



OTAGO DRY HILL SHEEP AND BEEF

KEY RESULTS FROM MAF'S 2011 SHEEP AND BEEF MONITORING PROGRAMME. Please note that several budget parameters have changed between 2009/10 and 2010/11. Caution should be taken when comparing this year's data to previous years. Refer to the budget table footnotes for more detail.

KEY POINTS

- › Higher than average summer rainfall and a very favourable autumn in 2011 has resulted in the best pasture growth and stock condition for many years.
- › Total sheep revenue (sales less purchases) increased 58 percent to \$456 300 in 2010/11. Prices received varied greatly depending on timing of sale. Sales later in the season were generally higher for any stock or wool sold.
- › Farm working expenditure increased 12 percent to \$247 780
- › in 2010/11, from \$221 000 in 2009/10. Of this, feed (hay and silage), fertiliser and fuel expenditure showed the greatest increase.
- › Farm profit before tax increased significantly from \$74 000 in 2009/10 to \$271 900 in 2010/11.
- › Farmers are hopeful that the current beef, sheep and wool prices remain similar for the following two to three seasons.

»» TABLE 1: KEY PARAMETERS, FINANCIAL RESULTS AND BUDGET FOR THE OTAGO DRY HILL MODEL SHEEP AND BEEF MODEL

YEAR ENDED 30 JUNE	2007/08	2008/09	2009/10 ¹	2010/11	2011/12 BUDGET
Effective area (ha)	2 000	2 000	2 000	2 000	2 000
Breeding ewes (head)	4 675	4 155	3 745	3 762	3 690
Replacement ewe hoggets (head)	1 130	780	895	950	1 021
Other sheep (head)	261	271	203	203	168
Breeding cows (head)	84	89	102	103	102
Rising -year cattle (head)	54	54	51	50	65
Other cattle (head)	44	29	75	30	35
Opening sheep stock units (ssu)	5 655	4 897	4 983	5 006	5 009
Opening cattle stock units	892	844	1 120	908	989
Opening total stock units (su)	6 546	5 741	6 103	5 913	5 998
Stocking rate (stock unit/ha)	3.3	2.9	3.1	3.0	3.0
Ewe lambing (%)	120	117	122	122	128
Average lamb price (\$/head)	43.46	88.71	67.80	104.75	102.50
Average store lamb price (\$/head)	33.50	51.22	63.00	96.00	93.00
Average prime lamb price (\$/head)	51.00	71.22	75.0	113.0	109.00
Average wool price (\$/kg)	3.15	3.08	3.31	4.29	4.66
Total wool produced (kg)	24 380	21 392	19 881	21 640	19 906
Wool production (kg/ssu)	4.31	4.37	3.99	4.32	3.97
Average rising 2-year steer (\$/head)	559	743	732	1 099	833
Average cull cow (\$/head)	495	520	521	744	683
Net cash income (\$)	376 077	470 024	429 531	598 170	596 322
Farm working expenses (\$)	252 421	269 866	220 996	247 782	266 098
Farm profit before tax (\$)	-15 240	148 056	74 010	271 935	317 912
Farm surplus for reinvestment (\$) ²	-13 758	94 006	77 148	218 277	96 853

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.



»» TABLE 2: OTAGO DRY HILL SHEEP AND BEEF MODEL BUDGET

	2010/11			2011/12 BUDGET		
	WHOLE FARM (\$)	PER HA (\$)	PER STOCK UNIT ¹ (\$)	WHOLE FARM (\$)	PER HA (\$)	PER STOCK UNIT ¹ (\$)
REVENUE						
Sheep	462 602	231	92.41	439 188	220	87.68
Wool	92 836	46	18.55	92 763	46	18.52
Cattle	58 760	29	64.75	69 528	35	70.30
Grazing income (including hay and silage sales)	750	0	0.13	9 645	5	1.61
Other farm income	3 300	2	0.56	3 165	2	0.53
LESS:						
Sheep purchases	6 270	3	1.25	6 520	3	1.30
Cattle purchases	13 808	7	15.21	11 447	6	11.57
Net cash income	598 170	299	101.16	596 322	298	99.42
Farm working expenses	247 782	124	41.90	266 098	133	44.36
Cash operating surplus	350 388	175	59.25	330 224	165	55.05
Interest	45 797	23	7.74	40 012	20	6.67
Rent and/or leases	948	0	0.16	970	0	0.16
Stock value adjustment	6 322	3	1.07	66 215	33	11.04
Minus depreciation	38 030	19	6.43	37 545	19	6.26
Farm profit before tax	271 935	136	45.99	317 912	159	53.00
Income equalisation	0	0	0.00	0	0	0.00
Taxation	26 981	-17	-5.60	132 914	66	22.16
Farm profit after tax	244 954	122	41.42	184 999	92	30.84
ALLOCATION OF FUNDS						
Add back depreciation	38 030	19	6.43	37 545	19	6.26
Reverse stock value adjustment	-6 322	-3	-1.07	-66 215	-33	-11.04
Drawings	58 385	29	9.87	59 475	30	9.92
Farm surplus for reinvestment²	218 277	109	36.91	96 853	48	16.15
REINVESTMENT						
Net capital purchases	25 420	13	4.30	53 029	27	8.84
Development	2 200	1	0.37	3 470	2	0.58
Principal repayments	32 225	16	5.45	63 140	32	10.53
Farm cash surplus/deficit	158 432	79	26.79	-22 786	-11	-3.80
OTHER CASH SOURCES						
Off-farm income	11 330	5.665	1.92	10 750	5.375	1.79
New borrowings	0	0	0.00	0	0	0.00
Introduced funds	0	0	0.00	0	0	0.00
Net cash position	169 762	85	28.71	-12 036	-6	-2.01
ASSETS AND LIABILITIES						
Farm, forest and building (opening)	3 191 333	1 596	539.69	3 180 083	1 590	530.17
Plant and machinery (opening)	178 533	89	30.19	177 173	89	29.54
Stock valuation (opening)	859 600	430	145	865 922	433	144
Other produce on hand (opening)	0	0	0.00	0	0	0.00
Total farm assets (opening)	4 229 466	2 115	715.25	4 223 178	2 112	704.07
Total assets (opening)	4 309 799	2 155	728.83	4 481 979	2 241	747.21
Total liabilities (opening)	613 778	307	103.80	530 165	265	88.39
Total equity (farm assets - liabilities)	3 615 688	1 808	611.45	3 693 013	1 847	615.68

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.

Please note that several budget parameters have changed between 2009/10 and 2010/11. These changes have been made to better reflect the financial position of the farm. New and adjusted definitions include farm surplus for reinvestment, farm cash surplus/deficit and net cash position. Caution should be taken when comparing this year's data to previous years.

»» TABLE 3: OTAGO DRY HILL SHEEP AND BEEF MODEL EXPENDITURE

	2010/11			2011/12 BUDGET		
	WHOLE FARM (\$)	PER HA (\$)	PER STOCK UNIT (\$)	WHOLE FARM (\$)	PER HA (\$)	PER STOCK UNIT (\$)
FARM WORKING EXPENSES						
Permanent wages	9 160	5	1.55	9 730	5	1.62
Casual wages	2 530	1	0.43	3 470	2	0.58
ACC	439	0	0.07	410	0	0.07
Total labour expenses	12 129	6	2.05	13 610	7	2.27
Animal health	18 520	9	3.13	19 260	10	3.21
Breeding	2 065	1	0.35	2 145	1	0.36
Electricity	4 990	2	0.84	5 255	3	0.88
Feed (hay and silage)	10 545	5	1.78	10 440	5	1.74
Feed (feed crops)	4 035	2	0.68	3 235	2	0.54
Feed (grazing)	1 165	1	0.20	595	0	0.10
Feed (other)	2 935	1	0.50	3 575	2	0.60
Fertiliser	47 645	24	8.06	51 454	26	8.58
Lime	6 655	3	1.13	7 755	4	1.29
Cash crop expenses ¹	0	0	0.00	1 665	1	0.28
Freight (not elsewhere deducted)	4 330	2	0.73	4 205	2	0.70
Regrassing costs	10 550	5	1.78	11 985	6	2.00
Shearing expenses ²	25 490	13	5.09	25 795	13	5.15
Weed and pest control	11 285	6	1.91	11 900	6	1.98
Fuel	15 025	8	2.54	16 515	8	2.75
Vehicle costs (excluding fuel)	14 340	7	2.43	13 205	7	2.20
Repairs and maintenance	21 750	11	3.68	21 295	11	3.55
Total other working expenses	201 325	101	34.05	210 279	105	35.06
Communication costs (phone and mail)	2 925	1	0.49	3 015	2	0.50
Accountancy	4 375	2	0.74	4 285	2	0.71
Legal and consultancy	1 735	1	0.29	1 575	1	0.26
Other administration	975	0	0.16	900	0	0.15
Water charges (irrigation)	1 400	1	0.24	1 110	1	0.19
Rates	9 340	5	1.58	9 645	5	1.61
Insurance	7 360	4	1.24	7 728	4	1.29
ACC employer	3 943	2	0.67	11 636	6	1.94
Other expenditure	2 275	1	0.38	2 315	1	0.39
Total overhead expenses	34 328	17	5.81	42 209	21	7.04
Total farm working expenses	247 782	124	41.90	266 098	133	44.36
CALCULATED RATIOS						
Economic farm surplus (EFS ³)	245 385	123	41.50	285 663	143	47.62
Farm working expenses/NCI ⁴	41%			45%		
EFS/total farm assets	5.8%			6.8%		
EFS less interest and lease/equity	5.5%			6.6%		
Interest+rent+lease/NCI	7.8%			6.9%		
EFS/NCI	41.0%			47.9%		
Wages of management	73 295	37	12.39	73 232	37	12.21

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 2010/11

The cash operating surplus of \$350 400 is up 68 percent (\$141 900) on 2009/10 due to significantly higher income from sheep, wool and cattle. Farm working expenses increased \$26 800 (12 percent) to \$247 800.

FARM INCOME UP 39 PERCENT

Net cash income was \$598 200 in 2010/11, up 39 percent or \$168 600 compared with 2009/10. Prices received for all stock varied greatly depending on timing of sale. Sales later in the season were generally higher for any stock or wool sold.

SHEEP REVENUE UP 58 PERCENT

Net sheep revenue (sales less purchases) increased 58 percent to \$456 300 in 2010/11 primarily because of increased prices for both prime and store lambs. Prices for mixed age ewes also increased significantly from 2009/10. The average store lamb price increased 52 percent from \$63.00 in 2009/10 to \$96.00 in 2010/11. Demand for store lambs was high this season as a result of both a shortage in supply due to spring snow storms in Southland and Otago and above average pasture covers across much of the South Island over summer and autumn. The average price for prime lambs in this model rose 51 percent to \$113.00 in 2010/11 due to a reduction in the supply of lambs for slaughter and increased carcass weights due to above average summer feed levels. The average price for mixed age ewes increased 77 percent to \$108.00 due to strong prices for mutton.

WOOL PRICE INCREASES SIGNIFICANTLY

Wool revenue increased 41 percent to \$92 800 in 2010/11. This season there was a significant lift in the price of crossbred wool. The majority of the properties in this model farm crossbred sheep and the rest have halfbred flocks. Average wool price increased from \$3.31 per greasy kilogram in 2009/10 to \$4.29 per greasy kilogram in 2010/11. Although this is a significant lift, the many of the farmers in this model shear pre-lamb and sold their wool prior to the full lift in the auction price.

CATTLE REVENUE DECLINES

Cattle revenue (sales less purchases) decreased 39 percent from \$73 800 in 2009/10 to \$45 000 in 2010/11 because of a drop in the number of cattle sold in 2010/11. Dry conditions in 2009/10 meant that many cattle that would normally be sold prime in 2010/11 were sold store a year earlier. The reduction in cattle revenue occurred despite higher cattle prices in 2010/11 with the average calf price up 52 percent to \$546, rising two year steers up 50 percent to \$1099 and mixed age cows up 43 percent to \$744.

EXPENDITURE INCREASES

Farm working expenditure increased \$26 800 (12 percent) to \$247 800 in 2010/11.

FEED AND REGRASSING EXPENDITURE INCREASES

Expenditure on hay and silage production increased 42 percent from \$7 400 in 2009/10 to \$10 500 in 2010/11 as farmers harvested surplus feed grown in an attempt to maintain pasture quality. Regrassing expenses increased 32 percent to \$10 600 following a reduction in regrassing in 2009/10 as a result of the extended dry conditions. At \$1.78 per stock unit, expenditure on regrassing is starting to recover to levels closer to that spent before the 2009/10 season.

FERTILISER EXPENDITURE RISES 37 PERCENT

Farmers spent \$47 600 (\$24 per hectare) on fertiliser in 2010/11, an increase of \$12 800 from



2009/10. Most of this additional fertiliser was applied on areas that have not received maintenance fertiliser for a number of years.

FUEL AND VEHICLE COSTS INCREASE

Expenditure on fuel increased 26 percent to \$15 000 in 2010/11 as a result of significant increases in the price of fuel. Vehicle costs increased 18 percent to \$14 300.

Repairs and maintenance increased 26 percent to \$21 750 in 2010/11 following a reduction in expenditure in 2009/10.

INTEREST COSTS DECLINE

Expenditure on interest decreased by 17 percent from \$55 500 in 2009/10 to \$45 800 in 2010/11. Interest rates fell as farmers moved off older fixed interest loans and reduced average overdraft levels. With the increase in net cash income and the reduction in interest, debt servicing is now a very modest 8 percent of net cash income.

SOME INCREASE IN CASH DISPOSAL

There has been a modest increase in cash disposal given the size of farm surplus for reinvestment. Drawings increased \$6300 (12 percent) and capital purchases increased to \$25 400. However, there has been very little development possibly because the improvement in income didn't occur until later in the year.

SIGNIFICANT IMPROVEMENT IN NET RESULT

Farm profit before tax increased dramatically from \$74 000 (\$12.13 per stock unit) in 2009/10 to \$271 900 (\$45.99 per stock unit) in 2010/11 and farm surplus for reinvestment increased to \$218 300. This surplus was used for overdraft reduction as well as some principal repayment.

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

The cash operating surplus is expected to decrease 6 percent to \$330 200 in 2011/12 with fewer ewes being sold in 2011/12 compared with 2010/11. Farmers aim to replenish ewe numbers following a decline in the number of breeding ewes in the 2008/09 and 2009/10 seasons.

»»» TABLE 4: OTAGO DRY HILL SHEEP AND BEEF MODEL CASH FARM INCOME

YEAR ENDED 30 JUNE	2007/08 (\$)	2008/09 (\$)	2009/10 ¹ (\$)	2010/11 (\$)	2011/12 BUDGET (\$)
Sheep sales less purchases	241 848	353 965	288 247	456 332	432 668
Cattle sales less purchases	42 783	34 682	73 783	44 952	58 081
Wool	76 846	65 887	65 806	92 836	92 763
Grazing income (including hay and silage sales)	6 900	6 900	0	750	9 645
Other income	7 700	7 700	1 695	3 300	3 165
Net cash income	376 077	470 024	429 531	598 170	596 322

Note

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.

REVENUE EXPECTED TO FALL SLIGHTLY

Net cash income is expected to remain relatively static at \$596 300 in 2011/12. Sheep revenue (sales less purchases) is expected to decrease 5 percent to \$432 700 as a result of slightly lower budgeted prices for lambs, hoggets and ewes. Fewer old ewes are being sold in order to increase numbers. Prices for store and prime lambs are budgeted to decrease to \$93.00 and \$109.00 respectively in 2011/12.

Lambing percentage is budgeted to increase from 122 percent in 2010/11 to 128 percent in 2011/12 due to the above average autumn feed levels resulting in above average autumn ewe condition. The percentage of lambs sold prime versus store is expected to return to the historic ratio of 67 percent prime and 33 percent store. This is an increase from 54 percent prime in 2010/11 which was influenced by the high demand and premium for store lambs.

Farmers expect a rise in average wool price from \$4.29 per kilogram in 2010/11 to \$4.66 per kilogram in 2011/12 as those selling in the first half of the year get the benefit of current prices rather than an expectation of further improvement in prices. Wool production per stock unit is expected to be slightly lower in 2011/12 as a result of a slight shift in the age structure of sheep flocks. More young stock may be carried through (and slightly fewer mixed age ewes compared with opening numbers for the 2010/11 season) as farmers try to rebuild stock numbers following the dry season in 2009/10.

CATTLE REVENUE INCREASES SUBSTANTIALLY

Cattle revenue (sales less purchases) is expected to increase \$13 100 (29 percent), as Otago Dry Hill properties return to their typical cattle selling policy. This improved revenue is despite lower budgeted average calf prices at \$529 per head (\$546 in 2010/11) and lower average prices for finished cattle of \$906 per head (\$917 in 2010/12).

SIGNIFICANT RISE IN EXPENDITURE

Total farm working expenditure is budgeted to increase 7 percent to \$266 100.

FERTILISER EXPENDITURE RISES

Farmers plan to spend 8 percent (\$3 800) more on fertiliser with most of this again targeted towards areas that have not received maintenance fertiliser for a number of years.

Feed and silage expenditure is expected to decrease 4 percent to \$17 800 as farmers plan for conserved hay and silage made on farm to reduce back to usual levels. Contractor costs for all farm activities including hay and silage are predicted to increase to with an expected increase in fuel costs.

Insurance is budgeted to increase 5 percent to \$7730 although industry comments suggest that this may be significantly higher.

Interest costs are expected to fall to \$40 000 in 2011/12 (\$45 800 in 2010/11) as a result of a significantly reduced average overdraft balance and reduced term debt from the positive 2010/11 financial year.

FARMERS PLAN TO FURTHER REDUCE DEBT

Farmers are planning to use their increased profits in 2011/12 to increase principal repayments to \$63 100 (up 96 percent). Plant replacement is also a priority with an increase of 109 percent in net capital purchases.

The most significant change in the model is the allocation for tax payment of \$132 900. Substantial profits in the 2010/11 year after many years of minimal returns have increased estimated provisional and terminal tax. Farmers may be able to reduce the liability if they have carried forward losses or deferred expenses from previous years.



FARM PROFIT BEFORE TAX CONTINUES TO RISE

Farmers expect to end the coming year with a negative \$12 000 net cash position. This is a positive outcome considering the allocations towards fertiliser, capital purchases, principal repayment and taxation.

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 inland Palmerston areas.

These farms are characterised by systems that cope with dry summers and long cold winters. Rainfall is 400 to 700mm but drought days 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.

For more information on the model contact trish.burborough@maf.govt.nz

»»» FIGURE 1: OTAGO DRY HILL SHEEP AND BEEF MODEL PROFITABILITY TRENDS



Notes

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.

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.

PUBLISHER

Ministry of Agriculture and Forestry
PO Box 2526, Wellington 6140, New Zealand
Tel +64 4 894 0100 or Freephone 0800 008 333
Email: policy.publications@maf.govt.nz
Web: www.maf.govt.nz

ISBN 978-0-478-36419-4 (Print)
ISBN 978-0-478-36420-0 (Online)

The report can be downloaded from www.maf.govt.nz
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