146**	**0.45**
Total farm working expenses	**386 394**	**1 044**	**3.28**	**451 258**	**1 203**	**3.71**
CALCULATED RATIOS						
Economic farm surplus (EFS[2])	286 229	774	2.43	268 220	715	2.21
Farm working expenses/NCI[3]	49%			55%		
EFS/total farm assets	4.4%			4.4%		
EFS less interest and lease/equity	2.8%			2.6%		
Interest+rent+lease/NCI	20.3%			19.4%		
EFS/NCI	36.2%			32.4%		
Wages of management	85 000	230	0.72	85 000	227	0.70

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 LOWER NORTH ISLAND DAIRY FARM MODEL IN 2009/10

Although milksolids production in 2009/10 was down on the previous season, the much higher than expected payout led to the cash operating surplus more than doubling to $403 700. The west coast regions were typically down 6 percent for the season, but the production on the east coast was fractionally up on 2008/09. Overall, there was a 2 percent decline in production on the lower North Island dairy farm model.

IMPROVED PAYOUT LIFTS MILKSOLIDS REVENUE BY 21 PERCENT

Net cash income on the lower North Island dairy farm model in 2009/10 increased 24 percent compared with 2008/09 to $790 100. The farm model has increased by five hectares and 10 cows in 2009/10, and so the increase in milksolids revenue per cow equated to 21 percent (rising to $1985 per cow). The key driver for the increase in milk revenue was the payout, which increased throughout the season, from an opening forecast of $4.55 per kilogram of milksolids produced in 2009/10, to a final milk payout of $6.10. This equates to a 17 percent increase over the payout for the 2008/09 season of $5.20 per kilogram of milksolids.

In 2009/10, Fonterra moved to separate the dividend on shares from the payment for milk. An additional dividend of 8 cents per share was paid in 2009/10.

MILK PRODUCTION DOWN BY 2 PERCENT

Milk production for the Lower North Island dairy farm model fell by 2 percent compared with 2008/09 to 117 850 kilograms of milksolids (based on a five hectares increase in farm size). The 2009/10 season began with low pasture covers and slow pasture growth following a cold, wet start to winter. Conditions improved with record mild to warm conditions in late July and August. Wet conditions returned in the west in September and cool, overcast conditions across the region in October reduced peak milk flows. Milk flows were also compromised by spread calving patterns inherited from the previous season's poor reproductive performance, and a reluctance to spend any more than necessary to keep cows fed.

Growing conditions improved in the east in November but unfavourable conditions persisted in the west until December. Generally pasture quality was poor. January and February 2010 finally delivered late "spring" growth and although milk production per cow was poor, cow numbers were sustained without supplements.

Conditions turned dry in autumn and by March most districts were using supplements; in the west palm kernel expeller (PKE) was brought to boost declining feed stocks, while in the east fodder crops were better than usual and were used to meet the feed deficit.

Culling of cows started in March and by April some farmers had moved to once daily milking. As the cows had a difficult spring and no mid-summer supplement their condition failed to recover. This was a significant concern through late April and became the trigger for some to dry off their herds earlier than usual.

Despite mild late autumn conditions, poor pasture growth demanded that those farmers continuing to milk needed to increase their use of silage and PKE. Soil moisture remained at low levels until mid-May, but as the payout was good and conditions mild, those still milking chose to continue through to late May.

LOW PRICES FOR CALVES AND SURPLUS COWS

The demand for "budget" cows (cull cows suitable for milking for a further season) was low in 2009/10 and the price for calves dropped dramatically. The model's bobby calf price fell from $16.50 in 2008/09 to just $10.00 in 2009/10. Fewer calves were reared. As a result cattle income on the farm model fell 11 percent compared with 2008/09 to $45 500 in 2009/10.

EXPENDITURE CONSTRAINED BY LOW PAYOUT EXPECTATIONS

Farm working expenditure on the farm model fell 16 percent compared with 2008/09 to $386 400 in 2009/10. On a per cow basis the reduction was 18 percent to $1044 per cow. Mid-2009 projections of a $4.55 payout for 2009/10 and a very tight finance market were the catalysts for detailed budgeting and tightening expenditure. The initial 2009/10 advance of just $2.90 per kilogram of milksolids was around one-third ($1.40 per kilogram of milksolids) lower than the early advance milk payments in 2008/09.

Costs were heavily scrutinised with casual labour cut back, fertiliser reduced to sub-maintenance levels, and commitments to expensive feed crops were put off, or substituted with contracts for PKE. The latter remained priced at a level throughout the season that was deemed by most to be cost effective. Farm maintenance was limited to "must-do" activities and development projects were postponed. Capital expenditure was halted. Farm working expenses on monitored farms ranged from $2.47 to $4.18 per kilogram of milksolids.

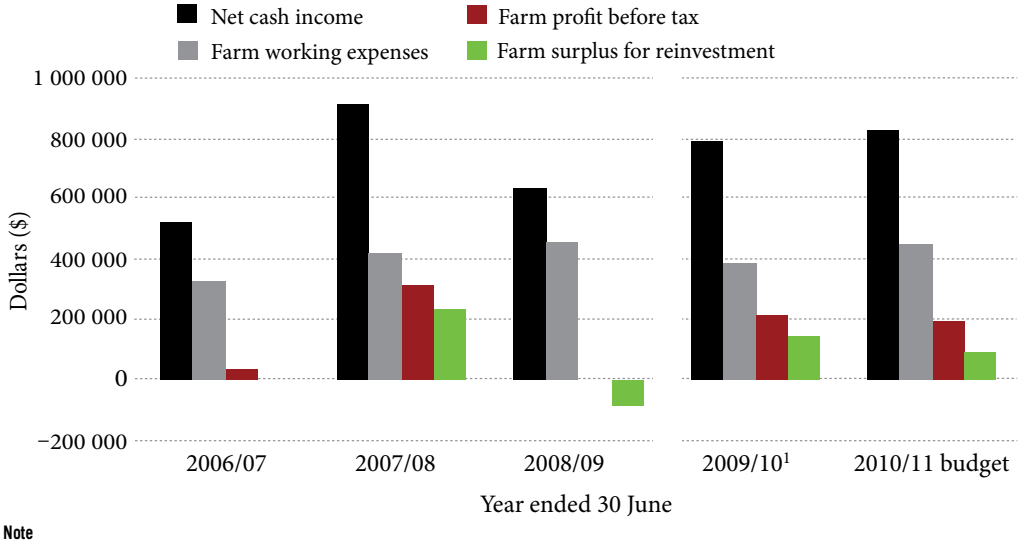
The farm model acquired a 60-hectare runoff in 2009/10. This has altered the composition of some farm expenditure, particularly feed, interest, labour and fertiliser expenditure making direct comparison between 2008/09 and 2009/10 difficult.

FEED EXPENDITURE FALL

Feed expenditure on the model has fallen from $1.22 per kilogram of milksolids in 2008/09, to just $0.72 per kilogram of milksolids in 2009/10. Potentially around 60 percent of the reduction is due to adding a runoff to the model's farm system. This allows cows and calves to be grazed "at-home" and about a third of the model's silage to be made on the runoff rather than being bought-in but results in increased labour, interest and fertiliser costs.

It is estimated that feed expenditure fell by around 17 cents per kilogram of milksolids (or $57 per cow) in 2009/10 due to seasonal conditions. Less supplementary feed was required in 2009/10 due to better conditions than in 2008/09; and farmers were not confident about the payout and were intent on containing costs. The DairyNZ initiative "Tight Management for Tight Times" was very well supported. The concept of being frugal with spending and not wasting feed encouraged farmers to actively manage their way through a very difficult period.

FIGURE 1: LOWER NORTH ISLAND 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.

Many farmers also reportedly used up feed stocks and are moving from reliance on stored maize silage to PKE which can be bought as required. Less maize silage and balage was made in the Manawatu in 2009/10 due to wet conditions at crop establishment and dairy farmers putting off commitments to maize contracts. Better summer conditions meant that some farms were able to make more late pasture silage to rebuild barely adequate feed reserves.

In the east, good spring pasture growth conditions through August and September led to the early closure of paddocks for supplement and the cultivation of summer crops in late September. Some crops had to be resown because of poor establishment in October. Better conditions in November in the east meant that farmers there made sufficient silage and balage by early summer.

FERTILISER AND OTHER EXPENDITURE ALSO FALLS

Fertiliser expenditure fell, particularly in spring, with the model only applying half of the maintenance levels of phosphorous. Nutrient budgets and cost-cutting drove the reductions. Other discretionary items such as regrassing and weed and pest expenditure were also deferred.

Labour expenses nudged higher in 2009/10 but the labour market was not as tight as it had been in recent years. Less casual/relief labour was employed as farmers pruned expenditure particularly early in the season.

Animal health and breeding costs were reduced 9 percent on a per cow basis to $103. Warmer and drier early spring conditions over calving meant minimal metabolic complications and a lower incidence of mastitis. In an effort to curtail expenditure farmers reduced the use of artificial breeding and herd testing.

SIGNIFICANT TURNAROUND IN PROFITS

The farm profit before tax on the lower North Island dairy model was $211 000 in 2009/10, compared with just $2400 in 2008/09. The very tight financial situation at the start of 2009/10 led to expenditure including capital purchases, development and drawings being curtailed. Recent volatility in payouts has resulted in much greater caution towards expenditure and an emphasis on reducing debt. The model bought 2000 additional “dry” Fonterra shares in 2009/10.

As a result of adding a runoff to the model and in doing so increasing debt levels, the debt to total farm assets ratio has deteriorated from 26 percent to 32 percent on the model. The model’s indebtedness at $17.73 per kilogram of milksolids is slightly lower than the national average. During 2009/10, the model’s overdraft was substantially reduced, as this became the greatest priority for using the developing cash surplus. The average interest rate fell slightly reflecting farms moving off higher fixed term mortgages to lower floating rates. However, a significant proportion of mortgages are still fixed. Interest on monitored farms ranged from 13 cents to $2.26 per kilogram of milksolids.

Industry sources indicate that the value of dairy farms has fallen by 10 to 30 percent from the peak in September 2008. The value of farms varies widely and the lack of sales, combined with differences between east and west coasts, make it difficult to establish a value for the model. The value of the farm model is estimated to have decreased by 9 percent in 2009/10 and a total of 15 percent from the beginning of 2008/09 (after adjusting for the milking platform being enlarged by five hectares and a 60 hectare runoff added at the start of 2009/10).

BUDGET FINANCIAL PERFORMANCE OF THE LOWER NORTH ISLAND DAIRY FARM MODEL IN 2010/11

The cash operating surplus is expected to decline 7 percent to $375 800 in 2010/11. A significant increase in farm working expenses, as farmers restore inputs of fertiliser to maintenance levels and catch up on deferred expenditure, is expected to more than offset a marginal increase in milk revenue. At the start of 2010/11, there was only five cents per kilogram of milksolids additional cash income from milk in budgets as a result of the manner in which Fonterra makes its advance milk payments. This is despite the potential for an improvement in the expected milk payout.

REVENUE EXPECTED TO LIFT

Net cash income is budgeted to increase 5 percent to $827 100 in 2010/11. Milk revenue is expected to increase 3 percent to $755 900 but the dividend on wet shares is budgeted to increase by a similar dollar amount to $29 500 in 2010/11. A fall in cattle income is anticipated as five cows are added to the closing herd. This means fewer "budget" cows are available for sale despite the expected improvement in their price.

MILK PRODUCTION INCREASES

The higher forecast payout and a return to average spring pasture growth conditions is expected to lift production 3 percent in 2010/11, to 900 kilograms of milksolds per hectare.

The 2010/11 season started with low pasture covers (less than 2000 kilograms of drymatter per hectare) and relatively poor cow condition. Very wet conditions in early June 2010 meant farmers keeping stock on the milking area risked significant pasture damage. Those farmers sending stock to runoffs were conscious that cows needed to gain significant condition; while those purchasing off-farm grazing were concerned the feeding levels might not be adequate given low pasture quality and covers on many hill country farms. Reasonably mild temperatures for most of June have allowed some recovery of cow condition.

The 2010 spring is expected to see tight calving patterns and cows in less than desirable condition. This may see reasonable early season milk yields but difficulty sustaining them without good pasture levels and/or large amounts of high energy supplements. More feed is likely to be purchased to offset low cow condition or negative climate effects.

There is widespread concern about the number of empty cows, which may reflect the poor mating conditions in 2009 but is also likely to be due to issues with bulls and a tendency to carry-over empty cows for another season leading to the retention of greater numbers of "difficult to get in-calf" cows in the national herd.

EXPENDITURE EXPECTED TO BOUNCE BACK

Farm working expenses on the lower North Island dairy farm model are expected to increase 17 percent to $451 300 in 2010/11 as farmers catch up on deferred expenditure, particularly fertiliser inputs and repairs and maintenance.

Labour and animal health expenses are expected to increase 8 percent and 10 percent respectively. More relief and casual labour is expected to be employed because farmers can afford it. Breeding costs are budgeted to rise 20 percent as farmers return to herd testing and greater use of artificial breeding.

Fertiliser application is expected to increase back to maintenance levels with a 25 percent increase in the tonnage applied on the model and a 23 percent increase in expenditure. More lime is also expected to be applied.

Feed costs are expected to rise in 2010/11 as farmers seek to fill spring feed deficits in anticipation that the higher payout will make extra feed inputs worthwhile. The cost of maize silage and heifer grazing is expected to increase as suppliers seek to extract greater returns. In 2009/10, maize silage prices were forced down from 23 cents to 18 cents per kilogram of dry matter by farmers' changing demand for feed, in response to the low payout projection, and the drop in the price of PKE.

Regrassing is budgeted to increase as farmers renew pastures, particularly those damaged by the wet winter. This activity and weed and pest control will return to earlier levels after some deferral due to cost-saving pressures in 2009/10.

Costs such as electricity, fuel and freight are expected to rise as a result of Emissions Trading Scheme (ETS) impacts. Other expenditure includes the ACC employer levy, which fluctuates based on income in the previous year, although many farmers minimise this variation by taking out ACC Cover Plus Extra insurance.

NET RESULT IS A SMALL CASH SURPLUS

Farm profit before tax is expected to fall 9 percent to $192 900 in 2010/11 as a result of the reduced cash operating surplus. Interest rates are budgeted to trend slightly upwards but the reduction in the model's average overdraft and a small principal repayment means that interest expenditure is budgeted to be unchanged. A 7 percent increase in drawings is expected to claw back the reduction in 2009/10 and account for ETS and increasing GST impacts. Taxation payments on the model are expected to rise by 58 percent to $63 500. Increased expenditure on capital items and development and a commitment to principal repayments soaks up most of the discretionary cash leaving a budgeted cash surplus of $5000 in 2010/11.

INFORMATION ABOUT THE MODEL

This model represents approximately 1100 seasonal supply dairy farms in the bottom half of the North Island, including the regions of Manawatu, Horowhenua, Wairarapa and Southern Hawkes Bay. The dairy farms supply the Fonterra Co-operative Dairy Company.

Generally, they are well-developed farms, have good soil fertility levels, and a modest level of well-maintained buildings, plant and equipment. On average, the farms are 135 effective hectares in size, wintering 380 cows and peak milking 370 cows. They have a supporting runoff of 60 hectares on which cows are wintered and surplus pasture conserved in summer. Yearlings are grazed off-farm from June to May and the calves are reared and retained on the milking area and runoff.

Most of the lower North Island has reliable summer rainfall, however many farms in the Manawatu and East Coast are by New Zealand standards, somewhat drought prone. Approximately 300 farms, mainly in South Wairarapa, Hawke's Bay and Manawatu, have irrigation.

The model budget is prepared for an owner-operator farm, with labour employed, and represents an estimated 70 to 80 percent of dairy farms – the other 20 to 30 percent fit into the sharemilking or partnership categories.

The model was created from information drawn from 20 dairy farms and a wide cross-section of agribusiness representatives. The aim of the model was to typify an average dairy farm for the lower North Island. Budget figures were averaged from the contributing properties and adjusted to represent a real dairy farm.

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