

PASTORAL MONITORING 2010

CANTERBURY/MARLBOROUGH HILL COUNTRY SHEEP AND BEEF



This report contains the key results from MAF's 2010 sheep and beef monitoring programme. Please note that the sample of farms has changed between 2008/09 and 2009/10. Caution should be taken when comparing data between these two years.

KEY POINTS

- A good spring and summer over most of the region in 2009/10 lifted lamb survival and lambing percentage as well as boosting cattle sale weights.
- Improved lambing percentage and good demand for store and prime lambs lifted sheep revenue in 2009/10 and helped increase net cash income to \$375 900.
- Farm working expenses were held at \$230 800, a 4 percent increase on 2008/09. Feed costs increased, but interest costs fell substantially in 2009/10.
- Farm profit before tax has increased 52 percent to \$71 200 in 2009/10; this results in a farm surplus for reinvestment of \$42 200.
- Drought affected parts of both South and North Canterbury in 2009/10. Farmers in these areas had to sell store and capital stock and buy in supplementary feed.

>>> TABLE 1: KEY PARAMETERS, FINANCIAL RESULTS AND BUDGET FOR THE CANTERBURY/MARLBOROUGH HILL COUNTRY SHEEP AND BEEF **FARM MODEL**

| YEAR ENDED 30 JUNE | 2006/07 | 2007/08 | 2008/09 | 2009/10 ¹ | 2010/11 BUDGET |
|---|---------|---------|---------|----------------------|-------------------|
| Effective area (ha) | 1 397 | 1 397 | 1 397 | 1 397 | 1 397 |
| Breeding ewes (head) | 2 597 | 2 706 | 2 614 | 2 600 | 2 600 |
| Replacement ewe hoggets (head) | 783 | 787 | 664 | 650 | 650 |
| Other sheep (head) | 403 | 414 | 0 | 389 | 290 |
| Breeding cows (head) | 220 | 207 | 0 | 192 | 196 |
| Rising 1-year cattle (head) | 136 | 135 | 143 | 140 | 140 |
| Other cattle (head) | 41 | 42 | 30 | 73 | 68 |
| Opening sheep stock units (ssu) | 3 431 | 3 551 | 3 318 | 3 380 | 3 315 |
| Opening cattle stock units | 1 952 | 1 976 | 2 048 | 2 022 | 2 072 |
| Opening total stock units (su) | 5 384 | 5 614 | 5 482 | 5 487 | 5 462 |
| Stocking rate (stock unit/ha) | 3.9 | 4.0 | 3.9 | 3.9 | 3.9 |
| Ewe lambing (%) | 112 | 112 | 111 | 118 | 114 |
| Average lamb price (\$/head) | 44.08 | 46.02 | 70.51 | 70.02 | 71.77 |
| Average store lamb price (\$/head) | 37.51 | 33.00 | 58.00 | 61.50 | 63.00 |
| Average prime lamb price (\$/head) | 52.00 | 54.64 | 79.00 | 74.00 | 75.00 |
| Average wool price (\$/kg) | 3.18 | 3.25 | 3.10 | 3.28 | 3.15 |
| Total wool produced (kg) | 17 190 | 16 624 | 15 560 | 15 730 | 15 470 |
| Wool production (kg/ssu) | 5.01 | 4.68 | 4.69 | 4.65 | 4.67 |
| Average rising 2-year steer (\$/head) | 653 | 683 | 1 025 | 700 | 750 |
| Average cull cow (\$/head) | 554 | 454 | 0 | 643 | 571 |
| Net cash income (\$) | 283 033 | 295 744 | 362 009 | 375 894 | 343 732 |
| Farm working expenses (\$) | 207 394 | 214 467 | 222 964 | 230 784 | 232 560 |
| Farm profit before tax (\$) | 28 950 | 4 316 | 46 854 | 71 179 | 49 973 |
| Farm surplus for reinvestment (\$) ² | -24 696 | -21 247 | 35 519 | 42 238 | 5 269 |
| 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 represents the cash available from the farming business, after meeting living costs, which is available for investment on farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.



>>> TABLE 2: CANTERBURY/MARLBOROUGH HILL COUNTRY SHEEP AND BEEF MODEL BUDGET

| | | 2009/10 | | | 2010/11 BUDGET | | | |
|---|-----------------------|------------------------|--|-----------------------|------------------------|--|--|--|
| | WHOLE FARM (\$) | PER HECTARE (\$) | PER STOCK UNIT ¹ (\$) | WHOLE FARM (\$) | PER HECTARE (\$) | PER STOCK UNIT ¹ (\$) | | |
| REVENUE | | | | | | | | |
| Sheep | 209 229 | 150 | 61.90 | 194 680 | 139 | 58.73 | | |
| Wool | 51 594 | 37 | 15.26 | 48 706 | 35 | 14.69 | | |
| Cattle | 109 331 | 78 | 54.07 | 96 066 | 69 | 46.36 | | |
| Grazing income (including hay and silage sales) | 5 040 | 4 | 59.29 | 7 280 | 5 | 97.07 | | |
| Other farm income | 10 700 | 8 | 1.95 | 7 500 | 5 | 1.37 | | |
| LESS: | | | | | | | | |
| Sheep purchases | 6 500 | 5 | 1.92 | 6 500 | 5 | 1.96 | | |
| Cattle purchases | 3 500 | 3 | 1.73 | 4 000 | 3 | 1.93 | | |
| Net cash income | 375 894 | 269 | 68.51 | 343 732 | 246 | 62.93 | | |
| Farm working expenses | 230 784 | 165 | 42.06 | 232 560 | 166 | 42.58 | | |
| Cash operating surplus | 145 110 | 104 | 26.45 | 111 171 | 80 | 20.35 | | |
| Interest | 37 660 | 27 | 6.86 | 37 660 | 27 | 6.89 | | |
| Rent and/or leases | 5 000 | 4 | 0.91 | 4 000 | 3 | 0.73 | | |
| Stock value adjustment | -12 035 | -9 | -2.19 | 0 | 0 | 0.00 | | |
| Minus depreciation | 19 237 | 14 | 3.51 | 19 539 | 14 | 3.58 | | |
| Farm profit before tax | 71 179 | 51 | 12.97 | 49 973 | 36 | 9.15 | | |
| Taxation | 7 292 | 5 | 1.33 | 9 735 | 7 | 1.78 | | |
| Farm profit after tax | 63 887 | 46 | 11.64 | 40 238 | 29 | 7.37 | | |
| | | | | | | | | |
| ALLOCATION OF FUNDS | | | | | | | | |
| Add back depreciation | 19 237 | 14 | 3.51 | 19 539 | 14 | 3.58 | | |
| Reverse stock value adjustment | 12 035 | 9 | 2.19 | 0 | 0 | 0.00 | | |
| Income equalisation | 0 | 0 | 0.00 | 0 | 0 | 0.00 | | |
| Off-farm income | 15 000 | 11 | 2.73 | 8 000 | 6 | 1.46 | | |
| Discretionary cash | 110 158 | 79 | 20.08 | 67 776 | 49 | 12.41 | | |
| APPLIED TO: | | | | | | | | |
| Net capital purchases | 15 000 | 11 | 2.73 | 10 000 | 7 | 1.83 | | |
| Development | 16 622 | 12 | 3.03 | 6 000 | 4 | 1.10 | | |
| Principal repayments | 11 000 | 8 | 2.00 | 6 000 | 4 | 1.10 | | |
| Drawings | 52 921 | 38 | 9.64 | 54 507 | 39 | 9.98 | | |
| New borrowings | 6 000 | 4 | 1.09 | 6 000 | 4 | 1.10 | | |
| Introduced funds | 0 | 0 | 0.00 | 0 | 0 | 0.00 | | |
| Cash surplus/deficit | 20 616 | 15 | 3.76 | -2 731 | -2 | -0.50 | | |
| Farm surplus for reinvestment ² | 42 238 | 30 | 7.70 | 5 269 | 4 | 0.96 | | |
| ASSETS AND LIABILITIES | | | | | | | | |
| Farm, forest and building (opening) | 4 675 000 | 3 346 | 852.03 | 4 675 000 | 3 346 | 855.92 | | |
| Plant and machinery (opening) | 78 245 | 56 | 14.26 | 81 508 | 58 | 14.92 | | |
| Stock valuation (opening) | 680 844 | 487 | 124.09 | 668 809 | 479 | 122.45 | | |
| Other produce on hand (opening) | 0 | 0 | 0.00 | 0 | 0 | 0.00 | | |
| Total farm assets (opening) | 5 434 089 | 3 890 | 990.38 | 5 425 317 | 3 884 | 993.29 | | |
| Total assets (opening) | 5 674 089 | 4 062 | 1 034.12 | 5 425 317 | 3 884 | 993.29 | | |
| Total liabilities (opening) | 556 500 | 398 | 101.42 | 556 500 | 398 | 101.89 | | |
| Total equity (farm assets - liabilities) | 4 877 589 | 3 491 | 888.95 | 4 868 817 | 3 485 | 891.41 | | |
| Notes | 10,700 | | | 2000017 | | ~ 1.11 | | |

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 represents the cash available from the farming business, after meeting living costs, which is available for investment on farm or for principal repayments. It is calculated as discretionary cash less off-farm income and drawings.

>>> TABLE 3: CANTERBURY/MARLBOROUGH HILL COUNTRY SHEEP AND BEEF MODEL EXPENDITURE

| | | | 2009/10 | 2010/11 BUDGET | | | |
|---|-----------------------|------------------------|--|-----------------------|------------------------|--|--|
| | WHOLE FARM (\$) | PER HECTARE (\$) | PER STOCK UNIT ¹ (\$) | WHOLE FARM (\$) | PER HECTARE (\$) | PER STOCK UNIT ¹ (\$) | |
| FARM WORKING EXPENSES | | | | | | | |
| Permanent wages | 23 936 | 17 | 4.36 | 25 585 | 18 | 4.68 | |
| Casual wages | 9 863 | 7 | 1.80 | 8 065 | 6 | 1.48 | |
| ACC | 1 266 | 1 | 0.23 | 1 433 | 1 | 0.26 | |
| Total labour expenses | 35 065 | 25 | 6.39 | 35 083 | 25 | 6.42 | |
| Animal health | 17 453 | 12 | 3.18 | 17 798 | 13 | 3.26 | |
| Breeding | 1 043 | 1 | 0.19 | 1 112 | 1 | 0.20 | |
| Electricity | 6 760 | 5 | 1.23 | 6 952 | 5 | 1.27 | |
| Feed (hay and silage) | 15 680 | 11 | 2.86 | 14 461 | 10 | 2.65 | |
| Feed (feed crops) | 6 968 | 5 | 1.27 | 5 562 | 4 | 1.02 | |
| Feed (grazing) | 1 939 | 1 | 0.35 | 1 947 | 1 | 0.36 | |
| Feed (other) | 2 272 | 2 | 0.41 | 3 337 | 2 | 0.61 | |
| Fertiliser | 29 016 | 21 | 5.29 | 26 826 | 19 | 4.91 | |
| Lime | 2 400 | 2 | 0.44 | 4 000 | 3 | 0.73 | |
| Cash crop expenses ² | 1 000 | 1 | 0.18 | 800 | 1 | 0.15 | |
| Freight (not elsewhere deducted) | 166 | 0 | 0.03 | 167 | 0 | 0.03 | |
| Regrassing costs | 8 145 | 6 | 1.48 | 8 065 | 6 | 1.48 | |
| Shearing expenses | 18 590 | 13 | 5.50 | 18 231 | 13 | 5.50 | |
| Weed and pest control | 8 644 | 6 | 1.58 | 8 176 | 6 | 1.50 | |
| Fuel | 12 744 | 9 | 2.32 | 13 349 | 10 | 2.44 | |
| Vehicle costs (excluding fuel) | 10 250 | 7 | 1.87 | 10 290 | 7 | 1.88 | |
| Repairs and maintenance | 19 393 | 14 | 3.53 | 19 467 | 14 | 3.56 | |
| Total other working expenses | 162 463 | 116 | 29.61 | 160 539 | 115 | 29.39 | |
| Communication costs (phone and mail) | 2 050 | 1 | 0.37 | 2 058 | 1 | 0.38 | |
| Accountancy | 4 156 | 3 | 0.76 | 4 171 | 3 | 0.76 | |
| Legal and consultancy | 2 216 | 2 | 0.40 | 2 225 | 2 | 0.41 | |
| Other administration | 3 879 | 3 | 0.71 | 3 893 | 3 | 0.71 | |
| Water charges (irrigation) | 1 108 | 1 | 0.20 | 1 669 | 1 | 0.31 | |
| Rates | 10 527 | 8 | 1.92 | 10 901 | 8 | 2.00 | |
| Insurance | 4 987 | 4 | 0.91 | 5 006 | 4 | 0.92 | |
| ACC employer | 2 118 | 2 | 0.39 | 4 790 | 3 | 0.88 | |
| Other expenditure | 2 216 | 2 | 0.40 | 2 225 | 2 | 0.41 | |
| Total overhead expenses | 33 257 | 24 | 6.06 | 36 938 | 26 | 6.76 | |
| Total farm working expenses | 230 784 | 165 | 42.06 | 232 560 | 166 | 42.58 | |
| CALCULATED RATIOS | | | | | | | |
| Economic farm surplus (EFS ³) | 38 839 | 28 | 7.08 | 16 633 | 12 | 3.05 | |
| Farm working expenses/NCI ⁴ | 61% | 20 | 7.00 | 68% | 12 | 3.03 | |
| EFS/total farm assets | 0.7% | | | 0.3% | | | |
| EFS less interest and lease/equity | -0.1% | | | -0.5% | | | |
| Interest+rent+lease/NCI | 11.3% | | | 12.1% | | | |
| EFS/NCI | 10.3% | | | 4.8% | | | |
| Wages of management | 75 000 | 54 | 13.67 | 75 000 | 54 | 13.73 | |
| mages of management | 73 000 | 34 | 13.07 | 75 000 | - 34 | 13./3 | |

Notes

¹ Shearing expenses per stock unit based on sheep stock units.
2 Includes forestry expenses.
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 CANTERBURY/MARLBOROUGH HILL COUNTRY SHEEP AND BEEF FARM MODEL IN 2009/10

The cash operating surplus in 2009/10 was very similar to the previous year increasing only slightly to \$145 100, with a slightly improved net cash income almost offset by an increase in farm working expenses.

BETTER LAMBING LIFTS REVENUE

Net cash income increased due to a lift in lambing percentage. Lamb survival rates were very good over most of the lambing season due to the mild weather conditions. Feed conditions throughout most of the region were very good over spring and summer, thus allowing hill country farmers to finish more lambs, selling two-thirds of lambs as prime, compared with 55 percent in 2008/09. The strong demand for lambs kept store prices at good levels right through the season, with a margin of only \$12.50 between the price for prime and store lamb.

The average lamb price at \$70.02 was virtually the same as 2008/09, with better store prices and a bigger proportion sold prime, offsetting the \$5.00 drop in prime price.

DROUGHT AFFECTS PART OF THE REGION

Parts of south Canterbury and north Canterbury suffered from drought during the 2009/10 season. The Mackenzie and Waimate districts were declared a drought area in April 2010 following a very dry summer and autumn, in which they had to sell stock store, destock capital stock and buy in supplementary feed. While north Canterbury had a reasonable summer, a very dry autumn led to a drought declaration in May. Farmers in this area had to sell some capital stock and buy in supplementary feed.

GOOD FEED CONDITIONS BOOST CATTLE WEIGHTS AND PRICES

Good feed conditions over most of the region gave good carcass weights on finishing cattle, and weaner calf weights were 15 to 25 kilograms heavier than normal. Prices lifted further as farmers took advantage of good demand for weaner cattle both locally and from the North Island. They sold their best steer and heifer calves and retained the lighter weaners to rear themselves. Drought-affected farmers destocked breeding cows, but over the rest of the region cows were in the fattest condition seen for many years. Cattle revenue was down slightly from 2008/09 to \$109 300 mostly because there were fewer older cattle sold.

WOOL RETURNS LIFT A LITTLE

Wool prices lifted 6 percent providing some encouragement for farmers but wool still contributes only 14 percent of revenue.

FARMERS KEEP SPENDING UNDER CONTROL

Farm working expenses in 2009/10 were \$230 800, a 4 percent increase on 2008/09. Overall farm working expenses are 61 percent of net cash income. However, farm accountants report that the farm working expenses to net cash income ratio is over 70 percent for many famors.

MOST EXPENSES INCREASED SLIGHTLY

Most farm working expenses increased slightly either as a result of inflation, or though slightly higher usage. Animal health, electricity, regrassing, fuel, administration, rates and insurance all increased slightly in 2009/10. Animal health costs have increased partly through new formulations of internal parasite control being more expensive, rather than increased number of treatments.

FEED EXPENSES UP

Feed expenses increased in 2009/10. Farmers not affected by drought conserved nearly double the normal amount of hay and silage in 2009/10, while many of those affected by drought had lower conservation costs, but had to buy in some supplementary feed.

FERTILISER SPENDING HELD

Fertiliser use has increased slightly in 2009/10, as lower fertiliser prices and a slight increase in spending to \$29 000 allowed farmers to increase the area topdressed. Hill country farmers have maintained fertiliser on their paddock area, but have typically topdressed only one third to half of their hill country. Some farmers have not used fertiliser on their hill country for several years, while others are maintaining applications to maintain or improve production.

Spending on lime continues to increase as some farmers use lime as a substitute for fertiliser.

INTEREST COSTS FALL

Interest costs have fallen as low floating interest rates have flowed through to farm mortgages. Historically, most farm loans have been on fixed rates for two to five years. As loans have come up for renewal farmers have moved to floating rate loans. This is thought to have reduced the typical interest rate by 1.5 to 2.0 percent.

Interest and rent is only 11 percent of net cash income.

CASH DISPOSAL MODEST

Farmers continued to spend modest amounts on development and capital purchases in the 2009/10 season. There were some principal repayments; however, industry commentators consider that this is most likely repayment of hire purchase, and that there was very little repayment of term loan principal. Some new borrowings were associated with the capital purchases.

FARM PROFIT IMPROVES

Farm profit before tax lifted to \$71 200, an increase of \$24 300 in 2009/10. However, this was influenced partly by decreases in stock on hand. Farm surplus for reinvestment increased by \$6700 to \$42 200 in 2009/10, the highest level for some years.

The value of land and buildings was revised downwards to around \$850 per stock unit, based on the view of farmers monitored and industry commentators. There were very few farm sales to determine farm values but continued strength in the dairy industry has underpinned these hill country farmers' expectations.

>>> TABLE 4: CANTERBURY/MARLBOROUGH HILL COUNTRY SHEEP AND BEEF MODEL CASH FARM INCOME

| YEAR ENDED 30 JUNE | 2006/07 (\$) | 2007/08 (\$) | 2008/09 (\$) | 2009/10 (\$)¹ | 2010/11 BUDGET (\$) |
|---|-----------------|-----------------|--------------|------------------|------------------------|
| Sheep sales less purchases | 112 318 | 132 606 | 183 066 | 202 729 | 188 180 |
| Cattle sales less purchases | 99 650 | 83 410 | 106 507 | 105 831 | 92 066 |
| Wool | 54 666 | 54 028 | 48 236 | 51 594 | 48 706 |
| Grazing income (including hay and silage sales) | 2 800 | 9 500 | 10 500 | 5 040 | 7 280 |
| Other income | 13 600 | 16 200 | 13 700 | 10 700 | 7 500 |
| Net cash income | 283 033 | 295 744 | 362 009 | 375 894 | 343 732 |
| Note | | | | | |

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.

BUDGET FINANCIAL PERFORMANCE OF THE CANTERBURY/ MARLBOROUGH HILL COUNTRY SHEEP AND BEEF FARM MODEL IN 2010/11

The cash operating surplus for 2010/11 is expected to fall due to a lower lambing percentage, reduced cattle sales and slightly increased farm working expenses.

REVENUE DOWN 10 PERCENT

Net cash income is expected to fall 10 percent in 2010/11 to \$343 700 compared with \$375 900 in 2009/10. Most classes of income are expected to decline with the exception of grazing which is expected to increase 44 percent to \$7300.

LAMBING PREDICTED TO FALL

Following the dry autumn in 2010, ewes were losing condition, as they were put to the ram. Monitored farmers are still expecting a reasonable lambing season, but industry commentators feel that ewes were lighter going to the ram than farmers originally thought, subsequently lowering performance in 2010/11. The 2009/10 season had very good weather during lambing. A return to more typical lambing conditions and poorer survival rates would also indicate a drop in lambing percentage for the 2010/11 season.

Farmers have budgeted a small rise in both the prime and store lamb price, partly because they expect there to be a shortage of lambs for the 2010/11 season.

Gross sheep revenue is expected to fall 7 percent to \$194 700 (resulting from a lower expected lambing percentage). However, bad weather at lambing or a dry summer could cause revenue to fall even further in 2010/11.

CATTLE REVENUE DOWN

Gross cattle revenue is expected to fall 12 percent in 2010/11 to \$96 000, because of expected lower prices for all classes of cattle. This result will be very weather dependent, with a good season giving better sale weights for stock and stronger demand for store and prime markets.

OTHER REVENUE ALSO DOWN

Wool prices are predicted to be 4 percent lower in 2010/11, resulting in lower wool income. Grazing income is expected to continue to rise, with an increase in demand from dairy farmers but other income from deer is expected to fall.

NO INCREASE IN EXPENDITURE

Farmers expect farm working expenses to be very similar to the 2009/10 year, with only a slight increase to \$232 600 compared with \$230 800 in 2009/10.

2010/11 BUDGETS TIGHT

Monitored farmers have indicated that they intend to keep a tight rein on expenses in 2010/11 with only slight increases in some spending categories, and expected cut backs in other areas. Animal health, electricity and fuel are expected to increase slightly through inflation and the impact of the Emissions Trading Scheme.

Feed costs are expected to reduce with less feed being bought in, and less hay and silage being made. This will be dependent on the weather, and already in the early part of the 2010 winter, feed usage has been higher than planned for many farmers.

Fertiliser expenditure is expected to be cut in 2010/11 with fertiliser on crops and paddocks maintained, but less fertiliser applied on the hill. This will be reviewed by farmers in the autumn, when the returns for lamb

and wool are better known. Lime spending is predicted to increase in 2010/11 to \$4000 as farmers move to correct pH levels in soils.

NO CHANGE IN INTEREST COSTS

Interest costs are expected to remain unchanged for the coming year. Some farmers still have fixed loans which will come onto lower floating rates and provide downward pressure on interest costs, while those who are on floating rates expect only a slight increase over the coming year. At present, farmers are reluctant to fix loans when the floating interest rate is so much lower than the longer term fixed rate.

With the drop in income in 2010/11, interest and rent are budgeted to represent 12 percent of net cash income.

NET RESULT PREDICTED TO DETERIORATE

The drop in cash operating surplus is expected to reduce farm profit before tax in 2010/11 and is less than the 2008/09 year at about \$50 000. This flows into the farm surplus for reinvestment and the cash surplus, both of which indicate a low level of profitability for the 2010/11 season. When the optimism farmers have shown regarding lambing percent and lamb price is taken into account, some farmers could have a very difficult 2010/11.

CASH DISPOSAL RESTRAINED

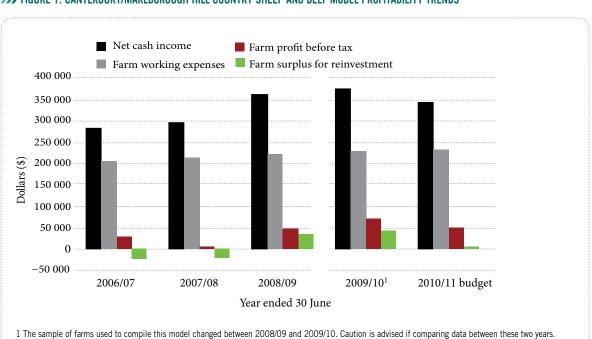
Farmers expect to restrain cash disposal in 2010/11, with only modest levels of development and capital spending planned. Drawings are expected to increase slightly, due to the flow on effects of increased GST.

INFORMATION ABOUT THE MODEL

This model represents 425 hill country farms in Canterbury and Marlborough. Farms have a proportion of land that is in tussock, or too steep to be cultivated by two wheeled tractors. They run fine wool, mid-micron or crossbred sheep according to the class of country and farmer preference. They run breeding flocks and herds and produce a proportion of store stock.

For more information on this model contact: john.greer@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

Web: www.maf.govt.nz

ISBN 978-0-478-36380-7 (Online)

© Crown copyright – Ministry of Agriculture and Forestry 2010

DISCLAIMER

The information in this report by the Ministry of Agriculture and Forestry is based on the best information available to the the Ministry at the time it was drawn up and all due care was exercised in its preparation. As it is not possible to foresee all uses of this information or to predict all future developments and trends, any subsequent action that relies on the accuracy of the information in this report is the sole commercial decision of the user and is taken at his/her own risk. Accordingly, the Ministry of Agriculture and Forestry disclaims any liability whatsoever for any losses or damages arising out of the use of this information, or in respect of any actions taken.

New Zealand Government

