



# FARM MONITORING 2012

## NATIONAL DAIRY

### Key results from the Ministry for Primary Industries 2012 dairy monitoring programme

The national dairy budget depicted below has been constructed via a weighted average of the MPI dairy farm models. The weighting is based on the number of dairy cows in each region from the 2011 Livestock Improvement/DairyNZ survey. The weightings, on a model basis, are as follows:

• Northland	7.4%
• Waikato/Bay of Plenty	38.9%
• Taranaki	11.5%
• Lower North Island	9.9%
• Canterbury	18.1%
• Southland	14.3%

### KEY POINTS

#### 2011/12

- The 2011/12 season was outstanding across most of the country, apart from spring storms in Taranaki and an early summer dry spell in Southland.
- The effect of the season was a nearly 10 percent lift in national production.
- The lift in production was offset by a declining payout, which eventually dropped to \$6.05 per kilogram of milksolids. Total milksolids income for 2011/12 was \$1.05 million which is essentially the same as for 2010/11.
- With increased cattle income (up 5 percent) and increased dividends on wet shares (up 21 percent), the average net cash income for 2011/12 was 1.4 percent ahead of 2010/11.
- Farm working expenses increased 12 percent over 2010/11 as a result of increased spending in most areas combined with on-farm cost inflation. Many farmers increased expenditure on the expectation of a higher payout than eventuated.
- Spending on repairs and maintenance increased 21 percent as farmers continued to catch up in this area, with expenditure on effluent systems a major item.
- Debt servicing costs reduced 6 percent in 2011/12, due to a combination of debt reduction and lower interest rates. Many farmers continued with debt reduction during the year.
- The improved profit in 2010/11 and similar before tax profit levels in 2011/12 saw tax payments increase significantly, especially as many farmers had exhausted their tax losses (carried forward from earlier years).
- While farmers finished the year with a farm cash surplus, this was down 68 percent on 2010/11.
- Most farms go into 2012/13 in good shape, with pasture covers and cow condition at target levels, and significant levels of supplementary feed on hand.

#### 2012/13

- The main concern going into 2012/13 is the drop in the expected payout. Both the deferred payment from 2011/12 and the advance through to June 2013 are well down on 2011/12 levels.
- The initial advance payment of \$3.85 per kilogram of milksolids means cash flows will be tight through to January 2013.
- The drop in the expected payout will see total income from milksolids fall 20 percent, compared with 2011/12, and net cash income down 18 percent.
- While farmers are budgeting conservatively in the face of a reduced payout, overall farm working expenses are expected to be down only 3 percent compared with 2011/12. The main reductions in spending will be feed expenditure, both with respect to supplements made on-farm and purchased in, fertiliser, and repairs and maintenance. These are expected to be offset by inflation-driven cost increases.
- Farm profit before tax is expected to drop 57 percent compared with 2011/12. The average farm is currently budgeting to run at a loss for the 2012/13 season, and few farmers are budgeting for any debt reduction this season.
- Farmers will be watching both the payout and expenditure closely. Current international dairy product prices are well under the expected \$5.50 per kilogram of milksolids payout. While there is an expectation that the drought in the USA will result in increased international prices, if prices do not lift significantly, farmers will look to cut expenditure further to break even.
- While many farmers have paid off debt over the past two years, aggregate debt remains high, and there are a small number (20 percent) of dairy farms with high debt that are vulnerable to a drop in payout.

Table 1: National dairy model budget

	2011/12			2012/13 budget		
	Whole farm (\$)	Per cow (\$)	Per kg of milksolids (\$)	Whole farm (\$)	Per cow (\$)	Per kg of milksolids (\$)
<b>Revenue</b>						
Milksolids	1 050 566	2 443	6.51	836 459	1 923	5.26
Dividend on wet shares	47 880	111	0.30	50 649	116	0.32
Cattle	63 602	148	0.39	61 932	142	0.39
Other farm income	4 713	11	0.03	4 965	11	0.03
<b>Less:</b>	0	0	0.00	0	0	0.00
Cattle purchases	5 070	12	0.03	4 627	11	0.03
<b>Net cash income</b>	<b>1 161 690</b>	<b>2 702</b>	<b>7.20</b>	<b>949 378</b>	<b>2 182</b>	<b>5.97</b>
<b>Farm working expenses</b>	<b>644 634</b>	<b>1 499</b>	<b>3.99</b>	<b>624 829</b>	<b>1 436</b>	<b>3.93</b>
<b>Cash operating surplus</b>	<b>517 056</b>	<b>1 202</b>	<b>3.20</b>	<b>324 549</b>	<b>746</b>	<b>2.04</b>
Interest	185 469	431	1.15	168 589	388	1.06
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	17 270	40	0.11	5 419	12	0.03
Minus depreciation	29 338	68	0.18	23 791	55	0.15
<b>Farm profit before tax</b>	<b>319 519</b>	<b>743</b>	<b>1.98</b>	<b>137 589</b>	<b>316</b>	<b>0.87</b>
Income equalisation	0	0	0.00	- 5 103	- 12	-0.03
Taxation	111 129	258	0.69	36 847	85	0.23
<b>Farm profit after tax</b>	<b>208 390</b>	<b>485</b>	<b>1.29</b>	<b>105 844</b>	<b>243</b>	<b>0.67</b>
<b>Allocation of funds</b>						
Add back depreciation	29 338	68	0.18	23 791	55	0.15
Reverse stock value adjustment	- 17 270	- 40	-0.11	- 5 419	- 12	-0.03
Drawings	74 736	174	0.46	74 594	171	0.47
<b>Farm surplus for reinvestment<sup>1</sup></b>	<b>145 722</b>	<b>339</b>	<b>0.90</b>	<b>49 622</b>	<b>114</b>	<b>0.31</b>
<b>Reinvestment</b>						
Net capital purchases	30 219	70	0.19	43 427	100	0.27
Development	48 476	113	0.30	18 545	43	0.12
Principal repayments	35 955	84	0.22	6 669	15	0.04
<b>Farm cash surplus/deficit</b>	<b>31 072</b>	<b>72</b>	<b>0.19</b>	<b>- 19 019</b>	<b>- 44</b>	<b>-0.12</b>
<b>Other cash sources</b>						
Dividend on dry shares	788	2	0.00	467	1	0.00
Introduced funds	0	0	0.00	0	0	0.00
New borrowings	0	0	0.00	10 865	25	0.07
Off-farm income	7 556	18	0.05	7 425	17	0.05
<b>Net cash position</b>	<b>39 415</b>	<b>92</b>	<b>0.24</b>	<b>- 261</b>	<b>- 1</b>	<b>0.00</b>
<b>Assets and Liabilities</b>						
Farm, forest and building (opening)	5 385 451	384	33.37	5 454 028	12 538	34.32
Plant and machinery (opening)	164 969	2 500	1.02	153 425	353	0.97
Stock valuation (opening)	1 075 215	1 631	4.35	1 092 484	2 511	6.87
Dairy company shares	701 448	1 631	4.35	735 981	1 692	4.63
Other farm-related investments (opening)	494	1	0.00	494	1	0.00
<b>Total farm assets</b>	<b>7 327 578</b>	<b>17 041</b>	<b>45.41</b>	<b>7 436 413</b>	<b>17 095</b>	<b>46.79</b>
Total liabilities (opening)	2 850 163	6 628	17.66	2 799 584	6 436	17.62
<b>Total equity (assets-liabilities)</b>	<b>4 477 415</b>	<b>10 413</b>	<b>27.75</b>	<b>4 636 829</b>	<b>10 659</b>	<b>29.18</b>

**Notes**

<sup>1</sup> 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.

Table 2: National dairy model expenditure

	2011/12			2012/13 budget		
	Whole farm (\$)	Per cow (\$)	Per kg of milk solids (\$)	Whole farm (\$)	Per cow (\$)	Per kg of milk solids (\$)
<b>Farm working expenses</b>						
Permanent wages	92 779	216	0.57	94 881	218	0.60
Casual wages	12 642	29	0.08	11 067	25	0.07
ACC	3 664	9	0.02	3 184	7	0.02
<b>Total labour expenses</b>	<b>109 086</b>	<b>254</b>	<b>0.68</b>	<b>109 132</b>	<b>251</b>	<b>0.69</b>
Animal health	35 361	82	0.22	36 851	85	0.23
Breeding	19 727	46	0.12	19 651	45	0.12
Dairy shed expenses	10 196	24	0.06	11 024	25	0.07
Electricity	20 946	49	0.13	25 303	58	0.16
Feed (hay and silage)	75 998	177	0.47	64 847	149	0.41
Feed (feed crops)	2 222	5	0.01	2 631	6	0.02
Feed (grazing)	84 914	197	0.53	90 545	208	0.57
Feed (other)	39 712	92	0.25	31 054	71	0.20
Fertiliser	79 388	185	0.49	74 085	170	0.47
Lime	3 979	9	0.02	3 460	8	0.02
Freight (not elsewhere deducted)	5 756	13	0.04	5 534	13	0.03
Regrassing costs	7 547	18	0.05	7 278	17	0.05
Weed and pest control	4 294	10	0.03	4 277	10	0.03
Fuel	13 767	32	0.09	15 673	36	0.10
Vehicle costs (excluding fuel)	17 784	41	0.11	17 758	41	0.11
Repairs and maintenance	56 841	132	0.35	46 533	107	0.29
<b>Total other working expenses</b>	<b>478 433</b>	<b>1 113</b>	<b>2.96</b>	<b>456 503</b>	<b>1 049</b>	<b>2.87</b>
Communication costs (phone and mail)	3 530	8	0.02	3 634	8	0.02
Accountancy	5 497	13	0.03	5 605	13	0.04
Legal and consultancy	4 124	10	0.03	3 983	9	0.03
Other administration	2 976	7	0.02	3 012	7	0.02
Water charges (irrigation)	3 333	8	0.02	4 551	10	0.03
Rates	14 196	33	0.09	14 738	34	0.09
Insurance	10 825	25	0.07	11 479	26	0.07
ACC employer	4 686	11	0.03	5 019	12	0.03
Other expenditure <sup>1</sup>	7 947	18	0.05	7 173	16	0.05
<b>Total overhead expenses</b>	<b>57 114</b>	<b>133</b>	<b>0.35</b>	<b>59 194</b>	<b>136</b>	<b>0.37</b>
<b>Total farm working expenses</b>	<b>644 634</b>	<b>1 499</b>	<b>3.99</b>	<b>624 829</b>	<b>1 436</b>	<b>3.93</b>
<b>Calculated ratios</b>						
Economic farm surplus (EFS <sup>2</sup> )	421 321	980	2.61	222 471	511	1.40
Farm working expenses/NCI <sup>3</sup>	55%			66%		
EFS/total farm assets	5.7%			2.7%		
EFS less interest and lease/equity	5.3%			0.7%		
Interest+rent+lease/NCI	16.0%			17.8%		
EFS/NCI	36.3%			4.3%		
Wages of management	83 667			83 706		
<b>Physical parameters</b>						
Effective area (ha)	148			148		
Cows milked	430			435		
Milk solids (kg)	161,369			158,931		

**Notes**

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.

Table 3: Key parameters, financial results and budget for the national dairy model

Year ended 30 June	2008/09	2009/10	2010/11	2011/12 actual	2012/13 budget
Total milksolids revenue/cow (\$)	1 788	2160	2 532	2 443	1 923
Kilograms of milksolids/ha	1 014	1 020	1 040	1 090	1 074
Kilograms of milksolids/cow milked	349	348	354	375	365
Milksolids advance to end June (\$/kg)	4.15	5.15	6.20	5.20	4.40
Milksolids deferred payment (\$/kg)	1.00	1.05	0.95	1.30	0.85
Cattle income (\$)	50 025	45 457	60 536	63 602	61 932
Other farm income (\$)	5 842	2 229	2 570	4 713	4 627
Net cash income (\$)	749 977	931 703	1 146 118	1 161 690	949 378
Farm working expenses (\$)	528 625	492 162	576 403	644 634	624 829
Cash operating surplus	221 351	439 541	569 715	517 056	324 549
Farm profit before tax (\$)	- 6 329	202 800	345 352	319 519	137 589
Farm surplus for reinvestment <sup>1</sup>	- 50 416	134 935	227 008	145 722	49 622
EFS <sup>2</sup> per cow (\$)	244	788	1 109	980	511
FWE <sup>3</sup> /net cash income (%)	71	53	50	55	66
EFS/total farm assets (%)	1.1	4.8	6.8	5.7	3.0

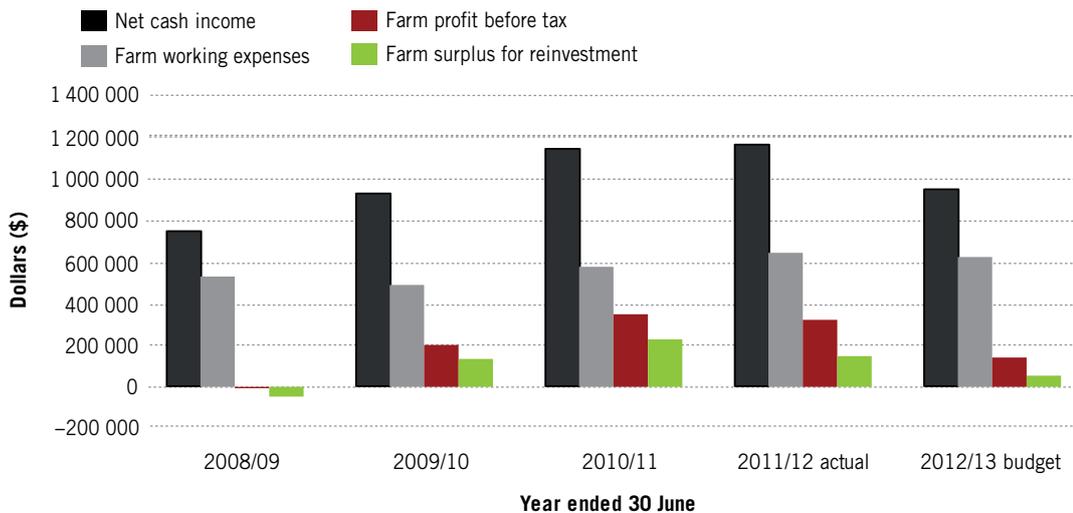
**Notes**

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 Economic farm surplus.

3 Farm working expenses.

Figure 1: National dairy model profitability trends



## NATIONAL DAIRY PERCENTILE ANALYSIS

The following tables and graphs are based on an analysis of the total national sample of dairy farms monitored as part of the MPI farm monitoring programme.

Table 4 gives a percentile analysis based on farm profit before tax per hectare for the 2011/12 year. Table 5 gives a percentile analysis of production data for the 2011/12 year. These tables show the

distribution of income, expenditure, and production across the monitored farms.

Table 6 and Table 7 also show the same data but sorted on economic farm surplus per hectare – sorting this way removes the influence of debt servicing on profitability. The mean and median figures are the same as in Table 4 and Table 5, but the percentile figures have altered.

**Table 4: Percentile analysis of financial data from monitored dairy farms, 2011/12**

	Average of			Mean	Median	Average of		
	Bottom 10% (\$)	Bottom 25% (\$)	Bottom 25-50% (\$)			Top 50-75% (%)	Top 25% (\$)	Top 10% (\$)
<b>Revenue</b>								
Milksolids	807 518	906 640	878 831	1 071 505	900 460	1 019 648	1 420 312	1 408 500
Dividend on wet shares	31 239	34 316	32 141	54 100	44 239	51 008	70 463	69 427
Cattle sales	77 830	77 364	55 057	82 110	61 218	78 568	100 504	96 983
Other revenue	7 767	4 217	3 585	5 333	1 650	3 345	7 691	6 819
Cattle purchases	5 094	18 988	11 559	25 783	3 475	52 326	13 025	14 298
<b>Net cash income</b>	<b>918 934</b>	<b>1 005 202</b>	<b>955 749</b>	<b>1 182 267</b>	<b>991 792</b>	<b>1 094 929</b>	<b>1 581 747</b>	<b>1 568 205</b>
<b>Farm working expenses</b>	<b>527 281</b>	<b>573 352</b>	<b>512 678</b>	<b>659 220</b>	<b>555 185</b>	<b>601 366</b>	<b>793 184</b>	<b>724 838</b>
<b>Cash operating surplus</b>	<b>391 654</b>	<b>431 851</b>	<b>443 071</b>	<b>523 048</b>	<b>412 317</b>	<b>493 563</b>	<b>788 563</b>	<b>843 367</b>
Interest	274 820	240 422	167 787	189 936	149 612	163 587	189 544	185 835
Rent/lease	27 901	23 093	6 094	21 350	0	22 784	23 329	7 549
Stock value adjustment	- 20 753	- 8 469	20 676	24 819	5 699	61 059	9 595	11 453
Depreciation	60 795	66 202	44 074	51 888	35 380	41 270	43 723	53 900
<b>Farm profit before tax</b>	<b>7 384</b>	<b>93 665</b>	<b>245 792</b>	<b>284 693</b>	<b>216 369</b>	<b>326 980</b>	<b>541 562</b>	<b>607 537</b>
Tax	11 567	9 730	19 377	47 360	26 250	37 976	99 365	107 066
<b>Farm profit after tax</b>	<b>- 4 183</b>	<b>83 936</b>	<b>226 415</b>	<b>237 333</b>	<b>176 436</b>	<b>289 004</b>	<b>442 198</b>	<b>500 471</b>
Add back depreciation	20 753	8 469	20 676	51 888	35 380	41 270	43 723	53 900
Reverse stock value adjustment	60 795	66 202	44 074	24 819	5 699	61 059	9 595	11 453
Drawings	58 858	58 528	65 701	69 584	65 000	74 169	79 146	70 236
<b>Farm surplus for reinvestment</b>	<b>130 789</b>	<b>216 541</b>	<b>258 402</b>	<b>377 068</b>	<b>182 108</b>	<b>428 168</b>	<b>629 559</b>	<b>612 094</b>
Capital purchases	15 618	13 514	18 075	115 048	7 193	111 618	225 395	65 239
Development	107 959	89 152	59 824	61 898	0	33 643	87 776	67 018
Principal repayments	20 135	72 453	36 202	122 431	36 614	160 960	143 580	209 921
<b>Farm cash surplus/deficit</b>	<b>3 986</b>	<b>44 052</b>	<b>143 498</b>	<b>60 818</b>	<b>28 278</b>	<b>130 699</b>	<b>111 632</b>	<b>194 910</b>
Introduced funds	3 844	2 288	171	23 136	0	5 095	4 911	0
New borrowings	108 438	114 175	74 118	158 883	0	228 027	227 467	139 412
Dividend on dry shares	2 829	2 610	2 619	2 236	1 259	2 455	1 351	1 289
Off-farm income	16 044	10 426	8 411	12 354	0	12 153	12 809	13 496
<b>Net farm profit before tax per hectare</b>	<b>12</b>	<b>579</b>	<b>1 842</b>	<b>1 918</b>	<b>1 991</b>	<b>2 337</b>	<b>3 466</b>	<b>4 138</b>

Table 5: Percentile analysis of production data from monitored farms, 2011/12

	Average of			Mean	Median	Average of		
	Bottom 10% (\$)	Bottom 25% (\$)	Bottom 25-50% (\$)			Top 50-75% (%)	Top 25% (\$)	Top 10% (\$)
<b>Physical performance data:</b>								
Milking area (ha)	143	153	137	148	131	140	157	146
Opening cow numbers	424	429	412	461	395	429	562	551
Closing cow numbers	421	437	417	472	405	459	562	550
Total opening stock numbers	514	529	522	575	497	536	694	678
Total closing stock numbers	520	542	526	591	517	575	703	689
Cows in milk (15 December)	402	408	384	435	379	410	526	514
Total milk production (kgMS)	140 089	143 216	143 784	169 706	143 135	161 420	224 836	222 730
Milksolids per hectare (kg/ha)	994	967	1 036	1 126	1 114	1 139	1 366	1 450
Milksolids production per cow	336	345	365	378	385	384	415	420
Stocking rate (cows/ha)	2.9	2.8	2.8	2.9	2.9	3.0	3.3	3.4
Opening assets	7 007 833	6 626 198	6 337 784	7 251 917	6 268 901	7 012 772	8 757 169	8 301 713
Opening debt	3 988 462	3 241 439	2 831 100	2 937 746	2 416 514	2 463 329	3 144 471	3 298 365
Equity (%)	43%	50%	57%	60%	61%	65%	67%	65%
Farm working expenses/kgMS	4.60	4.48	3.92	3.86	3.77	3.57	3.49	3.26
Debt servicing/kgMS	1.98	1.58	1.19	1.11	1.11	0.97	0.72	0.66
Total debt/kgMS	30.1	23.9	18.5	17.3	17.5	14.8	12.4	12.6
Drawings/kgMS	0.40	0.50	0.60	0.55	0.47	0.65	0.48	0.42
Economic farm surplus/ha	1 278	1 634	2 320	2 787	2 762	2 970	4 186	4 770

Table 6: Percentile analysis of financial data from monitored dairy farms (EFS/ha), 2011/12

	Average of			Mean	Median	Average of		
	Bottom 10% (\$)	Bottom 25% (\$)	Bottom 25-50% (\$)			Top 50-75% (%)	Top 25% (\$)	Top 10% (\$)
<b>Revenue</b>								
Milksolids	929 710	885 933	785 153	1 071 505	900 460	993 080	1 600 943	1 810 022
Dividend on wet shares	47 927	44 539	41 658	54 100	44 239	49 465	79 656	89 091
Cattle sales	76 543	67 987	60 880	82 110	61 218	73 956	124 813	128 416
Other revenue	1 644	3 228	5 080	5 333	1 650	5 976	7 149	5 592
Cattle purchases	52 378	40 632	6 380	17 181	3 225	6 151	15 295	21 651
<b>Net cash income</b>	<b>909 914</b>	<b>920 812</b>	<b>882 308</b>	<b>1 182 267</b>	<b>991 792</b>	<b>1 111 850</b>	<b>1 791 590</b>	<b>2 009 143</b>
<b>Farm working expenses</b>	<b>728 945</b>	<b>646 940</b>	<b>507 954</b>	<b>659 220</b>	<b>555 185</b>	<b>580 203</b>	<b>892 870</b>	<b>942 328</b>
<b>Cash operating surplus</b>	<b>180 969</b>	<b>273 872</b>	<b>374 354</b>	<b>523 048</b>	<b>412 317</b>	<b>531 647</b>	<b>898 721</b>	<b>1 066 815</b>
Interest	161 602	171 185	152 319	189 936	149 612	161 750	268 388	319 429
Rent/lease	10 806	13 420	13 750	21 350	0	23 002	33 472	27 444
Stock value adjustment	152 163	80 014	11 820	24 819	5 699	5 352	1 373	5 446
Depreciation	75 300	61 258	41 779	51 888	35 380	58 604	44 930	55 268
<b>Farm profit before tax</b>	<b>85 424</b>	<b>108 023</b>	<b>178 326</b>	<b>284 693</b>	<b>216 369</b>	<b>293 644</b>	<b>553 304</b>	<b>670 120</b>
Tax	15 963	18 086	32 139	47 360	26 250	49 509	90 893	103 077
<b>Farm profit after tax</b>	<b>69 461</b>	<b>89 937</b>	<b>146 186</b>	<b>237 333</b>	<b>176 436</b>	<b>244 134</b>	<b>462 411</b>	<b>567 043</b>
Add back depreciation	75 300	61 258	41 779	51 888	35 380	58 604	44 930	55 268
Reverse stock value adjustment	152 163	80 014	11 820	24 819	5 699	5 352	1 373	5 446
Drawings	51 070	62 452	66 363	69 353	65 000	77 538	72 670	60 965
<b>Farm surplus for reinvestment</b>	<b>38 402</b>	<b>62 779</b>	<b>325 879</b>	<b>377 068</b>	<b>182 108</b>	<b>466 763</b>	<b>627 874</b>	<b>676 488</b>
Capital purchases	56 729	39 071	152 027	115 048	7 193	88 654	173 095	63 788
Development	33 663	25 910	104 763	61 898	0	17 098	100 925	131 385
Principal repayments	24 791	36 116	84 823	122 431	36 614	215 708	150 556	231 266
<b>Farm cash surplus/deficit</b>	<b>- 73 282</b>	<b>- 43 851</b>	<b>- 7 107</b>	<b>60 818</b>	<b>28 278</b>	<b>134 849</b>	<b>143 755</b>	<b>158 384</b>
Introduced funds	0	0	24 607	23 136	0	62 509	3 171	0
New borrowings	96 875	54 050	191 488	158 883	0	184 406	191 405	120 588
Dividend on dry shares	3 179	2 498	2 090	2 236	1 259	2 654	1 602	1 513
Off-farm income	12 946	14 428	14 436	12 354	0	16 257	4 906	4 090
<b>Economic farm surplus/ha</b>	<b>445</b>	<b>1 105</b>	<b>2 280</b>	<b>2 787</b>	<b>2 762</b>	<b>3 096</b>	<b>4 622</b>	<b>5 358</b>

Table 7: Percentile analysis of production data from monitored farms (EFS/ha), 2011/12

	Average of			Mean	Median	Average of		
	Bottom 10% (\$)	Bottom 25% (\$)	Bottom 25-50% (\$)			Top 50-75% (%)	Top 25% (\$)	Top 10% (\$)
<b>Physical performance data:</b>								
Milking area (ha)	156	154	124	148	131	137	175	180
Opening cow numbers	419	414	359	461	395	438	626	691
Closing cow numbers	500	456	365	472	405	438	622	686
Total opening stock numbers	523	512	450	575	497	548	778	848
Total closing stock numbers	624	565	458	591	517	549	781	856
Cows in milk (15 December)	405	398	341	435	379	408	587	646
Total milk production (kgMS)	145 983	140 210	124 829	169 706	143 135	157 492	252 900	286 244
Milksolids per hectare (kg/ha)	862	896	1 015	1 126	1 114	1 171	1 417	1 569
Milksolids production per cow	328	341	362	378	385	384	425	441
Stocking rate (cows/ha)	2.5	2.6	2.8	2.9	2.9	3.0	3.3	3.6
Opening assets	6 776 513	6 330 790	5 958 870	7 251 917	6 268 901	6 957 829	9 677 949	10 431 901
Opening debt	2 541 607	2 570 613	2 274 492	2 937 746	2 416 514	2 584 193	4 223 714	5 176 872
Equity (%)	65%	60%	62%	60%	61%	65%	54%	49%
Farm working expenses/kgMS	4.76	4.46	3.93	3.86	3.77	3.62	3.47	3.21
Debt servicing/kgMS	1.09	1.20	1.20	1.11	1.11	0.95	1.08	1.13
Total debt/kgMS	18.3	18.6	18.0	17.3	17.5	15.1	17.2	19.1
Drawings/kgMS	0.58	0.58	0.66	0.55	0.47	0.62	0.37	0.25
Economic farm surplus/ha	559	751	1 495	1 918	1 991	2 272	3 152	3 775

## BREAKEVEN ANALYSIS

Table 8 shows the “breakeven” point (covering farm working expenditure, debt servicing, depreciation and drawings) for the mean and median, as well as top and bottom 10 percentile farms for the 2011/12 year. This shows the level of payout necessary to cover the expense items indicated. The figures are down on the same indices relative to the 2010/11 season, mostly due to the increased level of production in 2011/12 rather than a drop in expenditure.

Table 8: Breakeven analysis of production data from monitored dairy farms (dollars per kilogram of milksolids) 2011/12

	Mean	Median	Bottom 10%	Top 10%
Farm working expenses	3.86	3.77	4.76	3.21
Debt servicing	1.11	1.11	1.09	1.13
Depreciation	0.33	0.29	0.53	0.20
Drawings	0.55	0.47	0.58	0.25
Total	5.85	5.64	6.96	4.79

## PROFITABILITY RELATIONSHIPS

Data analysis from the monitored farms indicates a varying relationship between the different indices and production or profitability.

Figure 2 indicates a reasonably good relationship ( $R^2 = 0.79$ ) between stocking rate (cows per hectare) and milksolids production.

By comparison, the relationship between stocking rate and economic farm surplus is relatively weak ( $R^2 = 0.31$ ) (Figures 3).

Figure 2: Stocking rate versus milksolids production

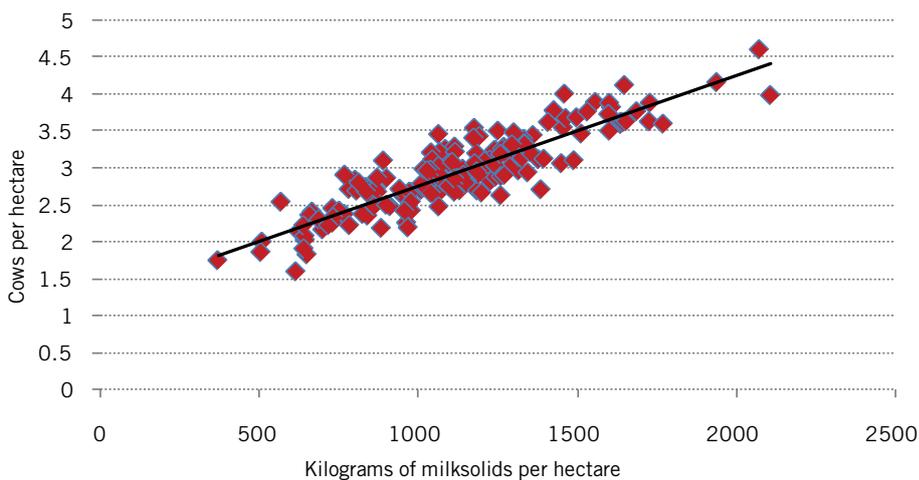
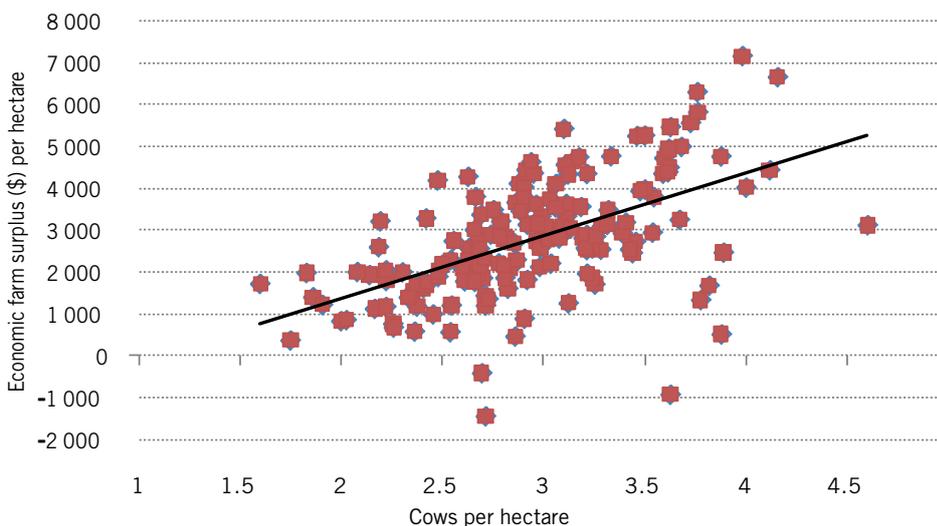


Figure 3: Economic farm surplus versus stocking rate



## FARM WORKING EXPENSES

Analysis of the distribution of farm working expenses shows an increase over 2009/10, but similar between 2010/11 and 2011/12, as shown in Figure 4.

Average farm working expenses for the three years are shown in Table 9.

Figure 4: Distribution of farm working expenses

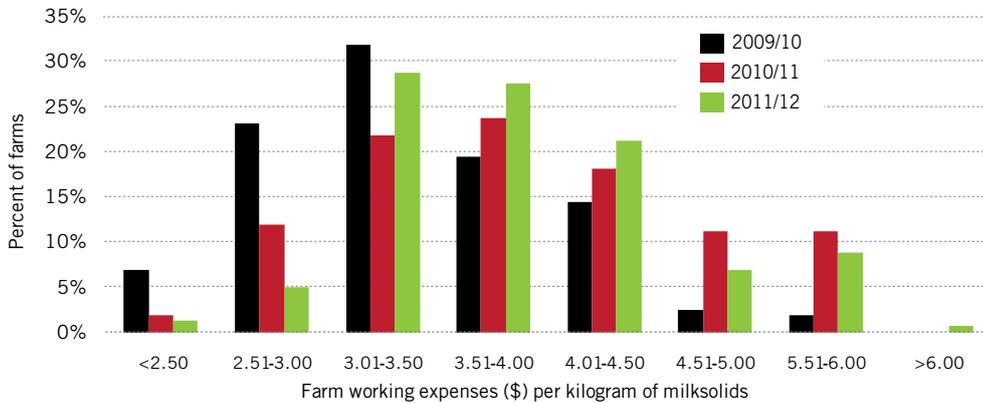


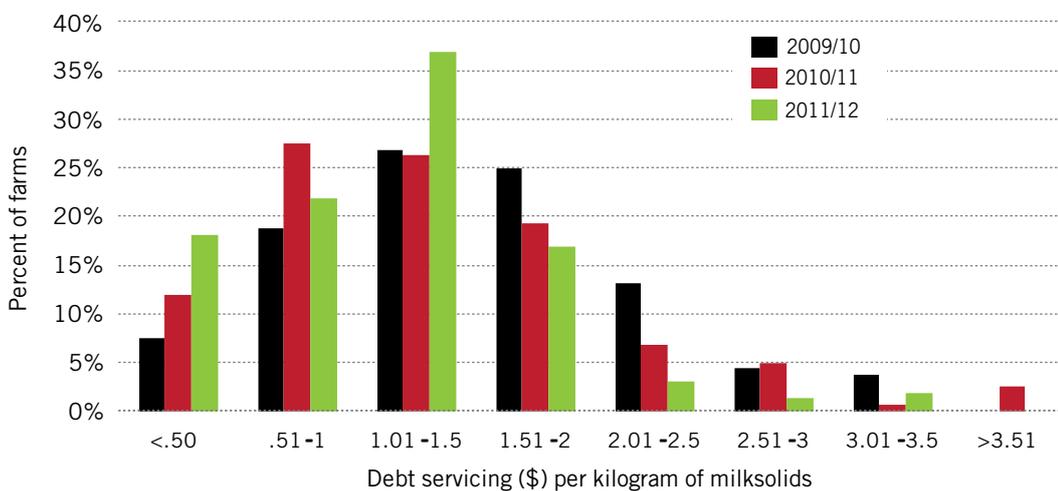
Table 9: Average farm working expenses

Year	Average farm working expenses (\$/kgMS)
2009/10	3.37
2010/11	3.87
2011/12	3.86

## DEBT SERVICING

Debt servicing costs have trended down over the past three years, due to a combination of reducing interest rates and some repayment of debt (Figure 5).

Figure 5: Distribution of debt servicing



## INDUSTRY ISSUES AND TRENDS

### INCOME, DEBT AND CASH FLOW

The 2011/12 season again highlighted one of the major risks in farming: fluctuating incomes. At the start of the year, the expectation was for a payout around \$6.75 per kilogram of milksolids. Farmers' concern grew as this reduced throughout the 2011/12 season to \$6.05 per kilogram of milksolids, and grew even further at the forecast \$5.50 per kilogram of milksolids for the 2012/13 season.

The drop in payout for 2011/12 was mitigated by a wonderful season that resulted in a 10 percent increase in production, although increased expenditure resulted in a much reduced cash surplus compared with 2010/11. The budgeted expectation for 2012/13 is for a drop in production back to "normal" levels, coupled with the reduction in payout. The result is a budgeted cash deficit for the year. The initial low advance also means farmers will have tight cash flows through the first half of the season. The majority of farmers will be able to survive such a year, but two or three years of payouts under \$6 per kilogram of milksolids would be another story.

A key aspect of this "survivability" is the amount of debt being carried by farms. Farmers have paid off a significant amount of debt over the past two years, but few will do so in 2012/13 due to the tight financial situation. At an aggregate level, total agricultural debt within New Zealand has diminished little – as some farmers paid off debt others borrowed more. Within the monitored farm population, 7 percent of farms had a total debt greater than \$30 per kilogram of milksolids, with another 12 percent having a total debt in the range of \$25 to \$30 per kilogram of milksolids. This indicates that 19 percent of dairy farms are in the "danger zone" with respect to debt levels.

### TRADING AMONGST FARMERS

Perhaps the biggest industry issue for the 2011/12 year was the Trading Amongst Farmers (TAF) proposition put forward by Fonterra. The proposal allows direct trading of shares between farmer shareholders, and the ability of outside investors to buy the financial rights attached to the shares but not voting rights.

The proposition gained the constitutionally necessary 75 percent shareholder vote in June 2010. Since then, several farmer shareholders have raised concerns, mainly around the perception of loss of control of the company, and

a second vote was held on 25 June 2012. This resulted in a 66 percent approval, sufficient for TAF to move forward. The necessary legislative changes to the Dairy Industry Restructuring Act 2001 have now been passed, and the expectation is that TAF will be in place and operating before the end of the calendar year.

### LABOUR

The supply of labour continues to be good as gauged by the number of applications to vacancies, although a shortage exists at the skilled end of the spectrum. The turnover rate has subsided in the past 18 months because job security is a factor for farm employees.

The proportion of migrant labour on dairy farms continues to grow. While overseas applicants do not always have the necessary skills, the number of larger farms hiring migrant staff is increasing. Some farmers in Canterbury have expressed concern about the nature of the workforce within the region, with recognition that foreign workers now comprise a reasonable number of farm staff with lower levels of responsibility. While farmers recognise this is a good situation for these workers, and they do well, there is some concern their main focus appears to be to return money to their families and they are less interested in progressing along the traditional worker/manager/sharemilker/owner pathway in the traditional sense of the New Zealand dairy industry.

As in previous years, the number of herd owning sharemilking agreements available for prospective sharemilkers has been low. This is due to a gradual decline in the number of herd owning sharemilking positions available but also due to a reluctance by incumbent sharemilkers to move on from their current positions. While this is a concern with regard to creating ability for young farmers to progress in the industry, alternatives are arising, such as equity partnerships.

### MILKING SYSTEMS

There is renewed interest in once-a-day (OAD) milking, particularly with the predicted drop in milk price. OAD milking is believed to provide non-feed buffers to seasonal production – cows are less sensitive to underfeeding; reproduction is consistently better than on twice-a-day milking and there is less requirement for bought-in feed. Some farmers are opting for part season OAD milking; either in early lactation for reproduction

gains or in late lactation to retain body condition score.

It also appears that farm systems are migrating away from a relatively similar, predominantly grass-based, farming system into two divergent systems, largely in response to climatic and financial volatility. Some farmers are choosing to opt for a low cost, low input farming system, often using part or full season OAD milking to buffer seasonal variation in pasture growth. Other farmers are moving to high intensity, high input farming systems, categorised by relatively large investments in infrastructure (for example, herd homes, feed pads and so on). These two farming systems require quite different skills to be managed effectively.

## ENVIRONMENTAL ISSUES

Farmers are generally more aware of environmental issues and the need to be proactive in this area and have invested in farm and effluent infrastructure over recent years. They are also aware of the tough stance being taken by regional councils along with prosecutions of high-profile farmers for discharging effluent inappropriately. The perception is that most farmers have responded by lifting their game; those

farmers who have not responded are either facing severe cash constraints or are unwilling to address these environmental issues.

One of the high-profile issues is effluent management, with farmers' key concerns being to avoid errors in spreading effluent on land, and creating additional storage for effluent. However, the legal requirements are not well understood by most farmers, and professional advice regarding potential solutions is varied.

Another key issue is around nitrogen leaching, particularly in sensitive catchments, with most regional councils talking about imposing limits on nitrogen leaching within these catchments. For most farmers, it is a matter of understanding the science and practicalities of both achieving the reductions required and managing their businesses within the limits.

Restrictions may well be introduced on water availability, with Waikato Regional Council's Plan Variation 6 in the forefront. This Plan allows a permitted take of 15 cubic metres of water per day, meaning that most dairy farms in the Waikato will now have to seek a consent to take water for dairymilk use.

## INFORMATION ABOUT THE MODEL

Please note that the sample of farms has changed between 2008/09 and 2009/10. Caution should be taken if comparing data between these two years.

For further information on the national dairy model and analysis contact: [phil.journeaux@agfirst.co.nz](mailto:phil.journeaux@agfirst.co.nz)

Ministry for Primary Industries  
PO Box 2526, Wellington 6140, New Zealand  
Tel +64 4 894 0100 or Freephone 0800 00 83 33  
Email: [brand@mpi.govt.nz](mailto:brand@mpi.govt.nz)  
Web: [www.mpi.govt.nz](http://www.mpi.govt.nz)

ISBN 978-0-478-40034-2 (Print)  
ISBN 978-0-478-40033-5 (Online)

© Crown copyright August 2012 – Ministry for Primary Industries

### Disclaimer

The information in this report by the Ministry for Primary Industries is based on the best information available to the the Ministry at the time it was drawn up and all due care was exercised in its preparation. As it is not possible to foresee all uses of this information or to predict all future developments and trends, any subsequent action that relies on the accuracy of the information in this report is the sole commercial decision of the user and is taken at his/her own risk. Accordingly, the Ministry for Primary Industries disclaims any liability whatsoever for any losses or damages arising out of the use of this information, or in respect of any actions taken.