



NORTH ISLAND DEER

KEY RESULTS FROM MAF'S 2011 DEER 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 publication to previous years. Refer to the budget table footnotes for more detail.

KEY POINTS

- › Deer production in 2010/11 was limited by a very dry autumn in 2010, poor pasture growth over winter and a difficult wet spring. This resulted in a poorer than expected average fawning rate of 80 percent and increased hind deaths.
- › The poor production season and fewer animals sold meant the 2010/11 model's net cash income of \$202 500 was down 7 percent compared with 2009/10. This was despite a higher than average venison price of \$7.54 per kilogram received in 2010/11.
- › The velvet price per kilogram improved across all grades, however, the price difference between grades was narrow. 2010/11 had a \$15 difference between the top and bottom grades compared with \$29 in 2009/10.
- › Other farm income provided 20 percent of net cash income and was up 52 percent from 2009/10 as a result of higher prices received for beef grazing and crops.
- › Total farm working expenses increased 16 percent as a consequence of managing stock through drought and price rises in fuel, fertiliser, electricity, ACC levies, rates and insurance premiums.
- › Farm profit before tax in 2010/11 improved 17 percent compared with 2009/10, an increase of \$9.17 per stock unit.
- › Deer farmers' morale is positive with North Island deer farmers expecting a better production season and higher venison and velvet prices in 2011/12. Net cash income for the 2011/12 model farm is expected to increase 35 percent to \$273 100 compared with 2010/11.

»» TABLE 1: KEY PARAMETERS, FINANCIAL RESULTS AND BUDGET FOR THE NORTH ISLAND DEER MODEL

| YEAR ENDED 30 JUNE | 2007/08 | 2008/09 | 2009/10 ¹ | 2010/11 | 2011/12 BUDGET |
|--|---------|---------|----------------------|---------|----------------|
| Effective area (ha) | 140 | 140 | 220 | 220 | 220 |
| Opening deer stock units (head) | 2 197 | 2 198 | 2 203 | 2 261 | 2 484 |
| Mixed age breeding hinds (head) | 440 | 440 | 400 | 420 | 490 |
| Rising 2-year hinds (head) | 100 | 110 | 140 | 100 | 100 |
| Rising 1-year hinds and stags (head) | 454 | 486 | 440 | 500 | 570 |
| Rising 2-year stags (head) | 25 | 25 | 80 | 83 | 80 |
| Rising 3-year plus stags (head) | 80 | 57 | 40 | 47 | 50 |
| Stocking rate (stock units/ha) | 15.7 | 15.7 | 10.0 | 10.3 | 11.3 |
| FAWNING² | | | | | |
| Farm average (%) | 85 | 80 | 85 | 80 | 86 |
| Mixed age hinds (%) | 88 | 85 | 88 | 82 | 89 |
| 2-year-old hinds (%) | 70 | 60 | 75 | 70 | 77 |
| VELVET | | | | | |
| Average price (\$/kg) | 75.00 | 55.00 | 81.00 | 95.00 | 95.00 |
| Farm average (includes re-growth but excludes yearling velvet) (kg/stag) | 3.6 | 2.2 | 2.7 | 2.8 | 2.9 |
| Mixed age stags (kg/stag) | 4.7 | 4.5 | 4.8 | 4.1 | 4.3 |
| 3-year-old stags (kg/stag) | 4.1 | 3.5 | 3.5 | 3.8 | 3.8 |
| 2-year old stags (kg/stag) | 2.4 | 2.0 | 2.0 | 2.0 | 2.1 |
| VENISON PRICE AND CARCASS WEIGHTS | | | | | |
| Average price (\$/kg) | | 7.93 | 6.86 | 7.54 | 7.57 |
| 2-year-old stags (kg) | 72 | 70 | 60 | 57 | 58 |
| Yearling stags (kg) | 57 | 54 | 56 | 55 | 55 |
| INCOME | | | | | |
| Net cash income (\$) | 155 043 | 221 351 | 216 563 | 202 493 | 273 120 |
| Farm working expenses (\$) | 103 828 | 128 333 | 117 423 | 129 581 | 135 012 |
| Farm profit before tax (\$) | 23 523 | 41 006 | 77 916 | 100 693 | 123 110 |
| Farm surplus for reinvestment ³ (\$) | -14 748 | 31 922 | 18 753 | -17 095 | 36 764 |

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
 ... Data not available.



»» TABLE 2: NORTH ISLAND DEER MODEL BUDGET

| | 2010/11 | | | 2011/12 BUDGET | | |
|--|------------------|---------------|--------------------------|------------------|---------------|--------------------------|
| | WHOLE FARM (\$) | PER HA (\$) | PER DEER STOCK UNIT (\$) | WHOLE FARM (\$) | PER HA (\$) | PER DEER STOCK UNIT (\$) |
| REVENUE | | | | | | |
| Deer sales | 177 029 | 805 | 78.30 | 231 782 | 1 054 | 93.31 |
| Velvet (per stag stock unit) | 37 534 | 171 | 49.26 | 41 398 | 188 | 47.80 |
| Other farm income | 40 000 | 182 | 17.69 | 40 000 | 182 | 16.10 |
| LESS: | | | | | | |
| Deer purchases | 52 070 | 237 | 23.03 | 40 060 | 182 | 16.13 |
| Net cash income | 202 493 | 920 | 89.56 | 273 120 | 1 241 | 109.95 |
| Farm working expenses | 129 581 | 589 | 57.31 | 135 012 | 614 | 54.35 |
| Cash operating surplus | 72 912 | 331 | 32.25 | 138 108 | 628 | 55.60 |
| Interest | 17 886 | 81 | 7.91 | 17 886 | 81 | 7.20 |
| Rent and/or leases | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Stock value adjustment | 54 020 | 246 | 23.89 | 11 938 | 54 | 4.81 |
| Minus depreciation | 8 353 | 38 | 3.69 | 9 050 | 41 | 3.64 |
| Farm profit before tax | 100 693 | 458 | 44.54 | 123 110 | 560 | 49.56 |
| Income equalisation | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Taxation | 22 121 | 101 | 9.78 | 32 458 | 148 | 13.07 |
| Farm profit after tax | 78 572 | 357 | 34.75 | 90 652 | 412 | 36.49 |
| ALLOCATION OF FUNDS | | | | | | |
| Add back depreciation | 8 353 | 38 | 3.69 | 9 050 | 41 | 3.64 |
| Reverse stock value adjustment | -54 020 | -246 | -23.89 | -11 938 | -54 | -4.81 |
| Drawings | 50 000 | 227 | 22.12 | 51 000 | 232 | 20.53 |
| Farm surplus for reinvestment¹ | -17 095 | -78 | -7.56 | 36 764 | 167 | 14.80 |
| REINVESTMENT | | | | | | |
| Net capital purchases | 6 875 | 31 | 3.04 | 4 750 | 22 | 1.91 |
| Development | 1 500 | 7 | 0.66 | 1 500 | 7 | 0.60 |
| Principal repayments | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Farm cash surplus/deficit | -25 470 | -116 | -11.27 | 30 514 | 139 | 12.28 |
| OTHER CASH SOURCES | | | | | | |
| Introduced funds | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| New borrowings | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Off-farm income | 15 272 | 69 | 6.75 | 15 272 | 69 | 6.15 |
| Net cash position | -10 198 | -46 | -4.51 | 45 786 | 208 | 18.43 |
| ASSETS AND LIABILITIES | | | | | | |
| Farm, forest and building (opening) | 1 741 520 | 7 916 | 770.28 | 1 741 520 | 7 916 | 701.10 |
| Plant and machinery (opening) | 55 688 | 253 | 24.63 | 60 335 | 274 | 24.29 |
| Stock valuation (opening) | 449 980 | 2 045 | 199.03 | 504 000 | 2 291 | 202.90 |
| Other produce on hand (opening) | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Total farm assets (opening) | 2 247 188 | 10 214 | 993.94 | 2 305 855 | 10 481 | 928.28 |
| Total assets (opening) | 2 247 188 | 10 214 | 993.94 | 2 305 855 | 10 481 | 928.28 |
| Total liabilities (opening) | 298 100 | 1 355 | 131.85 | 283 100 | 1 287 | 113.97 |
| Total equity (farm assets - liabilities) | 1 949 088 | 8 859 | 862.09 | 2 022 755 | 9 194 | 814.31 |

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.

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: NORTH ISLAND DEER MODEL EXPENDITURE

| | 2010/11 | | | 2011/12 BUDGET | | |
|---|-----------------|-------------|--------------------------|-----------------|-------------|--------------------------|
| | WHOLE FARM (\$) | PER HA (\$) | PER DEER STOCK UNIT (\$) | WHOLE FARM (\$) | PER HA (\$) | PER DEER STOCK UNIT (\$) |
| FARM WORKING EXPENSES | | | | | | |
| Permanent wages | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Casual wages | 7 200 | 33 | 3.18 | 7 350 | 33 | 2.96 |
| ACC | 248 | 1 | 0.11 | 252 | 1 | 0.10 |
| Total labour expenses | 7 448 | 34 | 3.29 | 7 602 | 35 | 3.06 |
| Animal health | 8 650 | 39 | 3.83 | 8 800 | 40 | 3.54 |
| Breeding | 950 | 4 | 0.42 | 1 000 | 5 | 0.40 |
| Electricity | 4 849 | 22 | 2.14 | 4 900 | 22 | 1.97 |
| Feed (hay and silage) | 14 000 | 64 | 6.19 | 13 500 | 61 | 5.43 |
| Feed (feed crops) | 8 000 | 36 | 3.54 | 7 600 | 35 | 3.06 |
| Feed (grazing) | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Feed (other) | 8 000 | 36 | 3.54 | 8 000 | 36 | 3.22 |
| Fertiliser | 27 254 | 124 | 12.05 | 31 058 | 141 | 12.50 |
| Lime | 960 | 4 | 0.42 | 1 000 | 5 | 0.40 |
| Freight (not elsewhere deducted) | 1 350 | 6 | 0.60 | 1 350 | 6 | 0.54 |
| Regrassing costs | 3 500 | 16 | 1.55 | 3 700 | 17 | 1.49 |
| Weed and pest control | 1 960 | 9 | 0.87 | 2 508 | 11 | 1.01 |
| Fuel | 5 177 | 24 | 2.29 | 5 867 | 27 | 2.36 |
| Vehicle costs (excluding fuel) | 5 500 | 25 | 2.43 | 5 500 | 25 | 2.21 |
| Repairs and maintenance | 11 660 | 53 | 5.16 | 11 660 | 53 | 4.69 |
| Total other working expenses | 101 810 | 463 | 45.03 | 106 443 | 484 | 42.85 |
| Communication costs (phone and mail) | 3 080 | 14 | 1.36 | 2 700 | 12 | 1.09 |
| Accountancy | 3 000 | 14 | 1.33 | 3 000 | 14 | 1.21 |
| Legal and consultancy | 600 | 3 | 0.27 | 620 | 3 | 0.25 |
| Other administration | 820 | 4 | 0.36 | 870 | 4 | 0.35 |
| Water charges (irrigation) | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| Rates | 7 920 | 36 | 3.50 | 8 140 | 37 | 3.28 |
| Insurance | 2 990 | 14 | 1.32 | 3 300 | 15 | 1.33 |
| ACC employer | 713 | 3 | 0.32 | 737 | 3 | 0.30 |
| Other expenditure | 1 200 | 5 | 0.53 | 1 200 | 5 | 0.48 |
| Total overhead expenses | 20 323 | 92 | 8.99 | 20 567 | 93 | 8.28 |
| Total farm working expenses | 129 581 | 589 | 57.31 | 134 612 | 612 | 54.19 |
| CALCULATED RATIOS | | | | | | |
| Economic farm surplus (EFS ¹) | -42 933 | -195 | -18.99 | 63 061 | 287 | 25.39 |
| Farm working expenses/NCI ² | 64% | | | 49% | | |
| EFS/total farm assets | -2% | | | 3% | | |
| EFS less interest and lease/equity | -3% | | | 2% | | |
| Interest+rent+lease/NCI | 9% | | | 7% | | |
| EFS/NCI | -21% | | | 23% | | |
| Wages of management | 53 472 | 243 | 23.65 | 54 059 | 246 | 21.76 |

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 FARM MODEL IN 2010/11

The 2010/11 cash operating surplus for the North Island deer model was \$72 900 or \$32.25 per stock unit, 36 percent lower than the previous year. Although prices received for both venison and velvet improved, this was offset by the rebuild of deer stock numbers and increased expenses associated with three years of consecutive droughts.

REVENUE

Net cash income was \$202 500, down 7 percent compared with 2009/10, reflecting an increase in stock purchases to make up for both the season's poor fawning percentage and to ensure the future supply of weaners. The stocking rate of the North Island model has increased to 10.3 stock units per hectare from 10.0 stock units per hectare in 2009/10.

DROUGHT AFFECTS PRODUCTION

The overall dry weather conditions in autumn 2010, meant hinds were at less than ideal condition for mating and farms went into winter with low pasture covers. This resulted in a poorer than expected average fawning rate of 80 percent in spring. The lighter hind condition also exacerbated hind deaths. As a result, the 2010/11 model had a hind death rate of 5 percent, compared with 3 percent in 2009/10.

VENISON PRICE IMPROVES

Prices for venison improved in 2010/11, with the average venison price for the model up 10 percent from \$6.86 per kilogram in 2009/10 to \$7.54 per kilogram in 2010/11. However, due to a dry autumn, poor pasture growth over winter and then a difficult wet spring in 2010, overall carcass weights were down 10 percent, reducing venison revenue for the model. Farmers tried to mitigate the poor season with later yearling sales. This lowered carcass weights for this stock class down just one kilogram. Average carcass weights for rising two-year stags also dropped 3 kilograms as a result of the autumn drought.

VELVET PRODUCTION STEADY

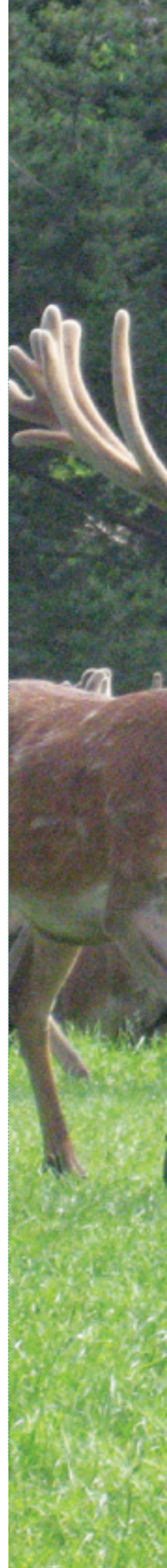
Monitored farmers reported similar velvet production to last year. Velvet prices improved across all grades over the year, resulting in a 12 percent increase in velvet revenue to \$37 500 or \$49.26 per stag stock unit. Farmers also noted the price difference between velvet grades was smaller than previous years. There was only a \$15 difference between the highest and lowest velvet grades in 2010/11 compared with \$29 in 2009/10. Velvet revenue in 2010/11 contributed 19 percent of the net cash income.

OTHER FARM INCOME BOOSTED

Other farm income from crop and grazing sales contributed \$40 000 to the 2010/11 budget, an increase of 51 percent from 2009/10, and is due to the high demand for grazing pushing up prices. Cropping in the Hawkes Bay has also increased with some farmers reporting more fodder beet grown for winter feeding to lift the carrying capacity of deer farms. These paddocks are usually then sown with lucerne for summer grazing sales.

OFF-FARM INCOME LESS IMPORTANT

Off-farm income contributed less to the 2010/11 model than in previous years as venison and velvet prices improved and monitored farmers, especially those that are older, decided to reduce their off-farm work commitments. Just over a quarter of the 20 farmers surveyed in 2010/11 had off-farm income.



EXPENDITURE UP

Total farm working expenditure was \$129 600, up 16 percent compared with 2009/10. The main drivers were increased expenses associated with managing stock through drought (feed expenses up 9 percent to \$30 000 and animal health expenses up 24 percent to \$8700), and higher prices for fertiliser, electricity, ACC levies, rates and insurance premiums.

FERTILISER

Fertiliser prices were not significantly different per tonne from 2009/10. There was a trend back towards the cheaper super and urea nitrogen products and away from DAP but fertiliser levels remained at maintenance levels.

REPAIRS, MAINTENANCE AND DEVELOPMENT

The combined repairs and maintenance and development expenses at \$13 200 were up almost 7 percent on the previous year's combined expense of \$12 300. Spending increases in this area are generally expected when good prices are being received for venison and velvet.

DEBT SERVICING

No principal was repaid off the term debt in the model; this is common for this smaller sized family farm where voluntary repayments are normally only made following consecutive surplus years. Generally debt levels are low for North Island deer farmers.

FARM PROFIT BEFORE TAX IMPROVED

The farm profit before tax increased to \$100 700, a 29 percent increase compared with 2009/10. However, after accounting for tax payments, stock value adjustments, drawings and farm reinvestments, the 2010/11 model's cash position was a \$25 500 deficit. A significant driver of this result was the farm model rebuilding deer stock numbers.

BUDGET FINANCIAL PERFORMANCE OF THE NORTH ISLAND DEER FARM MODEL 2011/12

REVENUE INCREASES WITH IMPROVED PRICES

Net cash income is expected to increase 35 percent to \$273 100. This improved result is due to increased revenue from deer sales from both more deer sold and improved venison prices. Expectations are for rising one year hinds to be up almost \$30 per head, mixed-aged hinds up \$40 per head and rising three year old stags up around \$100 per head. After deducting farm working expenses, the cash operating surplus is projected to increase to \$138 200.

The central North Island and Hawke's Bay regions experienced the warmest May on record in 2011. As a result, farms have gone into winter with good pasture levels and improved livestock condition compared with 2010. The average fawning rate is expected to improve to 86 percent. This is the highest fawning percentage the model has recorded for the last five years and, combined with the higher opening breeding hind numbers at June 2011, this is budgeted to provide the model with an extra 80 more fawns compared with 2009/10. Carcass weights are also expected to improve assuming typical weather conditions in 2011/12.

VENISON PRICES EXPECTED TO LIFT

North Island deer farmers are predicting improved venison prices for 2011/12. Revenue from venison is expected to increase 28 percent on 2010/11 to \$226 600. The expected venison prices are likely to encourage North Island deer farmers to continue rebuilding deer numbers. The farm model stocking

rate in 2011/12 is 11.3 stock units per hectare compared with 10.3 stock units per hectare for 2009/10.

VELVET

North Island deer farmers expect velvet prices to increase slightly for 2011/12 but note that the pricing system of velvet is difficult to predict from year to year. However, with central North Island and Hawke's Bay farms recovering from previous years' droughts, stock condition should improve along with a slightly higher velvet cut. Velvet revenue for the model in 2011/12 is expected to increase 10 percent to \$41 400 as a result of improved pasture and stock conditions.

FARM WORKING EXPENDITURE

Farm working expenditure on the North Island model is expected to increase 4 percent to \$135 000 in 2011/12. The most significant expenditure increase is fertiliser up 14 percent to \$31 000. Increased weed and pest expenses are a consequence of droughts opening up pastures and increasing weed and pest prevalence. Fuel and fertiliser price increases are expected as part of their continuing global demand and increased insurance expenses result from significant natural disaster events in New Zealand and around the world pushing up policy premiums.

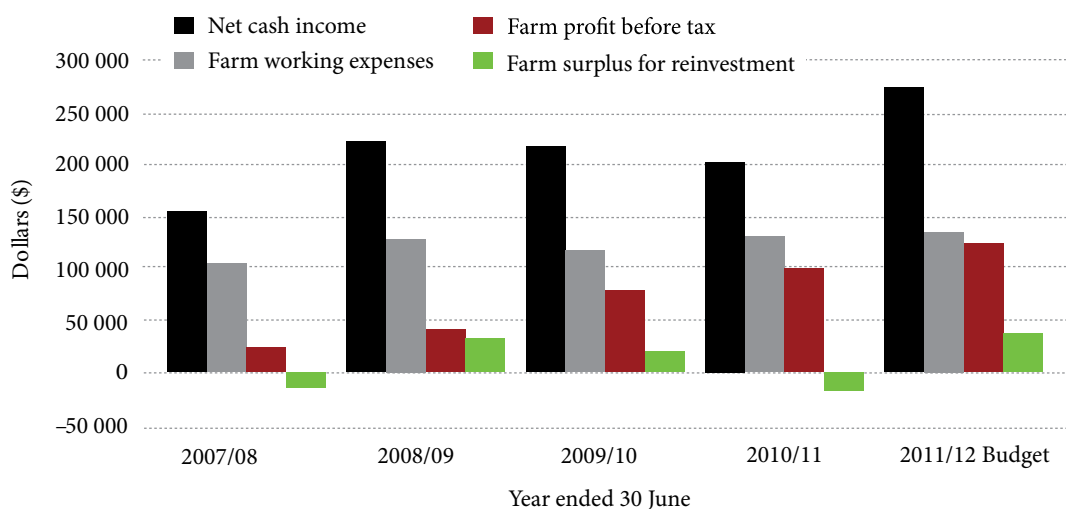
The combined repairs and maintenance, and development expenses are expected to be maintained at \$13 200 (\$11 700 for repairs and maintenance and \$1500 for development). Farmers report a desire to get their properties up to a good maintenance standard given the average advancing age of many deer farmers.

CASH SURPLUS SIGNIFICANTLY IMPROVES

The model is budgeted to return to a cash surplus of \$30 500 in 2011/12 as a result of the increased revenue from a greater number of deer sales, improved venison sale prices, and no changes to herd scheme tax values.

The farm surplus for reinvestment (cash available after meeting living costs) is expected to significantly improve in 2011/12 to \$36 800.

»» FIGURE 1: NORTH ISLAND DEER 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.



Limited farm sales made land prices difficult to judge. The general feeling among monitored farmers was that deer farms would be no less than \$10 000 per hectare and no less than \$30 000 per hectare for land blocks with dairy or maize potential. The land value of the model is budgeted to hold steady at \$1.7 million.

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 MAF's Pastoral Monitoring are based on stand-alone deer farms and therefore represent an important but not totally representative deer farming 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 farm is a small 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 farms 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. The farming programme aims to get yearling stock to target slaughter weights in late spring when market prices for chilled venison traditionally peak.

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

For more information on these models contact Deborah.Hackell@maf.govt.nz

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
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