



SOUTHLAND DAIRY

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

KEY POINTS

- Milksolids production per cow and per hectare improved 4 percent and 5 percent respectively in the 2011/12 year but was lower than predicted at the beginning of the season.
- Net cash income in 2011/12 decreased by 6 percent to \$1.536 million compared with the 2010/11 season. A further 12 percent decrease is expected in 2012/13.
- Total farm working expenses increased 13 percent in 2011/12, mainly as a result of higher feed costs and increased purchases of feed. Farm working expenses rose to \$4.14 per kilogram of milksolids, the highest level recorded in our monitoring to date.
- Farm profit before tax decreased 18 percent to \$379 300 and is budgeted to decrease by a further 60 percent, to \$152 000, in 2012/13.
- Southland dairy farmers have reinvested in their businesses by spending on repairs and maintenance, capital purchases, development and principal repayments. However, if the lower predicted payout in 2012/13 eventuates, farmers are expected to reassess planned expenditure.

Table 1: Key parameters, financial results and budget for the Southland dairy model

Year ended 30 June	2008/09	2009/10 ¹	2010/11 ^R	2011/12 actual	2012/13 budget
Effective area (ha)	183	192	212	212	212
Cows wintered (head)	557	548	597	609	637
Replacement heifers (head)	137	134	131	137	150
Cows milked 15th December (head)	510	518	555	561	580
Stocking rate (cows/ha)	2.8	2.7	2.6	2.6	2.7
Total milksolids (kg)	195 840	202 752	203 520	213 696	226 520
Milksolids per ha (kg/ha)	1 070	1 056	960	1 008	1 068
Milksolids per cow milked (kg/cow)	384	391	367	381	391
MS advance to end June (\$/kg)	4.15	5.15	6.20	5.20	4.40
MS deferred payment (\$/kg)	1.00	1.05	0.95	1.39	0.85
Net cash income (\$)	1 069 513	1 364 963	1 627 573	1 535 869	1 346 014
Farm working expenses (\$)	705 915	645 082	782 200	885 634	902 319
Farm profit before tax(\$)	3 453	383 180	465 340	379 341	151 968
Farm surplus for reinvestment ² (\$)	-41 248	262 742	313 169	186 774	63 025

Notes

¹ The sample of farms used to compile this model changed between 2008/09 and 2009/10. Caution is advised if comparing data between these two years.

² Farm surplus for reinvestment is the cash available from the farm business, after meeting living costs, which is available for investment on the farm or for principal repayments. It is calculated as farm profit after tax plus depreciation plus stock adjustments less drawings.

Symbol

^R The model parameters have been revised using the latest dairy statistics. Caution should be used if comparing with earlier published material.

Table 2: Southland dairy model budget

	2011/12			2012/13 budget		
	Whole farm (\$)	Per cow (\$)	Per kg of milksolids (\$)	Whole farm (\$)	Per cow (\$)	Per kg of milksolids (\$)
Revenue						
Milksolids	1 394 112	2 485	6.52	1 178 330	2 032	5.20
Dividend on wet shares	69 400	124	0.32	70 418	121	0.31
Cattle	70 241	125	0.33	88 416	152	0.39
Other farm income	4 716	8	0.02	11 250	19	0.05
Less:						
Cattle purchases	2 600	5	0.01	2 400	4	0.01
Net cash income	1 535 869	2 738	7.19	1 346 014	2 321	5.94
Farm working expenses	885 634	1 579	4.14	902 319	1 556	3.98
Cash operating surplus	650 236	1 159	3.04	443 694	765	1.96
Interest	293 324	523	1.37	276 396	477	1.22
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	77 429	138	0.36	14 448	25	0.06
Minus depreciation	55 000	98	0.26	29 778	51	0.13
Farm profit before tax	379 341	676	1.78	151 968	262	0.67
Income equalisation	0	0	0.00	0	0	0.00
Taxation	88 861	158	0.42	22 674	39	0.10
Farm profit after tax	290 480	518	1.36	129 295	223	0.57
Allocation of funds						
Add back depreciation	55 000	98	0.26	29 778	51	0.13
Reverse stock value adjustment	-77 429	-138	-0.36	-14 448	-25	-0.06
Drawings	81 277	145	0.38	81 600	141	0.36
Farm surplus for reinvestment¹	186 774	333	0.87	63 025	109	0.28
Reinvestment						
Net capital purchases	46 800	83	0.22	34 300	59	0.15
Development	85 766	153	0.40	37 500	65	0.17
Principal repayments	62 500	111	0.29	0	0	0.00
Farm cash surplus/deficit	-8 292	-5	-0.04	-8 775	-15	-0.04
Other cash sources						
Dividend on dry shares	5 495	10	0.03	3256	6	0.01
Introduced funds	0	0	0.00	0	0	0.00
New borrowings	0	0	0.00	0	0	0.00
Off-farm income	0	0	0.00	0	0	0.00
Net cash position	-2 797	-5	-0.01	-5 519	-10	-0.02
Assets and Liabilities						
Farm, forest and building (opening)	7 500 000	13 369	35.10	7 875 000	13 578	34.77
Plant and machinery (opening)	206 722	368	0.97	198 522	342	0.88
Stock valuation (opening)	1 444 801	2 575	6.76	1 522 230	2 625	6.72
Dairy company shares	1 011 901	1 804	4.74	1 011 901	1 745	4.47
Other farm-related investments (opening)	0	0	0.00	0	0	0.00
Total farm assets	10 163 424	18 117	47.56	10 607 653	18 289	46.83
Total liabilities (opening)	4 652 000	8 292	21.77	4 604 100	7 938	20.33
Total equity (assets-liabilities)	5 511 424	9 824	25.79	6 003 553	10 351	26.50

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.

Table 3: Southland 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 (\$)
Farm working expenses						
Permanent wages	129 152	230	0.60	134 949	233	0.60
Casual wages	18 235	33	0.09	15 555	27	0.07
ACC	5 399	10	0.03	4 451	8	0.02
Total labour expenses	152 786	272	0.71	154 955	267	0.68
Animal health	43 758	78	0.20	46 400	80	0.20
Breeding	24 684	44	0.12	23 200	40	0.10
Dairy shed expenses	13 464	24	0.06	17 400	30	0.08
Electricity	21 318	38	0.10	24 940	43	0.11
Feed (hay and silage)	148 104	264	0.69	116 000	200	0.51
Feed (feed crops)	5 610	10	0.03	8 700	15	0.04
Feed (grazing)	130 152	232	0.61	156 600	270	0.69
Feed (other)	19 074	34	0.09	17 400	30	0.08
Fertiliser	113 322	202	0.53	118 900	205	0.52
Lime	5 610	10	0.03	6 380	11	0.03
Freight (not elsewhere deducted)	9 537	17	0.04	9 280	16	0.04
Regrassing costs	8 415	15	0.04	12 180	21	0.05
Weed and pest control	5 610	10	0.03	5 800	10	0.03
Fuel	20 196	36	0.09	22 620	39	0.10
Vehicle costs (excluding fuel)	26 367	47	0.12	29 580	51	0.13
Repairs and maintenance	75 174	134	0.35	65 800	113	0.29
Total other working expenses	670 395	1 195	3.14	681 180	1 174	3.01
Communication costs (phone and mail)	3 992	7	0.02	4 195	7	0.02
Accountancy	7 732	14	0.04	7 803	13	0.03
Legal and consultancy	5 263	9	0.02	5 392	9	0.02
Other administration	3 427	6	0.02	3 330	6	0.01
Water charges (irrigation)	0	0	0.00	0	0	0.00
Rates	15 476	28	0.07	15 900	27	0.07
Insurance	12 315	22	0.06	12 896	22	0.06
ACC employer	4 686	8	0.02	5 019	9	0.02
Other expenditure ¹	9 561	17	0.04	11 649	20	0.05
Total overhead expenses	62 452	111	0.29	66 184	114	0.29
Total farm working expenses	885 634	1 579	4.14	902 319	1 556	3.98
Calculated ratios						
Economic farm surplus (EFS ²)	587 665	1 048	2.75	343 364	592	1.52
Farm working expenses/NCI ³	58%			67%		
EFS/total farm assets	5.8%			3.2%		
EFS less interest and lease/equity	5.3%			1.1%		
Interest+rent+lease/NCI	19.1%			20.5%		
EFS/NCI	38.3%			25.5%		
Wages of management	85 000	152	0.40	85 000	147	0.38

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.

FINANCIAL PERFORMANCE OF THE SOUTHLAND DAIRY MODEL FARM IN 2011/12

The cash operating surplus for the Southland dairy model farm was \$650 200, a 23 percent decrease compared with 2010/11. This decline was due to the decrease in milksolids payout, lower than predicted milk production (because of below-average pasture growth in spring and summer), as well as an increase in farm working expenses.

Production per cow was 381 kilograms of milksolids and production per hectare was 1008 kilograms of milksolids. Per cow and per hectare production were up 4 percent and 5 percent respectively compared with 2010/11.

Pasture production during 2011/12 fluctuated wildly. Growth was affected by a wet, cold spring and then record low rainfalls in December 2011. As in the previous season, the autumn growth replenished pasture covers and crop yields heading into the 2012 winter. In summer, farmers were concerned at the lack of supplementary feed they were able to conserve and the poor establishment and/or growth of winter feed crops, such as kale and swedes. By the end of autumn, however, grass covers had recovered, sufficient feed had been made or purchased and winter crops had returned to average or just below average yields. Consequently, cow condition was good going into winter. Barring any spring 2012 storms, production is expected to improve.

REVENUE DOWN DUE TO PAYOUT

In 2011/12, net cash income for the model decreased 6 percent, to \$1.536 million,

compared with 2010/11. This was driven by the reduced payout, which was \$6.59 per kilogram of milksolids to June 2012, compared with \$7.15 per kilogram of milksolids in 2010/11.

Variable seasonal pasture growth again

Figure 1 shows the variability in pasture growth over 2011/12. The continuous wet and cold conditions depressed pasture growth in spring. Just as pasture growth was recovering in early summer, it stopped raining, growth dropped and surplus grass usually bound for supplementary feed had to be eaten. An extended warm autumn helped pasture covers, crops and stores of supplementary feed recover to average levels.

EXPENDITURE RISES

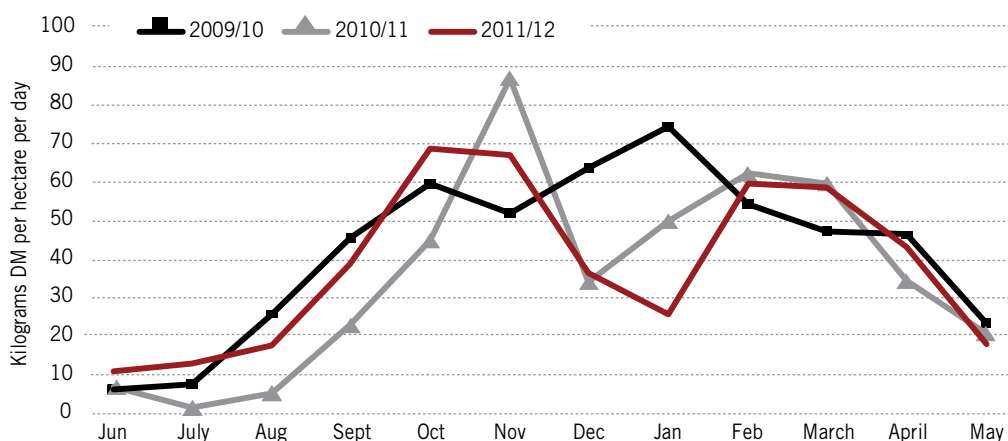
Total farm working expenses increased to \$4.14 per kilogram of milksolids in 2011/12, from \$3.84 per kilogram the previous year.

Healthy current account balances and positive cash flows over the previous three years enabled farmers to spend on items that would set their businesses up for leaner times ahead.

Most of the increase in farm working expenses was in response to the need to buy additional feed and the price of that feed, for example grazing, being more expensive.

The total feed cost of \$540 per cow was an increase of \$102 per cow on 2010/11, which was also a high-cost feed year.

Figure 1: Southland dairy model pasture growth rates 2011/12



Source: Southland Demonstration Farm – DairyNZ

Repairs and maintenance, fertiliser, wages and animal health all showed significant increases in expenditure. Labour costs make up 17 percent of all farm working expenses but are critical, with expenditure on labour increasing 5 percent compared with the previous year.

Overheads, such as rates and insurance, also continue to increase and farmers have little control over these direct costs. In addition, the cost of environmental monitoring, compliance and renewal of resource consents is expected to increase overheads in future years.

The range in farm working expenses across the monitored farms was between \$2.82 and \$5.50 per kilogram of milksolids. Farm working expenses represented 58 percent of net cash income, up from 48 percent the previous year.

Feeding for production

The price of most grown and/or purchased feed rose in 2011/12 due to the reduced spring–summer growth. The rest of the South Island had surplus feed during this period, but even straw from Canterbury increased in price. The price of standing grass increased during the dry spell, with sales around 28 cents per kilogram of dry matter. The price for grazing cows on brassica crops increased around 15 percent to \$29.50 per head per week.

Grazing in the province was harder to come by and cows were trucked further to areas in Central Otago and Canterbury, where feed was abundant.

Palm kernel extract use increased in the Southland province due to its lower price compared with grain alternatives.

Some farmers also used gibberellic acid to boost pasture growth at critical times.

Fertiliser use and price up

Fertiliser expenditure increased by 10 percent compared with the previous year. However, during the dry period, little nitrogen fertiliser was applied. Total fertiliser applied in the Southland dairy model was, respectively, 112, 43, 33 and 50 kilograms per hectare of N-P-K-S. This rate of nitrogen is down compared with 2010/11, but rates of phosphate and sulphur have increased. Fertiliser companies reported above average sales of fertiliser and not just to the dairy industry.

Interest rates ease

Farmers have welcomed an easing of interest rates over the year. Most are on floating interest

rates and these have eased 0.5 to 1.0 percentage points over the year. As interest rates drop, rates for fixed-term loans have become more attractive and many farmers are looking to fix for a short to medium term.

On average, the dairy farms monitored repaid \$62 500 of principal off their term loans. Total interest payments for the model were \$1.37 per kilogram of milksolids, which accounted for 19 percent of net cash income.

Debt still an issue

Indebtedness is still an issue for a proportion (20 percent nationally) of farms. The debt for the monitored farms ranged from \$12 to \$32 per kilogram of milksolids.

NET RESULT DECREASES

Farm profit before tax decreased 18 percent to \$379 300. Taxation was less than the previous year but was higher than has traditionally been paid. Many farm businesses have previous losses and development costs to bring into their tax calculations and/or have ownership structures that minimise their tax liability.

The model recorded a farm surplus for reinvestment of \$186 800, which was spent on capital purchases (increased 56 percent), development (increased 186 percent) and repaying principal (\$62 500). This was only the second time the model had repaid principal due to a reasonable financial result and banks encouraging principal repayments. Industry commentators feel that farmers will not spend as much in 2012/13 and will review their spending on capital purchases, development and principal repayments when the final payout in 2012/13 is clearer.

Land sales increase from low level

Dairy land value increased slightly during the year and there was an increase in farm sales activity. The model farm's value for land (including the run-off) and buildings increased 5 percent from 1 July 2011 to 1 July 2012 to \$34.80 per kilogram of milksolids. As at 1 July 2012 the model has \$6 003 500 of equity, which equates to 57 percent of the total farm assets.

With land prices increasing slightly, the economic farm surplus over the total farm assets in 2011/12 gave a return on capital of 5.8 percent.

BUDGET FINANCIAL PERFORMANCE OF THE SOUTHLAND DAIRY MODEL FARM IN 2012/13

The model's cash operating surplus in 2012/13 is expected to be down (32 percent) to \$443 700 compared with 2011/12. Despite increased milksolids production, the predicted decrease in payout will reduce milksolids revenue by \$215 800.

Total farm working expenses are expected to increase 2 percent. However, due to increased milksolids production, farm working expenses per kilogram of milksolids are expected to decline to \$3.98 per kilogram. Given the significant decrease in predicted payout, industry commentators believe farmers will look closely at discretionary farm working expenses, such as repairs and maintenance, to help balance the budget.

The most significant financial factor for 2012/13 is expected to be the payout. The 2012/13 budget is based on a final advance payout to 30 June 2012 of \$4.40 per kilogram of milksolids and a deferred payment from the 2011/12 year of 85 cents per kilogram of milksolids, giving a total payment of \$5.25 per kilogram of milksolids. This is the lowest within-season payout since 2008/09.

REVENUE DECREASES

Southland farms began the 2012/13 season with good pasture cover and cows in good condition. Feed crop yields rallied to be around average. Farmers were optimistic that, given a near-average growth season, production will increase to 226 520 kilograms of milksolids for 2012/13, up 6 percent on 2011/12.

This is a result of a slight increase in cow numbers and more production per cow, up 2.5 percent to 391 kilograms of milksolids per cow.

EXPENDITURE TO BE SCRUTINISED

Monitored farms were budgeting for a 2 percent (\$16 700) increase in farm working expenses compared with 2011/12. This equates to \$3.98 per kilogram of milksolids. The low advance payout means some discretionary spending may occur later in the season.

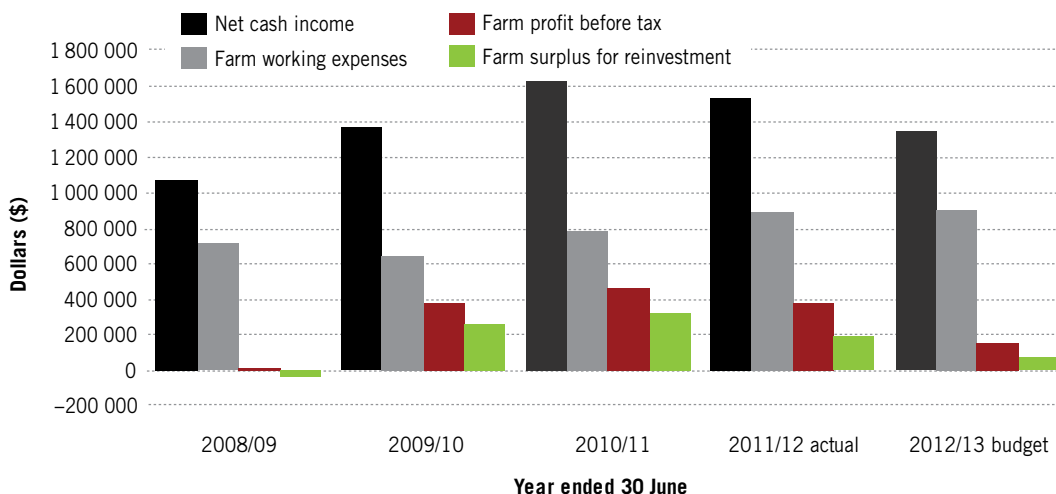
Having spent above-average amounts in 2011/12 on repairs and maintenance, development and capital purchases, any reduction in spending in 2012/13 is not expected to affect the productive capacity of the monitored farms. The biggest unknown is the cost of feed.

Feed prices high at start of the season

Farmers hope to return to a more average pasture growth season in 2012/13. If this pattern eventuates, the surplus grass in the province would put downward pressure on the price of supplementary feed in the summer and autumn of 2013. However, prices at the start of the 2012/13 winter were high due to demand. Overall, total feed expenditure is expected to decrease 5 percent to \$515 per cow.

Other expenditure categories farmers expect to increase are electricity and dairy shed expenses, fertiliser and regrassing. Fuel and vehicle expenses are also expected to increase 12 percent.

Figure 2: Southland dairy model profitability trends



The increase in fertiliser, regrassing and fuel expenditure is dependent on what is happening on the run-off block. Most milking platforms have high fertility, and nitrogen use is based on the need for feed in pinch times. It is on run-off blocks where pasture renewal and feed crop expenditure is expected to occur.

Interest rates on term loans and seasonal finance are expected to soften only slightly in 2012/13, as farmers may fix interest rates at around the 5 to 6 percent mark. Overdraft levels will depend on the timing of expenditure and payout announcements.

The model anticipates returning to interest-only repayments on the term loan due to decreased revenue.

FARM PROFIT BEFORE TAX DECREASES

Farm profit before tax is expected to decrease \$227 400, or 60 percent, to \$152 000 compared with 2011/12. Tax bills are expected to be less due to reduced income and reassessment.

Based on the increase in 2012/13 production, the model anticipates purchasing additional Fonterra shares to match this increased production but not until the 2013/14 financial year.

After capital, development and drawings, the model is budgeting a farm cash deficit of \$8800. This is similar to 2011/12, but a reduction of \$245 000 compared to the 2010/11 farm cash surplus.

INFORMATION ABOUT THE MODEL

The Southland dairy model represents production from the 809 dairy farms in Southland. The model is a family run farm that supplies milk to the Fonterra factory at Edendale. Around 65 percent of Southland dairy farms are classified as owner-operated. Equity partnerships are becoming a bigger feature of ownership structures in Southland.

The model size continues to increase to represent the expansion occurring in Southland. In 1995, the model was a 130 hectare stand-alone farm increasing to 192 hectares with a 68 hectare run-off. It is now a 212 hectare milking platform with a 98 hectare run-off.

Many farms in Southland are relatively new, being less than six years old. The model is created by collecting data from 25 farms and a wide cross-section of agribusiness representatives. The aim of the model is to represent the typical owner-operated farm in Southland.

Please note that the size of the model has changed between 2008/09 and 2009/10. It also changed between 2009/10 and 2010/11. Caution should be taken when comparing data over this time series.

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