

Farming Financials

Indicative farm financial information for assessing returns in Hawke's Bay from conversion of part-irrigated mixed livestock and arable farms to irrigated arable and process vegetable farm system

Livestock & Arable Conversion to Irrigated Arable and Process Vegetables

Indicative annual farm budget for mixed livestock and arable and irrigated arable and finishing farms

	Part-irrigated livestock & arable (\$/ha/year)	Irrigated arable & process vegetables (\$/ha/year)
Income - stock		
Sheep sales	1,999	2,364
Cattle sales	911	-
Wool sales	107	61
Income - produce		
Barley	222	-
Feed wheat	-	720
Squash	-	1,013
Potatoes	-	1,287
Peas	225	589
Beans	-	1,238
Maize grain	-	844
Italian ryegrass	-	612
Miscellaneous	324	530
Total income	3,787	9,258
Less stock purchases:		
Sheep	1,205	1,820
Cattle	545	-
Total stock purchases	1,750	1,820
Gross farm income	2,037	7,438
Less farm expenses:		
Wages (incl. management)	425	506
Fertiliser and lime	250	707
Seeds and treatment	89	596
Weed and pest control	69	682
Other expenses	626	1,769
Total farm expenses	1,459	4,260
Water charge (@ 27.5c/m ³)	-	842
Depreciation	165	407
Annual farm surplus	413	1,929

Indicative financing costs assuming investment 100% funded through bank loan

The 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 recommended to seek advice from their bank.

	(\$/ha/year)	(\$/ha/year)
Less conversion financing costs (Interest @ 7%)	-	483
Annual farm surplus (post finance)	413	1,447

Farm model assumptions

Mixed livestock & arable farming systems are based on a 300 ha farm, modelled using FARMAX. The farming system is comprised of dryland lamb breeding, lamb and bull finishing, dairy cow wintering, and 50 ha of irrigated crops and pasture. Crops grown include spring barley (7 tonne/ha yield, \$380/tonne sale price) and peas (7 tonne/ha, \$385/tonne), and rape winter feed, on a 12 year rotation. Dryland pasture production is 8 tonne/ha gross, while irrigated pasture is 12.9 tonne/ha gross.

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.

Other assumptions include:

- Weaner bull - \$4.20/kg • Manufacturing beef - \$4.50/kg
- Store bull beef - \$2.00/kg • 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	3,490
Arable/finishing specific costs	86
Associated costs	347
Plant and equipment	1,482
Working capital	1,867
Other costs (savings)	(377)
Total conversion investment	6,894

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	*6,894
Annual increase in farm surplus	1,516
Annual return on conversion investment	22%

*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 5a 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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