OTAGO DRY HILL SHEEP AND BEEF

KEY POINTS

- Exceptional spring and summer rainfall in 2011/12 resulted in the best pasture growth and stock condition for many years.
- Net cash income increased 8 percent to $648 700 in 2011/12 following an increase in both production and prices for sheep and wool. A 7 percent increase is forecast for 2012/13 to $692 700.
- Farm working expenditure increased 37 percent from $247 800 in 2010/11 to $338 400 in 2011/12. Feed, fertiliser, labour and shearing expenses accounted for much of the increase. Farmers are budgeting for a further 2 percent increase in farm working expenses to $344 100 in 2012/13.

Key results from the Ministry for Primary Industries 2012 sheep and beef monitoring programme

- Farm profit before tax increased 22 percent from $271 900 in 2010/11 to $331 200 in 2011/12 as the increased value of stock on hand at year end offset the reduction in the cash operating surplus. Farm profit before tax is expected to decrease 15 percent to $281 000 in 2012/13
- Farmer morale is high following an exceptional season of above average pasture growth and good prices for sheep, beef and wool. Ewes are going into winter in excellent condition and expectations are high for the 2012/13 lambing.

Table 1: Key parameters, financial results and budget for the Otago dry hill sheep and beef farm model

Year ended 30 June	2008/09	2009/10[1]	2010/11	2011/12 actual	2012/13 budget
Effective area (ha)	2 000	2 000	2 000	2 000	2 000
Breeding ewes (head)	4 155	3 745	3 762	3 690	3 952
Replacement ewe hoggets (head)	780	895	950	1 021	1 152
Other sheep (head)	271	203	203	168	206
Breeding cows (head)	89	102	103	106	114
Rising one-year cattle (head)	54	51	50	65	65
Other cattle (head)	29	75	30	31	43
Opening sheep stock units (ssu)	4 897	4 983	5 006	5 029	5 475
Opening cattle stock units	844	1 120	908	994	1 097
Opening total stock units (su)	5 741	6 103	5 913	6 023	6 571
Stocking rate (stock unit/ha)	2.9	3.1	3.0	3.0	3.3
Ewe lambing (%)	117	122	122	129	132
Average lamb price ($/head)	88.71	67.80	104.75	110.78	92.76
Average store lamb price ($/head)	51.22	63.00	96.00	100.90	82.50
Average prime lamb price ($/head)	71.22	75.00	113.00	116.60	99.00
Average wool price ($/kg)	3.08	3.31	4.29	4.86	4.48
Total wool produced (kg)	21 392	19 881	21 640	23 250	25 750
Wool production (kg/ssu)	4.4	4.0	4.3	4.6	4.7
Average rising two-year steer ($/head)	743	732	1 099	1 073	936
Average cull cow ($/head)	520	521	744	743	641
Net cash income ($)	470 024	429 531	598 170	648 702	692 741
Farm working expenses ($)	269 866	220 996	247 782	338 401	344 135
Farm profit before tax ($)	148 056	74 010	271 935	331 209	281 024
Farm surplus for reinvestment ($)[2]	94 006	77 148	218 277	71 802	156 627

Notes

1The sample of farms used to compile this model changed betwseen 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.

Table 2: Otago dry hill sheep and beef model budget

	2011/12			2012/13 budget		
	Whole farm ($)	Per hectare ($)	Per stock unit[1] ($)	Whole farm ($)	Per hectare ($)	Per stock unit[1] ($)
Revenue						
Sheep	489 552	245	97.34	482 949	241	88.21
Wool	112 995	56	22.47	115 360	58	21.07
Cattle	54 166	27	54.51	95 481	48	87.07
Grazing income (including hay and silage sales)	6 050	3	1.00	6 755	3	1.03
Other farm income	5 605	3	0.93	7 505	4	1.14
Less:						
Sheep purchases	8 694	4	1.73	7 130	4	1.30
Cattle purchases	10 972	5	11.04	8 179	4	7.46
Net cash income	**648 702**	**324**	**107.70**	**692 741**	**346**	**105.42**
Farm working expenses	**338 401**	**169**	**56.18**	**344 135**	**172**	**52.37**
Cash operating surplus	**310 301**	**155**	**51.52**	**348 606**	**174**	**53.05**
Interest	35 721	18	5.93	33 068	17	5.03
Rent and/or leases	1 030	1	0.17	1 030	1	0.16
Stock value adjustment	86 428	43	14.35	- 2 301	- 1	-0.35
Minus depreciation	28 770	14	4.78	31 184	16	4.75
Farm profit before tax	**331 209**	**166**	**54.99**	**281 024**	**141**	**42.76**
Income equalisation	0	0	0.00	0	0	0.00
Taxation	132 914	66	22.07	90 982	45	13.85
Farm profit after tax	**198 295**	**99**	**32.92**	**190 042**	**95**	**28.92**
Allocation of funds						
Add back depreciation	28 770	14	4.78	31 184	16	4.75
Reverse stock value adjustment	- 86 428	- 43	-14.35	2 301	1	0.35
Drawings	68 835	34	11.43	66 900	33	10.18
Farm surplus for reinvestment[2]	**71 802**	**36**	**11.92**	**156 627**	**78**	**23.83**
Reinvestment						
Net capital purchases	42 745	21	7.10	18 465	9	2.81
Development	7 980	4	1.32	6 915	3	1.05
Principal repayments	39 445	20	6.55	32 875	16	5.00
Farm cash surplus/deficit	**- 18 368**	**- 9**	**-3.05**	**98 372**	**49**	**14.97**
Other cash sources						
Off-farm income	7 093	4	1.18	4 385	2	0.67
New borrowings	0	0	0.00	0	0	0.00
Introduced funds	0	0	0.00	0	0	0.00
Net cash position	**- 11 275**	**- 6**	**-1.87**	**102 757**	**51**	**15.64**
Assets and liabilities						
Farm, forest and building (opening)	3 180 083	1 590	527.98	3 975 104	1 988	604.91
Plant and machinery (opening)	177 173	89	29.42	193 342	97	29.42
Stock valuation (opening)	963 781	482	160.01	1 050 209	525	159.81
Other produce on hand (opening)	0	0	0.00	0	0	0.00
Total farm assets (opening)	**4 321 037**	**2 161**	**717.41**	**5 218 655**	**2 609**	**794.15**
Total assets (opening)	**4 472 990**	**2 236**	**742.64**	**5 450 798**	**2 725**	**829.47**
Total liabilities (opening)	527 380	264	87.56	487 939	244	74.25
Total equity (farm assets - liabilities)	**3 793 657**	**1 897**	**629.85**	**4 730 716**	**2 365**	**719.89**

Notes

1 Sheep stock units are used in the per stock calculation for sheep and wool income and sheep purchases. Cattle stock units are used for cattle income and purchases. The remainder of the time total stock units are used.

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.

Table 3: Otago dry hill sheep and beef model expenditure

	2011/12			2012/13 budget		
	Whole farm ($)	Per hectare ($)	Per stock unit ($)	Whole farm ($)	Per hectare ($)	Per stock unit ($)
Farm working expenses						
Permanent wages	20 215	10	3.36	22 000	11	3.35
Casual wages	3 615	2	0.60	4 440	2	0.68
ACC	410	0	0.07	362	0	0.06
Total labour expenses	**24 240**	**12**	**4.02**	**26 802**	**13**	**4.08**
Animal health	22 600	11	3.75	24 110	12	3.67
Breeding	2 475	1	0.41	2 520	1	0.38
Electricity	6 260	3	1.04	6 800	3	1.03
Feed (hay and silage)	15 545	8	2.58	10 620	5	1.62
Feed (feed crops)	5 875	3	0.98	5 640	3	0.86
Feed (grazing)	0	0	0.00	0	0	0.00
Feed (other)	2 835	1	0.47	2 550	1	0.39
Fertiliser	63 370	32	10.52	66 535	33	10.12
Lime	11 840	6	1.97	11 110	6	1.69
Cash crop expenses[1]	1 550	1	0.26	585	0	0.09
Freight (not elsewhere deducted)	6 535	3	1.08	6 550	3	1.00
Regrassing costs	13 045	7	2.17	13 090	7	1.99
Shearing expenses[2]	35 210	18	7.00	36 430	18	6.65
Weed and pest control	14 385	7	2.39	16 390	8	2.49
Fuel	19 715	10	3.27	18 965	9	2.89
Vehicle costs (excluding fuel)	14 155	7	2.35	13 900	7	2.12
Repairs and maintenance	32 110	16	5.33	34 790	17	5.29
Total other working expenses	**267 505**	**134**	**44.41**	**270 585**	**135**	**41.18**
Communication costs (phone and mail)	3 565	2	0.59	3 485	2	0.53
Accountancy	4 090	2	0.68	4 125	2	0.63
Legal and consultancy	3 410	2	0.57	3 780	2	0.58
Other administration	1 715	1	0.28	1 705	1	0.26
Water charges (irrigation)	1 055	1	0.18	1 070	1	0.16
Rates	10 050	5	1.67	10 700	5	1.63
Insurance	10 330	5	1.72	10 735	5	1.63
ACC employer	4 641	2	0.77	4 467	2	0.68
Other expenditure	7 800	4	1.30	6 680	3	1.02
Total overhead expenses	**46 656**	**23**	**7.75**	**46 747**	**23**	**7.11**
Total farm working expenses	**338 401**	**169**	**56.18**	**344 135**	**172**	**52.37**
Calculated ratios						
Economic farm surplus (EFS[3])	293 749	147	48.77	144 142	117	35.55
Farm working expenses/NCI[4]	52%			50%		
EFS/total farm assets	6.8%			4.5%		
EFS less interest and lease/equity	6.8%			4.2%		
Interest+rent+lease/NCI	5.7%			5.0%		
EFS/NCI	45.3%			34.0%		
Wages of management	74 210	37	12.32	75 000	38	11.41

Notes
1 Includes forestry expenses.
2 Shearing expenses per stock unit based on sheep stock units.
3 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: $31 000 allowance for labour input plus 1 percent of opening total farm assets to a maximum of $75 000.
4 Net cash income.

FINANCIAL PERFORMANCE OF THE OTAGO DRY HILL SHEEP AND BEEF MODEL FARM IN 2011/12

Cash operating surplus was $310 300 in 2011/12, a decline of 11 percent or $40 100 compared with 2010/11. The increase in farm working expenses outweighed the improvement in net cash income. An increase was evident across all farm working expense categories in 2011/12. This followed a relatively conservative approach to expenditure and reinvestment in 2010/11. Farmers retained increased cattle numbers to utilise surplus pasture and also increased sheep numbers at year end. The 9 percent increase in total stock units at 30 June 2012 meant that fewer animals were sold in 2011/12 compared with 2010/11.

Otago dry hill sheep and beef properties experienced an exceptional growing season in 2011/12. Rainfall was well above average throughout October/November and January/February. Many older generation farmers described pasture growth in 2011/12 as unprecedented. Many farmers sold surplus hay and silage to properties in Southland that were affected by dry summer conditions - an unusual occurrence for this region.

FURTHER LIFT IN INCOME

Net cash income increased 8 percent ($50 500) to $648 700 in 2011/12. Prices for sheep were higher due to an increase in sale weights and good demand for store lambs and annual draft ewes. Wool revenue increased significantly as a result of higher production and an increase in price. There was increased revenue from sales of hay and silage.

Sheep revenue up 5 percent

Sheep revenue (sales less purchases) increased 5 percent to $480 900 in 2011/12, primarily as a result of higher lamb production. Lambing percentage increased seven percentage points from 122 percent in 2010/11 to 129 percent in 2011/12. Favourable spring lambing conditions were reported throughout the region and ewes were in good condition following a good season in 2010/11. Prices for both store and prime lambs were higher as a result of increased weights. Store lamb price increased 5 percent to $100.90 per head, with earlier sales achieving prices of $110 to 120 per head. The average price for prime lambs increased 3 percent to $116.60 per head as lambs were sent to the works at heavier weights. The proportion of sale lambs that were sold prime increased from 51 percent in 2010/11 to 63 percent in 2011/12. Many farmers retained a greater number of ewes in order to build flock numbers, which led to a reduction in ewe sales in 2011/12. The average price for mixed age ewes increased 11 percent to $119.90 per head as a result of strong demand for annual draft ewes.

Wool revenue increased 22 percent

Wool revenue increased 22 percent ($20 200) to $113 000 in 2011/12. This was partially due to a 7 percent increase in wool production to 4.62 kilograms per sheep stock unit in 2011/12 as a result of favourable feed conditions throughout 2010/11. Wool price increased 13 percent from $4.29 per greasy kilogram in 2010/11 to $4.86 per greasy kilogram in 2011/12. Many farmers sold their wool too early to realise the full lift in wool market prices that occurred in the 2010/11 season and consequently received a higher average price for wool in 2011/12.

Cattle revenue declines

Cattle revenue (sales less purchases) decreased 4 percent to $43 200 in 2011/12 due to a reduction in the number of cattle sold. Most farmers chose to retain a greater number of calves and older cattle in order to utilise surplus pasture. Prices for cattle remained reasonably stable at $609 per head for steer calves, $501 per head for heifer calves, $1073 per head for rising two year steers and $743 per head for mixed age cows.

SIGNIFICANT INCREASE IN EXPENDITURE

Farm working expenditure increased 37 percent ($90 600) to $338 400 ($56.18 per stock unit) in 2011/12, from $247 800 ($41.90 per stock unit) in 2010/11.

Excellent season results in increased expenditure on conserving feed

Excellent pasture growth conditions promoted an increase in hay and silage production in 2011/12. Many farmers conserved an unprecedented quantity of pasture due to phenomenal spring pasture growth. Expenditure on hay and silage production increased 47 percent to $15 500 in 2011/12. Many farmers sold surplus feed to properties in Southland who were unable to produce hay and silage due to dry summer conditions. Expenditure on regrassing increased 24 percent to $13 000 in 2011/12, as farmers increased pasture renewal or carried out over-sowing of hill country.

Fertiliser expenditure increases 33 percent

Farmers continued to increase their investment in fertiliser and lime, spending $63 400 ($10.52 per stock unit) on fertiliser and $11 800 ($1.97 per stock unit) on lime in 2011/12. Much of the additional investment was for applications of both fertiliser and lime to hill country, which has not seen fertiliser for a number of years.

Labour expenses increase

Many farmers have been able to employ additional labour this year following an improvement in balance sheets from the 2010/11 season. A number of farmers employed a permanent labour unit where previously casual labour was used. Total labour expenses increased to $24 200, double that of 2010/11. Shearing expenses increased 38 percent to $35 200 as a result of both an increase in shearing prices and an increase in the number of sheep shorn. Many farmers shore cull ewes prior to sale this year.

Repairs and maintenance expenditure up 48 percent

Expenditure on repairs and maintenance increased 48 percent to $32 100 in 2011/12. Repairs and maintenance on farm dwellings more than doubled, as did expenditure on water and irrigation systems. Expenditure on fuel increased 31 percent to $19 700 as farmers carried out more cultivation and development work.

FURTHER IMPROVEMENT IN NET RESULT

Farm profit before tax increased 22 percent to $331 200 ($54.99 per stock unit) in 2011/12 largely as a result of an increase in the value of livestock on hand at year end due to farmers retaining a greater number of cattle and increasing sheep numbers in 2011/12. A 22 percent reduction in interest expenditure due to falling interest rates combined with reduced debt as a result of principal repayments, and a 24 percent reduction in depreciation due to changing tax rules also contributed. This increase in farm profit before tax followed a dramatic lift from $74 000 in 2009/10 ($12.13 per stock unit) to $271 900 in 2010/11 ($45.99 per stock unit). Taxation increased almost four-fold to $132 900 following a substantial improvement in farm profit in 2011/12 and terminal tax due to the increase in profit in the previous year.

Increase in reinvestment of surpluses

Following a modest increase in cash reinvestment in 2010/11, farmers reinvested a further proportion of the 2010/11 cash surplus in 2011/12, resulting in a small cash deficit in 2011/12. Net capital purchases increased 68 percent to $42 700 and development expenditure increased more than three-fold to $8000. Principal repayments increased 22 percent to $39 400. Drawings increased 18 percent to $68 800 in 2011/12.

Table 4: Otago dry hill sheep and beef model cash farm income

Year ended 30 June	2008/09 ($)	2009/10 ($)	2010/11 ($)	2011/12 ($)	2012/13 budget ($)
Sheep sales less purchases	353 965	288 247	456 332	480 858	475 819
Cattle sales less purchases	34 682	73 783	44 952	43 194	87 302
Wool	65 887	65 806	92 836	112 995	115 360
Grazing income (including hay and silage sales)	6 900	0	750	6 050	6 755
Other income	7 700	1 695	3 300	5 605	7 505
Net cash income	470 024	429 531	598 170	648 702	692 741

Note
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.

BUDGET FINANCIAL PERFORMANCE OF THE OTAGO DRY HILL SHEEP AND BEEF MODEL FARM IN 2012/13

Cash operating surplus is expected to increase 12 percent to $348 600 in 2012/13 with a substantial increase in cattle revenue anticipated as surplus trading cattle are sold. Farmers are expecting a further increase in lambing percentage in 2012/13.

REVENUE EXPECTED TO INCREASE

Net cash income is expected to increase 7 percent to $692 700 in 2012/13. The majority of this lift is expected to come from cattle revenue as farmers sell surplus cattle that were retained through the 2012 winter.

Sheep revenue to remain static

Sheep revenue (sales less purchases) is expected to fall 1 percent to $475 800 in 2012/13. Farmers are budgeting reduced prices for lambs, hoggets and ewes with the anticipation that both weights and schedule prices will be lower in 2012/13. The budget is $82.50 per head for store lambs and $99.00 per head for prime lambs for the 2012/13 year. Farmers are expecting to finish a similar proportion of their sale lambs in 2012/13 (62 percent).

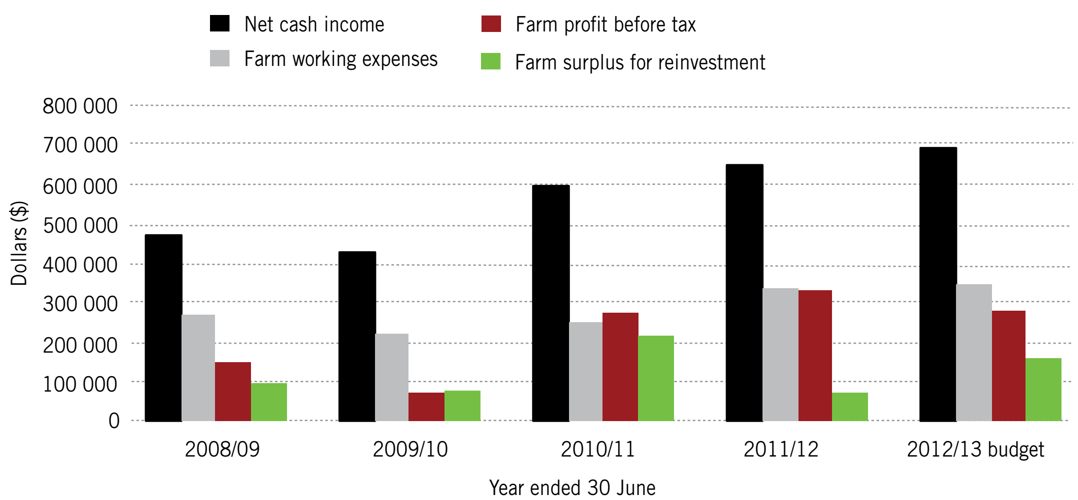
The lambing percentage is expected to increase three percentage points to 132 percent in 2012/13, as a result of ewes going into winter in better condition than the previous year. Replacement ewe hoggets were better grown in 2012 and a higher proportion (49 percent) were joined to the ram in 2012, compared with 2011 (when 43 percent of ewe hoggets were mated).

Increased wool production is expected to lift wool revenue 2 percent to $115 400 in 2012/13. Farmers are forecasting a slight increase in wool production per sheep stock unit to 4.7 greasy kilograms (up from 4.6 greasy kilograms per stock unit in 2011/12). This translates to an 11 percent increase in total wool production as a result of increased ewe numbers. Wool price is expected to fall 8 percent to $4.48 per greasy kilogram in 2012/13.

Cattle revenue doubles

Cattle revenue (sales less purchases) is expected to double from $43 200 in 2011/12 to $87 300 in 2012/13. This increase is expected to come predominantly through the sale of additional rising one and two year steers that were retained through the 2012 winter. Calving percentage is expected to increase two percentage points to 86 percent in 2012/13. Farmers in this model are less optimistic about cattle prices for 2012/13 despite positive messages from the market regarding the outlook for beef. Farmers are budgeting $458 per head for heifer calves, $584 per head for steer calves, $936 per head for rising two year steers, and $641 per head for mixed age cows. This reduction in budget prices probably reflects the anticipation of a return to average sale weights in 2012/13.

Figure 1: Otago dry hill sheep and beef farm model profitability trends



STABILISATION IN EXPENDITURE

Total farm working expenses are budgeted to increase 2 percent to $344 100 ($52.37 per stock unit) in 2012/13 as farmers anticipate a further lift in net cash income facilitating continued investment in areas of productive expenditure.

Continued investment in fertiliser, weed and pest control

Farmers are planning to continue investing in soil fertility in 2012/13, budgeting for a 5 percent ($3200) increase in fertiliser expenditure to $66 500 ($10.12 per stock unit). Expenditure on lime has been budgeted at $11 100 in 2012/13, back slightly from the $11 800 spent in 2011/12. Weed and pest control is expected to increase a further 14 percent in 2012/13 to $16 400, following a 27 percent increase in 2011/12.

FARM PROFIT BEFORE TAX PREDICTED TO FALL

Farm profit before tax is expected to fall 15 percent to $281 000 ($42.76 per stock unit) in 2012/13. Taxation is expected to fall 32 percent to $91 000 in 2012/13. The farm cash surplus is expected to increase to $98 400 following a conservative approach to cash disposal in 2012/13.

Reduction in reinvestment

Farmers are planning to revise back capital expenditure from $42 700 in 2011/12 to $18 500 in 2012/13, despite the farm surplus for reinvestment being predicted to more than double to $156 600. The cash surplus is expected to primarily be used to continue debt reduction, with $32 900 budgeted for principal repayment in 2012/13. Drawings have been revised back 3 percent to $66 900 in 2012/13.

INFORMATION ABOUT THE MODEL

The Otago dry hill model represents 400 farms in the Otago area. The farms range in size from 500 to 4000 hectares and are spread from Kurow to Millers Flat in Central Otago with the main concentration being in the Middlemarch and Maniototo areas.

These farms are characterised by systems that cope with dry summers and long cold winters. Rainfall is 400 to 700 millimetres per year and drought days typically average 100 per year. These farms are predominantly hill with a small area of valley floor. Some have a small area of irrigation on the valley areas.

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.

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