



NORTH ISLAND DEER

KEY POINTS

- Overall, an excellent pasture growing season in 2011/12 helped to improve breeding performance. Fawning percentages increased 5 percent in the mixed-age hinds and 4 percent in the rising two-year hinds.
- Net cash income per deer stock unit increased 24 percent to \$113. This was due to a rise in venison sales, and venison returns for the model averaging \$7.54 per kilogram.
- Farm profit before tax in 2011/12 remained at similar levels to 2010/11, mainly as a consequence of the nil stock value adjustment.
- Total farm working expenses rose 22 percent. This was a consequence of feed costs increasing, from more silage being made, an increase in the area in feed crops grown and significant increases in regrassing and weed and pest expenses associated with the additional feed crops. Price rises across the board, but particularly for fertiliser, rates and insurance premiums, also contributed to the increase in total farm working expenses in 2011/12.
- Deer farmers' morale was positive as they had their third season of relative stability in product prices and good levels of feed, which helped in improving stock condition going into winter 2012.

Table 1: Key parameters, financial results and budget for the North Island deer model

Year ended 30 June	2008/09	2009/10 ¹	2010/11 ^R	2011/12 actual	2012/13 budget
Effective area (ha)	140	220	220	220	220
Opening deer stock units (head)	2 198	2 203	2 261	2 534	2 534
Mixed-age breeding hinds (head)	440	400	420	490	490
Rising two-year hinds (head)	110	140	100	100	100
Rising one-year hinds and stags (head)	486	440	500	570	570
Rising two-year stags (head)	25	80	83	80	80
Rising three-year plus stags (head)	57	40	47	50	50
Stocking rate (stock units/ha)	15.7	10.0	10.3	11.5	11.5
Fawning²					
Farm average (%)	80	85	80	86	86
Mixed-age hinds (%)	85	88	82	86	86
Two-year-old hinds (%)	60	75	70	73	76
Velvet					
Average price (\$/kg)	55.00	81.00	89.00	89.00	91.00
Farm average (includes regrowth but excludes yearling velvet) (kg/stag)	2.2	2.7	2.8	3.1	3.4
Mixed-age stags (kg/stag)	4.5	4.8	4.1	4.4	4.6
Three-year-old stags (kg/stag)	3.5	3.5	3.8	4.1	4.1
Two-year-old stags (kg/stag)	2.0	2.0	2.0	2.3	2.3
Venison price and carcass weights					
Average price (\$/kg)	7.93	6.86	7.52	7.54	7.57
Two-year-old stags (kg)	70.0	60.0	60.0	65.0	65.0
Yearling stags (kg)	54.0	56.0	55.0	54.0	54.0
Income					
Net cash income (\$)	221 351	216 563	204 735	285 118	287 773
Farm working expenses (\$)	128 333	117 423	119 692	145 475	145 344
Farm profit before tax (\$)	41 006	77 916	112 824	111 724	115 022
Farm surplus for reinvestment ³ (\$)	31 922	18 753	-4 964	65 333	38 474

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 Fawning percentage is live calves available for sale as a percentage of hinds mated.

3 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 parameter has been revised so the data for 2010/11 may not match that published in the 2011 report.

Table 2: North Island deer model budget

	2011/12			2012/13 budget		
	Whole farm (\$)	Per hectare (\$)	Per deer stock unit (\$)	Whole farm (\$)	Per hectare (\$)	Per deer stock unit (\$)
Revenue						
Deer sales	231 866	1 054	91.50	233 365	1 061	92.09
Velvet (per stag stock unit)	41 642	189	48.09	42 578	194	49.17
Other farm income	40 000	182	15.79	40 000	182	15.79
Less:						
Deer purchases	28 390	129	11.20	28 170	128	11.12
Net cash income	285 118	1 296	112.52	287 773	1 308	113.56
Farm working expenses	145 475	661	57.41	145 344	661	57.36
Cash operating surplus	139 643	635	55.11	142 429	647	56.21
Interest	17 886	81	7.06	16 989	77	6.70
Rent and/or leases	0	0	0.00	0	0	0.00
Stock value adjustment	0	0	0.00	0	0	0.00
Minus depreciation	10 032	46	3.96	10 418	47	4.11
Farm profit before tax	111 724	508	44.09	115 022	523	45.39
Income equalisation	0	0	0.00	0	0	0.00
Taxation	6 424	29	2.54	36 966	168	14.59
Farm profit after tax	105 300	479	41.55	78 057	355	30.80
Allocation of funds						
Add back depreciation	10 032	46	3.96	10 418	47	4.11
Reverse stock value adjustment	0	0	0.00	0	0	0.00
Drawings	50 000	227	19.73	50 000	227	19.73
Farm surplus for reinvestment¹	65 333	297	25.78	38 474	175	15.18
Reinvestment						
Net capital purchases	12 600	57	4.97	6 500	30	2.57
Development	1 500	7	0.59	1 500	7	0.59
Principal repayments	14 949	68	5.90	8 747	40	3.45
Farm cash surplus/deficit	36 284	165	14.32	21 727	99	8.57
Other cash sources						
Off-farm income	0	0	0.00	0	0	0.00
New borrowings	0	0	0.00	0	0	0.00
Introduced funds	10 000	45	3.95	7 800	35	3.08
Net cash position	46 284	210	18.27	29 527	134	11.65
Assets and liabilities						
Farm, forest and building (opening)	2 556 302	11 620	1 008.80	2 556 302	11 620	1 008.80
Plant and machinery (opening)	66 882	304	26.39	69 450	316	27.41
Stock valuation (opening)	504 000	2 291	198.90	487 270	2 215	192.29
Other produce on hand (opening)	0	0	0.00	0	0	0.00
Total farm assets (opening)	3 127 184	14 214	1 234.09	3 113 022	14 150	1 228.50
Total assets (opening)	3 165 699	14 390	1 249.29	3 152 096	14 328	1 243.92
Total liabilities (opening)	298 100	1 355	117.64	283 151	1 287	111.74
Total equity (farm assets - liabilities)	2 829 084	12 859	1 116.45	2 829 871	12 863	1 116.76

Note

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: North Island deer model expenditure

	2011/12			2012/13 budget		
	Whole farm (\$)	Per hectare (\$)	Per deer stock unit (\$)	Whole farm (\$)	Per hectare (\$)	Per deer stock unit (\$)
Farm working expenses						
Permanent wages	0	0	0.00	0	0	0.00
Casual wages	7 200	33	2.84	7 200	33	2.84
ACC	198	1	0.08	252	1	0.10
Total labour expenses	7 398	34	2.92	7 452	34	2.94
Animal health	10 790	49	4.26	10 245	47	4.04
Breeding	2 972	14	1.17	2 972	14	1.17
Electricity	2 500	11	0.99	2 500	11	0.99
Feed (hay and silage)	12 400	56	4.89	9 000	41	3.55
Feed (feed crops)	8 650	39	3.41	7 800	35	3.08
Feed (grazing)	0	0	0.00	0	0	0.00
Feed (other)	6 200	28	2.45	6 000	27	2.37
Fertiliser	30 900	140	12.19	35 600	162	14.05
Lime	960	4	0.38	960	4	0.38
Freight (not elsewhere deducted)	2 103	10	0.83	2 300	10	0.91
Regrassing costs	4 200	19	1.66	3 900	18	1.54
Weed and pest control	3 100	14	1.22	3 750	17	1.48
Fuel	6 400	29	2.53	6 975	32	2.75
Vehicle costs (excluding fuel)	5 540	25	2.19	5 600	25	2.21
Repairs and maintenance	15 350	70	6.06	13 500	61	5.33
Total other working expenses	112 065	509	44.22	111 102	505	43.84
Communication costs (phone and mail)	2 040	9	0.81	2 290	10	0.90
Accountancy	3 000	14	1.18	3 100	14	1.22
Legal and consultancy	600	3	0.24	600	3	0.24
Other administration	2 300	10	0.91	2 200	10	0.87
Rates	9 500	43	3.75	9 900	45	3.91
Insurance	3 500	16	1.38	3 500	16	1.38
ACC employer	1 072	5	0.42	1 200	5	0.47
Other expenditure	4 000	18	1.58	4 000	18	1.58
Total overhead expenses	26 012	118	10.27	26 790	122	10.57
Total farm working expenses	145 475	661	57.41	145 344	661	57.36
Calculated ratios						
Economic farm surplus (EFS ¹)	67 338	306	26.57	69 881	318	27.58
Farm working expenses/NCI ²	51%			51%		
EFS/total farm assets	2.2%			2.2%		
EFS less interest and lease/equity	1.7%			1.9%		
Interest+rent+lease/NCI	6.3%			5.9%		
EFS/NCI	23.6%			24.3%		
Wages of management	62 272	283	24.57	62 130	282	24.52

Notes

1 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.

2 Net cash income.

FINANCIAL PERFORMANCE OF THE NORTH ISLAND DEER MODEL IN 2011/12

The 2011/12 cash operating surplus for the North Island deer model was just under \$140 000 (\$55.11 per stock unit). This was a substantial increase (64 percent) on the 2010/11 cash operating surplus. It was driven by a rise in production, good and stable product prices being received for longer throughout the season and less deer being purchased as a result of the improved fawning result.

Good growing season, one out of the box

Overall, the 2011/12 pasture growing season was excellent; due to a well spread rainfall and a cool summer. Autumn 2011 was exceptional for pasture growth and, although a wet winter followed, the cold, dry spring and cool summer provided for excellent summer feed growth.

Farmers experimented with alternative feed crops and pastures – for example, lucerne, plantain and chicory to improve weaner growth rates, but conclusive results remain to be seen. The live weights of purchased weaners were much the same as 2010/11. This was disappointing to vendors and purchasers, given the surplus of feed. However, lower feed quality and unusually high parasitic burdens were thought to be contributing factors to the static live weights.

The fawning percentage increased in 2011/12 to 86 percent for mixed-age hinds and 73 percent in rising two-year hinds – a lift of 5 and 4 percent respectively. Farmers felt a rise in feeding levels and good fawning conditions contributed to this increase.

Carcass weights were up 5 kilograms in rising two-year stags as a result of improved feeding management and non-drought conditions (as experienced in the previous two seasons).

REVENUE UP AGAIN

Net cash income increased 39 percent in 2011/12 to \$113 per stock unit. This was driven by the average venison price increasing slightly, but more influential was the volume of venison for sale, with more stock on hand to sell.

Velvet price falls

The farms monitored have a focus on venison production with a small velveted herd.

Velvet production per stag was higher across all ages resulting in an overall 10 percent increase

in kilograms produced compared with 2010/11.

The price per kilogram of velvet remained similar to the average price received in 2010/11, of \$89 per kilogram. Velvet income was \$41 600 and made up 15 percent of net cash income.

Off-farm income

Off-farm income (for example, off-farm part-time wages) is reducing and there is less reliance on this following several years of stable and improved venison returns. This income is now seen as an additional benefit rather than an economic necessity.

EXPENDITURE INCREASES

Total farm working expenditure was up 22 percent, compared with 2010/11. The largest increases were aimed at improving production and directed mainly at animal health, feed, regrassing and weed and pest expenses.

Deer farmers spent more on animal health, combating internal parasite issues and resistance to some drenches, as well as greater use of scanning in attempts to lift production. Some farmers in the Hawke's Bay also reported increased issues with laminitis or foot rot. The use of artificial insemination (AI) doubled in the North Island compared with the previous year. The number of straws has increased and more farms are investing in AI, and this is reflected in the increased breeding costs.

Because of the good growing season, feed costs increased in 2011/12. This was due to the need to conserve and control surplus feed and the increase in summer feed crop area with farmers attempting to improve weaner growth. Deer farmers are investing in more exotic types of feed crops and pasture mixes, such as fodder beet, plantain, lucerne mixes and kale. The regrassing and weed and pest expenses were related to the increase in cropping and some blanket thistle spraying.

Total overhead expenses continued to trend upwards with farmers monitored noting there is little they can do to constrain these cumulative costs (21 percent increase compared with 2010/11). The main contributors were increases in rates, Accident Compensation Corporation premiums, insurance and other expenditure.

FARM PROFIT BEFORE TAX STABLE

Farm profit before tax remained at similar levels, compared with 2010/11. With tax and drawings deducted, the farm surplus for reinvestment

increased dramatically from a deficit position in 2010/11 to a surplus of \$65 300. The surplus was spent on additional capital purchases and repaying principal. The model returned a farm cash surplus of \$36 300 in 2011/12.

BUDGET FINANCIAL PERFORMANCE OF THE NORTH ISLAND DEER MODEL IN 2012/13

Farmers expect a minimal change from the 2011/12 cash operating surplus for the North Island deer model. Net cash income is expected to increase 1 percent as farmers look to hold current stock numbers and prices received are expected to remain similar to 2011/12.

A 3 percentage point increase in rising two-year hind fawning percentages is expected, following the good 2011/12 pasture growing season.

Velvet price expected to hold

Farmers expect similar velvet prices at \$91 per kilogram. Overall, per head production is expected to be much the same or slightly up on 2011/12. The main production increase will be in the mixed-age stags. Many farmers sold a proportion of their velvet to road buyers and expect to continue this practice in 2012/13.

FARM WORKING EXPENDITURE STABLE

Farmers expect to hold farm working expenditure in the North Island deer model to around 2011/12 levels. This is due to unchanging stock numbers, a reduction in feed costs due to good pasture covers going into the 2012/13 season and surplus supplements on hand from the 2011/12 season.

Farmers are also planning to reduce expenses in 2012/13 on animal health, feed and regrassing. Farmers expect to use cheaper oral drenches rather than pour-ons. Less tuberculosis (Tb) testing is expected over the next two years, with Tb cases becoming less frequent.

With a more typical growing season expected in 2012/13, a surplus of supplements on hand and less silage made, total feed costs should decrease 16 percent.

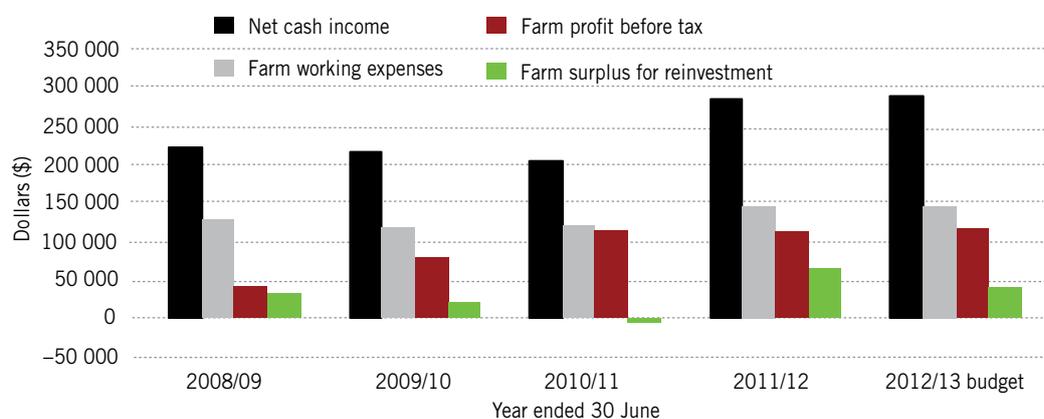
Expenditure on repairs and maintenance is expected to decrease by 12 percent to \$5.33 per deer stock unit but will still be above the long-term average (of \$4 per deer stock unit).

FARM PROFIT BEFORE TAX IMPROVES SLIGHTLY

If deer farmers can rein in some costs, the North Island deer model should show a farm profit before tax of \$115 000 in 2012/13, a 3 percent improvement.

With tax and drawings removed, the farm surplus for reinvestment is expected to remain at a good level at \$38 500.

Figure 1: North Island deer model profitability trends



INFORMATION ABOUT THE MODEL

Deer farming in New Zealand is characterised by many deer farms that carry around 400 to 600 head of deer. However, a high proportion of the national herd is farmed on larger farms. These may be stand-alone deer farms or large deer units within a mixed farming operation.

The deer models in the Ministry for Primary Industries' pastoral monitoring are based on stand-alone deer farms and, therefore, are an important but not totally representative deer farm type. However, monitoring and comparing the sector using a stand-alone deer model is important for tracking the deer sector's progress and trends.

The North Island deer model represents a family run, stand-alone deer farm that is big enough to support a family. The model does not run sheep and beef cattle but includes on-farm income from

grazing and cropping as part of the farm's feed management. The farm business is taxed on the basis of a two-person partnership.

Weaner hinds and stags are carried over the winter and sold to slaughter. This model is no longer mating with a cross-bred stag (as of 2010/11) with red deer being more prominent in the North Island. There is also a small velveted herd but the farm focus is on venison production.

The model is based on information monitored from 20 deer farms and a cross-section of agribusiness representatives. The model's aim is to typify a deer farm in the central North Island, East Coast and Hawke's Bay regions.

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