



# VITICULTURE

## Key results from the Ministry for Primary Industries 2012 viticulture monitoring programme

### KEY POINTS

- Unfavourable weather in both Marlborough and Hawke's Bay resulted in a 20 percent drop in average yields in 2011/12 to 9.7 tonnes and 6.8 tonnes per hectare, respectively. Both regions experienced a cool December and heavy rainfall over flowering. Hawke's Bay also had several rain events over harvest leading to significant crop losses from *Botrytis* infections.
- In 2011/12, the price of Marlborough Sauvignon Blanc increased for the first time in four years to \$1315 per tonne. Other varieties in Marlborough had mixed results leading to the average grape price rising 4 percent to \$1410 per tonne. In contrast, Hawke's Bay growers experienced a drop in the average price paid per tonne of \$65 to \$1175. This was mainly due to difficulty meeting contract quality and ripeness requirements for red and some white varieties because of the cool summer and rain at harvest. Prices for Merlot and Cabernet varieties were impacted the most.
- Lower yields resulted in the Marlborough model recording a drop in pre-tax profit to \$96 900 or \$3230 per hectare. The Hawke's Bay model reported a before tax loss of \$39 300 or just under \$3150 per hectare. This model continued to rely heavily on off-vineyard income in the form of wages, other business and investments.
- Lack of a sustainable and consistent profit remains the leading issue for grape growers in Marlborough and Hawke's Bay. However, monitored growers who possess a desirable mix of grape varieties, a well-structured business model and a healthy equity position express strong optimism regarding the medium to long-term future of the New Zealand wine industry.
- The models in both regions are budgeting in 2012/13 on an appreciable rise in prices paid per tonne, as supply and demand come back into balance following a relatively small 2012 vintage. Hawke's Bay growers are hopeful that a return to benign weather patterns in 2013 will also underpin more favourable prices.

Table 1: Key parameters, financial results and budgets for the vineyard models

Year ended 30 June	2008/09	2009/10	2010/11	2011/12	2012/13 budget
<b>Marlborough model</b>					
Planted area (ha)	31.0	31.0	30.0	30.0	30.0
Producing area (ha)	29.0	30.0	30.0	30.0	30.0
Total production <sup>1</sup> (t)	296	285	363	290	341
Average return (\$/t)	1 797	1 465	1 350	1 410	1 500
Net cash income (\$)	531 485	417 680	489 700	409 200	511 000
Vineyard working expenses (\$)	293 015	257 550	230 200	229 400	233 900
Vineyard profit before tax (\$)	108 070	55 730	167 300	96 900	200 900
Vineyard surplus for reinvestment <sup>2</sup> (\$)	76 370	31 230	117 800	55 900	122 900
<b>Hawke's Bay model</b>					
Planted area (ha)	10.0	12.5	12.5	12.5	12.5
Producing area (ha)	9.6	12.5	12.5	12.5	12.5
Total production (t)	89	94	106	85	108
Average return (\$/t)	1 565	1 350	1 240	1 175	1 455
Net cash income (\$)	139 400	126 135	131 700	99 200	156 500
Vineyard working expenses (\$)	90 800	104 045	99 825	92 700	97 400
Vineyard profit before tax (\$)	3 600	-33 885	-20 475	-39 300	16 050
Vineyard surplus for reinvestment <sup>2</sup> (\$)	-21 400	-59 885	-48 975	-71 800	-19 150

#### Notes

The vineyard models are based on an owner-operator business structure and representative of contract grape growers. Figures may not add to totals due to rounding.

1 Grapes are harvested in the autumn, so the 2011/12 year refers to fruit harvested in autumn 2012.

2 Vineyard surplus for reinvestment is the cash available from the vineyard business, after meeting living costs, which is available for investment on the vineyard or for principal repayments. It is calculated as the vineyard profit after tax plus depreciation less drawings/living expenses.

## FINANCIAL PERFORMANCE OF THE MARLBOROUGH VINEYARD MODEL IN 2011/12

The Marlborough vineyard model reported a vineyard profit before tax of \$96 900 in 2011/12, down 42 percent on the \$167 300 achieved in the previous year. This diminished profit is due primarily to an average drop in yield of 20 percent across all varieties.

The size of the Marlborough vineyard model remains at 30 hectares planted. The variety mix in the model is unchanged from 2010/11 and consists of 75 percent planted area in Sauvignon Blanc with the residual area comprising Pinot Noir, Chardonnay, Riesling and Pinot Gris.

### REVENUE DOWN DUE TO SIGNIFICANT DROP IN YIELDS ACROSS ALL VARIETIES

Net cash income for the Marlborough model in 2011/12 was \$409 200 or \$13 640 per hectare, down 16 percent on the previous year. This decrease in revenue was due mainly to a 20 percent fall in average yield per hectare including a 16 percent drop in yield for the predominant variety, Sauvignon Blanc.

The decrease in yield was only slightly mitigated by a lift of \$60 in the average grape price per tonne.

#### Unfavourable climate a big factor in 2012 vintage

The 2011/12 season was characterised by cooler than average conditions all season, with higher than average rainfall at the beginning and over flowering.

Spring growing degree days were lower than average and significantly lower than in the previous year.

This led to bud break being 7 to 14 days late. This late start and continued cool and wet conditions in December led to a delay in flowering. This, in turn, adversely affected fruit set resulting in a reduced number of berries per bunch.

Earlier-flowering vineyards on the central Wairau Plains were less affected by cool temperatures and generally had better yields.

Weather conditions from January to March 2012 did not improve much, with atypical low sunshine hours and growing degree days. However, a drier and slightly warmer April allowed late-maturing blocks to reach good ripeness.

Most blocks were harvested by the time frosts came towards the end of April and beginning of May. Frosts brought a rapid close to the season for the few remaining blocks. The low yields and favourable

April meant wineries were happy with the excellent quality of fruit they received.

#### 2012 yields plummet 20 percent

The Marlborough vineyard model experienced a 20 percent decrease in yield, reporting 290.1 tonnes from 30 producing hectares. This equates to an average yield of 9.7 tonnes per hectare, compared with 12.1 tonnes in the previous year.

Most growers laid down three canes at pruning to meet winery-imposed yield caps for 2011/12, following penalties for exceeding yield caps in 2010/11. On some varieties growers followed this up with pre-flowering shoot thinning in an attempt to further control yields. This would have reduced potential flower numbers, hence exacerbating the poor fruit set further.

On the vineyard model, Sauvignon Blanc yielded 10.8 tonnes per hectare on average, down 16 percent on the previous year. On the monitored vineyards, yields for Sauvignon Blanc ranged from 6 to 14 tonnes per hectare.

Chardonnay and Pinot Noir flower earlier and are more likely to be shoot thinned than Sauvignon Blanc and, consequently, were more severely impacted by the cool December. Within the survey group, Chardonnay-Mendoza and Clone 15, and Pinot Noir yields were down 43 percent, while a drop of 30 percent was reported for other clones of Chardonnay, compared with the previous season.

#### Excellent quality vintage, despite the unfavourable start to the season

Both growers and winemakers are viewing the 2012 vintage as excellent and superior to the previous year. This is mainly due to the lower yields and a cool dry harvest period that allowed fruit to achieve optimum flavour and ripeness.

#### Average grape price rises for the first time in four years

The average price per tonne in 2011/12 increased \$60 (4 percent) to \$1410, in line with monitored growers' forecasts from the previous year. This was largely due to the smaller crop. The Sauvignon Blanc price for the model increased \$125 (11 percent) to \$1315 per tonne in 2011/12. This is a welcome change from a downward trend in price since 2007/08 when this variety commanded \$2435 per tonne.

The Pinot Noir price decreased \$145 (5 percent) to \$2735 per tonne in 2011/12.

The prices paid per tonne for Pinot Gris, Riesling, and Chardonnay–Mendoza and Clone 15 remained relatively constant within the survey group. Other clones of Chardonnay increased \$190 to \$1595 per tonne, reflecting more favourable prices negotiated through a change in winery contract.

## GROWERS ACHIEVE SUCCESS REINING IN VINEYARD EXPENSES

The Marlborough model recorded vineyard working expenses at \$7647 per hectare in 2011/12, similar to the previous year but down significantly (24 percent) on 2008/09. This action of holding vineyard working expenses at or close to \$7600 per hectare reflects ongoing efforts by growers to manage expenses in line with reduced income from grapes.

Labour-related expenses declined 7 percent, primarily due to laying less cane at pruning and reduced crop management. By late January 2012, most growers had completed crop estimates indicating reduced yields, in particular for Sauvignon Blanc. In response to stronger demand from their wineries, growers undertook minimal crop thinning. Crop thinning occurred mainly on those blocks where premium quality fruit was targeted, such as Pinot Noir.

Many growers undertook canopy management, primarily shoot trimming on most varieties, and some shoot thinning and leaf plucking, especially of Pinot Noir.

Other working expenses remained similar to that of 2010/11 at \$2740 per hectare. Some savings were made by reducing fertiliser application (20 percent) and deferring repairs and maintenance (10 percent).

The model shows a steady reduction in fertiliser expenditure since 2008/09; from \$419 to just \$110 per hectare in 2011/12. Lower fertiliser inputs will reduce yields. Some industry commentators are concerned about the impact of ongoing reduced fertiliser inputs on vine health and grape quality.

Expenditure on weed and pest control was up for a second year in a row, by 11 percent to \$853 per hectare. This was due to higher than average rainfall in October and again over the critical flowering period in mid- to late-December requiring an increase in the application of fungicides for disease control.

Frost protection expenditure was down 42 percent because of relatively benign spring conditions.

Levy and subscription charges were down 12 percent due to the smaller crop in 2011/12, leading to a reduction in levy payments to New Zealand Winegrowers.

**Table 2: Marlborough weather data**

Month	Rainfall (mm)			Growing degree days <sup>1</sup> (GDD)		
	2010/11	2011/12	Long-term average	2010/11	2011/12	Long-term average
June	155	62	65	7	19	17
July	58	41	66	2	5	8
August	83	53	59	25	18	15
September	93	34	55	72	23	50
October	24	85	62	78	96	97
November	27	50	57	165	145	136
December	132	104	49	253	185	207
January	40	26	46	249	234	249
February	12	38	51	240	202	219
March	31	59	42	192	154	184
April	68	35	42	84	106	104
May	120	29	52	92	24	51
<b>Total</b>	<b>842</b>	<b>614</b>	<b>644</b>	<b>1 459</b>	<b>1 211</b>	<b>1 338</b>

**Note**

<sup>1</sup> GDD – growing degree days. GDDs are a temperature index, calculated by taking the average of the daily high and low temperatures each day compared with a baseline (usually 10 degrees centigrade). They help to predict the date that a flower will bloom or a crop reach maturity.

**Source**

NIWA (Blenheim).

## SMALLER CROP DELIVERS A LESS FAVOURABLE RESULT

The vineyard model's cash operating surplus in 2011/12 was \$179 800 or \$5993 per hectare, down 31 percent on the previous year. This is due mainly to the significant drop in grape yields for all varieties. The increase in price for some varieties was not sufficient to offset the lower yields.

A wide spectrum of contract grape growing businesses is included in the monitored group. Some have no debt, while others have debt servicing expenses ranging from \$4000 to \$11 000 per hectare. Interest payments for the model are around \$1400 per hectare.

Vineyard profit before tax was \$96 900 or \$3230 per hectare, down 42 percent on the profit achieved in the previous year. The model reflects the average outcome of the survey group with half reporting a profit and half a loss before tax in 2011/12.

No new development in the form of planting new

vineyards or significant replanting is recorded in the model in 2011/12. Capital purchases averaged \$10 000 overall. Capital items purchased by growers included a new tractor, a post rammer and a vehicle.

The model continues to reflect growers' efforts to reduce debt where possible with principal repayments of \$40 000 made in 2011/12. Overall liabilities at year end dropped to \$610 000, maintaining a high equity level of 87 percent.

The perception of monitored growers is that vineyard values remained relatively constant in 2011/12. The land value for the model remains at \$150 000 per planted hectare. There have been more vineyard sales in 2011/12 compared with the previous year with values ranging from \$50 000 to over \$200 000 per planted hectare; most fell within the band of \$120 000 to \$150 000 per planted hectare. Growers considered many of the sales in 2011/12 to be pressured and therefore did not accurately reflect their own vineyard value.

## BUDGET FINANCIAL PERFORMANCE OF THE MARLBOROUGH VINEYARD MODEL IN 2012/13

The vineyard model's profit before tax in 2012/13 is budgeted to reach \$200 900 or just under \$6700 per hectare. Should this outcome be realised, it would be the highest profit level achieved for the model since 2007/08.

### REVENUE EXPECTED TO TREND UPWARDS GIVEN CORRECTION IN GRAPE SUPPLY

In 2012/13, the model's net cash income is expected to be \$511 000, compared with \$409 200 in 2011/12. This reflects budgeted yields increasing 18 percent; the average price per tonne to improve by 6 percent; and only a small increase (2 percent) in vineyard working expenses. Monitored growers are expecting to negotiate price increases with wineries for the 2013 vintage, given historic wine surpluses are more or less cleared and the reduced vintage of 2012.

### Yields budgeted to bounce back but not to full potential

The Marlborough vineyard model is budgeting on an 18 percent increase in yield in 2012/13, equivalent to 340.1 tonnes from 30 producing hectares. This equates to an average yield of 11.4 tonnes per hectare, compared with

9.7 tonnes per hectare in 2011/12. These expectations are based on targeting close to agreed winery yield caps and being able to harvest all harvestable fruit in 2012/13.

Marlborough grape growers are not budgeting on vines carrying the volume of fruit that they did for the 2011 vintage, and are allowing for some impact from the cool temperatures of December 2011 on bud initiation for the 2013 crop. If temperatures in December 2012 are average or below average, fruit set will also be affected, resulting in yields significantly below the long-term average. The model is budgeting on yields reaching the long-term average in 2012/13.

The model is budgeting on Sauvignon Blanc achieving 12.5 tonnes per hectare in 2012/13, up 16 percent on 2011/12 but down on the high yields achieved in 2008 and 2010 harvests. The model expects that growers of Sauvignon Blanc will lay down three canes and reduce the amount of shoot thinning to achieve the predicted yields. Several monitored growers, typically those with low yields in 2012 or producing some of their own wine, are planning to lay an additional cane in Sauvignon Blanc.

### Growers conservatively budget on a small increase in price

The Marlborough vineyard model is budgeting in 2012/13 on a conservative \$90 (6 percent) increase in the average price to \$1500 per tonne, with price increases predicted across all varieties. Growers perceive national volumes of all varieties, particularly Sauvignon Blanc, to be more in line with demand or moderately short of demand. Growers are expecting a shortage of Sauvignon Blanc grapes in 2012/13 leading to wineries competing more for fruit.

Several monitored growers have contracts expiring in 2012/13 and are confident they will be able to renew them on more favourable terms, including negotiating higher prices. A moderate increase of \$70 (5 percent) to \$1385 per tonne is budgeted in the price of Sauvignon Blanc in 2012/13, reflecting the views of monitored growers in May 2012. However, at the Marlborough viticulture monitoring industry meeting in mid-June 2012, participants reported wineries actively advertising for 2012/13 fruit. This suggests prices for Sauvignon Blanc grapes in 2012/13 could well exceed the model's expectations.

### FRUGAL APPROACH TO EXPENDITURE EXPECTED TO CONTINUE

The vineyard model is budgeting on vineyard working expenses increasing 2 percent to just

under \$7800 per hectare in 2012/13. Most of the budgeted increase is for additional inputs of electricity, fertiliser, fuel and repairs and maintenance.

Growers see little scope for further savings in labour expenses. Pruning expenses are significantly lower than in recent years with the use of cane stripping machines and laying down less cane. Most growers are not looking to increase the number of canes in 2012/13.

Fertiliser applications and expenditure on repairs and maintenance are budgeted to increase as growers reactivate deferred expenditure. Expectations of higher electricity expenses are based on higher prices and increased irrigation in line with normal rainfall.

### NET RESULT LOOKING GOOD

The vineyard profit before tax for the model is expected to reach \$200 900 in 2012/13, more than double that of 2011/12. This budgeted profit reflects lower interest payments helped by ongoing principal repayments and historically low interest rates.

No expenditure on capital items or vineyard redevelopment is planned in 2012/13. Many growers are in a holding pattern, following the reduced financial outcome from 2011/12.





Table 3: Marlborough vineyard model grape prices

Year ended 30 June	2008/09 (\$/t)	2009/10 (\$/t)	2010/11 (\$/t)	2011/12 (\$/t)	2012/13 budget (\$/t)
Sauvignon Blanc	1 687	1 345	1 190	1 315	1 385
Pinot Noir – table	3 178	3 150	2 880	2 735	2 850
Chardonnay – Mendoza and clone 15	1 807	1 805	1 735	1 650	1 690
Chardonnay – all other clones	1 672	1 440	1 405	1 595	1 680
Riesling	1 663	1 635	1 460	1 510	1 535
Pinot Gris	2 155	1 640	1 725	1 700	1 765
<b>Weighted average</b>	<b>1 797</b>	<b>1 465</b>	<b>1 350</b>	<b>1 410</b>	<b>1 500</b>

Figure 1: Marlborough vineyard model profitability trends

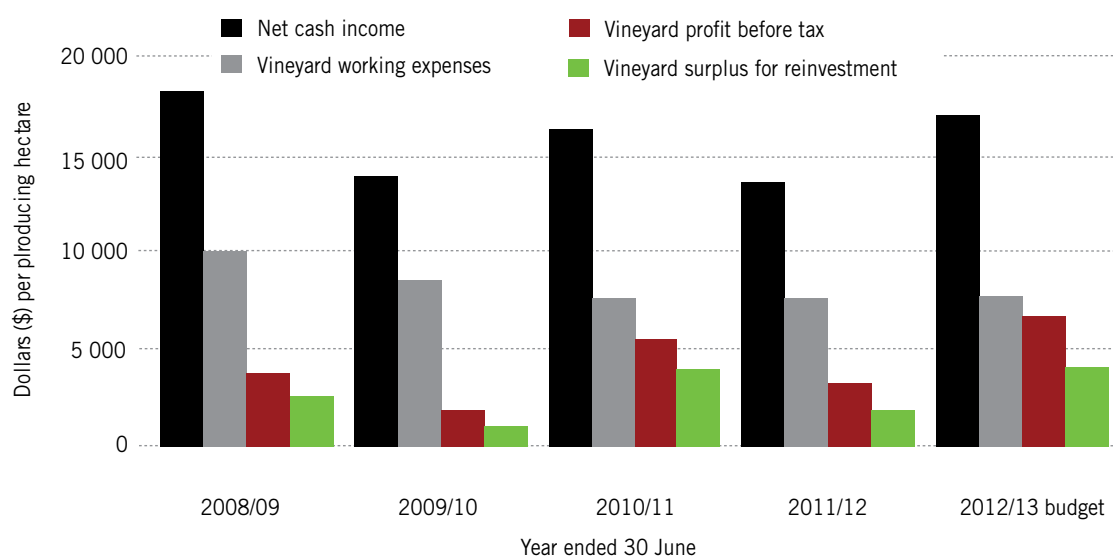


Table 4: Marlborough vineyard model production and income details for 2011/12

Year ended 30 June	Area (ha)	Production per hectare (t/ha)	Total production (t)	Gross yield (%)	Brix level (Brix)	Return (\$/t)	Revenue (\$)
<b>Grape variety</b>							
Sauvignon Blanc	22.5	10.8	243.0	84	21.9	1 315	319 500
Pinot Noir – table	3.0	4.3	12.9	4	23.4	2 735	35 300
Chardonnay – Mendoza and Clone 15	1.5	6.2	9.3	3	23.7	1 650	15 400
Chardonnay – All other clones	1.0	9.9	9.9	3	21.1	1 595	15 800
Riesling	1.5	7.6	11.4	4	21.4	1 510	17 200
Pinot Gris	0.5	7.1	3.6	1	23.2	1 700	6 000
<b>Total/average</b>	<b>30.0</b>	<b>9.7</b>	<b>290.1</b>	<b>100</b>		<b>1 410</b>	<b>409 200</b>

**Note**

Figures may not add to totals due to rounding.

Table 5: Marlborough vineyard model budget production and income details for 2012/13

Year ended 30 June	Area (ha)	Production per hectare (t/ha)	Total production (t)	Gross yield (%)	Brix level (Brix)	Return (\$/t)	Revenue (\$)
<b>Grape variety</b>							
Sauvignon Blanc	22.5	12.5	281.3	82	22.0	1 385	389 500
Pinot Noir – table	3.0	6.4	19.2	6	23.5	2 850	54 700
Chardonnay – Mendoza and Clone 15	1.5	7.3	11.0	3	23.0	1 690	18 500
Chardonnay – All other clones	1.0	11.4	11.4	3	21.5	1 680	19 200
Riesling	1.5	9.2	13.8	4	21.5	1 535	21 200
Pinot Gris	0.5	9.0	4.5	1	23.0	1 765	7 900
<b>Total/average</b>	<b>30.0</b>	<b>11.4</b>	<b>341.1</b>	<b>100</b>		<b>1 500</b>	<b>511 000</b>

**Note**

Figures may not add to totals due to rounding.

Table 6: Marlborough vineyard model budget

	2010/11	2011/12				2012/13 budget			
	Whole vineyard (\$)	Whole vineyard (\$)	Per producing ha (\$)	Per tonne gross (\$)	Per vine (\$)	Whole vineyard (\$)	Per producing ha (\$)	Per tonne gross (\$)	Per vine (\$)
<b>Revenue</b>									
Income from grapes	489 700	409 200	13 640	1 410	6.75	511 000	17 033	1 500	8.39
Other vineyard income	0	0	0	0	0.00	0	0	0	0.00
<b>Net cash income</b>	<b>489 700</b>	<b>409 200</b>	<b>13 640</b>	<b>1 410</b>	<b>6.75</b>	<b>511 000</b>	<b>17 033</b>	<b>1 500</b>	<b>8.39</b>
<b>Vineyard working expenses</b>	<b>230 200</b>	<b>229 400</b>	<b>7 647</b>	<b>790</b>	<b>3.79</b>	<b>233 900</b>	<b>7 797</b>	<b>686</b>	<b>3.84</b>
<b>Cash operating surplus</b>	<b>259 500</b>	<b>179 800</b>	<b>5 993</b>	<b>620</b>	<b>2.97</b>	<b>277 100</b>	<b>9 237</b>	<b>814</b>	<b>4.55</b>
Interest	45 000	43 000	1 433	148	0.71	40 000	1 333	117	0.66
Rent and/or leases	7 500	7 500	250	26	0.12	7 500	250	22	0.12
Depreciation	41 000	35 000	1 167	121	0.58	31 000	1 033	91	0.51
Net non-fruit cash income	1 300	2 600	87	9	0.04	2 300	77	7	0.04
<b>Vineyard profit before tax</b>	<b>167 300</b>	<b>96 900</b>	<b>3 230</b>	<b>334</b>	<b>1.60</b>	<b>200 900</b>	<b>6 697</b>	<b>591</b>	<b>3.30</b>
Tax	37 000	16 000	533	55	0.26	49 000	1 633	144	0.80
<b>Vineyard profit after tax</b>	<b>130 300</b>	<b>80 900</b>	<b>2 697</b>	<b>279</b>	<b>1.34</b>	<b>151 900</b>	<b>5 063</b>	<b>447</b>	<b>2.49</b>
<b>Allocation of funds</b>									
Add back depreciation	41 000	35 000	1 167	121	0.58	31 000	1 033	91	0.51
Drawings/living expenses	53 500	60 000	2 000	207	0.99	60 000	2 000	176	0.99
<b>Vineyard surplus for reinvestment<sup>1</sup></b>	<b>117 800</b>	<b>55 900</b>	<b>1 863</b>	<b>193</b>	<b>0.92</b>	<b>122 900</b>	<b>4 097</b>	<b>362</b>	<b>2.02</b>
<b>Reinvestment</b>									
Net capital purchases	1 500	10 000	333	34	0.17	0	0	0	0.00
Development	1 000	0	0	0	0.00	0	0	0	0.00
Principal repayments	20 000	40 000	1 333	138	0.66	20 000	667	59	0.33
<b>Vineyard cash surplus/deficit</b>	<b>95 300</b>	<b>5 900</b>	<b>197</b>	<b>20</b>	<b>0.10</b>	<b>102 900</b>	<b>3 430</b>	<b>303</b>	<b>1.69</b>
<b>Other cash sources</b>									
Off-vineyard cash income	25 000	25 000	833	86	0.41	25 000	833	73	0.41
New borrowings	0	0	0	0	0.00	0	0	0	0.00
Introduced funds	0	0	0	0	0.00	0	0	0	0.00
<b>Net cash position</b>	<b>120 300</b>	<b>30 900</b>	<b>1 030</b>	<b>107</b>	<b>0.51</b>	<b>127 900</b>	<b>4 263</b>	<b>376</b>	<b>2.10</b>
<b>Assets and liabilities</b>									
Land and building (opening) <sup>2</sup>	4 500 000	4 500 000	150 000	15 515	74.28	4 500 000	150 000	13 193	73.90
Plant and machinery (opening)	155 000	135 000	4 500	465	2.23	125 000	4 167	366	2.05
Vineyard related investments (opening)	0	0	0	0	0.00	0	0	0	0.00
<b>Total vineyard assets (opening)</b>	<b>4 655 000</b>	<b>4 635 000</b>	<b>154 500</b>	<b>15 980</b>	<b>76.50</b>	<b>4 625 000</b>	<b>154 167</b>	<b>13 559</b>	<b>75.96</b>
Total vineyard liabilities (opening)	670 000	650 000	21 667	2 241	10.73	610 000	20 333	1 788	10.02
<b>Total vineyard equity</b>	<b>3 985 000</b>	<b>3 985 000</b>	<b>132 833</b>	<b>13 739</b>	<b>65.78</b>	<b>4 015 000</b>	<b>133 833</b>	<b>11 771</b>	<b>65.94</b>

**Notes**

Figures may not add to totals due to rounding.

1 Vineyard surplus for reinvestment is the cash available from the vineyard business, after meeting living costs, which is available for investment on the vineyard or for principal repayments. It is calculated as the vineyard profit after tax plus depreciation less drawings/living expenses.

2 Land and building asset value includes the value of owned land, vines and supports, other improvements, vineyard buildings and dwellings on the property.



Table 7: Marlborough vineyard model expenditure

	2010/11	2011/12				2012/13 budget			
	Whole vineyard (\$)	Whole vineyard (\$)	Per producing ha (\$)	Per tonne gross (\$)	Per vine (\$)	Whole vineyard (\$)	Per producing ha (\$)	Per tonne gross (\$)	Per vine (\$)
<b>Vineyard working expenses</b>									
Hand harvesting	2 100	1 300	43	4	0.02	1 300	43	4	0.02
Pruning (and tying down)	59 800	59 800	1 993	206	0.99	60 600	2 020	178	1.00
Canopy/crop management	27 200	20 800	693	72	0.34	20 800	693	61	0.34
Other wages	31 800	30 500	1 017	105	0.50	30 500	1 017	89	0.50
ACC – employees	1 300	1 300	43	4	0.02	1 400	47	4	0.02
<b>Total labour expenses</b>	<b>122 200</b>	<b>113 700</b>	<b>3 790</b>	<b>392</b>	<b>1.88</b>	<b>114 600</b>	<b>3 820</b>	<b>336</b>	<b>1.88</b>
Weed and pest control	23 100	25 600	853	88	0.42	25 200	840	74	0.41
Fertiliser and lime	4 100	3 300	110	11	0.05	5 200	173	15	0.09
Electricity	3 200	3 200	107	11	0.05	3 500	117	10	0.06
Vehicle	3 900	4 500	150	16	0.07	4 500	150	13	0.07
Fuel	8 700	8 100	270	28	0.13	8 600	287	25	0.14
Repairs and maintenance	9 400	8 500	283	29	0.14	8 800	293	26	0.14
General	4 300	4 400	147	15	0.07	4 500	150	13	0.07
Frost protection	1 200	700	23	2	0.01	2 500	83	7	0.04
Contract machinery work	5 600	6 200	207	21	0.10	6 200	207	18	0.10
Machine harvesting	16 700	17 700	590	61	0.29	18 000	600	53	0.30
<b>Total other working expenses</b>	<b>80 200</b>	<b>82 200</b>	<b>2 740</b>	<b>283</b>	<b>1.36</b>	<b>87 000</b>	<b>2 900</b>	<b>255</b>	<b>1.43</b>
Rates	9 500	9 700	323	33	0.16	9 900	330	29	0.16
Water and related charges	1 400	1 500	50	5	0.02	1 500	50	4	0.02
General insurance	3 600	3 700	123	13	0.06	3 800	127	11	0.06
Crop insurance	0	0	0	0	0.00	0	0	0	0.00
ACC – owners	1 300	7 000	233	24	0.12	4 500	150	13	0.07
Communication	2 000	2 100	70	7	0.03	2 200	73	6	0.04
Accountancy	2 900	3 000	100	10	0.05	3 100	103	9	0.05
Legal and consultancy	1 200	1 200	40	4	0.02	1 500	50	4	0.02
Levies and subscriptions	4 200	3 700	123	13	0.06	4 400	147	13	0.07
Other administration	1 700	1 600	53	6	0.03	1 400	47	4	0.02
<b>Total overhead expenses</b>	<b>27 800</b>	<b>33 500</b>	<b>1 117</b>	<b>115</b>	<b>0.55</b>	<b>32 300</b>	<b>1 077</b>	<b>95</b>	<b>0.53</b>
<b>Total vineyard working expenses</b>	<b>230 200</b>	<b>229 400</b>	<b>7 647</b>	<b>791</b>	<b>3.79</b>	<b>233 900</b>	<b>7 797</b>	<b>686</b>	<b>3.84</b>

**Calculated ratios**

Economic vineyard surplus (EVS) <sup>1</sup>	143 500	69 800	2 327	241	1.15	171 100	5 703	502	2.81
Vineyard working expenditure/NCI <sup>2</sup>	47%	56%				46%			
EVS/total vineyard assets	3.1%	1.5%				3.7%			
EVS less interest and lease/equity	2.3%	0.5%				3.1%			
Interest+rent+lease/NCI	10.7%	12.3%				9.3%			
EVS/NCI	29.3%	17.1%				33.5%			
Wages of management	75 000	75 000	2 500	259	1.24	75 000	2 500	259	1.24

**Notes**

Figures may not add to totals due to rounding.

1 EVS is calculated as follows: net cash income less vineyard 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 vineyard assets to a maximum of \$75 000.

2 Net cash income.

## FINANCIAL PERFORMANCE OF THE HAWKE'S BAY VINEYARD MODEL IN 2011/12

The Hawke's Bay vineyard model achieved a net trading loss before tax of \$39 300 in 2011/12, the worst financial outcome since the start of viticulture monitoring in 2004/05. This result reflects significantly lower yields due to adverse weather and lower prices paid for some grape varieties.

The size of the Hawke's Bay vineyard model remains at 12.5 hectares planted. The variety mix in the model is unchanged and consists of 60 percent white and 40 percent red grape varieties.

### LOWER YIELDS AND PRICES REDUCE REVENUE

Net cash income for the Hawke's Bay model in 2011/12 was \$99 200 or \$7936 per hectare, down 25 percent compared with the previous year. This was due to significantly lower yields arising from unfavourable weather conditions throughout much of the growing season and at harvest, and lower prices paid for red grape varieties as a result of not meeting ripeness requirements.

#### La Nina weather pattern impacted on 2011/12 season

Initial predictions were for a neutral weather pattern but another La Nina developed early in the 2011/12 growing season. This meant prevailing north-east winds brought significant rain events, unsettled weather patterns and humid and cool conditions.

The 2011/12 season began with no frost events over the majority of the region. Below-average temperatures in August and September delayed bud burst by nearly two weeks. Rainfall in December was twice the monthly average and occurred during flowering of most varieties. Early flowering varieties avoided the rain. Below-average temperatures in December and January impacted fruit set.

Frequent rain events in early to mid-January led to high disease pressure. This meant growers had to undertake extra leaf plucking and apply more fungicide sprays. Outbreaks of powdery and downy mildew occurred in some blocks. Frequent rain events in February and the lack of sunny weather delayed veraison for most varieties by up to two weeks.

Cold weather and two significant rain events in late March and early April had a major impact on harvest. Harvest was frantic over this period, with

damp conditions and no advance in ripening. Rain fell when the berries were at their most vulnerable, resulting in crop losses from *Botrytis* infections.

Mid-season varieties, such as Merlot, were the main casualty. Some blocks were selectively picked, with "green" and diseased fruit thinned out pre-harvest.

Harvest decisions were made around rain events. Mid-season varieties were harvested at lower brix to ensure good fruit condition. In mid-April, the weather pattern settled and the region experienced an "Indian summer". Growing degree days picked up to a little above average. Late red varieties, such as Syrah, were able to be left longer on the vine to allow extended ripening. Most of the region's crop had been harvested by late April.

#### Reduced yield

Grape production for the vineyard model in 2011/12 dropped to 6.8 tonnes per hectare, a decrease of 20 percent or 1.7 tonnes per hectare.

Cool wet conditions at flowering were responsible for the 8 percent drop in yield to 6.0 tonnes per hectare for Chardonnay clones. Yields of Pinot Noir sparkling were down by 30 percent compared with last season, impacted by cool weather at budburst. Production of Pinot Gris was also significantly impacted by unfavourable conditions at flowering and fruit set, with yields dropping 33 percent to 6.0 tonnes per hectare. Growers reported bunch stem necrosis, aborted berries and small berries.

Merlot yields were well below expectation at 7.2 tonnes per hectare. The main cause was Botrytis rot due to rain at harvest. Sauvignon Blanc yields were also affected by Botrytis rot, as well as poor fruit set. Yields were 30 percent lower than the previous year at 7.3 tonnes per hectare.

Syrah yields were also below expectation, at 5.0 tonnes per hectare. The lack of adequate growing degree days, which slowed down ripening, meant "green" fruit had to be dropped pre-harvest, on top of already low crops due to poor fruit set.

Despite the challenging weather conditions at harvest, winemakers are positive about the 2012 Hawke's Bay vintage. Early varieties escaped disease infection, and the flavour profiles are reported as excellent. Lower alcohol wines will result from fruit picked at lower brix. All fruit that was harvested was in good condition.

### Grape prices

Grape prices were budgeted to remain similar or increase slightly between 2010/11 and 2011/12, provided quality parameters and brix levels could be met. The outcome was similar prices paid for white grape varieties but lower prices for red grape varieties. The weighted average price for the model fell from \$1240 to \$1175 per tonne, a drop of 5 percent.

The reduction in price for red grape varieties was a result of the following:

- Rain events around harvest time led to mid-season grape varieties being harvested early to ensure good condition, despite brix targets not being met. As a consequence, growers received lower prices due to contract quality and ripeness requirements. Varieties most impacted were Merlot, Cabernet Sauvignon and Cabernet Franc; and
- A cooler than average growing season slowed down ripening leading to lower brix levels at harvest. The variety most impacted was Syrah.

### EXPENDITURE REINED IN FURTHER

Growers have responded to lower grape income by cutting back on wages, judicious use of inputs and deferring expenditure. Seasonal factors also helped with the reduction in vineyard working expenses in 2011/12, dropping 7 percent to \$7416 per hectare.

Total labour expenses decreased 16 percent to \$2622 per hectare, with reductions in expenditure on hand harvesting, pruning and tying down, and other wages. Several factors contributed to the reduction in pruning and tying down expenses including:

- growers employing casual pruners directly rather than using contractors;
- increased use of pre-pruners or vine strippers; and
- growers and family members undertaking more of the pruning work themselves.

The absence of any significant frost events during the 2011/12 season kept expenditure on frost protection at a similar level to 2010/11. A decrease of 40 percent to \$84 per hectare for electricity expenditure reflected the wet season and little need for irrigation.

Continued efforts by growers to constrain expenditure meant a decrease of 3 percent to \$900 per producing hectare on weed and pest control. This is despite an increase in the number of fungicide applications because of the wet season. Savings were made by reduced herbicide use and purchase of cheaper sprays.

Most growers are using sheep for leaf plucking, which has an added advantage of weed and sward control. Some growers are using mechanised under-vine weeder. Growers in general are becoming less concerned about the aesthetics of their vineyards.

Expenditure on fertiliser increased 45 percent in 2011/12, to \$180 per hectare, as growers sought to make up for deferred inputs over the previous two seasons. Growers are becoming increasingly interested in improving soil health as a means of managing vine health and grape quality.

Contract machinery expenses increased 7 percent, to \$320 per hectare, due to the increased use of mechanical pre-pruners and vine stripping machines to reduce labour costs for pruning.

Overhead expenses increased slightly in 2011/12 largely due to unit cost increases and despite a reduction in levies as a result of lower production. Water-related charges are recorded for the first time at \$350 for the model. This includes items such as an audit of installed water meters and expenses incurred in monitoring and reporting water use.

Many grape growers in the region will likely face water consent renewal expenses in 2013 or thereafter with the Tukituki River and Heretaunga Zone catchments being ear-marked for plan and policy changes in the regional council's Long Term Plan 2012-22.

### NET RESULT DETERIORATES

The Hawke's Bay vineyard model achieved a cash operating surplus of \$6500 in 2011/12, only a fifth of that achieved in the previous year. This surplus is inadequate to cover debt servicing expenses for the business or living expenses.

The model's debt level has increased by \$10 000, or 2 percent, to fund losses as a result of lower income in 2011/12. Typically, this is via overdraft or drawdown of revolving credit facilities.

No new development work or significant capital purchases were undertaken in 2011/12. Small areas of diseased or poorly performing vines are being gradually replaced; expenditure on this is included under repairs and maintenance.

There is an ongoing reliance on income from off-vineyard wages, other businesses and investments, to cover interest payments, pay off debt and cover living expenses.

## BUDGET FINANCIAL PERFORMANCE OF THE HAWKE'S BAY VINEYARD MODEL IN 2012/13

The lower national vintage in 2012 is making growers optimistic that grape prices will improve in 2012/13. Monitored growers hope that, if prices improve somewhat, with a return to average yields and quality targets being achieved, most businesses with a supply contract will make a small profit in 2012/13. The Hawke's Bay vineyard model reflects this position and is expected to achieve a profit before tax of around \$16 000 in 2012/13.

### REVENUE EXPECTED TO INCREASE IN 2012/13

Net cash income for the model is budgeted to increase to \$156 500, or \$12 520 per hectare, in 2012/13, up 58 percent on the previous year. Grape yields are expected to return to average levels, depending on winery yield caps. An average yield of 8.6 tonnes per producing hectare is budgeted for the vineyard model, allowing for some impact from the cool temperatures of December 2011 on bud initiation for the 2013 vintage.

There is much uncertainty surrounding price expectations for the year ahead. Most growers believe prices will lift \$280 per tonne on average due to quality parameters and brix levels being met and an increase in demand for some varieties.

Prices for Merlot and other red varieties are budgeted to return to levels of recent years as a direct result of increased quality in a good growing season. Increasing demand for Syrah is also helping to lift price expectations for this variety.

Sauvignon Blanc and Chardonnay prices are budgeted to increase 18 percent and 30 percent to \$1200 and \$1750 per tonne respectively, as a result of meeting quality parameters and increased demand for both varieties.

### TIGHT CONTROL ON EXPENDITURE MAINTAINED

Vineyard working expenses for the Hawke's Bay model in 2012/13 are expected to increase 5 percent to \$7792 per hectare. While growers intend to manage inputs as efficiently as possible, they are budgeting for a return to average seasonal conditions and some necessary expenditure on repairs and maintenance. Frost protection expenditure is budgeted to increase to more typical levels of \$160 per hectare because last season was relatively frost-free.

Growers and their families intend to keep working on the vineyard and some have set up systems for sharing machinery and performing vineyard tasks for each other to help limit expenditure.

Overhead expenses are generally expected to increase in line with inflation, with levy expenses budgeted to increase significantly due to the anticipated lift in income from grapes.

### CONTINUED RELIANCE ON OFF-VINEYARD INCOME

In 2012/13, the cash operating surplus of the Hawke's Bay vineyard model is expected to increase to around \$60 000. This surplus should at least provide for debt servicing expenses and likely a reduction in overdraft. No capital or development expenditure is planned.

Three consecutive years of unfavourable climatic conditions, coinciding with a downturn in grape prices, have left the profitability of the Hawke's Bay vineyard model severely challenged. Off-vineyard income and investments are essential to meet most living expenses.

There have been few vineyard sales in the Hawke's Bay region in 2011/12 apart from a small number of distressed sales. In the absence of market data, the land and buildings value of the vineyard model remained stable at \$1.5 million, or \$120 000 per hectare, as at 1 July 2012. The Hawke's Bay vineyard model represents a predominantly mature and established vineyard with a lifestyle component.

Table 8: Hawke's Bay weather data

Month	Rainfall (mm)			Growing degree days <sup>1</sup> (GDD)		
	2010/11	2011/12	Long-term average	2010/11	2011/12	Long-term average
June	120	55	76	23	28	20
July	88	84	145	7	16	14
August	76	47	39	38	7	20
September	59	32	31	89	14	47
October	79	69	46	76	97	102
November	14	33	26	138	137	146
December	54	91	44	260	178	216
January	194	97	33	262	228	250
February	8	45	25	267	194	227
March	105	129	49	194	164	197
April	159	87	82	98	124	118
May	66	63	49	94	40	54
<b>Total</b>	<b>1 022</b>	<b>832</b>	<b>645</b>	<b>1 547</b>	<b>1 227</b>	<b>1 411</b>

**Note**

1 GDD – growing degree days. GDDs are a temperature index, calculated by taking the average of the daily high and low temperatures each day compared with a baseline (usually 10 degrees centigrade). They help to predict the date that a flower will bloom or a crop reach maturity.

**Sources**

MetService (Hastings) for rainfall data.

NIWA (Whakatu) for Growing Degree Day data.

Table 9: Hawke's Bay vineyard model grape prices

Year ended 30 June	2008/09 (\$/t)	2009/10 (\$/t)	2010/11 (\$/t)	2011/12 (\$/t)	2012/13 budget (\$/t)
Sauvignon Blanc	1 475	1 060	950	1 020	1 200
Chardonnay – Mendoza, Clone 15 and Clone 95 <sup>1</sup>	1 550	1 400	1 350	1 350	1 750
Pinot Gris	1 700	1 350	1 250	1 300	1 350
Pinot Noir – sparkling	910	500	500	500	500
Merlot	1 800	1 780	1 600	1 275	1 750
Other red	2 000	2 000	1 900	1 375	2 000
Syrah	2 000	2 000	2 000	1 770	2 250
<b>Weighted average</b>	<b>1 565</b>	<b>1 350</b>	<b>1 240</b>	<b>1 175</b>	<b>1 455</b>

**Note**

1 Chardonnay Clone 95 included from 2009/10 onwards.

Figure 2: Hawke's Bay viticulture model profitability trends

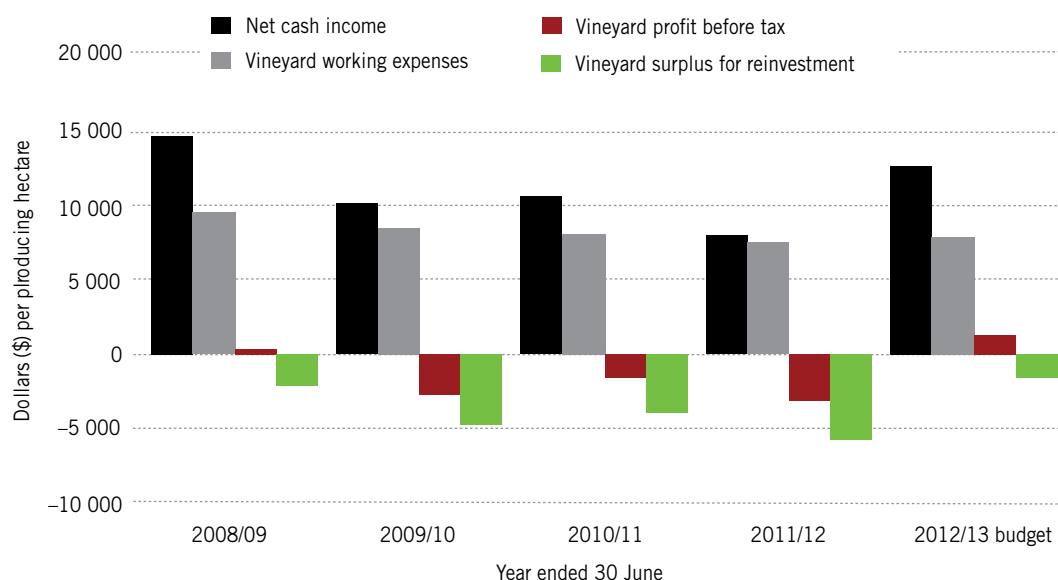


Table 10: Hawke's Bay vineyard model budget

	2010/11	2011/12				2012/13 budget			
	Whole vineyard (\$)	Whole vineyard (\$)	Per producing ha (\$)	Per tonne gross (\$)	Per vine (\$)	Whole vineyard (\$)	Per producing ha (\$)	Per tonne gross (\$)	Per vine (\$)
<b>Revenue</b>									
Income from grapes	131 700	99 200	7 936	1 173	3.38	156 500	12 520	1 455	5.33
Other vineyard income	0	0	0	0	0.00	0	0	0	0.00
<b>Net cash income</b>	<b>131 700</b>	<b>99 200</b>	<b>7 936</b>	<b>1 173</b>	<b>3.38</b>	<b>156 500</b>	<b>12 520</b>	<b>1 455</b>	<b>5.33</b>
<b>Vineyard working expenses</b>	<b>99 825</b>	<b>92 700</b>	<b>7 416</b>	<b>1 096</b>	<b>3.16</b>	<b>97 400</b>	<b>7 792</b>	<b>906</b>	<b>3.32</b>
<b>Cash operating surplus</b>	<b>31 875</b>	<b>6 500</b>	<b>520</b>	<b>77</b>	<b>0.22</b>	<b>59 100</b>	<b>4 728</b>	<b>550</b>	<b>2.01</b>
Interest	30 850	30 300	2 424	358	1.03	30 250	2 420	281	1.03
Rent and/or leases	0	0	0	0	0.00	0	0	0	0.00
Depreciation	23 500	17 500	1 400	207	0.60	14 800	1 184	138	0.50
Net non-fruit cash income	2 000	2 000	160	24	0.07	2 000	160	19	0.07
<b>Vineyard profit before tax</b>	<b>-20 475</b>	<b>-39 300</b>	<b>-3 144</b>	<b>-465</b>	<b>-1.34</b>	<b>16 050</b>	<b>1 284</b>	<b>149</b>	<b>0.55</b>
Tax	0	0	0	0	0.00	0	0	0	0.00
<b>Vineyard profit after tax</b>	<b>-20 475</b>	<b>-39 300</b>	<b>-3 144</b>	<b>-465</b>	<b>-1.34</b>	<b>16 050</b>	<b>1 284</b>	<b>149</b>	<b>0.55</b>
<b>Allocation of funds</b>									
Add back depreciation	23 500	17 500	1 400	207	0.60	14 800	1 184	138	0.50
Drawings/living expenses	52 000	50 000	4 000	591	1.70	50 000	4 000	465	1.70
<b>Vineyard surplus for reinvestment<sup>1</sup></b>	<b>-48 975</b>	<b>-71 800</b>	<b>-5 744</b>	<b>-849</b>	<b>-2.44</b>	<b>-19 150</b>	<b>-1 532</b>	<b>-178</b>	<b>-0.65</b>
<b>Reinvestment</b>									
Net capital purchases	7 500	1 500	120	18	0.05	0	0	0	0.00
Development	0	0	0	0	0.00	0	0	0	0.00
Principal repayments	0	0	0	0	0.00	0	0	0	0.00
<b>Vineyard cash surplus/deficit</b>	<b>-56 475</b>	<b>-73 300</b>	<b>-5 864</b>	<b>-867</b>	<b>-2.50</b>	<b>-19 150</b>	<b>-1 532</b>	<b>-178</b>	<b>-0.65</b>
<b>Other cash sources</b>									
Off-vineyard cash income	56 250	56 250	4 500	665	1.91	56 250	4 500	523	1.91
New borrowings	0	0	0	0	0.00	0	0	0	0.00
Introduced funds	10 000	10 000	800	118	0.34	0	0	0	0.00
<b>Net cash position</b>	<b>9 775</b>	<b>-7 050</b>	<b>-564</b>	<b>-83</b>	<b>-0.24</b>	<b>37 100</b>	<b>2 968</b>	<b>345</b>	<b>1.26</b>
<b>Assets and Liabilities</b>									
Land and building (opening) <sup>2</sup>	1 500 000	1 500 000	120 000	17 736	51.06	1 500 000	120 000	13 947	51.06
Plant and machinery (opening)	125 000	110 000	8 800	1 301	3.74	95 000	7 600	883	3.23
Vineyard related investments (opening)	0	0	0	0	0.00	0	0	0	0.00
<b>Total vineyard assets (opening)</b>	<b>1 625 000</b>	<b>1 610 000</b>	<b>128 800</b>	<b>19 036</b>	<b>54.81</b>	<b>1 595 000</b>	<b>127 600</b>	<b>14 830</b>	<b>54.30</b>
Total vineyard liabilities (opening)	440 000	440 000	35 200	5 202	14.98	450 000	36 000	4 184	15.32
<b>Total vineyard equity</b>	<b>1 185 000</b>	<b>1 170 000</b>	<b>93 600</b>	<b>13 834</b>	<b>39.83</b>	<b>1 145 000</b>	<b>91 600</b>	<b>10 646</b>	<b>38.98</b>

**Notes**

Figures may not add to totals due to rounding.

1 Vineyard surplus for reinvestment is the cash available from the vineyard business, after meeting living costs, which is available for investment on the vineyard or for principal repayments. It is calculated as the vineyard profit after tax less drawings/living expenses.

2 Land and building asset value includes the value of owned land, vines and supports, other improvements, vineyard buildings and dwellings on the property.



Table 11: Hawke's Bay vineyard model expenditure

	2010/11	2011/12				2012/13 budget			
	Whole vineyard (\$)	Whole vineyard (\$)	Per producing ha (\$)	Per tonne gross (\$)	Per vine (\$)	Whole vineyard (\$)	Per producing ha (\$)	Per tonne gross (\$)	Per vine (\$)
<b>Vineyard working expenses</b>									
Hand harvesting	1 200	0	0	0	0.00	0	0	0	0.00
Pruning (and tying down)	18 125	15 000	1 200	177	0.51	15 000	1 200	139	0.51
Canopy/crop management	14 375	14 375	1 150	170	0.49	14 375	1 150	134	0.49
Other wages	5 000	3 000	240	35	0.10	3 000	240	28	0.10
ACC - employees	200	400	32	5	0.01	425	34	4	0.01
<b>Total labour expenses</b>	<b>38 900</b>	<b>32 775</b>	<b>2 622</b>	<b>388</b>	<b>1.12</b>	<b>32 800</b>	<b>2 624</b>	<b>305</b>	<b>1.12</b>
Weed and pest control	11 600	11 250	900	133	0.38	11 250	900	105	0.38
Fertiliser and lime	1 550	2 250	180	27	0.08	2 000	160	19	0.07
Electricity	1 750	1 050	84	12	0.04	2 300	184	21	0.08
Vehicle	2 750	2 750	220	33	0.09	2 850	228	26	0.10
Fuel	5 800	5 500	440	65	0.19	5 500	440	51	0.19
Repairs and maintenance	6 000	5 000	400	59	0.17	6 000	480	56	0.20
General	1 780	1 200	96	14	0.04	1 200	96	11	0.04
Frost protection	500	500	40	6	0.02	2 000	160	19	0.07
Contract machinery work	3 750	4 000	320	47	0.14	4 000	320	37	0.14
Machine harvesting	8 750	9 375	750	111	0.32	10 000	800	93	0.34
<b>Total other working expenses</b>	<b>44 230</b>	<b>42 875</b>	<b>3 430</b>	<b>507</b>	<b>1.46</b>	<b>47 100</b>	<b>3 768</b>	<b>438</b>	<b>1.60</b>
Rates	3 570	3 650	292	43	0.12	3 725	298	35	0.13
Water and related charges	0	350	28	4	0.00	350	28	3	0.00
General insurance	3 400	3 450	276	41	0.12	3 500	280	33	0.12
Crop insurance	0	0	0	0	0.00	0	0	0	0.00
ACC - owners	1 750	2 200	176	26	0.07	2 200	176	20	0.08
Communication	1 800	1 800	144	21	0.06	1 800	144	17	0.06
Accountancy	2 500	2 500	200	30	0.09	2 500	200	23	0.09
Legal and consultancy	950	1 000	80	12	0.03	900	72	8	0.03
Levies and subscriptions <sup>1</sup>	1 375	1 150	92	14	0.04	1 575	126	15	0.05
Other administration	1 350	950	76	11	0.03	950	76	9	0.03
<b>Total overhead expenses</b>	<b>16 695</b>	<b>17 050</b>	<b>1 364</b>	<b>202</b>	<b>0.58</b>	<b>17 500</b>	<b>1 400</b>	<b>163</b>	<b>0.60</b>
<b>Total vineyard working expenses</b>	<b>99 825</b>	<b>92 700</b>	<b>7 416</b>	<b>1 096</b>	<b>3.16</b>	<b>97 400</b>	<b>7 792</b>	<b>906</b>	<b>3.32</b>
<b>Calculated ratios</b>									
Economic vineyard surplus (EVS) <sup>2</sup>	-38 875	-58 100	-4 648	-687	-1.98	-2 650	-212	-25	-0.09
Vineyard working expenditure/NCI <sup>3</sup>	76%	93%				62%			
EVS/total vineyard assets	-2.4%	-3.6%				-0.2%			
EVS less interest and lease/equity	-5.9%	-7.6%				-2.9%			
Interest+rent+lease/NCI	23.4%	30.5%				19.3%			
EVS/NCI	-29.5%	-58.6%				-1.7%			
Wages of management	47 250	47 100				46 950			

**Notes**

Figures may not add to totals due to rounding.

<sup>1</sup> Levies and subscriptions expenses for 2010/11 were recalculated based on industry levy rates. Due to this revision, data for the 2010/11 year will not match the *Farm Monitoring Report 2011 - Horticulture Monitoring: Viticulture*.

<sup>2</sup> EVS is calculated as follows: net cash income less vineyard 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 vineyard assets to a maximum of \$75 000.

<sup>3</sup> Net cash income.

Table 12: Hawke's Bay vineyard model production and income details for 2011/12

Year ended 30 June	Area (ha)	Production per hectare (t/ha)	Total production (t)	Gross yield (%)	Brix level (Brix)	Return (\$/t)	Revenue (\$)
<b>Grape variety</b>							
Sauvignon Blanc	2.5	7.3	18.3	22	19.0	1 020	18 600
Chardonnay – Mendoza, Clone 15 and Clone 95 <sup>1</sup>	2.3	6.0	13.5	16	21.0	1 350	18 200
Pinot Gris	1.9	6.0	11.3	13	20.5	1 300	14 600
Pinot Noir – sparkling	0.9	11.4	10.0	12	18.5	500	5 000
Merlot	3.0	7.2	21.6	26	20.0	1 275	27 550
Other red	1.3	5.0	6.3	7	..	1 375	8 600
Syrah	0.8	5.0	3.8	4	21.5	1 770	6 650
<b>Total/average</b>	<b>12.5</b>	<b>6.8</b>	<b>84.6</b>	<b>100</b>		<b>1 175</b>	<b>99 200</b>

**Notes**

Figures may not add to totals due to rounding.

<sup>1</sup> Chardonnay Clone 95 included from 2009/10 onwards.

.. Not applicable.

Table 13: Hawke's Bay vineyard model budget production and income details 2012/13

Year ended 30 June	Area (ha)	Production per hectare (t/ha)	Total production (t)	Gross yield (%)	Brix level (Brix)	Return (\$/t)	Revenue (\$)
<b>Grape variety</b>							
Sauvignon Blanc	2.5	10.0	25.0	23	20.5	1 200	30 000
Chardonnay – Mendoza, Clone 15 and Clone 95 <sup>1</sup>	2.3	7.5	16.9	16	22.5	1 750	29 500
Pinot Gris	1.9	9.0	16.9	16	22.0	1 350	22 800
Pinot Noir – sparkling	0.9	14.0	12.4	12	18.5	500	6 200
Merlot	3.0	8.0	24.0	22	23.0	1 750	42 000
Other red	1.3	6.0	7.5	7	..	2 000	15 000
Syrah	0.8	6.5	4.9	5	23.0	2 250	11 000
<b>Total/average</b>	<b>12.5</b>	<b>8.6</b>	<b>107.6</b>	<b>100</b>		<b>1 455</b>	<b>156 500</b>

**Notes**

Figures may not add to totals due to rounding.

<sup>1</sup> Chardonnay Clone 95 included from 2009/10 onwards.

.. Not applicable.

## INDUSTRY ISSUES AND DEVELOPMENTS

### REBUILDING SUSTAINABLE PROFIT WILL TAKE TIME

Since 2008, growers have focused hard on constraining yields, mainly through crop management, to better balance supply with a softening in market demand. In that time, growers have removed much discretionary expenditure from standard vineyard practice. They seek a sustainable business return that will allow them to adequately reinvest back into the vineyard. This is especially needed to support a rolling maintenance plan to replace old, diseased and less marketable vines.

Unfavourable weather conditions dominated grower financial outcomes in 2011/12, with cool wet weather in December 2011 in both Hawke's Bay and Marlborough and rain at harvest in Hawke's Bay.

#### Marlborough

Marlborough grape growers expect a gradual return to a position of business strength. The smaller than expected vintage of 2012 meant a challenging season financially for many growers. Growers' cash flows are challenged as most of the small to medium sized wineries are paying for grapes in instalments, prompting some growers to change to supplying larger wineries.

Growers are finding banks and wineries generally supportive of their businesses, and most are positive about the medium to long-term future of their industry. Even those growers with relatively high debt levels are feeling positive about the long-term prospects for their business but are keen to reduce debt before interest rates rise again.

Several of the smaller monitored vineyards are assessing businesses viability. These vineyards tend to produce grapes at the higher end of the quality spectrum and do not believe prices received reflect their additional effort. Similar sentiments are being expressed by owners of smaller vineyards in Hawke's Bay.

Some growers are considering purchasing other existing vineyard areas to improve economies of scale.

Many of the monitored growers in Marlborough spoke of wanting to supply fruit for the premium rather than bulk end of the wine market. However, decisions on whether to grow for the premium or bulk market will be influenced by the liquidity of vineyard businesses, amongst other factors.

Local nurseries in Marlborough report an increasing level of enquiries from growers seeking to replace dead or old vines. Sauvignon Blanc and Pinot Noir are the main varieties involved with interest also in Chardonnay. It takes up to three years for rootstocks to be ready for grafting, and a further two years before vines begin to produce fruit.

#### Hawke's Bay

In Hawke's Bay, low vineyard profitability is still the leading issue for contract grape growers. Three consecutive years of unfavourable climatic conditions, coinciding with a downturn in grape prices, have left many grape growing businesses in a poor financial position. Many growers are feeling stressed and questioning why they are still in the industry. They are anxious about the potential impact of another year of poor growing conditions. Reduced inputs and deferred spending are also making growers uneasy and feeling they are increasing the risk to the crop and their business.

Growers are keen to see pricing set earlier in the season so they are better placed to plan their own production and cash flow. Quality parameters are to the fore with the challenging vintage of 2012. Some growers feel that quality parameters should be set on a block by block basis for each variety, not a vineyard basis, thus getting the best out of each vineyard.

Growers are looking at ways to improve business viability including consideration of the following options:

- seeking full-time paid employment elsewhere, while employing a vineyard management company to run the vineyard;
- leasing additional vineyards, or purchasing neighbouring vineyards at a suitable price, to gain economies of scale;
- replacing unprofitable grape varieties with other crops; and
- putting the vineyard on the market.

There is emerging optimism around potential market growth in Asian markets, particularly China, for Hawke's Bay red wines. The Hawke's Bay Winegrowers Association has set up a China Network Group to help local producers in this market.

## LOCKING IN NEW AND RESILIENT VINEYARD PRACTICES

Growers believe that cost savings achieved in recent years through modified vineyard practices are generally sustainable in the long term. Many examples are now evident of successful uptake of vineyard mechanisation including multi-tasking of machinery to reduce labour costs and the introduction of mechanised vine strippers at pruning time.

The industry is benefiting from a more stable labour force through ongoing use of the Recognised Seasonal Employer scheme. Smaller growers are tending to undertake more labour tasks themselves. Some growers have moved to directly employing casual staff for pruning and canopy management tasks such as tucking and shoot thinning. They have reduced costs this way by cutting out contractors' fees, plus they consider they are getting a better job done.

Fertiliser expenses and repairs and maintenance are being recognised as expenses that should not be deferred indefinitely. While less has been spent on these two items while income has been limited, most growers are looking to rectify this in the short term.

In Hawke's Bay, sheep are still the biggest cost saving in canopy management with less or no mowing needed, plus bud rubbing and leaf plucking taken care of.

Less experienced growers are learning what really needs to be done in the vineyard, particularly spraying according to weather events and not using unnecessary products. Some growers are finding that the cost of chemicals is coming down and that they can negotiate better prices with contractors.

## ENVIRONMENTAL AND NATURAL RESOURCE MANAGEMENT

Most growers are members of Sustainable Wine Growing and supportive of responsible natural resource use and management. They accept that New Zealand's reputation as a premium wine producer is fundamentally linked to its advanced sustainable vineyard systems and should provide a competitive advantage in the global market.

Organic production methods are being practised by a few growers. Larger growers are seeking accreditation for selected blocks. Growers are critically assessing the pros and cons of the Organic Focus Vineyard project, funded by New Zealand Winegrowers and the MPI Sustainable Farming Fund. The focus vineyard project has expanded to include vineyards converting to organic production in three wine regions, including Mission Estate in Hawke's Bay and Wither Hills in Marlborough. The project aims to compare and contrast the results of organic versus conventional growing regimes. Growers are keen to see both the environmental and economic benefits of converting to organics clearly spelt out.

Many growers are incorporating native or wetland plantings on their properties, which is as much for amenity reasons as increased biodiversity. Other practices being adopted include:

- multi-tasking of machinery;
- grazing of sheep in winter;
- reducing use of mowing and herbicides;
- increasing monitoring of irrigation application;
- using Agrecovery to recycle chemical containers;
- installing dams to lessen the need for summer water takes from the river.



## INFORMATION ABOUT THE MODELS

The two vineyard models represent the two predominant grape-growing regions in New Zealand of Marlborough and Hawke's Bay. These two regions accounted for 84 percent of the New Zealand grape vintage in 2012. The models are based primarily on owner-operated businesses where the main source of income is derived from grape growing. Smaller lifestyle properties and larger corporate businesses are excluded from the monitoring programme.

The aim of the model is to typify an average vineyard for the region. Budget figures are averaged from the contributing vineyards and adjusted to represent real vineyards. Income figures include income from grapes, off-vineyard income, new borrowing and other cash income. Expenditure figures allow for vineyard production costs, debt servicing, leasing, drawings, development, and capital purchases.

Financial data in the viticulture models relates to a year end of 30 June.

### MARLBOROUGH VINEYARD MODEL

The Marlborough model of 30 producing hectares draws on data from 18 vineyards located mostly in the Wairau Valley, while three are situated in the Awatere Valley. Sauvignon Blanc is the dominant grape variety in the model vineyard, representing 75 percent of the producing area, followed by Pinot Noir, Chardonnay, Riesling and Pinot Gris.

### HAWKE'S BAY VINEYARD MODEL

The Hawke's Bay model of 12.5 producing hectares is based on data from 15 vineyards that are spread across the Heretaunga Plains. Merlot is the dominant grape variety, representing 24 percent of the producing area, followed by Sauvignon Blanc and Chardonnay.

For further information on the models contact:

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