Financial Survey 2021 Waikato/Bay of Plenty Dairy

This report summarises the results of a financial survey of dairy farms across the Waikato and Bay of Plenty regions, carried out by AgFirst through June 2021. A description of the model farm is at the back of this report.

KEY POINTS

- The 2020/21 season was again mixed climatically. A very good 2020 winter was followed by a below average spring, with good rains in November/December boosting pasture growth and silage made. A dry summer in most parts of the region was broken by good rains from late March onwards. The 2021 winter has been very good, with pasture covers and cow condition good on most farms heading into the new season.
- Overall milksolids production is up 2% compared with 2019/20, with farmers budgeting for a similar increase in 2021/22.
- Farm Profit after Tax for the 2020/21 season is up 31% compared with 2019/20, largely due to the improvement in the payout compared with the 2019/20 season. Farm working expenses have also increased 8%, driven by increased expenditure across the board.
- The surplus funds have seen a significant lift in capital expenditure, and full principal debt repayment, with the farm still showing a moderate cash surplus after this – mostly likely to be used for further debt reduction, farm development, or increased personal spending.
- For 2021/22, the budget is showing a 3% increase in Farm Profit after Tax; a higher payout is offset by an increase in farm working expenses (5%) and higher tax payments (4%).
- As a result, farmers are budgeting on increased expenditure on capital items, development, debt reduction, and personal spending. Much of this spending will not take place until the summer/autumn, when the payout is more certain. Overall, the farm is currently budgeting a “breakeven” situation.
- Farmer morale is good, buoyed by a combination of a higher payout, a good season, and low interest rates. The main downside is a serious labour shortage.

Table 1: Key Parameters, Financial Results and Budget for the Waikato/Bay of Plenty Dairy Model

Year ended 30 June	2017/18	2018/19	2019/20	2020/21	2021/22 Budget
Effective area (ha)	127	129	131	133	133
Cows wintered (head)	373	369	373	377	381
Replacement heifers (head)	80	69	71	71	72
Cows milked 15th December (head)	365	358	362	365	371
Stocking rate (cows/ha)	2.7	2.9	2.8	2.7	2.8
Total milksolids (kg)	130,064	132,200	135,024	137,908	140,666
Milksolids per ha (kg/ha)	1,024	1,025	1,031	1,037	1,058
Milksolids per cow milked (kg/cow)	356	369	373	378	379
MS advance to end June ($/kg)	5.35	5.10	5.81	6.06	6.40
MS deferred payment ($)	1.07	1.34	1.25	1.65	1.49
Net cash income ($)	880,244	877,601	1,002,591	1,110,905	1,154,830
Farm working expenses ($)	500,724	519,730	575,022	618,515	648,126
Farm profit before tax ($)	207,864	182,716	236,325	318,947	331,510
Farm surplus for reinvestment[1] ($)	108,047	108,757	116,575	169,940	176,120

Note:

[1] Farm surplus for reinvestment is the cash available from the farm business, after meeting living costs, which is available for principal repayments, capital expenditure, and further farm development.

PHYSICAL FACTORS

The 2020/21 season saw a mix of climatic conditions. The winter of 2020 was relatively mild, with excellent pasture growth, which coupled with good cow condition saw most farms make a good start to the season. Early to mid-spring was "middling" with dryish weather conditions and below average pasture growth rates. Good climatic conditions were experienced in November/December resulting in good pasture growth and a lot of silage made. Unfortunately, the quality of the pasture was generally poor, and milk production dropped significantly on many farms. Dry weather set in again from January, although there was some patchy rain around the regions through late February. Good rain fell across much of the regions from late March onwards, although the Hauraki Plains area did not see good rain until a month later. The late autumn/early winter again saw excellent mild weather and good pasture growth.

The monitored farms' milk production was up, on average, just over 2% for the season compared with 2019/20, which is reflected in the model budget.

The poor pasture quality in the late spring also affected mating management, with LIC reporting that empty rates on average were 16%, with a 68% 6-week in-calf rate.

2020/21 was a very good season for maize, with the dryish weather in the spring allowing many crops to go in early, coupled with enough rain at the right time, and good temperatures through the summer. Yields were generally up at 22 tonne DM/ha compared to an average of around 20 tonne DM/ha, and with relatively high ME levels.

Replacement heifers are generally in good condition and have been grown well, having come through the summer much better than in 2019/20. Heifer grazing is increasingly based on performance criteria, although some farmers are also looking for run-off blocks given the increasing cost of grazing heifers off the milking platform.

Stock water was a significant problem on many farms last summer, although the immediate past summer was much less of an issue. A number of farmers are drilling second wells, particularly given three years of below-average rainfall has affected aquifer recharge. Waikato Regional Council is also starting to monitor water takes much more closely.

Some facial eczema outbreaks were noted in December, and again in April/May following the warm rains. The TB outbreak in the Hauraki/Morrinsville area has also caused some concern, and there have been some cases of nitrate poisoning, and cow deaths, following the rapid pasture growth in May/June.

Overall though, pasture covers on most farms are good, supplementary feed inventories are good, as is cow condition, all of which augurs well at the start of the 2021/22 season.

FINANCIAL PERFORMANCE 2020/21

Revenue Up

Net cash income for the model increases by 11% compared with 2019/20. This is very largely driven by milksolids returns; a 2% increase in production coupled with the increased payout sees milksolids income up 12%. This is offset slightly by lower net returns from cattle sales, down 15%, due to lower beef schedules.

Expenditure Increases

Farm working expenses increased in 2020/21 by 8% compared with 2019/20. This was the result of increases virtually across the board. On a per kilogramme of milksolids basis, the increase was from $4.26 to $4.48/kg, although the 2020/21 figure is reduced slightly due to the higher level of milksolids production.

The main increases were:

- Labour costs up 6% driven largely by the shortage of labour and the need to retain staff.
- Overall feed costs are up by 9%, largely driven by the dry summer. Within this the expenditure on hay or silage (including maize silage) made on-farm or bought-in, increased by 6%, an increase in cropping area saw costs increase by 14%, and bought-in supplements (mostly palm kernel and DDG) by 16% as a result of increased volumes purchased.
- Fertiliser expenditure increased by 9%, due mainly to increased prices.
- Repairs and maintenance expenditure decreased by 9% following the large catch-up which occurred in 2019/20.

- Administration/standing charges expenditure increased by 20% as a result of increased cost across most of these items, particularly accountancy, legal and consultancy, rates, and insurances.
- Total debt servicing dropped by 11% mainly due to lower interest rates.

Net Result

Despite the increase in farm working expenditure, farm profit before tax for 2020/21 is up 35% on 2019/20, driven largely by the increased payout. Further expenditure has been:

- Tax liability has increased 46% in line with the increase in net profitability.
- Personal drawings have increased slightly (3%).
- Significant increase in capital expenditure on plant and machinery replacement, up 35%.
- Debt repayment. Given the improved payout and profitability, the model farm has made a full principal repayment this year, based on a 20-year P&I programme.

In addition, the model has borrowed an additional $75,000 and spent this on development, mainly in ensuring effluent management systems are up to compliance requirements.

The net result is a farm cash surplus for the year of $24,600. The expectation is that this would be spent on a variety of factors, particularly increased debt repayment, increased personal drawings, or further capital expenditure.

FINANCIAL PERFORMANCE 2021/22

Revenue Increases

The monitored farms were budgeting on an increase in milksolids production of 2% for the season, which is reflected in the model budget. This, coupled with the expected increase in payout, offset slightly by a decrease in cattle income, sees Net Cash Income up 4% compared with 2020/21.

Farmers were buoyed by Fonterra's forecast payout for the 2021/22 season. The model is working on the "mid-estimate" of an $8.00/kgMS payout, involving a $6.40/kgMS advance to 30 June 2022.

Expenditure Increases Further

Overall, the expectation is that Farm Working Expenses will increase by 5% over 2020/21. This is driven by a range of factors:

- Labour cost is again budgeted to increase, up by 6%, again driven by the labour shortage.
- Total feed costs increase by 5%, driven by a variety of factors; a budgeted increase in the amount of maize silage bought in (cost up 12%), to offset a reduction of Palm Kernel bought in (cost down 13% - a higher cost offset by a reduction in volume), plus an expectation of higher costs for the maize, and an increase in grazing fees (up 12%).
- Repairs and maintenance expenditure increases by 15%. This reflects much more an expectation of increase price costs due to material shortages rather than an increase in the amount of R&M carried out.
- General expectation of higher prices across most expenditure items as a reflection of shortages within the economy and an increase in on-farm inflation.
- Debt servicing drops again (down 3%) reflecting recent decreases in interest rates.

Net Result

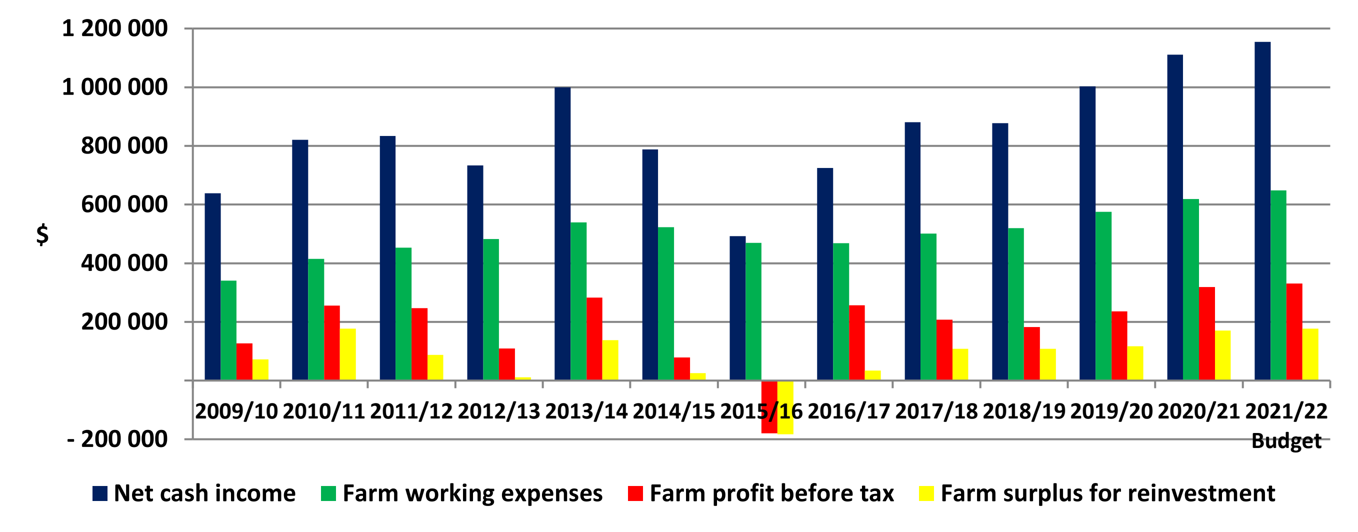
The currently budgeted farm profit before tax is $330,400, up 4% on 2020/21. Budgeted spending of this includes:

- Tax payment increases (up 4%) in line with the improved in profitability.
- Personal drawings increase by 10%.
- Capital expenditure continues at a high level, up 7% compared with 2020/21.
- Development expenditure continues, at $30,000, albeit down on the debt funded expenditure in 2020/21.
- The farm again makes a full debt reduction payment based on the 20-year P&I term.

The end result is a deficit, which is offset by the dividend payment, resulting in essentially a break-even situation. Farmers will monitor expenditure over the season; much of the capital and development expenditure is unlikely to occur until into the new calendar year, and the higher payout is confirmed.

On the balance sheet front, REINZ data shows that average dairy land values have increased by 10% over the first six months of 2021 compared with calendar 2020. This is a reflection of the improved profitability flowing through the industry, and has been reflected in the model balance sheet.

Figure 1: Waikato/Bay of Plenty Dairy Model Trends in Profitability Graph



Breakeven Payout

A calculation is shown below of the 'breakeven' milksolids payout required to meet basic expenditure requirements for the model covering: farm working expenditure, debt servicing, living expenses, taxation, and capital replacement.

Table 2: Breakeven payout estimate ($/kg MS)

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Budget 2021/22
Farm Working Expenses	$4.07	$3.65	$3.65	$3.85	$3.97	$4.26	$4.48	$4.61
Interest	$1.20	$1.14	$1.07	$1.08	$1.06	$1.20	$1.04	$0.99
Drawings	$0.58	$0.46	$0.51	$0.63	$0.62	$0.66	$0.66	$0.71
Depreciation	$0.19	$0.32	$0.28	$0.24	$0.27	$0.26	$0.26	$0.26
Tax	$0.09	$0.00	$0.10	$0.10	$0.10	$0.10	$0.38	$0.65
	$6.12	$5.57	$5.61	$5.90	$6.02	$6.48	$6.83	$7.22
(less) Cattle Income	$0.37	$0.44	$0.32	$0.42	$0.49	$0.35	$0.29	$0.27
Breakeven Payout	$5.75	$5.13	$5.29	$5.48	$5.48	$6.13	$6.54	$6.94
Within season payment	$5.75	$3.37	$5.30	$6.41	$6.09	$7.17	$7.68	$7.86
Difference	$0.00	-$1.76	$0.01	$0.92	$0.56	$1.05	$1.14	$0.92

[While depreciation is not a cash cost per se, it represents a real cost of maintaining plant and equipment on-farm]

This reinforces the trend shown in Figure 1, of improving profitability over the last 3 years. While the average breakeven payout across the period shown is $5.98/kg MS, of concern is the increase in recent years, with 2021/22 sitting just under $7/kg MS.

ISSUES

- Probably the main issue exercising farmers at the moment is the major shortage of labour throughout the industry, exacerbated by the Covid situation and the limitations on bringing in overseas workers. This is being reflected in the higher wages and salaries being paid, and efforts to retain existing staff.

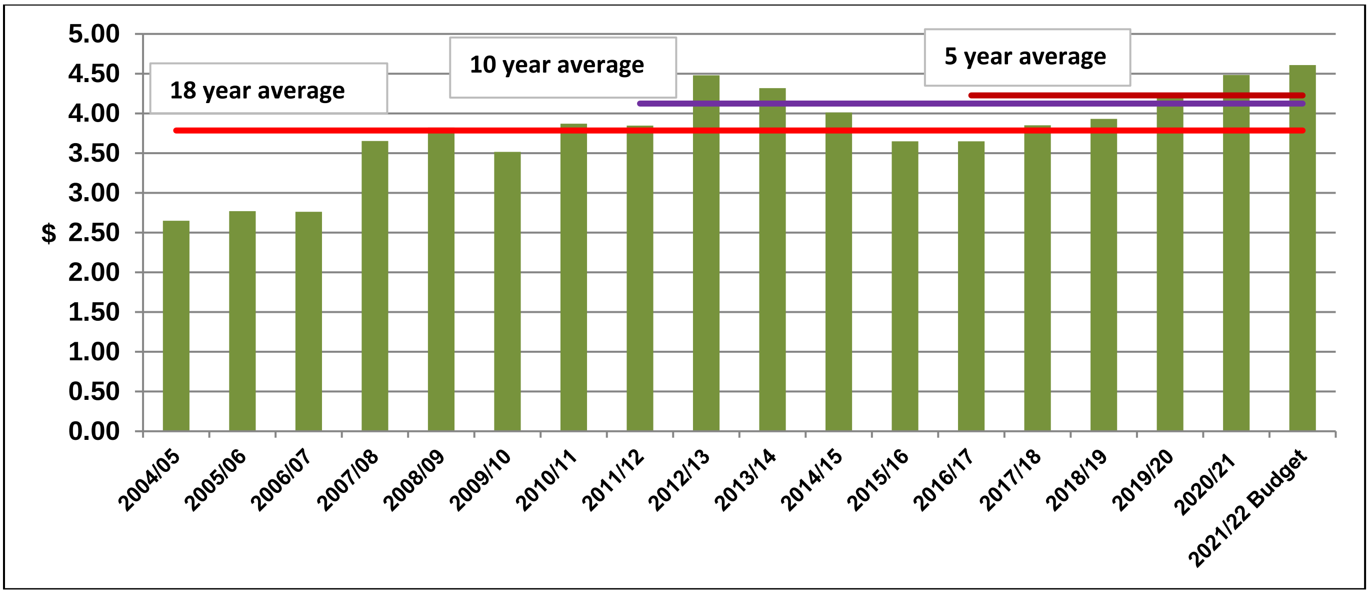
- It is also resulting in farmers spending on labour-saving technologies such as automatic cup removers, automatic teat sprays, and electronic collars. These make the job easier for existing staff as well as freeing them up for other work. Farmers are also looking at more flexible milking systems (e.g. Once-a-day) and much shorter rosters.

- On the environmental front, there is a lot of uncertainty around Regional Council Plans. The Waikato Plan Change 1 is currently in the Environment Court, and no sign as yet of a Plan Change affecting the eastern Waikato. Similarly, in the Bay of Plenty the water quality plan (Plan Change 9) is yet to re-surface. Farmers are continuing to plant up riparian strips, many are having Farm Environment Plans done, particularly by the Dairy Companies, and a number are installing feed pads/wintering barns. Councils are also pushing hard on ensuring effluent management systems are up to compliance levels, with Waikato recently announcing the requirement for 5-year pond drop tests. Farmers are also receiving their greenhouse gas emission numbers via the Dairy Companies, although the vast majority have no idea what the number means or how to reduce greenhouse gases. As yet, there is little information on Significant Natural Areas (SNAs) within the regions, and hence limited understanding of the implications of these. Farmers are also very conscious of the 190 kgN/ha limit – not that many farms in the regions operate near this level, as well as the Fonterra guideline on Purchased Nitrogen Surplus (PNS).

- There is increasing awareness of the bobby calf issue, with a number of farmers looking to address this via using sexed semen to obtain their replacement animals, and then using either beef semen or beef bulls over the remainder of the herd, to ensure a saleable animal. Some are looking to rear all calves, and finish these on run-offs.

- Farm Working Expenses continue to increase, a function of both increasing income and increasing costs/price inflation. Many of the monitored farmers when budgeting for the 2021/22 year, did not seem to appreciate the implications of the current shortage of many goods and materials due to the international Covid-19 situation.

Figure 2: Farm Working Expenses Trends ($/kg MS)



- There is a continuing interest in land use diversification, with two distinct trends; the higher payouts and improved profitability has meant some farmers have lost interest in diversifying, whereas for others the increased cashflow means they have more resource to pursue diversification. An issue that is rapidly becoming a constraint on some proposed diversification plans is the lack of access to water for irrigation.

- Generally, farmer morale is good, driven by a combination of: higher payout, a good season, and low interest rates. The downside being the shortage of labour. There has also been much less adverse comments about dairying in the media, meaning that the "feel good" factor is back.

Table 3: Waikato/Bay of Plenty Dairy Model Budget

	2020/21			2021/22 Budget		
	Whole Farm ($)	Per Cow ($)	Per kg of milksolids ($)	Whole Farm ($)	Per Cow ($)	Per kg of milksolids ($)
Revenue						
Milksolids	1 058 512	2 900	7.68	1 105 746	2 980	7.86
Cattle	47 749	131	0.35	46 256	125	0.33
Other farm income	12 000	33	0.09	10 500	28	0.07
Less:						
Cattle purchases	7 356	20	0.05	7 672	21	0.05
Net cash income	**1 110 905**	**3 044**	**8.06**	**1 154 830**	**3 113**	**8.21**
Farm working expenses	**618 515**	**1 695**	**4.48**	**648 126**	**1 747**	**4.61**
Cash operating surplus	**492 390**	**1 349**	**3.57**	**506 705**	**1 366**	**3.60**
Interest	144 110	395	1.04	139 178	375	0.99
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	6 582	18	0.05	0	0	0.00
Minus depreciation	35 916	98	0.26	37 097	100	0.26
Farm profit before tax	**318 947**	**874**	**2.31**	**330 430**	**891**	**2.35**
Income equalisation	0	0	0.00	0	0	0.00
Taxation	87 091	239	0.63	90 881	245	0.65
Farm profit after tax	**231 856**	**635**	**1.68**	**239 549**	**646**	**1.70**
Allocation of funds						
Add back depreciation	35 916	98	0.26	37 097	100	0.26
Reverse stock value adjustment	- 6 582	- 18	-0.05	0	0	0.00
Drawings	91 250	250	0.66	100 170	270	0.71
Farm surplus for reinvestment[1]	**169 940**	**466**	**1.23**	**176 476**	**476**	**1.25**
Reinvestment						
Net capital purchases	52 768	145	0.38	56 673	153	0.40
Development	75 000	205	0.54	30 000	81	0.21
Principal repayments	97 496	267	0.71	102 531	276	0.73
Farm cash surplus/deficit	**- 55 324**	**- 152**	**-0.40**	**- 12 728**	**- 34**	**-0.09**
Other cash sources						
Dividend on wet shares[2]	4 908	13	0.04	14 997	40	0.11
Dividend on dry shares[2]	0	0	0.00	0	0	0.00
Introduced funds	0	0	0.00	0	0	0.00
New borrowings	75 000	205	0.54	0	0	0.00
Off-farm income	0	0	0.00	0	0	0.00
Net cash position	**24 584**	**67**	**0.18**	**2 269**	**6**	**0.02**
Assets and Liabilities						
Farm, forest and building (opening)	5 151 862	14 115	37.36	5 667 048	15 275	40.29
Plant and machinery (opening)	214 688	588	1.56	222 685	600	1.58
Stock valuation (opening)	609 663	1 670	4.42	616 245	1 661	4.38
Dairy company shares	517 155	1 417	3.75	541 978	1 461	3.85
Other farm related investments (opening)	0	0	0.00	0	0	0.00
Total farm assets	**6 493 368**	**17 790**	**47.08**	**7 047 957**	**18 997**	**50.10**
Total liabilities (opening)	**3 138 592**	**8 599**	**22.76**	**3 213 592**	**8 662**	**22.85**
Total equity (assets-liabilities)	**3 354 776**	**9 191**	**24.33**	**3 834 365**	**10 335**	**27.26**

[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.

[2] Dividend payments shown are net of marginal tax.

Table 4: Waikato/Bay of Plenty Dairy Model Expenditure

	2020/21			2021/22 Budget		
	Whole Farm ($)	Per Cow ($)	Per kg of milksolids ($)	Whole Farm ($)	Per Cow ($)	Per kg of milksolids ($)
Farm working expenses						
Permanent wages	61 320	168	0.44	64 554	174	0.46
Casual wages	13 870	38	0.10	14 840	40	0.11
ACC	2 154	6	0.02	2 271	6	0.02
Total labour expenses	**77 344**	**212**	**0.56**	**81 665**	**220**	**0.58**
Animal health	35 405	97	0.26	35 616	96	0.25
Breeding	25 185	69	0.18	26 341	71	0.19
Dairy shed expenses	10 220	28	0.07	10 017	27	0.07
Electricity	17 520	48	0.13	18 179	49	0.13
Feed (hay and silage)	56 400	155	0.41	70 400	190	0.50
Feed (feed crops)	21 600	59	0.16	21 000	57	0.15
Feed (grazing)	54 912	150	0.40	61 256	165	0.44
Feed (other)	72 690	199	0.53	63 600	171	0.45
Fertiliser	57 798	158	0.42	60 760	164	0.43
Lime	1 500	4	0.01	1 800	5	0.01
Freight (not elsewhere deducted)	7 300	20	0.05	7 420	20	0.05
Regrassing costs	9 490	26	0.07	11 130	30	0.08
Weed and pest control	4 015	11	0.03	3 710	10	0.03
Fuel	10 220	28	0.07	10 759	29	0.08
Vehicle costs (excluding fuel)	18 980	52	0.14	20 034	54	0.14
Repairs and maintenance	46 720	128	0.34	53 795	145	0.38
Total other working expenses	**449 955**	**1 233**	**3.26**	**475 817**	**1 283**	**3.38**
Communication costs (phone, mail)	2 920	8	0.02	2 968	8	0.02
Accountancy	8 030	22	0.06	8 162	22	0.06
Legal and consultancy	8 030	22	0.06	6 678	18	0.05
Other administration	6 935	19	0.05	6 678	18	0.05
Water charges	0	0	0.00	0	0	0.00
Rates	23 725	65	0.17	25 228	68	0.18
Insurance	14 600	40	0.11	14 840	40	0.11
ACC Employer	4 618	13	0.03	4 618	12	0.03
Other expenditure[1]	22 358	61	0.16	21 472	58	0.15
Total overhead expenses	**91 216**	**250**	**0.66**	**90 644**	**244**	**0.64**
Total farm working expenses	**618 515**	**1 695**	**4.48**	**648 126**	**1 747**	**4.61**
Calculated Ratios						
Economic farm surplus (EFS[2])	368 057	1 008	2.67	374 608	1 010	2.66
Farm working expenses/NCI[3]	56%			56%		
EFS/total farm assets	5.7%			5.3%		
EFS less interest and lease/equity	6.7%			6.1%		
Interest+rent+lease/NCI	13.0%			12.1%		
EFS/NCI	33.1%			32.4%		

[1] Includes DairyNZ levy, and M. Bovis levy.

[2] EFS (Economic Farm Surplus) 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: $45 000 allowance for labour input plus 1 percent of opening total farm assets to a maximum of $95 000.

[3] Net cash income.

INFORMATION ABOUT THE MODEL

The Waikato/Bay of Plenty Dairy Model represents approximately 4,400 dairy farms across the Waikato and Bay of Plenty regions. The model is a seasonal supply farm based on an average property of 133 hectares, milking 365 cows and producing around 135,000 – 140,000 kgMS in a normal season. Heifers are grazed off the farm for 17 months.

The model is created from information drawn from 26 surveyed dairy farms and a cross section of agribusiness representatives. The aim of the model is to typify an average dairy farm for the Waikato/Bay of Plenty region. The model is assumed to supply Fonterra. The income and expenditure shown is on a cash in/cash out basis.

For more information on the model contact: phil.journeaux@agfirst.co.nz

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