VITICULTURE

KEY RESULTS FROM MAF'S 2011 VINEYARD 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

- Viticulture industry participants in Marlborough and Hawke's Bay are concerned about the current lack of profitability. However, a number of growers expressed strong optimism on the long-term future of the New Zealand wine industry. Growers are carefully monitoring vineyard costs and, where possible, continue to innovate in the vineyard. They fully support efforts to better co-ordinate premium wine marketing and sales, especially into emerging markets like China, and expect industry consolidation to continue.
- In 2010/11, growers in Marlborough were very satisfied with a good quality vintage, despite higher yields due to the excellent dry harvest period. Hawke's Bay growers were more challenged with continuous rain events throughout the harvest period, leading to significant crop loss from *Botrytis* infections.
- The price of Marlborough Sauvignon Blanc in 2010/11 decreased to $1190 per tonne. The average yield of this variety increased to 12.8 tonnes per hectare, which boosted the net cash income for the Marlborough model by 17 percent on the previous year, to $489 700. Hawke's Bay growers experienced a 7 percent drop in average price to $1240, due in part to reduced demand for varieties such as Sauvignon Blanc but also as a result of not meeting ripeness requirements.
- In 2010/11, the Marlborough model profit before tax increased to just under $5600 per producing hectare, due to increased profitability from higher yields per hectare and continued efforts to drive down vineyard working expenses. The Hawke's Bay model experienced a loss before tax of just over $1600 per producing hectare and the model continued to rely heavily on off-vineyard income in the form of wages, other business and investments.
- Marlborough growers in 2011/12 are budgeting on a steady rise in prices paid per tonne as demand for Sauvignon Blanc grapes is expected to balance supply. Revenue is budgeted to improve on the Hawke's Bay model in the coming year though profitability is expected to remain challenging in the short-term.

TABLE 1: KEY PARAMETERS, FINANCIAL RESULTS AND BUDGETS FOR THE VINEYARD MODELS

YEAR ENDED 31 DECEMBER	2007/08	2008/09	2009/10	2010/11	2011/12 BUDGET
MARLBOROUGH MODEL[1]					
Planted area (ha)	29.0	31.0	31.0	30.0	30.0
Producing area (ha)	27.0	29.0	30.0	30.0	30.0
Total production[2] (t)	368	296	285	363	349
Average return ($/t)	2 445	1 797	1 465	1 350	1 415
Net cash income ($)	907 300	531 485	417 680	489 700	494 300
Vineyard working expenses ($)	288 600	293 015	257 550	230 200	235 400
Vineyard profit before tax ($)	404 200	108 070	55 730	167 300	171 700
Vineyard surplus for reinvestment[3] ($)	324 200	76 370	31 230	117 800	115 400
HAWKE'S BAY MODEL[4]					
Planted area (ha)	10.0	10.0	12.5	12.5	12.5
Producing area (ha)	9.6	9.6	12.5	12.5	12.5
Total production (t)	66	89	94	106	120
Average return ($/t)	1 750	1 565	1 350	1 240	1 320
Net cash income ($)	115 400	139 400	126 135	131 700	158 650
Vineyard working expenses ($)	90 700	90 800	104 045	99 450	104 500
Vineyard profit before tax ($)	–16 400	3 600	–33 885	–20 100	3 900
Vineyard surplus for reinvestment[3] ($)	–53 700	–21 400	–59 885	–48 600	–25 600

Notes
Figures may not add to totals due to rounding.
1 The composition of the Marlborough monitored grower group was revised in 2010/11. Caution should be taken when comparing data between 2009/10 and 2010/11.
2 Grapes are harvested in the autumn, so the 2010/11 year refers to fruit harvested in autumn 2011.
3 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. Drawings refer to living expenses. Figures may not match to previously published figures for vineyard surplus for reinvestment due to the revision in interpretation of drawings.
4 Model parameters for the Hawke's Bay vineyard model were revised in the 2010/11 year; the model size increased from 10 to 12.5 producing hectares. Figures for 2009/10 were adjusted for comparison purposes. Due to this revision, data for the 2009/10 year will not match the *Farm Monitoring Report 2010 - Horticulture Monitoring: Viticulture.*

FINANCIAL PERFORMANCE OF THE MARLBOROUGH VINEYARD MODEL IN 2010/11

The composition of the monitored grower group was revised in 2010/11 to better align with the variety mix and average vineyard size of the region.

The Marlborough vineyard model posted a vineyard profit before tax of $167 300 in 2010/11, well up on the $55 700 achieved in the previous year. Despite the average price per tonne decreasing, this improved outcome was the result of the volume of fruit harvested increasing significantly and growers' continued efforts to rein in vineyard working expenses.

REVENUE UP AS YIELDS CLIMB WHILE PRICE PER TONNE DECLINES MARGINALLY

Revenue for the Marlborough model in 2010/11 was $489 700 or just over $16 300 per hectare, which is 17 percent up on the previous year. This was due primarily to growers achieving maximum harvest volumes within their yield caps and experiencing only a minimal decline in the average price paid per tonne.

FAVOURABLE CLIMATE FOR 2011 VINTAGE

The 2010/11 season was characterised by a good growing season with a warm dry start, punctuated with timely rainfall events and a long dry harvest period. Late winter and early spring rainfall ensured soil moisture was not a limiting factor at the beginning of the season.

While annual rainfall was higher than the long-term average, this generally fell in a few events with long dry periods in between. Irrigation applied was around 20 percent less than the previous season.

Spring growing degree days (GDD) were higher than in 2009/10 and similar to long-term averages. The exception was the Awatere Valley, which experienced cooler than average spring temperatures in 2010/11.

Lower temperatures from mid-March extended the ripening period and led to greater flavour development as acid levels dropped at lower brix levels. Wineries were generally very happy with both the higher volume and excellent quality of the fruit they received.

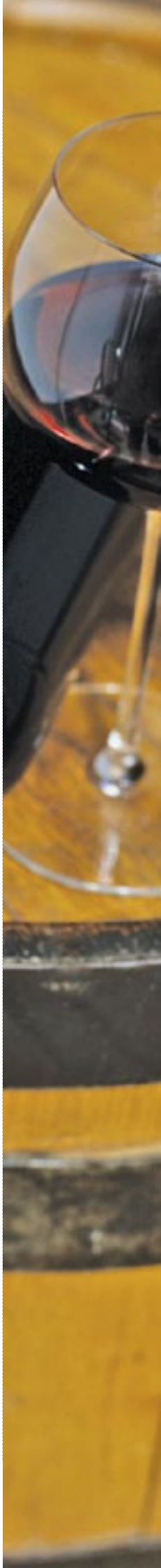
YIELDS RISE GIVEN BENIGN CLIMATE AND CHANGE IN BUSINESS MODELS

The Marlborough vineyard model experienced a 28 percent increase in yield, posting just over 360 tonnes from the 30 producing hectares. This equates to an average yield of 12.1 tonnes to the producing hectare.

At pruning time in 2010, wineries and industry representatives were still advising growers that a surplus of wine existed, despite a lower overall 2010 vintage. As a result the majority of growers chose to prune to a three-cane system, effectively laying down fewer fruiting buds. For most growers this is the second or third season of pruning to a three-cane system. As such, the yield increase experienced this year is likely due to a compensating effect in three-cane pruned vines and the higher rainfall during cell division leading to increased berry size.

Later in the season, it became apparent that yields greater than allowable yield caps may occur, but growers were not in a position to afford the significant hand thinning costs for Sauvignon Blanc. Some wineries indicated they might absorb some surplus but in many cases growers chose to leave excess fruit on the vine.

On the vineyard model, Sauvignon Blanc yielded 12.8 tonnes per hectare on average and on the monitored vineyards ranged from 9.0 to 20.0 tonnes per hectare. Of the 18 monitored growers, 15 had their production limited by their supply contract. Premium wine supply contracts limited yields to between 10.0 and 12.5 tonnes per hectare while those supplying grapes for the bulk wine market were loosely limited to yields of around 16.0 tonnes per hectare. Some growers in



the region produced bottled wine under their own label, which meant they effectively did not have a yield cap.

Within the monitored group, two-thirds of growers with limiting supply contracts did not harvest all of their producing area of Sauvignon Blanc because their yield at harvest exceeded their contracted volume. In a few instances, fruit over the yield cap was harvested by the winery but no payment will be made to the grower. Unharvested fruit represented approximately 7 percent of the total monitored Sauvignon Blanc producing area.

Varieties other than Sauvignon Blanc were also limited by similar yield caps but the majority of growers harvested their entire volume as they were below the variety-dependent yield cap.

GREAT QUALITY DESPITE THE HIGHER YIELDS

Growers and winemakers reported the 2011 vintage is likely to be very good. Despite the higher yields, the excellent cool, dry harvest period allowed fruit to achieve optimum flavour ripeness at lower sugar levels. Most winemakers believe this will lead to more intensely flavoured wines at lower than usual alcohol levels, although some winemakers are more cautious about the quality of the vintage, based on the increasing volume of potentially lower quality grapes harvested specifically for the bulk wine market.

GRAPE PRICES DECREASE ACROSS ALL MAIN VARIETIES

In 2009/10, monitored growers forecasted a 5 percent lift in the average price per tonne for 2011. In reality, the model experienced an 8 percent decline in the average price per tonne to $1350, as wineries sought to manage the challenge of selling surplus wine inventory into highly competitive markets. With this latest price decrease, the average grape price per tonne has now fallen $1095 or 45 percent since the 2008 vintage.

Within the monitored group all growers held a supply contract for the majority of their crop. One-fifth of growers chose to supply a portion of their crop to bulk wine companies at lower average prices but higher yield caps. For a few of these growers, essentially their entire crop went to bulk wine companies.

Sauvignon Blanc continued to be the variety most affected by surplus stocks in 2010/11, experiencing a 12 percent drop in price to $1190 per tonne. Pinot Noir prices decreased 9 percent to $2880 per tonne, due in large part to an increased crop volume in 2011. Despite this, growers still expect this variety to maintain prices and experience less price volatility in the long-term compared with Sauvignon Blanc. Pinot Gris and Chardonnay prices remained relatively steady while Riesling continued to decline in popularity

TABLE 2: MARLBOROUGH WEATHER DATA

	RAINFALL (MM)			GROWING DEGREE DAYS[1] (GDD)		
MONTH	2009/10	2010/11	LONG-TERM AVERAGE	2009/10	2010/11	LONG-TERM AVERAGE
June	52	155	65	6	7	17
July	51	58	66	6	2	8
August	82	83	59	41	25	15
September	50	93	55	44	72	50
October	115	24	62	54	78	97
November	32	27	57	146	165	136
December	20	132	49	222	253	207
January	41	40	46	262	249	249
February	6	12	51	224	240	219
March	33	31	42	206	192	184
April	7	68	42	146	84	104
May	167	120	52	53	92	51
Total	**796**	**842**	**644**	**1410**	**1459**	**1338**

Note
1 GDD – growing degree days. GDDs are 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).

and this was reflected in prices dropping 11 percent to $1460 per tonne.

GROWERS CONTINUE TO TAKE FRUGAL APPROACH TO EXPENDITURE

The Marlborough model recorded vineyard working expenses at $7673 per hectare in 2010/11, down 11 percent ($912) on the previous year. This was on top of significant savings achieved in the previous year as growers worked hard to limit expenditure in light of the tougher economic times. Expenditure was reduced in many areas of the vineyard but the greatest savings were from reduced labour expenses.

Labour expenditure declined 16 percent to $122 200 or $4073 per producing hectare, primarily through reduced pruning and crop management expenses. Following on from changes in the group of monitored growers this year, industry commentators noted expenditure on hand harvesting and canopy/crop management in 2010/11 decreased 20 percent and 25 percent respectively, which differs from monitored results. This impact of a change in monitored growers also applies to rates charges where most growers experienced a small rate increase to around $9500 in 2010/11.

Smaller growers achieved savings in labour related expenses by completing more work themselves and obtaining reduced rates from contractors. In contrast, the medium and larger scale growers took advantage of stripping machines used to mechanically remove the previous season's unwanted canes to reduce pruning labour expenses.

With the majority of growers choosing to lay three instead of four canes, growers were able to limit crop and canopy management to some shoot removal and small amounts of crop thinning. Some monitored growers who utilised machine stripping, three-cane pruning and negotiated reduced contractor rates, reported labour expense savings of 30 percent or more.

A number of other operating expenses decreased as growers reacted to the previous year's low returns. Fertiliser and lime expenses dropped as some growers elected not to apply any fertiliser at all. Growers are combining vineyard operations where practical and minimising more cosmetic operations such as mowing. As a result, vehicle costs declined significantly. Growers view repairs and maintenance as discretionary and deferred this work wherever possible.

Given yields at harvest exceeded contract volumes, 7 percent of the producing area remained unharvested. This meant that machine harvesting expenditure dropped 3 percent, as this item is charged per kilometre of row travelled.

Weed and pest control was one of the few expense items to increase. The previous year was a very low disease pressure year while this season some growers applied an extra flowering spray due to rainfall events. Fuel expenditure, despite efforts to achieve efficiencies in machinery use, increased as a result of rising fuel costs.

TABLE 3: MARLBOROUGH VINEYARD MODEL GRAPE PRICES

YEAR ENDED 30 JUNE	2007/08 ($/T)	2008/09 ($/T)	2009/10 ($/T)	2010/11 ($/T)	2011/12 BUDGET ($/T)
Sauvignon Blanc	2 435	1 687	1 345	1 190	1 270
Pinot Noir – table	3 277	3 178	3 150	2 880	2 945
Pinot Gris[1]	2 649	2 155	1 640	1 725	1 680
Chardonnay – Mendoza and clone 15	2 133	1 807	1 805	1 735	1 770
Chardonnay – all other clones	2 146	1 672	1 440	1 405	1 455
Riesling	1 830	1 663	1 635	1 460	1 445
Pinot Noir – sparkling	1 800	1 400	…	…	…
Weighted average	**2 445**	**1 797**	**1 465**	**1 350**	**1 415**

Note
1 Prior to 2008/09 Pinot Gris was included with Gewurztraminer in the Other White variety.

Symbol
.. Not applicable.

BETTER NET RESULT REFLECTS INCREASED YIELDS AND TIGHT EXPENSE MANAGEMENT

The vineyard's cash operating surplus in 2010/11 was $259 500 or $8650 per producing hectare, up 62 percent on the previous year. Both increased income from grapes and sustained efforts to drive down vineyard working expenditure achieved this result.

Vineyard profit before tax was $167 300 or just under $5600 per producing hectare. The monitored growers tend to have a better than average debt to equity position and consequently those Marlborough growers with a more challenging debt ratio would expect their higher interest payments to have a greater negative impact on profit.

Net non-fruit cash income was up, reflecting some income received from sheep grazing over winter. Some growers have investigated contract wine sales. This is a good example of contract grape growers, in difficult times, seeking to diversify their income stream by managing bottling and sales for some or all of their wine.

An increase in tax payments was due to the model's improved profit compared with the previous year's poor profitability.

Vineyard investment, development and capital purchases have trended downwards as growers defer all but essential expenditure. Notably, no grape vine removals occurred despite some growers previously indicating they planned to do this. There were some instances where growers completed grafting exercises. The model made principal repayments of $20 000.

In line with efforts to lower vineyard working expenses, owners have reined in personal expenditure with drawings including living expenses dropping from $60 500 to $53 500.

To help sustain the business, off-vineyard cash income remains a substantial contributor for the model at $25 000.

Growers assessed vineyard value of land and buildings to be $150 000 per planted hectare, an 18 percent drop in value on the previous year. There are few objective yardsticks currently available given there were not many vineyards sales in the past year and most of these were distressed sales at around $100 000 to $110 000 per planted hectare. Members of the industry panel felt the value that growers determined was likely not far off the mark. Willing sales over the next 12 months will better confirm this position.

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

In 2011/12 the model's net cash income is expected to remain similar to the previous year at $494 300. This expectation is based on an assumed 5 percent improvement in the budgeted average price per tonne, yields diminishing slightly and continued tight controls on working expenses. Similarly, the vineyard's profit before tax is expected to stabilise at $171 700 or just over $5700 per hectare.

REVENUE EXPECTED TO BE MAINTAINED AS HISTORIC WINE SURPLUSES CLEAR

Monitored growers are expecting some price improvements to be negotiated with wineries, given recent industry efforts to successfully clear historic surpluses of mainly Marlborough Sauvignon Blanc.

YIELDS EXPECTED TO SIT WITHIN WINERY AGREED YIELD CAPS

Monitored growers are budgeting for yields to fall within the yield caps negotiated with wineries and that they will harvest all of their fruit. The producing area of the model is expected to remain at 30 hectares with total production budgeted to reach almost 350 tonnes, or 11.6 tonnes per hectare. Where growers are bottling their own wine or where the bulk wine business model is applicable, average yields of 14–15 tonnes are budgeted.

Growers are budgeting yields for Sauvignon Blanc to average 12.4 tonnes per hectare in 2011/12. To achieve this they are predominately targeting three canes, although a small amount of two-cane Sauvignon Blanc will be grown within the monitored group. Whereas approximately 7 percent of the producing area remained

unharvested in the previous season, a negligible unharvested area is budgeted in 2011/12.

SOME IMPROVEMENT IN PRICE HOPED FOR AS SUPPLY ALIGNS BETTER WITH DEMAND

Given that much of the historic wine surplus for Marlborough Sauvignon Blanc has now cleared and new markets have developed, monitored growers expect the average price per tonne to increase 5 percent to $1415 per tonne.

Although several growers in the monitored group have supply contracts terminating in 2010/11 they are expecting a lift in their average price. A reason for this confidence is their expectation that should they not secure a new premium grape supply contract they would be able to supply a bulk wine contract for a similar return per hectare.

Growers are budgeting on the Sauvignon Blanc price to rise 7 percent to $1270 per tonne. This remains far shy of the average price achieved in the 2007/08 year of $2435. Prices per tonne for all other varieties carried in the model are not expected to deviate more than 5 percent from those achieved in 2010/11.

FRUGAL APPROACH TO EXPENDITURE EXPECTED TO CONTINUE

Growers in the monitored group are expecting vineyard working expenses to increase 2 percent to just under $7850 per hectare in 2011/12. The increase is budgeted for additional machine harvesting work, electricity, fertiliser and weed and pest control.

Monitored growers consider they have made all the labour savings they can. Growers with larger vineyards are able to take advantage of economies of scale and introduce machinery for tasks such as stripping machines. The model is budgeting on a significant drop in pruning expenses due to increased use of a stripping machine. Growers are now doing minimal hand harvesting and with pruning now the main crop management tool, canopy/crop management expenditure has reduced. Any excess fruit is expected to remain on the vine or be machine harvested to the ground. Wineries were generally accepting of this strategy last season, allowing growers to crop vines at 15 or 16 tonnes per hectare but only harvesting up to their yield cap.

Further reductions in repairs and maintenance expenditure are budgeted as growers continue to defer non-essential work.

The model vineyard is not planning any major vineyard development in 2011/12 reflecting the hiatus in vineyard development since 2008. Capital expenditure is also expected to be minimal as the model awaits a clear upswing in vineyard economics.

NET RESULT EXPECTED TO FIRM AS GROWERS ADJUST TO A TIGHTER ECONOMIC REALITY

The vineyard profit before tax for the model is expected to stabilise at $171 700 in 2011/12. This budgeted outcome comes after two challenging years weathered by growers since the unexpectedly large vintage of 2008. The model is now better placed to fine-tune crop load to match winery demand while also keeping a very close eye on vineyard working expenses.

The budgeted profit reflects lower interest payments as historically low interest rates take effect. Growers are also planning to reduce outstanding principal where possible with the model budgeting to make principal repayments of $22 000. Those growers in the region with higher dept levels and consequentially higher interest payments are more likely to record cash deficits in 2011/12.

Growers commented that they believed the industry was at the bottom of a cycle. They are anticipating little change in vineyard values. Consequently, the model has budgeted for vineyard opening values for land and buildings to remain the same as those in 2010/11 at $150 000 per hectare.

TABLE 4: MARLBOROUGH VINEYARD MODEL PRODUCTION AND INCOME DETAILS FOR 2010/11

YEAR ENDED 30 JUNE GRAPE VARIETY	AREA (HA)	PRODUCTION PER HA (T/HA)	TOTAL PRODUCTION (T)	GROSS YIELD (%)	BROX LEVEL (BRIX)	RETURN ($/T)	REVENUE ($)
Sauvignon Blanc	22.5	12.8	288.0	79	22.1	1 190	342 700
Pinot Noir – table	3.0	7.5	22.5	6	23.8	2 880	64 800
Pinot Gris	0.5	9.8	4.9	1	23.1	1 725	8 500
Chardonnay – Mendoza and Clone 15	1.5	10.8	16.2	4	22.8	1 735	28 100
Chardonnay – All other clones	1.0	14.1	14.1	4	22.6	1 405	19 800
Riesling	1.5	11.8	17.7	5	21.6	1 460	25 800
Total/average	**30.0**	**12.1**	**363**	**100**		**1 350**	**489 700**

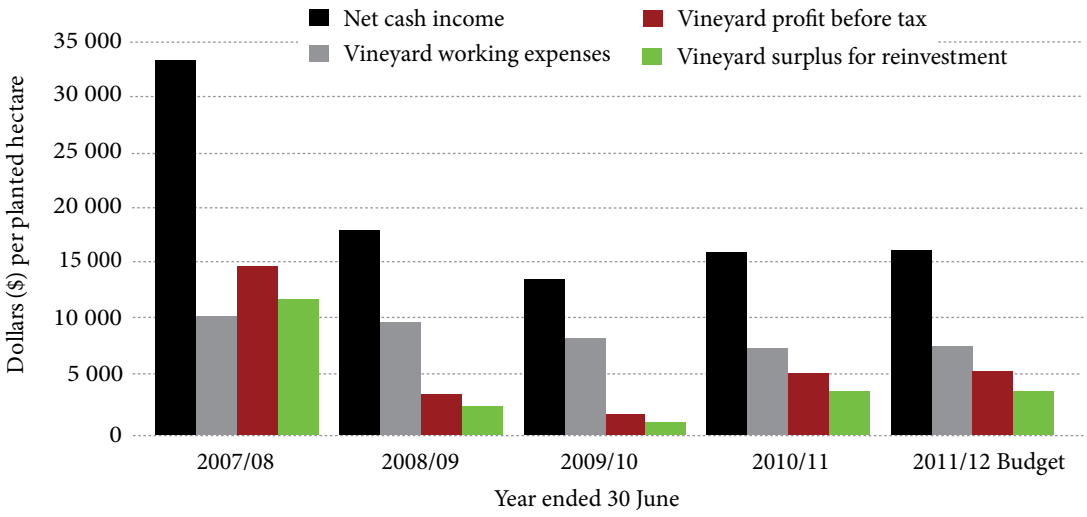
Note
Figures may not add to totals due to rounding.

TABLE 5: MARLBOROUGH VINEYARD MODEL BUDGET PRODUCTION AND INCOME DETAILS FOR 2011/12

YEAR ENDED 30 JUNE GRAPE VARIETY	AREA (HA)	PRODUCTION PER HA (T/HA)	TOTAL PRODUCTION (T)	GROSS YIELD (%)	BROX LEVEL (BRIX)	RETURN ($/T)	REVENUE ($)
Sauvignon Blanc	22.5	12.4	279.0	80	22.0	1 270	354 300
Pinot Noir – table	3.0	7.1	21.3	6	23.9	2 945	62 700
Pinot Gris	0.5	10.0	5.0	1	23.0	1 680	8 400
Chardonnay – Mendoza and Clone 15	1.5	10.6	15.9	5	23.0	1 770	28 100
Chardonnay – All other clones	1.0	11.6	11.6	3	22.5	1 455	16 900
Riesling	1.5	11.0	16.5	5	21.8	1 445	23 900
Total/average	**30.0**	**11.6**	**349.3**	**100**		**1 415**	**494 300**

Note
Figures may not add to totals due to rounding.

FIGURE 1: MARLBOROUGH VINEYARD MODEL PROFITABILITY TRENDS



Note
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.

TABLE 6: MARLBOROUGH VINEYARD MODEL BUDGET

	2009/10	2010/11				2011/12 BUDGET			
	WHOLE VINEYARD ($)	WHOLE VINEYARD ($)	PER PRODUCING HA ($)	PER TONNE GROSS ($)	PER VINE ($)	WHOLE VINEYARD ($)	PER PRODUCING HA ($)	PER TONNE GROSS ($)	PER VINE ($)
REVENUE									
Income from grapes	417 680	489 700	16 323	1 348	8.09	494 300	16 477	1 415	8.16
Other vineyard income	0	0	0	0	0.00	0	0	0	0.00
Net cash income	**417 680**	**489 700**	**16 323**	**1 348**	**8.09**	**494 300**	**16 477**	**1 415**	**8.16**
Vineyard working expenses	**257 550**	**230 200**	**7 673**	**633**	**3.80**	**235 400**	**7 847**	**674**	**3.89**
Cash operating surplus	**160 130**	**259 500**	**8 650**	**714**	**4.29**	**258 900**	**8 630**	**741**	**4.28**
Interest	48 900	45 000	1 500	124	0.74	44 000	1 467	126	0.73
Rent and/or leases	7 500	7 500	250	21	0.12	7 500	250	21	0.12
Depreciation	48 000	41 000	1 367	113	0.68	37 000	1 233	106	0.61
Net non-fruit cash income	0	1 300	43	4	0.02	1 300	43	4	0.02
Vineyard profit before tax	**55 730**	**167 300**	**5 577**	**460**	**2.76**	**171 700**	**5 723**	**492**	**2.84**
Tax	12 000	37 000	1 233	102	0.61	38 500	1 283	110	0.64
Vineyard profit after tax	**43 730**	**130 300**	**4 343**	**359**	**2.15**	**133 200**	**4 440**	**381**	**2.20**
ALLOCATION OF FUNDS									
Add back depreciation	48 000	41 000	1 367	113	0.68	37 000	1 233	106	0.61
Drawings/living expenses[1]	60 500	53 500	1 783	147	0.88	54 800	1 827	157	0.91
Vineyard surplus for reinvestment[2]	**31 230**	**117 800**	**3 927**	**324**	**1.95**	**115 400**	**3 847**	**330**	**1.91**
REVINVESTMENT									
Net capital purchases	13 000	1 500	50	4	0.02	1 500	50	4	0.02
Development	18 000	1 000	33	3	0.02	1 000	33	3	0.02
Principal repayments	0	20 000	667	55	0.33	22 000	733	63	0.36
Vineyard cash surplus/deficit	**230**	**95 300**	**3 177**	**262**	**1.57**	**90 900**	**3 030**	**260**	**1.50**
OTHER CASH SOURCES									
Off-vineyard cash income	25 500	25 000	833	69	0.41	25 000	833	72	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
Net cash position	**25 730**	**120 300**	**4 010**	**331**	**1.99**	**115 900**	**3 863**	**332**	**1.91**
ASSETS AND LIABILITIES									
Land and building (opening)[3]	5 490 000	4 500 000	150 000	12 383	74.31	4 500 000	150 000	12 883	74.33
Plant and machinery (opening)	170 000	155 000	5 167	427	2.56	134 000	4 467	384	2.21
Vineyard related investments (opening)	0	0	0	0	0.00	0	0	0	0.00
Total vineyard assets (opening)	**5 660 000**	**4 655 000**	**155 167**	**12 810**	**76.87**	**4 634 000**	**154 467**	**13 267**	**76.54**
Total vineyard liabilities (opening)	670 000	670 000	22 333	1 844	11.06	650 000	21 667	1 861	10.74
Total vineyard equity	**4 990 000**	**3 985 000**	**132 833**	**10 966**	**65.81**	**3 984 000**	**132 800**	**11 406**	**65.81**

Notes

Figures may not add to totals due to rounding.

1 Drawings refers to living expenses. Figures may not match with previous years due to the revision in interpretation of drawings

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.

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

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 vineyard. New and adjusted definitions include vineyard surplus for reinvestment, vineyard cash surplus/deficit and net cash position. Caution should be taken when comparing this year's data to previous years.

TABLE 7: MARLBOROUGH VINEYARD MODEL EXPENDITURE

	2009/10	2010/11				2011/12 BUDGET			
	WHOLE VINEYARD ($)	WHOLE VINEYARD ($)	PER PRODUCING HA ($)	PER TONNE GROSS ($)	PER VINE ($)	WHOLE VINEYARD ($)	PER PRODUCING HA ($)	PER TONNE GROSS ($)	PER VINE ($)
VINEYARD WORKING EXPENSES									
Hand harvesting[1]	4 920	2 100	70	6	0.03	1 300	43	4	0.02
Pruning (and tying down)	64 980	59 800	1 993	165	0.99	61 400	2 047	176	1.01
Canopy/crop management[1]	49 140	27 200	907	75	0.45	27 000	900	77	0.45
Other wages	24 900	31 800	1 060	88	0.53	32 400	1 080	93	0.54
ACC - employees	1 470	1 300	43	4	0.02	1 400	47	4	0.02
Total labour expenses	**145 410**	**122 200**	**4 073**	**336**	**2.02**	**123 500**	**4 117**	**354**	**2.04**
Weed and pest control	20 430	23 100	770	64	0.38	23 800	793	68	0.39
Fertiliser and lime	5 430	4 100	137	11	0.07	6 100	203	17	0.10
Electricity	3 630	3 200	107	9	0.05	3 500	117	10	0.06
Vehicle	5 040	3 900	130	11	0.06	4 000	133	11	0.07
Fuel	7 530	8 700	290	24	0.14	9 000	300	26	0.15
Repairs and maintenance	12 660	9 400	313	26	0.16	8 600	287	25	0.14
General	3 150	4 300	143	12	0.07	4 300	143	12	0.07
Frost protection	4 230	1 200	40	3	0.02	2 700	90	8	0.04
Contract machinery work	3 120	5 600	187	15	0.09	3 800	127	11	0.06
Machine harvesting	17 250	16 700	557	46	0.28	17 900	597	51	0.30
Total other working expenses	**82 470**	**80 200**	**2 673**	**221**	**1.32**	**83 700**	**2 790**	**240**	**1.38**
Rates[1]	11 580	9 500	317	26	0.16	9 800	327	28	0.16
Water rates	1 320	1 400	47	4	0.02	1 500	50	4	0.02
General insurance	3 060	3 600	120	10	0.06	3 800	127	11	0.06
Crop insurance	0	0	0	0	0.00	0	0	0	0.00
ACC owners	1 110	1 300	43	4	0.02	1 300	43	4	0.02
Communication	2 460	2 000	67	6	0.03	2 100	70	6	0.03
Accountancy	3 120	2 900	97	8	0.05	2 800	93	8	0.05
Legal and consultancy	1 140	1 200	40	3	0.02	800	27	2	0.01
Levies and subscriptions	3 840	4 200	140	12	0.07	4 500	150	13	0.07
Other administration	2 040	1 700	57	5	0.03	1 600	53	5	0.03
Total overhead expenses	**29 670**	**27 800**	**927**	**76**	**0.46**	**28 200**	**940**	**81**	**0.47**
Total vineyard working expenses	**257 550**	**230 200**	**7 673**	**633**	**3.80**	**235 400**	**7 847**	**674**	**3.89**
CALCULATED RATIOS									
Economic vineyard surplus (EVS)[2]	37 127	143 500	4 783	395	2.37	146 900	4 897	421	2.43
Vineyard working expenditure/NCI[3]	62%	47%				48%			
EVS/total vineyard assets	0.7%	3.1%				3.2%			
EVS less interest and lease/equity	–0.4%	2.3%				2.4%			
Interest+rent+lease/NCI	13.5%	10.7%				10.4%			
EVS/NCI	8.9%	29.3%				29.7%			
Wages of management	75 000	75 000	2 500	206	1.24	75 000	2 500	215	1.24

Notes

Figures may not add to totals due to rounding.

1 The composition of the Marlborough monitored grower group was revised in 2010/11. Caution should be taken when comparing these expenses between 2009/10 and 2010/11.

2 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.

3 Net cash income.

FINANCIAL PERFORMANCE OF THE HAWKE'S BAY VINEYARD MODEL IN 2010/11

The Hawke's Bay vineyard model achieved a net trading loss before tax of $20 100 in 2010/11. Although this was a negative financial result, this outcome was an improvement on the previous year. This result reflects an increased yield per hectare, but further reductions in prices paid for grapes per tonne. Changes in the variety mix have also influenced this outcome.

The size of the Hawke's Bay vineyard model increased to 12.5 planted hectares in 2010/11, reflecting the average vineyard size of commercial contract grape growers in the region.

The variety mix in the model consists of 60 percent white and 40 percent red grape varieties. Sauvignon Blanc is now the predominant white grape variety. The increased proportion of white grape varieties reflects significant new or replacement plantings of Sauvignon Blanc and Pinot Gris in the Hawke's Bay region between 2002 and 2008.

REVENUE UP SLIGHTLY ON THE PREVIOUS SEASON

Net cash income for the Hawke's Bay model in 2010/11 was $10 536 per hectare, up 4 percent compared with the previous year. This result comes from a combination of higher yields overall due to good weather conditions at flowering (despite some losses to *Botrytis* rot), some changes in variety mix, lower grape demand from wineries and lower prices paid for grapes.

LA NINA WEATHER PATTERN A CHALLENGE FOR THE 2010/11 SEASON

The presence of a strong La Nina weather pattern in the 2010/11 growing season meant prevailing north-east winds brought significant rain events and high temperatures.

The 2010/11 season began with no frost events over the majority of the region. Higher than average temperatures in September and good soil moisture levels ensured excellent conditions for bud burst. November and early December had settled conditions with low rainfall and average to above average growing degree days (GDD) providing excellent conditions for flowering (refer to Table 8 for monthly rainfall and GDD information).

La Nina was apparent throughout December and January with above average GDD and rainfall in January was more than three times the average level. One significant rain event in late January delivered up to 200mm in some parts of the region. The rain, coupled with high temperatures, meant disease pressure was very high and lead to outbreaks of powdery and downy mildew.

Very low rainfall in February combined with average GDD encouraged the onset of veraison, up to a week earlier than average.

Continuous rain events in late March and throughout April had a major impact on harvest. Vines responded by becoming more vigorous which slowed ripening. Rain fell when the berries were at their most vulnerable, resulting in significant crop losses from *Botrytis* infections. Merlot was the main casualty with some growers unable to harvest any fruit off this variety.

Harvest decisions were made around rain events. Mid-season varieties were harvested at lower brix to ensure good fruit condition. Most of the region's crop had been harvested by late April.

INCREASED YIELDS

Grape production on the vineyard model in 2010/11 increased to 8.5 tonnes per hectare, an increase of 13 percent or 1.0 tonnes per hectare. This increase shows a recovery from the previous season's poor fruit set caused by cold temperatures and rain events at flowering. Another factor is young blocks of Pinot Gris and Syrah reaching maturity and hence increasing production.

Yields for Chardonnay clones increased slightly on last season to 6.5 tonnes per hectare but were well below average yield levels. This yield outcome is due to a combination of:

- a shift away from the Mendoza Clone to Clones 15 and 95 which are lower yielding;
- parts of Hawke's Bay experiencing low fruit set in the Mendoza clone with very small berries and bunches. This effect is thought to be partly influenced by trials of mechanical leaf plucking at flowering; and
- losses due to *Botrytis* rot.

Merlot yields were well below expectation at 7.5 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, with yields 16 percent lower than the previous year at 10.5 tonnes per hectare.

Yield increases were recorded for Pinot Noir sparkling, Pinot Gris and Syrah, helped by good weather conditions at flowering and fruit set. The increased yields for Pinot Gris and Syrah can also be attributed to recently planted blocks reaching maturity.

Despite the challenging weather conditions at harvest, winemakers are positive about the 2011 Hawke's Bay vintage. Earlier harvested varieties escaped disease infection, and lower alcohol wines will result from fruit picked at lower brix. All harvested fruit was in good condition and of high quality.

FURTHER DROP IN GRAPE PRICES

Grape prices were budgeted to remain similar or increase slightly between 2009/10 and 2010/11; in reality, the prices for most grape varieties declined. The weighted average price for the model fell from $1350 to $1240 per tonne, a drop of 8 percent. Price reductions were the result of:

- reduced demand for some grape varieties such as Sauvignon Blanc given the more than adequate grape supply from the Marlborough region, and stocks remaining from the previous season; and
- rain events around harvest time leading to mid-season grape varieties being harvested early to ensure good condition, despite brix targets not being yet met. As a consequence, growers received lower prices due to contract quality and ripeness requirements. The varieties impacted the most were Merlot and other red varieties such as Cabernet Sauvignon and Cabernet Franc.

EXPENDITURE KEPT UNDER A TIGHT REIN

Growers have responded to lower grape income by cutting back on wages, reducing inputs and deferring expenditure. Seasonal factors also

TABLE 8: HAWKE'S BAY WEATHER DATA

	RAINFALL (MM)			GROWING DEGREE DAYS[1] (GDD)		
MONTH	2009/10	2010/11	LONG-TERM AVERAGE	2009/10	2010/11	LONG-TERM AVERAGE
June	143	125	69	11	23	20
July	86	96	103	5	7	14
August	49	83	56	40	38	20
September	88	51	52	43	89	47
October	118	83	51	56	76	102
November	15	12	49	138	138	146
December	77	26	45	187	260	216
January	147	165	45	224	262	250
February	24	9	54	238	267	227
March	13	111	64	205	194	197
April	24	178	66	113	98	118
May	198	52	61	70	94	54
Total	**981**	**992**	**716**	**1 329**	**1 547**	**1 411**

Note
1 GDD – growing degree days. GDDs are 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 (Whakatu).

helped reduce vineyard working expenses in 2010/11, dropping 4 percent to $7956 per producing hectare.

Total labour expenses increased slightly. Expenditure on canopy management increased by 13 percent to $1150 per producing hectare as growers undertook extra leaf plucking to control strong vegetative growth resulting from the La Nina weather pattern. Hand harvesting expenses doubled because of the need to remove rot-affected berries prior to harvest.

Significant savings were made on non-labour working expenses. The absence of any significant frost events during the 2010/11 season resulted in a saving of $120 per producing hectare (75 percent) on frost protection expenditure. Electricity was the next largest expenditure reduction reflecting the wet season and very little irrigation being required.

Reduced herbicide use was the main reason for the drop of 13 percent in expenditure on weed and pest control to $928 per producing hectare. The majority of growers are using sheep for leaf plucking, which has an added weed control advantage, reducing weed sprays to two passes per season. Some growers are using a mechanised under-vine weeder. Growers in general are becoming less concerned about the aesthetics of their vineyards.

Machine harvesting costs decreased 7 percent to $700 per producing hectare. This was due to some vineyard blocks being skim-picked by hand which is reflected in the increased hand harvesting expenditure.

Overhead expenses increased 6 percent to $1306 per producing hectare largely due to unit cost increases.

PROFITABILITY LEVELS REMAIN LOW

The Hawke's Bay vineyard model achieved a cash operating surplus of $32 250 in 2010/11, an increase of 46 percent on that achieved in the previous year. This surplus was only just sufficient to cover the debt servicing costs for the business; no principal repayments were covered. Lower interest rates are helping to reduce debt servicing costs.

Several grape growers are earning income from grazing sheep in winter. Depending on vineyard size some growers are also fattening lambs. Such income is recorded in the model budget as net non-fruit cash income.

The model's debt level has increased by $15 000 or 4 percent, reflecting a greater reliance by growers on overdraft facilities and increased drawdown of revolving credit facilities. There is an increasing trend for wineries to spread out grape payments throughout the year putting further pressure on vineyard cash flow.

A small amount of capital expenditure was made to buy necessities such as new bird netting and the installation of a water meter now required on water-takes over five litres per second. This capital expenditure was funded from introduced funds.

The reliance on income from off-vineyard wages, other business activity and investments to cover living expenses and pay off debt, is ongoing.

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

There is much uncertainty amongst grape growers about the year ahead. Growers believe they have cut their costs back as far as they can without impacting on vineyard health. Monitored growers hope that if prices remain stable and with a return to average yields, and quality targets are achieved, most businesses with a supply contract will at least break even or make a small profit in 2011/12. The Hawke's Bay vineyard model reflects this position, and it is expected to achieve a small profit before tax of $3900 in 2011/12. This budget is based on the assumption that all fruit from grape varieties will be sold to wineries.

REVENUE EXPECTED TO INCREASE IN 2011/12

Growers expect grape yields to return to average levels, dependent on winery yield caps. An average yield of 9.6 tonnes per producing hectare is expected for the vineyard model.

There is much uncertainty surrounding price expectations for the year ahead. Most growers believe there will be a lift in prices of about

$100 per tonne on average due to quality parameters and brix levels being met. Prices for Merlot and other red varieties are expected to return to levels of recent years; these varieties were the most significantly affected by adverse seasonal factors in 2010/11.

EXPENDITURE EXPECTED TO BE KEPT UNDER TIGHT CONTROL

Vineyard working expenses for the Hawke's Bay model in 2011/12 are expected to increase 5 percent to $8360 per producing hectare. Whilst growers intend to manage inputs as efficiently as possible, they are budgeting for a return to average seasonal conditions and some necessary expenditure on fertiliser inputs and on repairs and maintenance. Frost protection expenditure is also budgeted to return to more typical levels of $160 per producing hectare as last season was relatively frost-free.

Expenditure on fertiliser is expected to increase 40 percent to $174 per producing hectare as this expense was reduced or deferred for the past two seasons. Increased expenditure on repairs and maintenance of 4 percent is also budgeted; growers understand that they cannot keep deferring maintenance work indefinitely. Overhead expenses are generally expected to increase in line with inflation.

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

CONTINUED RELIANCE ON OFF-VINEYARD INCOME

In 2011/12, the cash operating surplus position of the Hawke's Bay vineyard model is expected to be approximately $54 000. This surplus should at least provide for debt servicing expenses. No capital or development expenditure is planned and growers are unlikely to make any principal repayments in 2011/12.

With income expected to be limited due to stagnant or decreasing grape prices and caps on yields, the profitability of the Hawke's Bay vineyard model remains challenged in the short-term.

Off-vineyard income and investments are budgeted to be relied upon to meet living expenses, and service or pay off debt. Growers are well aware that having a good relationship with their winery is paramount to the future survival of their business.

The Hawke's Bay vineyard model shows that property values remained static during 2010/11 with a land and buildings value of $1.5 million on 1 July 2011. The vineyard model represents a predominantly mature and established vineyard with a lifestyle component. Stability in the value of vineyards is helping to hold equity levels close to 70 percent.

TABLE 9: HAWKE'S BAY VINEYARD MODEL GRAPE PRICES

YEAR ENDED 30 JUNE	2007/08 ($/T)	2008/09 ($/T)	2009/10 ($/T)	2010/11 ($/T)	2011/12 BUDGET ($/T)
Merlot	1 800	1 800	1 780	1 600	1 750
Syrah	2 250	2 000	2 000	2 000	2 000
Other red	2 040	2 000	2 000	1 900	2 000
Chardonnay - Mendoza, Clone 15 and Clone 95[1]	1 750	1 550	1 400	1 350	1 350
Sauvignon Blanc	1 800	1 475	1 060	950	1 000
Pinot Gris	1 900	1 700	1 350	1 250	1 300
Pinot Noir - sparkling	900	910	500	500	500
Weighted average	**1 750**	**1 565**	**1 350**	**1 240**	**1 320**

Note
1 Chardonnay Clone 95 included from 2009/10 onwards.

TABLE 10: HAWKE'S BAY VINEYARD MODEL BUDGET

	2009/10	2010/11[1]				2011/12 BUDGET			
	WHOLE VINEYARD ($)	WHOLE VINEYARD ($)	PER PRODUCING HA ($)	PER TONNE GROSS ($)	PER VINE ($)	WHOLE VINEYARD ($)	PER PRODUCING HA ($)	PER TONNE GROSS ($)	PER VINE ($)
REVENUE									
Income from grapes	126 135	131 700	10 536	1 239	4.48	158 650	12 692	1 317	5.40
Other vineyard income	0	0	0	0	0.00	0	0	0	0.00
Net cash income	**126 135**	**131 700**	**10 536**	**1 239**	**4.48**	**158 650**	**12 692**	**1 317**	**5.40**
Vineyard working expenses	**104 045**	**99 450**	**7 956**	**935**	**3.39**	**104 500**	**8 360**	**868**	**3.56**
Cash operating surplus	**22 090**	**32 250**	**2 580**	**303**	**1.10**	**54 150**	**4 332**	**450**	**1.84**
Interest	31 250	30 850	2 468	290	1.05	31 750	2 540	264	1.08
Rent and/or leases	0	0	0	0	0.00	0	0	0	0.00
Depreciation	26 000	23 500	1 880	221	0.80	20 500	1 640	170	0.70
Net non-fruit cash income	1 275	2 000	160	19	0.07	2 000	160	17	0.07
Vineyard profit before tax	**–33 885**	**–20 100**	**–1 608**	**–189**	**–0.68**	**3 900**	**312**	**32**	**0.13**
Tax	0	0	0	0	0.00	0	0	0	0.00
Vineyard profit after tax	**–33 885**	**–20 100**	**–1 608**	**–189**	**–0.68**	**3 900**	**312**	**32**	**0.13**
ALLOCATION OF FUNDS									
Add back depreciation	26 000	23 500	1 880	221	0.80	20 500	1 640	170	0.70
Drawings/living expenses[2]	52 000	52 000	4 160	489	1.77	50 000	4 000	415	1.70
Vineyard surplus for reinvestment[3]	**–59 885**	**–48 600**	**–3 888**	**–457**	**–1.65**	**–25 600**	**–2 048**	**–213**	**–0.87**
REINVESTMENT									
Net capital purchases	10 200	7 500	600	71	0.26	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
Vineyard cash surplus/deficit	**–70 085**	**–56 000**	**–4 488**	**–528**	**–1.91**	**–25 600**	**–2 048**	**–213**	**–0.87**
OTHER CASH SOURCES									
Off-vineyard cash income	52 000	56 250	4 500	529	1.91	56 250	4 500	467	1.91
New borrowings	0	0	0	0	0.00	0	0	0	0.00
Introduced funds	10 200	10 000	800	94	0.34	0	0	0	0.00
Net cash position	**–7 885**	**10 150**	**812**	**95**	**0.35**	**30 650**	**2 452**	**254**	**1.04**
ASSETS AND LIABILITIES									
Land and building (opening)[4]	1 675 000	1 500 000	120 000	14 109	51.06	1 500 000	120 000	12 453	51.06
Plant and machinery (opening)	134 000	125 000	10 000	1 176	4.26	110 000	8 800	913	3.74
Vineyard related investments (opening)	0	0	0	0	0.00	0	0	0	0.00
Total vineyard assets (opening)	**1 809 000**	**1 625 000**	**130 000**	**15 285**	**55.32**	**1 610 000**	**128 800**	**13 366**	**54.81**
Total vineyard liabilities (opening)	425 000	440 000	35 200	4 139	14.98	450 000	36 000	3 736	15.32
Total vineyard equity	**1 384 000**	**1 185 000**	**94 800**	**11 146**	**40.34**	**1 150 000**	**92 800**	**9 630**	**39.49**

Notes

Figures may not add to totals due to rounding.

1 Model parameters for the Hawke's Bay vineyard model were revised in the 2010/11 year; the model size increased from 10 to 12.5 producing hectares. Figures for 2009/10 were adjusted for comparison purposes. Due to this revision, data for the 2009/10 year will not match the *Farm Monitoring Report 2010 - Horticulture Monitoring: Viticulture.*

2 Drawings refers to living expenses. Figures may not match with previous years due to the revision in interpretation of drawings.

3 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.

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

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 vineyard. New and adjusted definitions include vineyard surplus for reinvestment, vineyard cash surplus/deficit and net cash position. Caution should be taken when comparing this year's data to previous years.

TABLE 11: HAWKE'S BAY VINEYARD MODEL EXPENDITURE

	2009/10	2010/11				2011/12 BUDGET			
	WHOLE VINEYARD ($)	WHOLE VINEYARD ($)	PER PRODUCING HA ($)	PER TONNE GROSS ($)	PER VINE ($)	WHOLE VINEYARD ($)	PER PRODUCING HA ($)	PER TONNE GROSS ($)	PER VINE ($)
VINEYARD WORKING EXPENSES									
Hand harvesting	770	1 200	96	11	0.04	750	60	6	0.03
Pruning (and tying down)	18 300	18 125	1 450	170	0.62	18 125	1 450	150	0.62
Canopy/crop load management	12 750	14 375	1 150	135	0.49	14 375	1 150	119	0.49
Other wages	5 750	5 000	400	47	0.17	5 000	400	42	0.17
ACC - employees	220	200	16	2	0.01	225	18	2	0.01
Total labour expenses	**37 790**	**38 900**	**3 112**	**36**	**1.32**	**38 475**	**3 078**	**319**	**1.31**
Weed and pest control	13 400	11 600	928	109	0.39	11 500	920	95	0.39
Fertiliser and lime	1 900	1 550	124	15	0.05	2 175	174	18	0.07
Electricity	3 300	1 750	140	16	0.06	2 300	184	19	0.08
Vehicle	2 950	2 750	220	26	0.09	2 825	226	23	0.10
Fuel	4 800	5 800	464	55	0.20	6 175	494	51	0.21
Repairs and maintenance	7 000	6 000	480	56	0.20	6 250	500	52	0.21
General	1 780	1 780	142	17	0.06	1 700	136	14	0.06
Frost protection	2 000	500	40	5	0.02	2 000	160	17	0.07
Contract machinery work	4 350	3 750	300	35	0.13	4 000	320	33	0.14
Machine harvesting	9 375	8 750	700	82	0.30	10 000	800	83	0.34
Total other working expenses	**50 855**	**44 230**	**3 538**	**416**	**1.51**	**48 925**	**3 914**	**406**	**1.67**
Rates	3 500	3 570	286	34	0.12	3 650	292	30	0.12
Water rates	0	0	0	0	0.00	0	0	0	0.00
General insurance	3 200	3 400	272	32	0.12	3 600	288	30	0.12
Crop insurance	0	0	0	0	0.00	0	0	0	0.00
ACC - owners	1 700	1 750	140	16	0.06	2 200	176	18	0.07
Communication	1 850	1 800	144	17	0.06	1 950	156	16	0.07
Accountancy	2 400	2 500	200	24	0.09	2 500	200	21	0.09
Legal and consultancy	650	950	76	9	0.03	850	68	7	0.03
Levies and subscriptions	900	1 000	80	9	0.03	1 100	88	9	0.04
Other administration	1 200	1 350	108	13	0.05	1 250	100	10	0.04
Total overhead expenses	**15 400**	**16 320**	**1 306**	**154**	**0.56**	**17 100**	**1 368**	**142**	**0.58**
Total vineyard working expenses	**104 045**	**99 450**	**7 956**	**935**	**3.39**	**104 500**	**8 360**	**868**	**3.56**
CALCULATED RATIOS									
Economic vineyard surplus (EVS)[2]	–53 000	–38 500	–3 080	–362	–1.31	–13 450	–1 076	–112	–0.46
Vineyard working expenditure/NCI[3]	82%	76%				66%			
EVS/Total vineyard assets	–2.9%	–2.4%				–0.8%			
EVS less interest & lease/equity	–6.1%	–5.9%				–3.9%			
Interest+rent+lease/NCI	24.8%	23.4%				20.0%			
EVS/NCI	–42.0%	–29.2%				–8.5%			
Wages of management	49 090	47 250				47 100			

Notes

Figures may not add to totals due to rounding.

1 Model parameters for the Hawke's Bay vineyard model were revised in the 2010/11 year; the model size increased from 10 to 12.5 producing hectares. Figures for 2009/10 were adjusted for comparison purposes. Due to this revision, data for the 2009/10 year will not match the *Farm Monitoring Report 2010 - Horticulture Monitoring: Viticulture.*

2 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.

3 Net cash income.

TABLE 12: HAWKE'S BAY VINEYARD MODEL PRODUCTION AND INCOME DETAILS FOR 2010/11

YEAR ENDED 30 JUNE GRAPE VARIETY	AREA (HA)	PRODUCTION PER HA (T/HA)	TOTAL PRODUCTION (T)	GROSS YIELD (%)	BROX LEVEL (BRIX)	RETURN ($/T)	REVENUE ($)
Merlot	3.0	7.5	22.5	21	22.5	1 600	36 000
Syrah	0.8	8.0	6.0	6	22.5	2 000	12 000
Other red	1.3	4.5	5.6	5	…	1 900	10 700
Chardonnay – Mendoza, Clone 15 and Clone 95	2.3	6.5	14.6	14	22.0	1 350	19 750
Sauvignon Blanc	2.5	10.5	26.3	25	20.0	950	24 950
Pinot Gris	1.9	9.0	16.9	16	22.0	1 250	21 100
Pinot Noir – sparkling	0.9	16.5	14.4	14	18.5	500	7 200
Total/average	**12.5**	**8.5**	**106.3**	**100**		**1 240**	**131 700**

Note
Figures may not add to totals due to rounding.

Symbol
.. Not applicable.

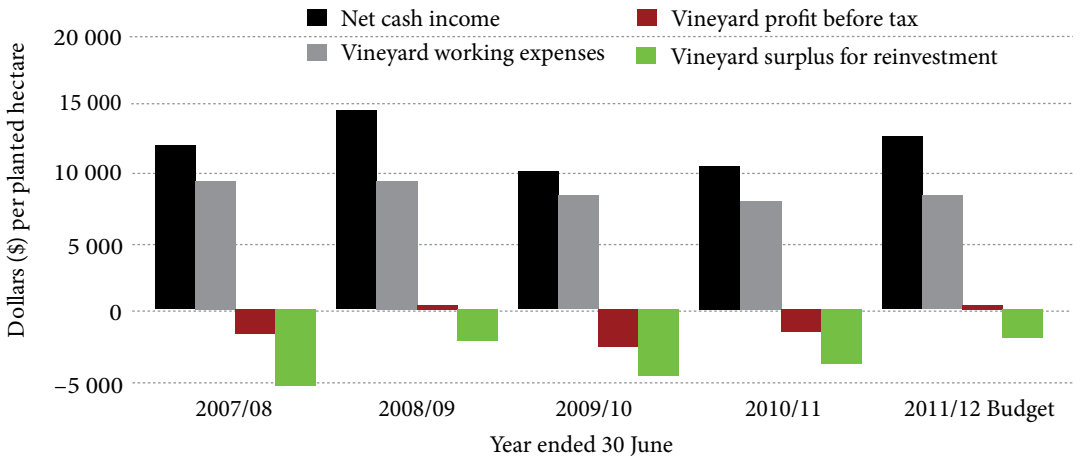
TABLE 13: HAWKE'S BAY VINEYARD MODEL BUDGET PRODUCTION AND INCOME DETAILS 2011/12

YEAR ENDED 30 JUNE GRAPE VARIETY	AREA (HA)	PRODUCTION PER HA (T/HA)	TOTAL PRODUCTION (T)	GROSS YIELD (%)	BROX LEVEL (BRIX)	RETURN ($/T)	REVENUE ($)
Merlot	3.0	9.0	27.0	22	23.0	1 750	47 250
Syrah	0.8	8.0	6.0	5	23.5	2 000	12 000
Other red	1.3	6.5	8.1	7	…	2 000	16 250
Chardonnay – Mendoza, Clone 15 and Clone 95	2.3	7.5	16.9	14	23.0	1 350	22 800
Sauvignon Blanc	2.5	12.0	30.0	25	20.5	1 000	30 000
Pinot Gris	1.9	9.5	17.8	15	22.5	1 300	23 150
Pinot Noir – sparkling	0.9	16.5	14.4	12	18.5	500	7 200
Total/average	**12.5**	**9.6**	**120.2**	**100**		**1 320**	**158 650**

Note
Figures may not add to totals due to rounding.

Symbol
.. Not applicable.

FIGURE 2: HAWKE'S BAY VITICULTURE MODEL PROFITABILITY TRENDS



Note
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.

INDUSTRY ISSUES AND DEVELOPMENTS

LACK OF PROFITABILITY

Lack of profitability was identified as the number one issue by monitored growers in both Marlborough and Hawke's Bay. This view was also endorsed by industry panel members in Marlborough when they considered the outcomes of the monitoring round. This lack of profitability is affecting wineries as much as growers. Industry representatives viewed the exponential growth in bulk wine as a necessary escape valve for the imbalance in supply and demand of grapes. However, they viewed a staged shift to lower the proportion of bulk to premium wine as essential to the long-term viability of the industry and to prevent erosion of price premiums for New Zealand wine long-term.

MARLBOROUGH

Monitored growers in Marlborough believe that the worst is over but any sustainable long-term lift in profitability will likely take two to three years. Those growers with high debt levels were more pessimistic and expected a longer road to recovery and there was some discussion that this may need to be assisted by asset sales from within or off-vineyard sources. Some financially challenged growers perceived an imbalance in the contract negotiating position of wineries and support discussions on forming a grower co-operative.

The majority of growers still consider premium branded Marlborough Sauvignon Blanc as the preferred target market for their grapes. Some growers believe bulk wine sales have served a purpose in clearing the surplus volume but at a cost, causing inevitable erosion in the price of premium grade New Zealand wine. However, other growers (typically those without contracts) appear happy to accept the lower bulk grape price at higher tonnages, as there is minimal direct oversight from wineries and typically prompt payment.

The grape and wine industry has many participants with diverging views and financial situations. This has helped bulk wine retailers identify a niche in the Marlborough wine market that industry commentators believe is strong at present. One industry participant commented, "If your business is at risk financially, it is unlikely you will turn down the bulk wine option if it means that you can survive these difficult times."

HAWKE'S BAY

In Hawke's Bay, although yields improved in the 2010/11 season, the adverse weather events and lower grape prices (caused partly by grape quality) have pushed some growers to their financial and personal limits. Growers were looking to the 2011 season for improvement following on from a poor season in 2009/10 when grape prices were cut and crop yields were down dramatically due to a cold spring causing low fruit set. With two seasons of poor returns, many growers are feeling stressed and questioning why they are in the industry. Having to reduce inputs and defer spending also made them uneasy and feeling they are increasing the risk to the crop and their business.

Many growers have looked for other forms of income or are rethinking their futures as grape growers entirely. Growers with contracts are reviewing their business viability plans, given their expectation of reduced grape income in the short-term, and the potential delay in payments from wineries by up to eleven months. Options being considered include:

- contracting out the vineyard to a vineyard management firm whilst seeking full time paid employment elsewhere;
- leasing additional vineyards to gain economies of scale;
- converting vineyards to organic status; and
- putting vineyards on the market.

Overall, growers believe it will take at least five years for most vineyards and wineries to be profitable again. To achieve this, growers believe that bulk wine sales need to be reduced and greater focus put on marketing and selling high priced premium wines. There is a concern that larger growers, due to economies of scale, will be able to make a reasonable income growing white grape varieties for the bulk wine market. If this practice becomes too predominant, many believe that it will conspire against adequate price increases for smaller operators.

There is emerging optimism around potential growth in Asian markets for Hawke's Bay red wines.

GROWERS REFINE EFFORTS TO CONTAIN VINEYARD EXPENDITURE

During the past two seasons, growers have made significant expenditure savings, especially in labour expenditure such as pruning and canopy management. While many of the expenditure reductions are sustainable in the long-term, some such as repairs and maintenance, fertiliser and capital investment are considered deferred expenses and others such as frost and pest and disease control are seasonally dependant.

Growers have successfully found ways to manage their vineyards at lower expenditure levels and are now operating at what they consider to be very lean levels. Further reductions in labour expenditure this past season were achieved through a competitive labour market, reduced contracted crop management and increased owner involvement. Another developing trend is increased use of stripping machines and mechanical defoliators which gently remove leaves at flowering thus aiding fruit set by blowing out the leaf and flower caps. Medium to larger growers especially are reporting 10 to 20 percent savings through the use of such mechanical aids.

Growers have reduced crop management intervention through laying fewer canes at pruning, electing to leave higher crops on the vine then managing volumes to the winery at harvest. Growers in both regions are using sheep to assist with leaf removal on some varieties; this practice is more widespread in Hawke's Bay than Marlborough.

Vineyards have been shielded from fuel price increases by reducing the amount of tractor work in the vineyard. Some growers have embraced multi-tasking of machinery while many are developing under-vine cover crops and using sheep to reduce vineyard mowing.

The focus on monitoring vineyard activities continues with the majority of growers now members of Sustainable Winegrowers New Zealand or organic registration programmes. Members are actively monitoring for pests and disease, irrigation, soil and leaf nutrient levels to match inputs to minimum requirements. Growers report closer monitoring often allows spending reductions on fuel, chemicals, fertiliser and electricity for irrigation without compromising quality.

ENVIRONMENTAL AND NATURAL RESOURCE MANAGEMENT

There have been minimal changes within the monitored group regarding environmental and natural resource management. While the industry is sympathetic to environmental issues, it is facing economic challenges, so growers consider that environmental initiatives need to also demonstrate a positive effect on the bottom line.

With the industry downturn, several growers have investigated organics as an alternative approach to better differentiate their fruit in the market. Several very large vineyards in Marlborough have converted all or part of their holdings to organics in the past two years. These growers are assessing the impact on profitability before committing further areas to this production method. There is also an increasing interest in organic grape and wine production in the Hawke's Bay region.

A recently approved project through MAF's Sustainable Farming Fund, called *Organic Focus Vineyard,* will showcase comparisons between organic and conventionally managed vineyards. It will also demonstrate the process of converting a vineyard to organic management.

Use of sheep and under-vine weeders in the vineyard is increasing biodiversity and believed to be improving soil health.

The National Environmental Standard (NES) on water-take measurements (meters) came into effect in November 2010, requiring the installation of a water meter on all water-takes over five litres per second. Some grape growers in the Hawke's Bay region installed water meters during the 2010/11 season; this action will affect most growers over the next couple of years. Growers are happy to abide with the NES requirements but the added cost in hard times has become a burden with each water meter installed and certified costing approximately $5000. Telemetry is a possible approach to monitoring water use.

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 86 percent of the grape harvest in New Zealand in 2011. 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 that are mostly located in the Wairau Valley, while three are situated in the Awatere Valley. Sauvignon Blanc is the dominant grape variety in the model vineyard, followed by Pinot Noir, Chardonnay, Riesling and Pinot Gris.

HAWKE'S BAY VINEYARD MODEL

The Hawke's Bay model of 12.5 planted and producing hectares (owned title area of 14 hectares) is based on data from 15 vineyards that are spread across the Heretaunga Plains. Merlot is the predominant grape variety, followed by Sauvignon Blanc and Chardonnay.

For more information on the models contact **Nick.Dalgety@maf.govt.nz**

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