Financial Survey 2016
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 2016. A description of the model farm is at the back of this report.

KEY POINTS

- A moderate season, with a cool dry spring, a moist summer/autumn in most areas, and a relatively mild winter. Pasture cover going into the 2016/17 calving season is variable, and cow condition generally below target.
- The poor spring coupled with a reducing payout and predictions of an El Niño drought saw many farmers cull cows early and reduce their overall herd numbers by 5.7%. Production across the region for 2015/16 is estimated to be down by 3.4%.
- The low payout saw farmers significantly reduce farm working expenditure and personal drawings. Despite this the model records a loss of $100,000 (80c/kgMS) for the 2015/16 season, which effectively will be added to term debt.
- While the predicted payout for 2016/17 is up on 2015/16, farmers are still budgeting to reduce on-farm spending. The increased dividend payment sees the model budget finish 2016/17 with a net deficit of $13,300 (11c/kgMS).
- While farm working expenses have been reduced, many farms are now operating with sub-maintenance spending, and not replacing capital items.
- The payout situation for 2016/17 remains very uncertain, and farmers are operating under significant financial stress.

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

Year ended 30 June	2012/13	2013/14	2014/15	2015/16	2016/17 budget
Effective area (ha)	119	122	123	123	123
Cows wintered (head)	345	350	344	344	325
Replacement heifers (head)	64	65	65	65	62
Cows milked 15th December (head)	340	346	340	335	325
Stocking rate (cows/ha)	2.9	2.9	2.8	2.7	2.6
Total milksolids (kg)	107,460	124,800	130,464	126,028	124,768
Milksolids per ha (kg/ha)	903	1,023	1,060	1,025	1,014
Milksolids per cow milked (kg/cow)	316	361	383	376	384
MS advance to end June ($/kg)	5.15	6.90	4.29	3.39	3.59
MS deferred payment ($)	0.85	0.68	1.50	0.12	0.51
Net cash income ($)	733,744	999,485	788,056	514,556	565,966
Farm working expenses ($)	482,103	538,881	522,563	457,205	433,592
Farm profit before tax ($)	109,252	282,844	78,832	-168,687	-56,333
Farm surplus for reinvestment[1] ($)	10,867	137,922	25,386	-150,572	-67,269

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 2015 winter was relatively mild in most districts, although some late frosts slowed pasture growth during the start of calving. Cow condition at calving was generally below target, especially in the Central Plateau.

The spring turned out to be both cool and dry, which restricted pasture growth and milk production. The prediction of a dry El Niño summer, coupled with a low payout and high beef schedule, saw many farmers cull cows early through this period. On the monitored farms cow numbers dropped by an average of 5.7% over the 2015/16 season.

Despite the predictions, the summer turned out reasonably wet, although it was patchy across the region; there tended to be something of a “north/south” division within the Waikato, with southern Waikato receiving more rain compared with the north, whereas the Hauraki Plains, and Bay of Plenty especially, enjoyed a good summer and autumn.

The 2016 winter to date has been relatively mild, with few frosts, although wet in patches. Pasture covers are quite variable, and tending to drop with recent cooler weather. Cow condition is below target; less than what it was going into calving in 2015.

Facial Eczema was an issue on a number of farms. Although farmers had been treating for FE, some very high spore counts were recorded, and a number of clinical cases occurred. At the start of calving farmers were reporting a number of symptoms which may well reflect subclinical FE; increased number of slips, and cows not putting on weight. Some farms also reported incidents of nitrate poisoning in the autumn due to overcast weather and warm soil temperatures.

FINANCIAL PERFORMANCE 2015/16

Revenue Down

The major financial issue throughout the season was the ever-decreasing payout. The prediction at the start of the year was $5.25/kgMS, and eventually settled out at $3.90/kgMS. This had a significant effect on farmers’ budgets and cash flow, and was compounded by a reduction in milk production (down 3.4% on the model), offset to some degree by increased cattle income from the sale of cull cows.

The result is that Net Cash Income for the model in 2015/16 is $514,600, down 36% compared with 2014/15.

Expenditure Down

With the drop in payout, farmers have made a concerted effort to reduce farm working expenses in order to minimise the overall loss. Total farm working expenses have dropped by 12% compared with 2014/15, from $4.00/kgMS down to $3.63/kgMS. While reductions were made across the board, key changes were:

- Animal Health down 13%
- Breeding expenses down 16%
- Dairy Shed expenses down 26%
- Total feed costs (covering supplements made on-farm, bought-in supplements, and off-farm grazing) down 21%. The biggest reduction was in bought-in feed, down 35%.
- Fertiliser down 3%. Many farmers reduced their P, K, S application, but increased nitrogen applications
- Repairs and maintenance down 22%

While the reduction in farm working expenses was a financial necessity, many farms are now operating at sub-maintenance spending, which is not sustainable long term, and a number of farms are now showing the effect of low R&M spending. For the monitored farms, total farm working expenses varied from $2.67 to $5.75/kgMS, with a median of $3.64 and an average of $3.70/kgMS.

Total debt servicing has dropped slightly; while most farmers were running much higher overdrafts, reductions in interest rates on term debt more than offset this. The model paid a total of $1.20/kgMS in 2015/16; within the monitored farms debt servicing varied from $0.13 to $2.40/kgMS, with a median payment of $1.20/kgMS.

Net Result

Farm profit before tax for 2015/16 is -$168,700, down 343% compared with 2014/15. As a result, tax payments are nil.

As a result of the drop in the payout, farmers have also reduced their personal drawings compared with previous years, with spending in 2015/16 down 23% compared with 2014/15.

The dividend on the Fonterra shares increased this year, giving some relief to the overall cash position.

The net position for the model is a loss of $100,000 (80c/kgMS), which is somewhat offset by the Fonterra loan. This loan was taken up by many farmers, and included in the model budget (at $31,500), giving a cash loss for the model of $68,700 (55c/kgMS). The end result though is that the $100,000 loss is carried into the 2016/17 year as increased debt.

FINANCIAL PERFORMANCE 2016/17

Revenue Up

The budgeted net cash income for the model increases by $51,400, or 10% compared with 2015/16. The main driver of this is the expected increased payout and a higher deferred payment relative to 2015/16, offset by a drop in cattle returns, accepting that cattle income in 2015/16 was boosted by the higher than normal cull.

In noting this, the monitored farms were budgeting on a 2.2% reduction in cow numbers over the season (closing versus opening) and a 1% reduction in milksolids production. Both of which are reflected in the model budget.

Expenditure Down

The drive to reduce farm working expenses continues, with budgeted total FWE within the model down 5% to $3.48/kgMS. Again there are reductions across the board, with key ones being:

- Animal Health down 6%
- Breeding down 5%
- Total feed down 7%, with bought-in supplement down 16%
- Fertiliser down 11% (particularly P, K, S)
- Repairs and maintenance down 11%

While these reductions are driven by financial necessity, again it extends the period that many farms are operating at a sub-maintenance level.

While labour costs in the model have only dropped slightly, a number of farms have reduced a labour unit and will operate with less staff this season. In a number of cases, some owners are going back into the milking shed.

For the monitored farms, budgeted expenditure in 2016/17 on FWE varies from $2.51 to $5.28/kgMS, with a median of $3.49 and an average of $3.47/kgMS.

Total debt servicing for the year drops slightly (2%); while term debt is higher following the loss in 2015/16, and the average overdraft level is held the same as in 2015/16, the reduction in interest rates is helping to offset this.

Net Result

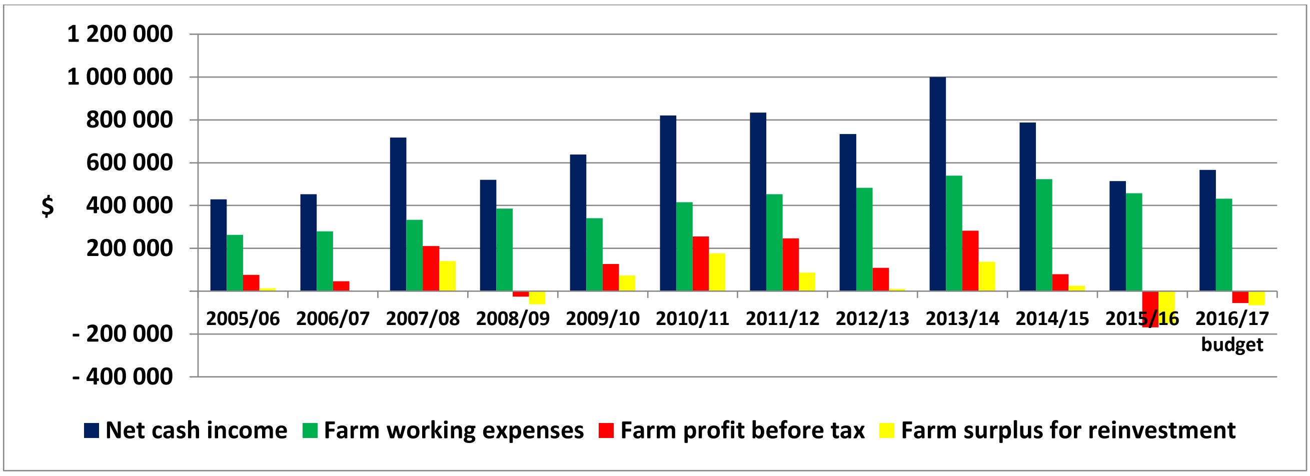
Farm profit before tax remains in negative territory, at -$56,300, albeit an improvement over 2015/16. Consequently, tax again is zero.

Farmers are again budgeting for a reduction in personal drawings (down 8% compared with 2015/16), as a means of helping to reduce the deficit.

The deficit is then almost offset by the recently announced increased share dividend, meaning the model is currently budgeting to finish 2016/17 with a net cash deficit of $13,300 (11c/kgMS).

The low payout situation has also resulted in a reduction in equity. While it is difficult to get an exact reading on land values, the value of the model farm has been reduced by 5%, coupled with reductions in stock values (Herd Scheme) and plant and equipment (given no capital replacement spending), plus an increase in term debt, offset slightly by an improvement in the value of the Fonterra shares. The end result of this is that the model had debt of 40%/equity of 60% at the start of the 2015/16 season, which has reduced to 44% debt/56% equity at the start of the 2016/17 season.

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



Sensitivity analysis

With some uncertainty around the 2016/17 payout, the following table shows the net cash position (i.e. including the share dividend) allowing for sensitivities in payout, debt levels, and farm working expenses.

Table 2: 2016/17 Season: Net Cash Position sensitivities to various factors

Payout $/kgMS	$4.00								
Debt $/kgMS	$10			$21.3			$30		
FWE $/kg/MS	$3.20	$3.48	$4.00	$3.20	$3.48	$4.00	$3.20	$3.48	$4.00
Net Cash Position	$64,700	$38,100	-$25,300	-$2,900	-$39,500	-$102,900	-$62,500	-$99,100	-$162,500

Payout $/kgMS	$4.25*								
Debt $/kgMS	$10			$21.3*			$30		
FWE $/kg/MS	$3.20	$3.48	$4.00	$3.20	$3.48*	$4.00	$3.20	$3.48	$4.00
Net Cash Position	$84,700	$56,100	$900	$23,300	-$13,300	-$76,700	-$36,300	-$72,900	-$136,300

Payout $/kgMS	$4.50								
Debt $/kgMS	$10			$21.3			$30		
FWE $/kg/MS	$3.20	$3.48	$4.00	$3.20	$3.48	$4.00	$3.20	$3.48	$4.00
Net Cash Position	$105,700	$76,500	$27,100	$42,800	$12,900	-$50,500	-$10,100	-$46,700	-$110,100

Payout $/kgMS	$5.00								
Debt $/kgMS	$10			$21.3			$30		
FWE $/kg/MS	$3.20	$3.48	$4.00	$3.20	$3.48	$4.00	$3.20	$3.48	$4.00
Net Cash Position	$141,200	$117,800	$68,200	$85,500	$57,000	$1,900	$42,300	$5,700	-$57,700

*Current base model parameters

Breakeven Payout

A calculation is shown below of the "breakeven" payout required to meet basic expenditure requirements covering; farm working expenditure, debt servicing, living expenses, and capital replacement.

Table 3: Breakeven payout estimate ($/kg MS)

	2015/16	2016/17	2016/17 @ Maintenance*
Farm Working expenses	$3.63	$3.48	$3.80
Interest	$1.20	$1.18	$1.18
Drawings	$0.45	$0.42	$0.65
Depreciation	$0.33	$0.29	$0.33
	$5.61	$5.36	$5.96
Cattle Income	$0.47	$0.37	$0.37
Breakeven Payout	$5.14	$4.99	$5.59
Within season payment	$3.51	$4.11	$4.11
Difference	-$1.63	-$0.88	-$1.48

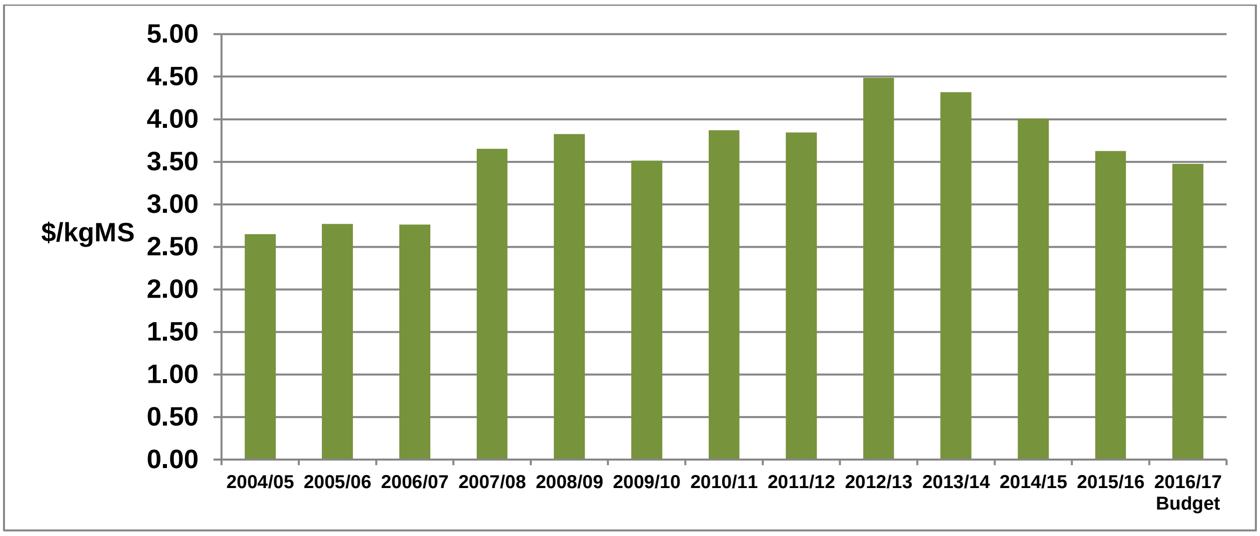
*This assumes full maintenance expenditure on-farm, particularly for farm working expenses

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

Farm Working Expenses

The current payout situation has seen a concentration on reducing farm working expenses. The following figure illustrates the movement in FWE over the last 13 years, and the recent downward trend.

Figure 2: Trends in model farm working expenses ($/kgMS)



ISSUES

By far the main issue at the moment is financial survival, and the attendant stress that many farmers are under. There is a lot of uncertainty about the future, especially around the level of payout. Most farmers are just “getting on with it”, but the worry continues. Many are continually looking at their farming system in order to (particularly) reduce costs, but also boost returns.

The situation for sharemilkers is much tougher, particularly for herd-owning sharemilkers who have seen most if not all their equity eroded over the last year. Many are having difficulty seeing a path forward at the moment, and are wondering if they are in the right industry. Unless the payout/profitability improves, this may well have flow-on effects into the future.

Table 4: Waikato/Bay of Plenty Dairy Model Budget

	2015/16			2016/17 budget		
	Whole farm ($)	Per cow ($)	Per kg of milksolids ($)	Whole farm ($)	Per cow ($)	Per kg of milksolids ($)
Revenue						
Milksolids	412 645	1 232	3.27	482 285	1 484	3.87
Capacity Adjustment	30 209	90	0.24	29 945	92	0.24
Cattle	63 066	188	0.50	51 136	157	0.41
Other farm income	12 700	38	0.10	7 000	22	0.06
Less:						
Cattle purchases	4 064	12	0.03	4 400	14	0.04
Net cash income	**514 556**	**1 536**	**4.08**	**565 966**	**1 741**	**4.54**
Farm working expenses	**457 205**	**1 365**	**3.63**	**433 592**	**1 334**	**3.48**
Cash operating surplus	**57 351**	**171**	**0.46**	**132 374**	**407**	**1.06**
Interest	150 974	451	1.20	147 318	453	1.18
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	- 33 488	- 100	-0.27	- 5 675	- 17	-0.05
Minus depreciation	41 577	124	0.33	35 714	110	0.29
Farm profit before tax	**- 168 687**	**- 504**	**-1.34**	**- 56 333**	**- 173**	**-0.45**
Income equalisation	0	0	0.00	0	0	0.00
Taxation	0	0	0.00	0	0	0.00
Farm profit after tax	**- 168 687**	**- 504**	**-1.34**	**- 56 333**	**- 173**	**-0.45**
Allocation of funds						
Add back depreciation	41 577	124	0.33	35 714	110	0.29
Reverse stock value adjustment	33 488	100	0.27	5 675	17	0.05
Drawings	56 950	170	0.45	52 325	161	0.42
Farm surplus for reinvestment[1]	**- 150 572**	**- 449**	**-1.19**	**- 67 269**	**- 207**	**-0.54**
Reinvestment						
Net capital purchases	2 819	8	0.02	3 078	9	0.02
Development	0	0	0.00	0	0	0.00
Principal repayments	0	0	0.00	0	0	0.00
Farm cash surplus/deficit	**- 153 391**	**- 458**	**-1.22**	**- 70 347**	**- 216**	**-0.56**
Other cash sources						
Dividend on wet shares[2]	53 143	159	0.42	56 811	175	0.46
Dividend on dry shares[2]	0	0	0.00	222	1	0.00
Introduced funds	0	0	0.00	0	0	0.00
New borrowings[3]	31 507	94	0.25	0	0	0.00
Off-farm income	0	0	0.00	0	0	0.00
Net cash position	**- 68 742**	**- 205**	**-0.55**	**- 13 313**	**- 41**	**-0.11**
Assets and Liabilities						
Farm, forest and building (opening)	4 900 000	14 627	38.88	4 655 000	14 323	37.31
Plant and machinery (opening)	260 000	776	2.06	221 000	680	1.77
Stock valuation (opening)	613 585	1 832	4.87	456 541	1 405	3.66
Dairy company shares	619 958	1 851	4.92	689 545	2 122	5.53
Other farm related investments (opening)	0	0	0.00	0	0	0.00
Total farm assets	**6 393 543**	**19 085**	**50.73**	**6 022 086**	**18 529**	**48.27**
Total liabilities (opening)	**2 558 854**	**7 638**	**20.30**	**2 659 103**	**8 182**	**21.31**
Total equity (assets-liabilities)	**3 834 689**	**11 447**	**30.43**	**3 362 983**	**10 348**	**26.95**

Notes:

[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

[3] Fonterra Loan

Table 5 Waikato/Bay of Plenty Dairy Model Expenditure

	2015/16			2016/17 budget		
	Whole farm ($)	Per cow ($)	Per kg of milksolids ($)	Whole farm ($)	Per cow ($)	Per kg of milksolids ($)
Farm working expenses						
Permanent wages	81 070	242	0.64	80 600	248	0.65
Casual wages	8 710	26	0.07	8 320	26	0.07
ACC	2 865	9	0.02	2 711	8	0.02
Total labour expenses	**92 645**	**277**	**0.74**	**91 631**	**282**	**0.73**
Animal health	28 810	86	0.23	26 975	83	0.22
Breeding	16 415	49	0.13	15 600	48	0.13
Dairy shed expenses	7 705	23	0.06	7 800	24	0.06
Electricity	16 248	49	0.13	16 250	50	0.13
Feed (hay and silage)	23 100	69	0.18	23 300	72	0.19
Feed (feed crops)	17 500	52	0.14	17 500	54	0.14
Feed (grazing)	38 636	115	0.31	36 946	114	0.30
Feed (other)	51 300	153	0.41	44 300	136	0.36
Fertiliser	41 390	124	0.33	36 890	114	0.30
Lime	0	0	0.00	0	0	0.00
Freight (not elsewhere deducted)	4 523	14	0.04	3 981	12	0.03
Regrassing costs	5 327	16	0.04	4 420	14	0.04
Weed and pest control	3 099	9	0.02	2 990	9	0.02
Fuel	12 060	36	0.10	12 025	37	0.10
Vehicle costs (excluding fuel)	12 395	37	0.10	12 903	40	0.10
Repairs and maintenance	29 815	89	0.24	26 390	81	0.21
Total other working expenses	**308 321**	**920**	**2.45**	**288 270**	**887**	**2.31**
Communication costs (phone and mail)	2 848	9	0.02	3 770	12	0.03
Accountancy	6 120	18	0.05	6 013	19	0.05
Legal and consultancy	4 188	13	0.03	3 743	12	0.03
Other administration	4 295	13	0.03	3 933	12	0.03
Water charges	0	0	0.00	0	0	0.00
Rates	16 633	50	0.13	16 900	52	0.14
Insurance	10 117	30	0.08	9 425	29	0.08
ACC Employer	4 501	13	0.04	3 716	11	0.03
Other expenditure[1]	7 537	22	0.06	6 192	19	0.05
Total overhead expenses	**56 238**	**168**	**0.45**	**53 691**	**165**	**0.43**
Total farm working expenses	**457 205**	**1 365**	**3.63**	**433 592**	**1 334**	**3.48**
Calculated Ratios						
Economic farm surplus (EFS[2])	- 102 714	- 307	-0.82	5 985	18	0.05
Farm working expenses/NCI[3]	89%			77%		
EFS/total farm assets	-1.6%			0.1%		
EFS less interest and lease/equity	-6.6%			-4.2%		
Interest+rent+lease/NCI	29.3%			26.0%		
EFS/NCI	-20.0%			1.1%		

Notes:

1 Includes Dairy NZ 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: $38 000 allowance for labour input plus 1 percent of opening total farm assets to a maximum of $85 000.

3 Net cash income.

INFORMATION ABOUT THE MODEL

The Waikato/Bay of Plenty Dairy Model represents approximately 4,800 dairy farms across the Waikato and Bay of Plenty regions. The model is a seasonal supply farm based on an average property of 123 ha, milking 344 cows and producing around 125,000 - 130,000 kg MS in a normal season. Heifers are grazed off the farm for 17 months.

The model is created from information drawn from 22 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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