

Farming Financials

Indicative farm financial information for assessing returns in Hawke's Bay from conversion of dryland finishing farms to irrigated arable and process vegetable farm system

Dryland Finishing Conversion to Irrigated Arable and Process Vegetables

Indicative annual farm budget for dryland finishing and irrigated arable and process vegetable farms

| | Dryland finishing (\$/ha/year) | Irrigated arable & process vegetables (\$/ha/year) |
|--|--------------------------------|--|
| Income - stock | | |
| Sheep sales | 743 | 2,364 |
| Cattle sales | 2,435 | - |
| Wool sales | 13 | 61 |
| Income - produce | | |
| Barley | 107 | - |
| Feed wheat | - | 720 |
| Squash | - | 1,013 |
| Potatoes | - | 1,287 |
| Peas | - | 589 |
| Beans | - | 1,238 |
| Maize grain | - | 844 |
| Italian ryegrass | - | 612 |
| Miscellaneous | - | 530 |
| Total income | 3,299 | 9,258 |
| Less stock purchases: | | |
| Sheep | 539 | 1,820 |
| Cattle | 1,400 | - |
| Total stock purchases | 1,939 | 1,820 |
| Gross farm income | 1,360 | 7,438 |
| Less farm expenses: | | |
| Wages (incl. management) | 213 | 506 |
| Fertiliser and lime | 107 | 707 |
| Animal health | 23 | 43 |
| Seeds and treatment | - | 596 |
| Weed and pest control | - | 682 |
| Other expenses | 397 | 1,726 |
| Total farm expenses | 740 | 4,260 |
| Water charge (@ 27.5c/m ³) | - | 842 |
| Depreciation | 83 | 407 |
| Annual farm surplus | 537 | 1,929 |

Indicative financing costs assuming investment 100% funded through bank loan

Finance costs represent interest payments if the conversion was funded entirely through a bank loan. However, taking out a loan for conversions will depend on individual farmer circumstances and farmers are advised to seek advice from their bank.

| | (\$/ha/year) | (\$/ha/year) |
|---|--------------|--------------|
| Less conversion financing costs (Interest @ 7%) | - | 844 |
| Annual farm surplus (post finance) | 537 | 1,085 |

Farm model assumptions

Dryland finishing farming systems are based on a 300 ha farm, modelled using FARMAX. The farming system is an unirrigated system comprising of lamb and beef finishing, rape-fed summer and winter. The farms are estimated to have 12 stock units/ha and 8.2 tonne/ha gross pasture production. The system also includes production of 25ha of feed barley (5 tonne/ha yield, \$380/tonne sale price).

Irrigated arable and process vegetables farming systems are based on a 300 ha farm, also modelled using FARMAX. The intensive farming system is 90% irrigated, and comprised of 270 ha of crop and process vegetable produce production on a five year rotation cycle, and 30 ha of dry lucerne. Produce grown includes wheat (10 tonne/ha, \$400/tonne), squash (15 tonne/ha, \$750/tonne), potatoes (65 tonne/ha, \$220/tonne), peas (8.5 tonne/ha, \$385/tonne), beans (16 tonne/ha, \$430/tonne), maize grain (12.5 tonne/ha, \$375/tonne), and ryegrass seed (2 tonne/ha, \$1,700 tonne). Ryegrass straw and lucerne balage is sold. The system also includes intensive lamb finishing, with irrigated pasture production of 13 tonne/ha gross.

Other assumptions include:

- Store lamb - \$2.70/kg • Lamb - \$6.00/kg • Wool - \$4.00/kg
- Water price of 27.5c per m³
- Annual irrigation requirement of 3,400 m³ per ha

Indicative irrigation conversion costs for farm intensification

| | (\$/ha) |
|------------------------------------|---------------|
| Conversion investment | |
| On farm irrigation | 4,564 |
| Dairy-specific costs | 360 |
| Associated costs | 495 |
| Plant and equipment | 1,834 |
| Working capital | 2,112 |
| Other costs (savings) | 2,694 |
| Total conversion investment | 12,059 |

Financial summary for investment in farm conversion

The financial summary details annual return on conversion investment, which will be equal to return on equity if the conversion investment is 100% equity funded.

| | (\$/ha) |
|---|------------|
| Conversion investment required | *12,059 |
| Annual increase in farm surplus | 1,393 |
| Annual return on conversion investment | 12% |

*Equivalent cost per ha for 300 ha farm with 270 ha of irrigation

Farm budgets based on information from Macfarlane Rural Business Limited (budget reference 3a and 5b)

Detailed budgets can found in appendices to 16-01-27 RWSS Farm Profitability Report FINAL v2, 27 January 2016, Macfarlane Rural Business. Available at www.hbrc.govt.nz



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