



How has the financial viability of Sauvignon Blanc in Marlborough changed over the last five years in the three major growing areas?



Dawn Wairau Valley – Wine Marlborough

*Report prepared for the  
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## Executive Summary

The financial viability of Sauvignon Blanc in Marlborough has never been stronger, showing returns on investment for the 2015/16 season of 24.47%, now who wouldn't chase returns like that? Growers and investors are purchasing the remaining bare flat land to develop and keep up with world demand this is seeing record prices paid for both bare land and existing vineyards.

I undertook a literature review in conjunction with interviewing three growers, I was better able to understanding the characteristics of the Marlborough wine region its sub regions, and how these characteristics play out in the flavour of the wine, value of the land and the factors that are driving the current expansion.

What I wasn't aware of before undertaking this report was just how well this industry was performing and had been over the last 5 years peaking last season as mentioned above, I quickly learned that if we suggest these things to be cyclic then it would appear to me that we are very high in the cycle right now, are we at the peak or do we still have room to move? This report will give you an understanding of where the market is today.

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- Lachlan Hynd – Farmlands Viticulture representative
- Grant Coles – Coles Contracting

## 1.3 Introduction

The Marlborough wine industry is booming on the back of the Sauvignon Blanc grape. With the New Zealand wine industry target of \$2 billion in exports by 2020 it's no wonder Marlborough has earmarked some 4000+ ha over the next 4 years for development into Sauvignon Blanc. Considering Marlborough already has some 21000ha in Sauvignon Blanc in the ground the race is on to grab the last of the more easily developed land.

The pressure is on to get a return on your investment with land prices at record highs, high investor activity, development costs edging up, and water rights harder to obtain and more regulated. I'm going to have a look at the three main growing regions in Marlborough and their characteristics.

I will look back over the last five years into prices paid per tonne for Sauvignon Blanc, investigate what has happened to land prices over these years and where it is today. I will outline development costs, and draw conclusions on the state of the market that are helpful for someone looking to invest.

# NEW ZEALAND WINE INDUSTRY

## 2016: A SNAPSHOT

TOTAL PRODUCING AREA **36,192 HA**

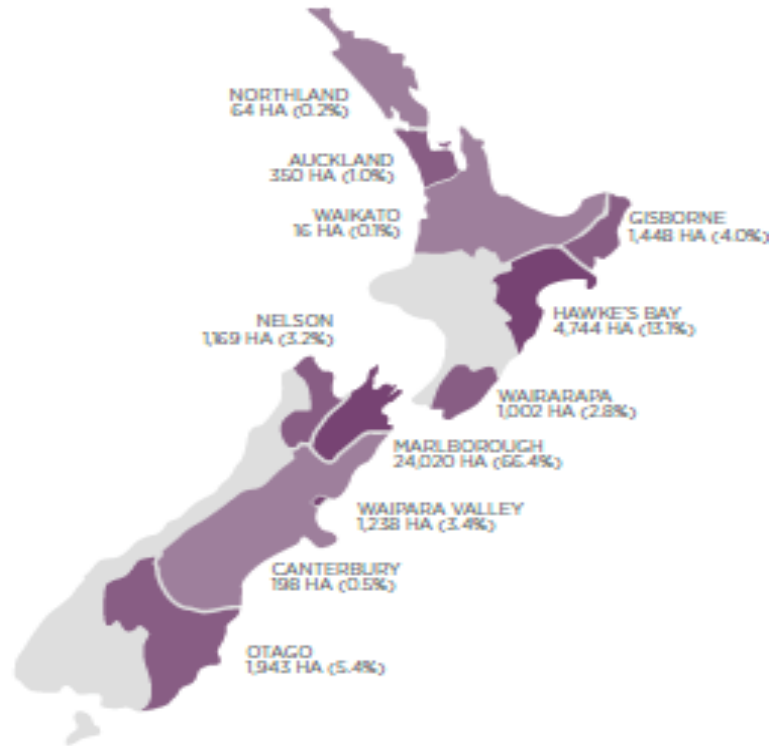
TOTAL PRODUCING AREA BY VARIETY  
 RED **7,960 HA**  
 WHITE **28,231 HA**

PRODUCING AREA OF SAUVIGNON BLANC **21,016 HA**

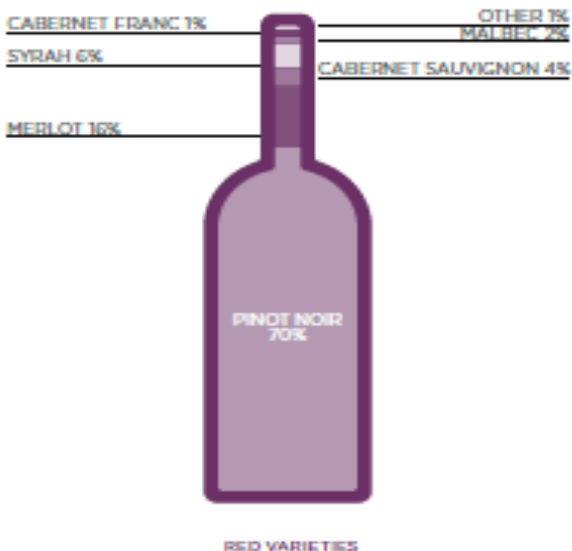
NUMBER OF VINEYARDS **2040**

AVERAGE AREA OF VINEYARD **17.4 HA**

2016 PRODUCING AREA BASED ON PROJECTIONS SUBMITTED IN 2016 VINEYARD REGISTER



## TOP PRODUCING VARIETIES



New Zealand wine growers report 2016

Figure 1

## 1.4 Methodology

I have used my literature review to increase my knowledge of the industry and build a picture of Viticulture in Marlborough since its inception in 1973. I have looked at factors including land price by area, soils types, temperate zones, risks and market trends over the last five years.

Tim Gifford of Colliers International, a real estate and valuation company, provided data on sale prices of Vineyards over the last 5 years in Marlborough.

The Farmlands Viticulture team in Marlborough helped with development costing's and shared their views on industry trends.

I also interviewed three growers, each from a different growing area. This gave me an understanding of their business, its challenges and what needs to be considered if investing in Marlborough Sauvignon Blanc.



## 2. Literature review

Marlborough has over 21000 hectares of Sauvignon Blanc currently in the ground and over 4000 hectares ear marked for planting in the next few years, I wanted to understand the market better identify any opportunity to invest and probably more importantly weather the timing is right. Below I briefly demonstrate how and where I gathered my information. All of these points are explained in depth later in this report.

### 2.1 Soil and Temperate zone

After reviewing the Constellation brand website and Wine Marlborough website I was able to establish the differences when it came to soil type and temperate zone in Marlborough.

The Southern Valleys have a cool and dry climate with heavy soils. The Wairau has a similar climate but is old riverbed and riverbank soils. The Awatere valley is higher, cooler, drier and windier.

### 2.2 Price of Vineyards in Marlborough

I approached Tim Gifford, an associate Director for Colliers international. Tim is part of the Viticulture valuation and advisory team with over 14 years' experience. He provided me with accurate information with data to support it. Much of the data was based on the Marlborough Model Vineyard report (put together by nzwine.com). This showed a steady increase in return per tonne for Grapes harvested over the past 5 years. What was most notable was the rapid rise in vineyard valuations over the last 12 months (figure 4).

### 2.3 Land Availability

Colliers International stated wine companies are chasing large blocks for development to meet forecast growth for Marlborough Sauvignon Blanc (pg22).

The Marlborough Viticulture Labour Market survey uses a map produced by MDC (Marlborough District Council) depicting Wellington (figure 6) to demonstrate the area in grapes in Marlborough and the planned planting over the next five years.

### 2.4 Outlook

Using the Situation and Outlook for Primary Industries March 2017, I was able to gather an accurate snapshot of where the market is now. It provided an immediate forecast and the reasons surrounding it.

The 2017 wine export is forecast to reach \$1.6 billion, which is lower than previous estimates and expectations. Reasons include a decrease in export price per litre on the back of an increase in bulk wine exports. It also mentioned trade uncertainty in the US and EU, where protectionist sentiment may affect demand for imported wine.

## **2.5 Market trends**

I used the Marlborough Viticulture monitoring reports from 2012-2016 to find the average price paid for Sauvignon Blanc. In 2012 the price was \$1315 per tonne, increasing to \$1603 in 2013. This increase has remained steady, with 2014/15 paying an average of \$1635 per tonne. In the 2016 season, the average payment jumped to \$1740 per tonne on the back of strong export growth, particularly into the US and Canada. This has driven demand for bare land to develop from 2016-2020 (see pic#4). Information on potential wine export growth came from The Situation and Outlook for the Primary industries March 2017 report, produced by the Ministry of Primary Industries. It indicated that growth is slower than expected and referenced the uncertainty in trade with the US and EU as factors.

## **2.6 Development considerations and cost**

The Viticulture representatives at Farmlands Blenheim provided spreadsheets and formulas from which I was able to determine an average per hectare cost.

I also read the Vine Managers Fact Sheet – Getting a Vineyard Right, The First Time Round by Nick Hoskins. Nick refers to several subject matter experts as he points out the critical steps in considering a Viticulture development and the time it takes to get a return on your investment.

### 3. Interview Summary- Points of Interest

The below points from the interviewees should be considered when developing land in Marlborough for grapes. Also it gives you an understanding of the positivity in the market over the last 5 years the importance and value of water, some of the disease and labour pressure which have grown with the buoyant market. A grower from each of the three major areas in Marlborough was represented in the survey. All three growers had vines of differing ages, from newly planted to 30 years old.

A copy of the Survey is available in the Appendix.

Two of the growers had developed Sauvignon Blanc Vineyards in the last 5 years. The first of these was an established long-term grower who already owned the land. This was a case of evaluating whether a vineyard stacked up against other farming options, then approaching wine companies looking for long-term commitment before developing the land.

I interviewed a first-time grape grower whose business and passion is sheep and beef farming. After applying for and acquiring a water right, he has chosen to diversify the on-farm business by entering into a lease agreement with a reputable Marlborough wine company. This agreement sees the company take control of the development of the vineyard while the grower picks up the costs. This leaves the grower with a fully developed vineyard with a long-term lease agreement.

Two of the three growers referred to the significant increase in land values since 2012.

Two had developed a vineyard or had added to their existing vineyard. When developing the vineyard, considerations such as irrigation infrastructure, data logging for frost and soil profiling were important. Also mentioned was the importance of selecting a stable partner with a proven route to market, such as a winery.

Two of the three growers referred to having different soil types. This provided the opportunity to use a different variety of grapes. In one instance the different soil type will produce different characteristics in the Sauvignon Blanc.

The remaining grower was on deep silt over gravel across the whole vineyard. He was able to ripen heavy crops but yield caps introduced to combat oversupply after the Global Financial Crisis and to maintain quality, and his own moral obligation to uphold these standards, had prevented this.

One grower had installed two forms of frost protection – wind machine and flipper irrigation. The latter, which uses irrigation to protect the grape from frost, was installed due to data showing that in some places the property had no inversion layer, making frost fans ineffective. The difference between these two methods is \$10,000/ha for a wind machine and \$20,000/ha for flipper irrigation.

The same grower, commenting on land value, said he would have to give his stony river flats the greatest value due to the added cost in establishing them.

When it came to risks, all growers referred to the importance of water and water rights before purchasing or developing any land for grape production. Understanding the water right being purchased and knowing whether there is water available to apply for are essential in the purchase agreement for any land intended for grapes.

Both established growers identified pests and diseases such as powdery mildew, mealy bug and botrytis as an increasing risk during the last 5 years. They have had to drop fruit because of botrytis and increase spray rounds considerably to control or keep on top of mealy bug and powdery mildew. This has cut returns.

All growers interviewed said they would consider further investment in Marlborough Sauvignon Blanc. One had just purchased a large producing block on the Wairau Plains. Another grower said if they were to follow suit, they would also look to the Plains, the premium producing area.

Two growers were concerned that over cropping was leading to a devaluing of Marlborough Sauvignon Blanc, and a lack of labour supply was an increasing problem.

## 4. Soil type and temperate zone

### Marlborough weather and soil snapshot



Constellation brands website 2016

Figure 2

This section represents each growing zone and the characteristics that make it unique. Much of the information gathered came from the Wine Marlborough website.

If wines can be said to express their land and origin then the wines of Marlborough evoke crisp clean air, sunlight and crystalline melt-waters. [www.wine-marlborough.co.nz 2016]

New Zealand was the last landmass to appear from beneath the seas. Marlborough, as a wine region, is by default one of the youngest globally significant wine regions on earth, from the newest country on earth, New Zealand.

Perfectly positioned at 41.3°C, a latitudinal mid-point within the world's wine belt [key statistics wine marlborough.co.nz], Marlborough lies on a comparable latitude to many of the world's longest established wine regions. But its proximity to the Pacific Ocean, prevailing winds and isolation from continental hot air masses create a temperate maritime climate with much cooler summers and milder winters than those experienced in its northern hemisphere latitude equivalents. [www.wine-marlborough.co.nz 2016]

Although blessed with one of the sunniest and driest climates in New Zealand, Marlborough's heat is tempered throughout the summer months by easterly sea breezes that cool the vineyards through the day. The lengthy mild and dry autumn then provides ideal conditions for the long slow ripening of grapes prior to vintage. This "cool viticultural climate" promotes flavour purity, with stronger and more vibrant fruit flavours. [www.constellationbrands.co.nz]

In Marlborough the effect is magnified by the region's significant diurnal temperature range – commonly a 10°C temperature variation between the cool nights and sunny days of autumn (referred to in the Industry as growing degree days GDD see table below). Such variations between the cool nights and sunny days of autumn slow the development of sugars, preserve the natural acidity in the grapes and give the extraordinarily intense varietal characteristics and succulent fruit flavours for which Marlborough wines are renowned.

**Table 1 Marlborough Weather Data 2013**

Month	Growing Degree Days <sup>1</sup>			Rainfall		
	2011/12	2012/13	Long Term Average	2011/12	2012/13	Long Term Average
June	19	3	18	62	80	67
July	5	10	9	41	73	70
August	18	23	18	53	123	59
September	23	58	57	34	32	48
October	96	99	100	85	53	73
November	145	117	141	50	7	48
December	185	246	213	104	25	53
January	234	253	247	26	59	42
February	202	189	221	38	19	35
March	154	202	196	59	23	34
April	106	141	108	35	98	47
May	24	49	58	29	94	57
<b>Total</b>	<b>1 211</b>	<b>1 390</b>	<b>1 386</b>	<b>614</b>	<b>687</b>	<b>632</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 predict the date that a flower will bloom or a crop reach maturity. Source NIWA (Blenheim).

While climate is crucial to the character of Marlborough wine, so too is the soil. Most were laid down within the last 14,000 years, carved and eroded by glaciers in the high country and carried down to the coast by Snowmelt Rivers. [www.wine-marlborough.co.nz 2016]

The composition of these free-draining alluvial soils varies markedly across the region, influenced by proximity to riverbeds and exposure to wind, resulting in myriad soil types.

Such soil variations coupled with variation in geography, rainfall and temperature have given rise to the emergence of three loosely banded viticulture sub-regions, each characterised by a cluster of distinct growing conditions. [www.wine-marlborough.co.nz 2016]

#### 4.1 The Southern Valleys

The soils of the Ben Morven, Brancott, Omaka, Fairhall and Waihopai valleys (as a group referred to as the Southern Valleys) that lie to the south of the Wairau Plains typically originated from glacial outwash [www.ruralnewsgroup.co.nz 2017]. Less extensively worked by the river system, these soils tend to have significant amounts of silt and gravel but also higher levels of clay than the other sub-regions [www.ruralnewsgroup.co.nz 2017]. Geologically these soils are acknowledged as older and more similarly grouped than in the other two sub-regions of the Wairau Plains and the Awatere Valley. Spreading like the fingers on a hand into the valleys along the Wither Hills range, the Southern Valleys provide opportunities to plant either on the fringes or further up the undulating hillsides, which have distinctive higher clay content. [www.wine-marlborough.co.nz 2016]

While the Wairau River moderates the viticultural climate along the fringes of the Wairau Plains, cold air descends from the nearby Wither Hills into the Southern Valleys, creating a cooler, later-ripening climate than that of the growing areas on the opposite, northern side of the Wairau Plain. [www.wine-marlborough.co.nz 2016]

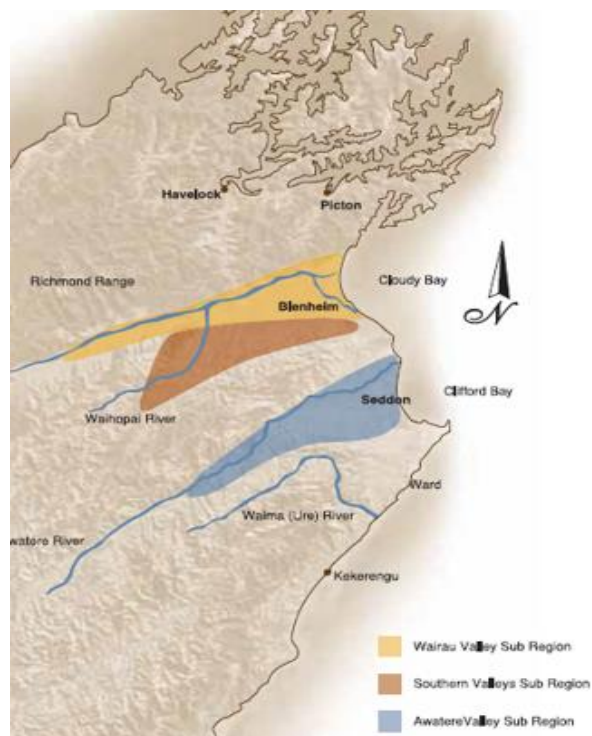
## 4.2 The Wairau Plains

This sub-region is broadly defined by its proximity to the 179km Wairau River, which runs from the mountains in the west to the ocean at Cloudy Bay. Marlborough's earliest vineyards were established on the characteristically alluvial river plains [www.ruralnewsgroup.co.nz 2017]. These include the acclaimed Rapaura and Renwick areas, home to some of the region's most well-known wineries. [www.wine-marlborough.co.nz 2016] Despite diverse soil structures, vineyards here lie mostly on either buried or visible river terraces. Some vineyards have large amounts of stone grouped under the vines. These help radiate the heat back into the canopy, giving the grapes the distinctive, identifiable characteristics of this sub-region.

## 4.3 The Awatere Valley

South-east of the Wairau and closest to the coast, the vineyards of the narrow Awatere Valley – which include the Awatere River valley, Seaview, Redwood Pass and Blind River areas – experience a cooler, drier and more windy growing season. The area can be more exposed to cold weather from the south, which tends to create a later ripening and even longer growing season [www.wine-marlborough.co.nz 2016]. The soils are typically alluvial gravel and wind-borne loess, often exhibiting a diverse composition of stone materials. The Awatere sub-region was the last to be fully recognised, even though its high quality and potential was noted by early pioneers who planted in the late 1980s. [www.wine-marlborough.co.nz 2016]

The below Picture shows the Three growing areas



## 5. Cost of Establishment

In this section I look at the cost of developing bare land, and what it may cost to invest in a developed vineyard. I also look at the basic costs of getting water to your site.

The below cost are estimates. I have gathered this information from Grant Coles (Coles Contracting) and Lachlan Hynd (Farmlands Viticulture representative). The cost to purchase land is not represented.

The information is based on a 2.5m row @ 1.8m plant spacing = 2220 plants /ha (please note that plant numbers/ha can vary).

### 5.1 Table 2 Development costs

<b>Ground Preparation</b>
Weed spray = \$100/ha
Ground preparation 3 passes = \$250/ha
<b>Marking and Planting</b>
40 cents per plant = \$890/ha
Purchase plant @ \$5.50 each = \$12,210/ha
<b>Posts and posting</b>
555 posts per ha @ \$10 per post = \$5,555 /ha
Laying out posts 25 cents each = \$150 /ha
Ramming post \$1 each = \$550 /ha
Strainers and stays 10 rows per ha 20 @ \$70 each = \$1400 /ha
Wire and running 7 wires per row 28 coil @ \$125 = \$3500/ha
<b>Young vine work</b>
Vine guards, bamboos & clips 2220 @ 75 cents = \$1665 /ha
4 passes training vines = \$1775 /ha
Nails for wires 11 per post 555 posts @ \$3.30 for nail and nailing = \$1815 /ha
Fertilizer and sowing grass for inter row = \$100 /ha
Instillation of Irrigation would need to allow another = \$1000/ha
<b>Total</b>
\$30,960 /ha

The above pricing assumes using a Contractor to establish your vineyard. This shows the true cost of development as it includes a labour cost. You could save money by doing it yourself but that would depend on whether you had your own equipment and time, and how much value you put on that time. Some costs may reduce on a large development due to labour efficiencies.



Below are the daily running costs of a vineyard – again I have taken these costs from a contractor, for the reasons argued above.

These also would be the costs if you were to purchase a producing vineyard and did not want to invest in the machinery required to do this yourself.

## 5.2 Table 3 **Costs of running a developed vineyard**

Pruning \$1.50 4 canes \$3330
bud rubbing 7cents \$155
4 wire lifts @ 7cents each \$625
Mulch and sweep \$150
mowing 4 passes \$250
3 trim and mows \$2501
13 Spray rounds \$850
Chemical \$1100
Harvesting \$860
leaf pluck \$150
Vineyard Maintenance \$250
Management fee \$600 depending on vineyard size but average per ha
Total \$8570 that's on a good year with good weather.

Two major costs not yet covered are water and frost protection, both of which vary greatly. There are four options when considering frost protection:

- 1) Probably the most common protection in high-risk areas in Marlborough would be a frost fan. These can be used where there is a warm air inversion layer. Cost is \$10,000/ha.
- 2) Commonly used where there is no detectable inversion layer and the risk of frost is still high is flipper irrigation. Cost is \$20,000/ha.
- 3) If your vineyard is a low frost risk you could choose to hire a helicopter when required. Cost is \$1000/hour.
- 4) If you are in a warmer area with little risk of frost you may choose to do nothing, thus carrying the risk of losing part or all of your crop if a frost event was to occur.

With water, even when you have your consent there are many variables. I have used an estimate from a Marlborough expert service provider, Think Water Marlborough. The estimate is for water supply costs to a 20ha development on flat terrain with underground water available (as soon as you put contour and/or more difficult water source parameters the price per hectare will climb).

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5.3 **Table 4 Basic Irrigation Costs**

Well	\$12,000	
Pump & Electrical	\$10,000	
Power to site	\$20,000	(Estimate, can vary greatly)
Headworks, filtration, fertigation.	\$8,000	
Reticulation into 8x 2.5ha zones	\$90,000	
Control system	\$15,000	
Dripline & fittings	\$30,000	
Installation	\$40,000	
<b>Total</b>	<b>\$225,000</b>	<b>=\$11,250 per hectare.</b>

There are several variables. You must ensure when purchasing bare land to develop that you have done your homework and spoken to the experts in the respective fields. You don't want to rush into your investment without understanding the challenges and knowing your numbers.

## 6. Prices of Sauvignon Blanc over the past five years

In this section I survey the price movement over the last five years as well as the key factors influencing it. The below information is from the Marlborough Model Vineyard report, put together by Wine Marlborough. The model is based on a combination of contract grower and winery-operated businesses where the main source of income is derived from grape growing. Its aim is to typify an average vineyard in Marlborough.

### 6.1 Table 5 **Price per tonne for Marlborough Sauvignon**

Year ended 30 June	2006-15 (\$/t)	2011-15 (\$/t)	2015 (\$/t)	2016 (\$/t)	2017 budget (\$/t)
Sauvignon Blanc	1 765	1 490	1 710	1 805	1 840

Ministry of primary Industries  
Manatu Ahu Matua

The Marlborough Model Vineyard is based on an owner-operator business structure and from 2014 is representative of both contract and winery growers. The data is formulated to represent 30 producing hectares. For 2016, data was sourced from 38 vineyards, compared with 31 in the previous year. Nine vineyards are in the Awatere Valley and 29 in the Wairau Valley. There are 29 contract growers and nine winery-operated vineyards in the monitoring group. Eight of the vineyards are under 10 hectares, eight are 10-20 hectares, 13 are 20-50 hectares and nine are 50 hectares or larger. Sauvignon Blanc is the dominant grape variety in the model, representing 79 percent of the producing area.

#### **2013 yields increase by 26 percent**

The Marlborough vineyard model experienced a 25 percent increase in yield, reporting 365 tonnes from 30 producing hectares. This equates to an average yield of 12.2 tonnes per hectare, compared with 9.7 tonnes the previous year. There was a significant difference in yield between the sub-regions, with the Wairau growers reporting 35 percent higher yields across all varieties compared with the Awatere. The Awatere suffered extremely cool weather in December 2011, which had a greater effect on reduced flower bud initiation of the 2013 crop than did the Wairau. Because they expected this, some growers elected to lay down four canes on Sauvignon Blanc in the winter of 2012, which is more fruiting wood than usual. (Information taken from the Marlborough model vineyard report 2014 by Wine Marlborough)

## Model Vineyard returns

Marlborough	10/11	11/12	12/13	13/14	14/15	15/16
Producing planted area (ha)	30	30	30	30	30	30
Total yield (t)	363	290	365	439	324	452
Average return (\$/t)	\$1,350	\$1,410	\$1,720	\$1,730	\$1,810	\$1,900
Net cash income (\$)	\$489,700	\$409,200	\$625,800	\$763,000	\$587,300	\$868,800
Vineyard working expenses (\$)	\$230,200	\$229,400	\$237,600	\$289,300	\$291,600	\$313,300
Profit before tax (\$/ha)	\$5,577	\$3,230	\$9,800	\$11,277	\$6,107	\$14,823
Model vineyard capital value (CV)	\$4,650,000	\$4,673,000	\$4,927,000	\$5,260,000	\$5,640,000	\$6,540,000
CV / planted ha	\$155,000	\$155,767	\$164,233	\$175,333	\$188,000	\$218,000
Capital value movement		0.49%	5.44%	6.76%	7.22%	15.96%
Return on capital EBIT/CV	5.58%	3.85%	7.88%	9.01%	5.24%	8.49%
<b>Total Vineyard Return</b>	<b>5.58%</b>	<b>4.34%</b>	<b>13.31%</b>	<b>15.76%</b>	<b>12.47%</b>	<b>24.45%</b>

Figure 4  
(Marlborough Model Vineyard report 2016)

Very little crop adjustment was done on Sauvignon Blanc in 2012/13 due to expectations of lower bunch numbers and because wineries were actively seeking extra fruit. In many cases yield caps were relaxed as the season unfolded and wineries wanted to ensure they had enough grapes to meet demand. This was exacerbated by the small 2012 vintage, leading to wine stocks being very low by harvest 2013. In the vineyard model, Sauvignon Blanc yielded 13.1 tonnes per hectare on average, up 21 percent on the previous year and 9 percent up on the 2008-12 average. On the monitored vineyards, yields for Sauvignon Blanc ranged from 8.1 to 19.6 tonnes per hectare. The Wairau growers in the survey produced yields of Sauvignon Blanc 41 percent higher than the Awatere growers due to improved flowering conditions over 2011/12.

The average grape price rose compared with 2011/12. This was largely due to wine stocks being very low by the time of the 2013 harvest and wineries actively seeking fruit to meet demand. Sauvignon Blanc prices were up by \$288 (22 percent) to \$1603 per tonne in 2012/13, very close to the 2008-12 average of \$1601 per tonne. [Produced by Fruition Horticulture Nelson for New Zealand wine]

The Marlborough vineyard model's yield increased 20 percent compared with 2012/13, reporting 439 tonnes from 30 producing hectares. This equates to an average yield of 14.6 tonnes per hectare, compared with 12.2 tonnes in the previous year. In the 2013 report, the monitored group budgeted a yield of 12.3 tonnes per hectare in 2013/14, largely influenced by the yield cap prescribed by their wineries. The significantly higher actual yield was aided by increases in the yield cap accepted by some wineries, a wider band of accepted yield if quality parameters were met, and some instances of alternative customers buying excess fruit. The Wairau growers monitored produced a 19 percent higher average yield than the Awatere growers (17 tonnes per hectare compared with 14.1

tonnes per hectare). In general, the Awatere area was more affected by the rain at harvest, leading to some crop being left behind and selective picking on some hand-harvested blocks.

In the model, Sauvignon Blanc yielded 16.5 tonnes per hectare on average, up 26 percent compared with 2012/13 and 41 percent up on the average yield for the 2009-13 period. On the monitored vineyards, yields for Sauvignon Blanc ranged from 9.8 to 23.1 tonnes per hectare. This significant increase in the predominant variety's yield was the main reason for the overall increased yield. For the model's other varieties, the yield changes were minor compared with 2012/13. [Model vineyard report 2013 by wine Marlborough]

With excellent fruit bud initiation in December 2012 and equally good flowering conditions in December 2013, wineries and growers were well aware of the potentially high yields and used various methods to moderate crops. These included shoot thinning, cutting through a cane and hand or machine fruit thinning. At harvest many wineries enforced contracted yield caps, and a common sight in many vineyards was an area of fruit left behind once the target had been reached. Within the monitored group 6 percent of the total producing area was not harvested for wine production and was either harvested directly to the ground or left unharvested. [New Zealand winegrowers / Ministry of primary industries 2014 viticulture report]

The model returned a record yield in 2016 of 452 tonnes or 15.1 tonnes per hectare, surpassing the previous record in 2014 of 14.6 tonnes per hectare. The overall yield was up 39 percent compared with 2015. [Model vineyard report 2014 by wine Marlborough]

The main driver of this increased yield was significantly heavier bunches, with both berry weight and berry numbers per bunch well above the long-term average. The Sauvignon Blanc yield of 16.5 tonnes per hectare equalled the record 2014 yield and was up 41 percent on 2015. [Model vineyard report 2014 by wine Marlborough]

Sauvignon Blanc's price, at \$1805 per tonne, increased 6 percent compared with 2015. However, the model yield includes 5 percent that was surplus to winery-imposed yield limits and was sold at low prices in 2016. Disregarding these sales, the average price for Sauvignon Blanc would have been \$1850 per tonne. [nzwine.com]

## 7. Land Availability and Price

Over the past twelve months, vineyard values have risen sharply in Marlborough (Colliers International Marlborough vineyard values 2016 overview), with around 23,000 hectares of developed vineyard area. There is still a strong market preference for Marlborough Sauvignon Blanc, with export markets showing good growth. This has resulted in increased demand for land for vineyard expansion within the region, leading to scarcity of supply. (Colliers International Marlborough vineyard values 2016 overview)

Existing wine companies are looking to secure vineyards to meet future growth both onshore and offshore, and investors are taking advantage of the strong yields that can be achieved through vineyard leasing. These buyers prefer larger blocks with a low proportion of non-productive assets, although there are now also smaller lifestyle type vineyards selling very well. Due to good returns generated over the past three years, there is a lack of listings available for sale, which has led to a supply/demand imbalance and driven values up (Colliers International Marlborough vineyard values 2016 overview). Within the prime growing area of Rapaura and lower Wairau, vineyard values range from \$175,000-\$250,000 per hectare. Mid-tier productive blocks within the Wairau and Southern Valleys have been achieving \$150,000-\$200,000 per hectare, while Awatere and Upper Wairau sales range from \$100,000-\$150,000 per hectare [Figure 5]. The main determinants of value are soil/contour, climatic conditions and irrigation – these drive the long-term productivity and capabilities of each vineyard. (Colliers International Marlborough vineyard values 2016 overview)

Vineyard values are closely related to the contract grape price, which is \$1800-\$2000 per tonne for Marlborough Sauvignon Blanc. This price is expected to remain static for the coming season as a result of a large 2016 crop, with most wineries operating at near capacity and increased stocks of wine to be sold in the coming year. (Colliers International Marlborough vineyard values 2016 overview)

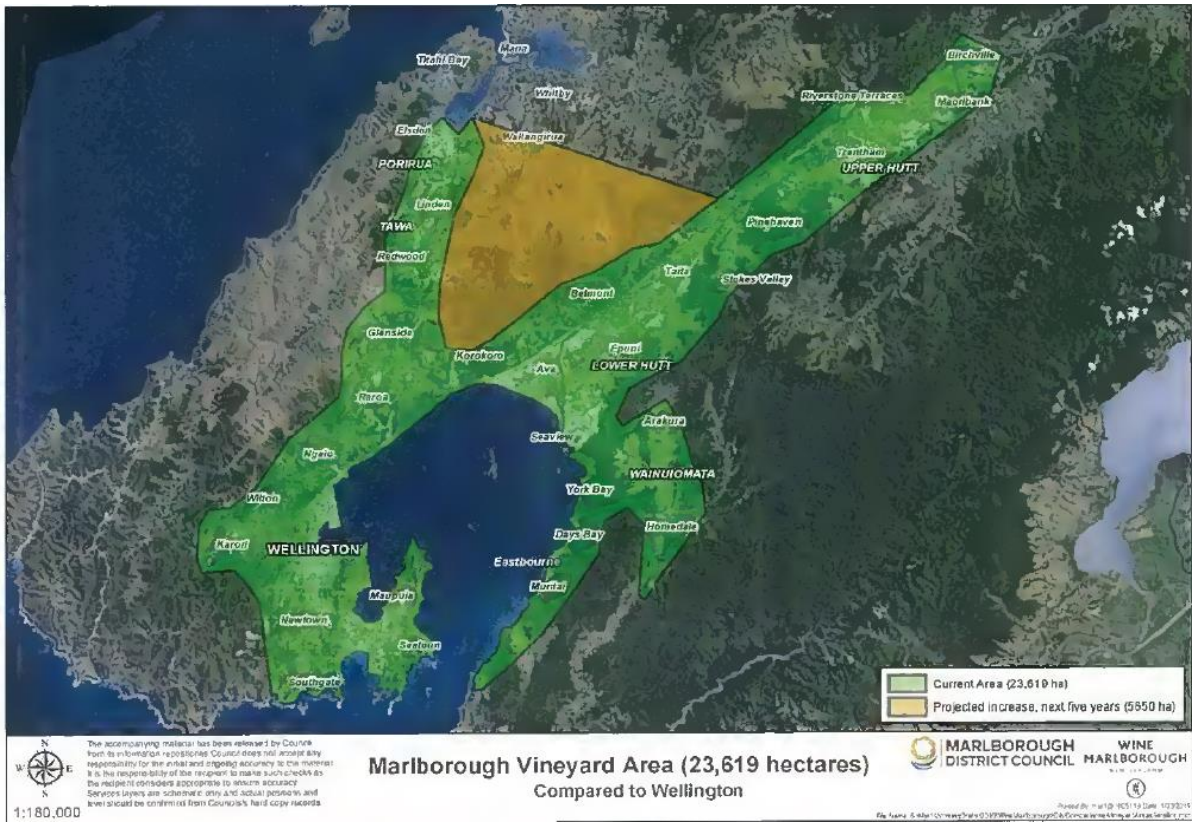
### Vineyard Price range in Marlborough 2016



(Colliers International Rural and Agribusiness)

Figure 5

The below Table uses a map of wellington to show the size of the proposed development for the next Five years in Marlborough.



2016 viticulture monitoring report  
 Figure 6

# 8. Current Market Activity/Sales of Vineyards 2017

Below is data I have taken from Colliers International – viticulture market data for 2017. I have included it to give you a snapshot of where the price for a developed vineyards is this year it shows the rapid market movement this season and supports my recommendations.

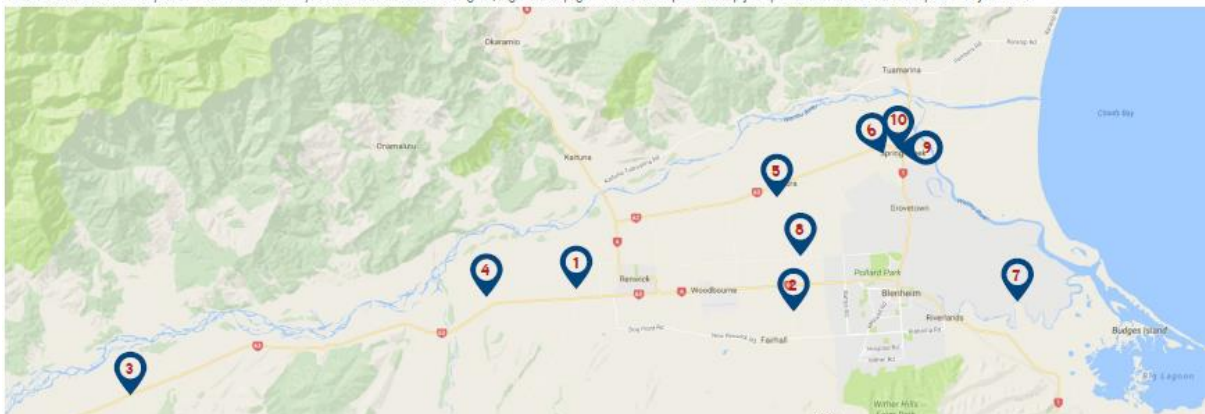
- KEY**
- ha** Total area in hectares
  - Planted area in hectares
  - NSP** Net Sale Price
  - \$/ha** Net sale price per hectare
  - Analysed vineyard value per planted hectare
  - Analysed Internal Rate of Return

## COLLIERS INTERNATIONAL VITICULTURE MARKET DATA SERIES MARLBOROUGH VINEYARD SALES



### 10 MOST RECENT VITICULTURE SALES

In 2017 we will endeavour to provide landowners and rural professionals with a series of regular, regional one page market data snapshot to keep you updated with the current developments in your area.



<p><b>1</b> 438 STATE HIGHWAY 63 December 2016</p> <p><b>ha</b> 12.0000  9.00ha</p> <p><b>NSP</b> \$2,840,000 <b>\$/ha</b> \$236,667</p> <p> \$231,389  10.30%</p>	<p><b>2</b> 95 BELLS ROAD November 2016</p> <p><b>ha</b> 8.3315  7.30ha</p> <p><b>NSP</b> \$2,290,000 <b>\$/ha</b> \$274,860</p> <p> \$244,101  10.17%</p>	<p><b>3</b> 2644 STATE HIGHWAY 63 November 2016</p> <p><b>ha</b> 94.7871  70.50ha</p> <p><b>NSP</b> \$10,500,000 <b>\$/ha</b> \$110,775</p> <p> \$144,313  11.41%</p>	<p><b>4</b> 72 FAREHAM LANE September 2016</p> <p><b>ha</b> 16.0000  14.90ha</p> <p><b>NSP</b> \$3,310,000 <b>\$/ha</b> \$206,875</p> <p> \$184,181  10.23%</p>	<p><b>5</b> 239 HAMMERICHS ROAD September 2016</p> <p><b>ha</b> 8.0000  5.77ha</p> <p><b>NSP</b> \$3,110,000 <b>\$/ha</b> \$388,750</p> <p> \$267,809  7.05%</p>
<p><b>6</b> 152 MURRAYS ROAD August 2016</p> <p><b>ha</b> 4.1076  3.30ha</p> <p><b>NSP</b> \$1,135,000 <b>\$/ha</b> \$276,317</p> <p> \$259,618  9.70%</p>	<p><b>7</b> 295 SWAMP ROAD August 2016</p> <p><b>ha</b> 8.0000  6.30ha</p> <p><b>NSP</b> \$2,510,000 <b>\$/ha</b> \$313,750</p> <p> \$276,857  8.70%</p>	<p><b>8</b> 320 OLD RENWICK ROAD July 2016</p> <p><b>ha</b> 4.2938  2.80ha</p> <p><b>NSP</b> \$1,400,000 <b>\$/ha</b> \$326,052</p> <p> \$252,993  7.45%</p>	<p><b>9</b> 1233 RAPAURA ROAD June 2016</p> <p><b>ha</b> 7.9180  6.70ha</p> <p><b>NSP</b> \$2,070,000 <b>\$/ha</b> \$261,430</p> <p> \$218,645  10.45%</p>	<p><b>10</b> 1233A RAPAURA ROAD June 2016</p> <p><b>ha</b> 5.5550  4.10ha</p> <p><b>NSP</b> \$1,200,000 <b>\$/ha</b> \$216,022</p> <p> \$229,381  10.91%</p>

Figure #7

This data shows Marlborough vineyard values are up considerably from the 2015/16 land value ranges from Figure 5. The data is from the same valuation company.



## 9. Potential Risks / Challenges

- Vulnerable irrigation schemes getting turned off in the dry or at critical times.
- Six farmers in the Marlborough Model Vineyard report are considering investing in alternative water schemes, such as dams and private schemes. These growers are reliant on schemes that are prone to being shut off due to low river flows. A quarter of all growers in the model report having an alternative water source.
- Yield caps being imposed on the back of the large development that is taking place, particularly as this comes into production in 2020/21.
- The view is held by some that the corporate and large growers will hold the majority share of vines in the ground in the future. Considering they have done large-scale development, which keeps the overall costs down, they would be able produce a tonne of grapes for less than a small grower. This could make it difficult for the small grower to compete.
- How will the industry cope with full production in 2020/2021? Will vineyards in marginal areas still be viable given high prices paid for land?
- Powdery mildew is the major disease problem facing the industry. The increased cost of prevention and control have had a significant impact on working expenses in Marlborough, The sexual stage of powdery mildew (chasmothecia) has increased the carryover of inoculums between seasons, requiring many vineyards to shorten the spray interval to prevent economic losses. This is likely to continue in the coming season as powdery mildew is spread by wind (so everyone downwind of a dirty or poorly managed crop is at risk), and also once spraying has ceased prior to harvest the powdery mildew will affect new growth that may be used as next year's canes.
- Permanent skilled workers are becoming harder to find and keep as competition increases for their services.

## 10. Conclusions

Sauvignon Blanc has found its home in Marlborough. The soil and climatic conditions along with extreme variations between the cool nights and sunny days, particularly in autumn, produce the extraordinarily intense varietal characters and succulent fruit flavours Marlborough Sauvignon Blanc is renowned for.

There is little flat, easily developed land left for planting. In fact over the last five years many growers and wine companies have moved to plant out land in areas once considered not suitable for growing grapes. This move, made on the back of strong returns and demand for Marlborough Sauvignon Blanc, has shown no sign of slowing down. Now more than ever the race by the major wine companies to claim these last remaining blocks is seeing record prices paid, especially when the opportunity to purchase a sizeable producing block on the favoured Wairau Plains becomes available. Large growers and wine companies are this year paying more than \$300,000/ha, and with vineyard returns this season sitting at 24.45 percent, why wouldn't they.

With development costs around \$30,000/ha with a minimum of a further \$11,000/ha to get water to the plant, it is imperative you have done your homework on any potential block purchase in terms of water availability, contour, water rights and a fixed cost for the procurement of the products you need to develop.

Some of the wine companies are entering into long-term lease agreements, giving wealthy investors the confidence to snap land up at record prices based on what has been strong demand for Marlborough Sauvignon Blanc.

With the 2017 export price being lowered by 55c per litre for bottled wine and an increase in bulk wine exports, the pressure to add value to the product here in New Zealand is as critical as ever.

Attention must also be given to trade uncertainty in the US and EU as protectionist sentiment may affect demand.

There will always be opportunities as markets move, people over commit or disease threatens. Will the demand still be there? Will the more risky land be as viable as forecast? Will there be the capacity to manufacture all the wine in a good season? Like anything in agriculture it is not without its risks, regardless of when you enter, but to do so right now with little capital would be fraught with risk.

## 11. Recommendations

Based on current returns I would recommend that anyone who has money and would like to invest in Marlborough Sauvignon Blanc do so, Though you must consider where we are in the cycle.

Anyone owning flat bare land with a water right should consider leasing out their land for vineyard development or consider developing it themselves. If you don't have a water right you should consider applying for one.

People lacking capital to make purchasing a vineyard viable should look to lease, or invest their money elsewhere until the market cools or an opportunity presents itself.

## 12. References

- Colliers International – New Zealand, Marlborough vineyard values, 2016 overview.
- Fruition Horticulture 2013, Viticulture Monitoring report
- Ministry for Primary Industries & New Zealand wine – 2014 Viticulture monitoring report.
- Ministry for Primary Industries – Situation and Outlook for Primary Industry March 2017.
- Nick Hoskins - Vine Managers Fact Sheet, Getting a vineyard right the first time round.
- New Zealand Wine Growers Annual report 2016.
- New Zealand wine & ministry of Primary Industries -Viticulture Model vineyard Benchmarking report Marlborough 2016.
- Rural news group website 2017 - [www.ruralnewsgroup.co.nz](http://www.ruralnewsgroup.co.nz)
- Tara Druce & Martin Anderson (Druce Consulting). Marlborough Viticulture labour market survey.
- Warren Moran - New Zealand Wine – The Land, the Vine, the People,2016
- Wine Marlborough website – [www.winemarlborough.com](http://www.winemarlborough.com)

## Appendix

Survey questions used to gather information;

# Survey

To allow a better insight into viability of Marlborough Sauvignon Blanc  
Vineyards across different locations

1) Where do you have your vineyard or vineyards?

2) Table

Varieties planted	Vine age	Ha/planted	Average yield Last 5 years	Return/ha

a) Is there any correlation to your soil type/types in relation to yield? Are you able to describe?

b) Do you have any land Value variations across your sites? If so what and are you able to explain why?

- c) What have you seen happen in relation to value over the last 5 years?
- 
- 3) Have you developed a sauvignon Blanc vineyard/ vineyards in the last 5 years?
    - a) Also what were your major considerations and costs?
    - b) What process did you go through before choosing this area to plant?
    - c) How long from development until you received income?
- 
- 4) If you have purchased a producing vineyard what process did you go through?
    - c) Did you consider other areas?
    - d) If so what areas?
    - e) In your opinion what were the benefits or negatives to other locations?
- 
- 5) What was the process like to get a water right?
    - a) What changes if any have you seen in relation to this process over the last 5 years?
    - b) In your opinion how accessible is water going to be for future development?
- 
- 6) How did you assess the vineyards exposure to frost?
    - a) What have you put in place as far as frost protection? What was the cost of this?
    - b) Do you use contractors in or on your vineyard?
    - c) If so for what?
    - d) How many FTEs does your Vineyard employ

e) And what is the cost/ha of this?

7) Do you grow for your own company or do you supply your fruit to a local company?

a) If so what markets does your company supply?

b) What has been the key for growth in the last 5 years for your customers or the company you supply?

c) Where do you see future growth coming in relation to the markets?

8) What have you seen as major threats in relation to pests and disease

a) What have you done to address this?

Is it working?

9) Are you seeing more powdery mildew in your Vineyard in the past 5 years?

a) Can you explain what impact this has had on returns?

10) Are there any other concerns you have seen in the last 5 years or see in the future that threaten bottom line profit? If so what?

11) What have you noticed as far a market trends over the last 5 years?

12) Would/will you continue to invest in Marlborough Sauvignon?





