32. New Zealand

In four decades, New Zealand has established itself as a supplier of fruity and refreshing wines, in the main made from single varieties. This is due to its mainly cool, maritime climate and the application of modern wine making. The standout variety since the late 1980s is Sauvignon Blanc which is usually produced in an unoaked dry style, typically with pronounced green fruit and tropical flavours and high acidity. New Zealand winemakers created a unique style of Sauvignon Blanc that has been much envied and copied since its introduction to the wine world.

Benefiting from latitudes ranging from 36°–46°S and a high proportion of sunshine hours, New Zealand winemakers are also able to produce a range of red wines, from high acidity Pinot Noirs to full-bodied Bordeaux blends.

After earlier exploratory journeys, European colonists arrived in New Zealand in numbers from 1820s on. Early European settlers were primarily of British and French extraction, and settled in the north island. Over the next 80 years, the population of Maori people was reduced by about half principally due to the spread of European diseases but also through direct conflict and inter-tribal warfare made more lethal by the arrival of European firearms. Virtually all of the land previously inhabited by the Maori was confiscated or purchased, reducing many Maori to poverty. Maori culture and identity have remained robust in spite of this trauma and there are now several Maori-owned wineries.

New Zealand's first grape vines were planted in 1819 by Samuel Marsden, and the first wine making recorded by James Busby in 1840.¹ However, due to an influx of immigrants from the United Kingdom, with their beer and whisky drinking culture, and also to a temperance movement that demanded restrictive laws on wine sales, the growth of the wine industry was inhibited until the early 1960s, with supermarkets only permitted to sell wine after the Sale of Liquor Act 1989 had been passed.

In the first half of the twentieth century, most wines were made in a fortified style and called 'Port' or 'Sherry' as there was little demand locally for dry table wines. Yet other immigrants from Europe, most notably Croatia, established vineyards in West Auckland and Hawke's Bay and started to produce table wines. However, more affordable overseas travel, a greater interest in dining out and increased coverage of food and drink in print and on television prompted a growing appreciation amongst New Zealanders of their country's wines.

With a long-standing dairy industry supporting the country's manufacture and export of butter and cheese, very high standards of hygiene and usage of temperature control were second nature to farmers moving into wine production and were fundamental to delivering clean, consistent and reliable wines.

In 1981, there were only 5,000 hectares of vineyards and an export market of 6,000 hL. However, since then, driven by the success in overseas markets of Marlborough Sauvignon Blanc, the industry has grown to 41,600 hectares with exports of nearly 2.7 million hL in 2022. While Sauvignon Blanc, representing 64 per cent of all plantings in 2022,² was the catalyst for this growth, other varieties such as Pinot Noir, Chardonnay and Pinot Gris have also enjoyed a dramatic rise in popularity.

32.1. The Growing Environment and Grape Growing CLIMATE

New Zealand, consisting of two main islands, North and South, separated by the Cook Strait, is relatively isolated in the South Pacific Ocean, being 1,900 kilometres (1,200 miles) south-east of Australia, 5,000 kilometres (3,000 miles) north of Antarctica, and 9,000 kilometres (5,500 miles) west of Chile, the nearest land masses on each side. The cool Pacific Ocean moderates what could otherwise be a warm area (Rome and Marlborough are the same distance from the equator) and means that most of New Zealand's wine regions have a maritime climate. The exception is Central Otago, which, sheltered from ocean influence by mountains on all sides, has a semi continental climate. New Zealand's length, spanning 36°–46°S, and topography leads to variations in the climate on different parts of the islands. A cool climate is found in most areas of the South Island, whereas the lower latitudes of the North Island mean some regions, such as Auckland and Gisborne, have moderate climates.



Open canopies on lyre-trained vines

New Zealand's vineyards are predominantly found on the east of the islands. The Southern Alps run the length of the South Island and protect vineyards from excessive rains and the prevailing winds that blow in from the Tasman Sea. Even though these mountains mitigate rainfall, Marlborough still receives an average of around 650 mm per year.

High UV radiation, long hours of sunlight and a large diurnal range are other significant aspects of New Zealand's climate. UV levels in New Zealand can be 40 per cent higher than places of similar latitude in the Northern Hemisphere. This is thought to be partially due to the hole in the ozone layer but also due to the very low levels of air pollution. This high UV can enhance the development of colours and tannins, desirable in black grape varieties. In the more southerly latitudes extended daylight hours are also important for increasing the viable ripening period, making grape growing possible in sites where it would otherwise be too cool. The wine regions of the South Island in particular are subject to a large diurnal range, which helps preserve acidity in the grapes.

VINEYARD MANAGEMENT

With more than enough rainfall in many of the wine regions, paired with high levels of UV, sunshine hours exceeding 2,000 hours per year, and relatively fertile soils, canopy management is particularly important for producing high quality fruit. Without this, there would excessive vegetative growth, leading too much shading of the fruit and potentially a reduction in both yield and quality.

Vines are generally trained and trellised using VSP with two canes. Some large volume producers may use more complex trellising systems that have as many as four canes per vine, such as Scott-Henry, but high yields can be an issue for ripening in the coolest years.



Netted vineyard, Canterbury

Grape growers tend to train the vines so that the height of the fruiting zone is relatively high compared to those of vines in many European cool climate regions. High sunlight hours in New Zealand means that vines do not need reflected solar energy from the ground in order to ripen; and higher fruiting zones make harvesting by hand easier. Sufficient rainfall, plentiful sunshine and high nutrient levels mean that yield per vine can be high. Despite low planting densities (often 2,000–2,500 vines/ha). Overall yield per hectare is typically quite high. For example, the average yield in New Zealand in 2022 was 92 hL/ha, a significantly larger harvest than the average of the preceding five years.³ Machine harvesting is commonplace as many of the vineyards are planted on flat land.

For more on growing Sauvignon Blanc, see the box on 'Producing the distinctive style Marlborough Sauvignon Blanc' below.

As rainfall levels are often quite high, humidity and therefore fungal diseases can be a problem, especially in the warmer North Island. With very few predators in New Zealand, many different bird species thrive. Birds can cause substantial damage in vineyards; not only eating grapes but also damaging grape bunches so that bacterial and fungal diseases can infect the fruit. This has led to producers putting netting over their vines to protect the fruit before harvest (adding to cost), and also to installing bird scarers.

Despite high levels of rainfall, irrigation may be practised in some areas due to free draining alluvial soils, and due to strong winds that increase evapotranspiration. Windbreaks of trees may be planted to reduce winds but this can exacerbate problems with birds.

Sunburn of the fruit is a major concern given the high UV levels and therefore leaf positioning is critical in providing some shade for the grape bunches. In addition, New Zealand's relatively exposed position in the South Pacific means that unsettled weather such as tropical cyclones can cause problems during flowering and fruit set and also during harvest time, with the potential to reduce yields and have a negative impact on fruit quality.

Almost all producers in New Zealand are part of the Sustainable Winegrowing New Zealand initiative, which includes an independently-audited certification programme focused on a number of environmental, social and economic parameters.

Interest in certified organic viticulture is growing with 10 per cent of New Zealand wineries now holding organic certification. Some regions with a focus on small scale production have much higher levels, e.g. Central Otago at 17 per cent, but the overall figure is reduced by the large Marlborough area, which has less than four per cent (figures reported in 2018).⁴ Some producers have chosen to embrace biodynamics as their sustainable model.

32.2. Grape Varieties and Winemaking

Sauvignon Blanc dominates plantings in New Zealand being planted in 62 per cent of the vineyard area. At the same time, a significant number of other varieties are also grown.



New Zealand, top varieties planted, hectares, 2020

Whilst New Zealand is best known for its fresh, fruity varietal wines, it is increasingly producing a wide variety of wine styles. With no GI-specific winemaking regulations, experimentation with different winemaking techniques to create new styles is common.

The pronounced style of Sauvignon Blanc is typically made with low fermentation temperatures in a neutral vessel, usually stainless steel, to retain primary fruit aromas and flavours. Cultured yeasts are used to help increase aromatics. Malolactic conversion is avoided to preserve the high levels of acidity and to prevent any dairy notes. Oak fermentation and maturation are also avoided in this case, as is any extended lees contact. Some producers may have to chaptalize at the beginning of fermentation if it has been a particularly cool year or if they have harvested early. Ascorbic acid, an antioxidant, and SO₂ may also be used to ensure freshness after bottling.

Source: New Zealand Wine⁵

PRODUCING THE DISTINCTIVE STYLE OF MARLBOROUGH SAUVIGNON BLANC

In the vineyard:

- High light levels, adequate water with irrigation as required, careful canopy management to ensure ripe fruit
- High diurnal range means a long growing season producing fruit with intense aromas and high acidity
- Row orientation and careful canopy management to produce the range of aromas desired – fully ripe fruit with tropical flavours on the sunny side of the canopy, higher green pepper and grassy (herbaceous) aromas from fruit grown on the shadier side of the canopy
- Slightly early picking if proportion of herbaceous aromas required in the blend
- Mechanically harvested fruit creates some skin contact with juice from crushed berries during transportation to the winery leading to higher levels of herbaceous aromas

In the winery:

- Reduction of contact with oxygen during processing of fruit by refrigerating fruit to preserve primary fruit characters
- Choice of selected yeast to promote aromatic intensity
- Low fermentation temperature in stainless steel vessels to retain primary fruit character
- Avoidance of malolactic conversion to preserve high acidity and retain primary fruit character
- Minimal ageing on lees (2–3 months) and in stainless steel vessels to retain primary fruit character
- Use of ascorbic acid and SO₂ at bottling, and bottling under screwcap to retain freshness

However, there is an increasing number of producers who are making Sauvignon Blanc with barrel fermentation, lees stirring, partial or full malolactic conversion and oak maturation. Some are also experimenting with skin contact for white grapes, leaving small percentages of production in contact with the skins for up to two months to add texture and aroma.

These methods of winemaking also apply to other white grape varieties. The use of a high level of solids in fermentation, ambient yeast strains, skin contact or oak ageing are increasingly common especially amongst small-volume or premium wines.

For red wines, mid-range fermentation temperatures, cultured yeasts and neutral vessels are used to create high-volume fresh, fruity wines. Winemakers producing premium Pinot Noir and Syrah are experimenting with varying proportions of whole bunches in fermentations, which can give a herbal or floral note. Cold maceration before fermentation is also commonplace, particularly with Pinot Noir, to extract more colour and aromas. Extraction during the winemaking process varies depending on the grape variety and desired style.

Premium examples of red wines tend to be matured in French oak barriques, particularly for the full-bodied Cabernet Sauvignon and Merlot based styles, whereas larger oak vessels are increasingly used for Pinot Noir.

White wines are made in a full range of sweetness levels from dry to sweet. For sweet wines, noble rot is sought-after for premium Semillon and Riesling but some producers are also using long hang times in the vineyard. Fermentation may stop on its own or be halted by the winemaker, using SO₂ and filtration, to leave some residual sugar.

Once wines have been readied for bottling the great majority of producers have now chosen to use screwcap instead of cork for part or all of their production, with many outstanding and premium wines being sealed under screwcap rather than cork. 90 per cent of production is sealed in this way. This is partially due to historical reasons when TCA levels in cork were high but also because of the incidence of premature oxidation and bottle variation. A number of producers switched to screwcap and founded the New Zealand Screwcap Wine Seal Initiative in 2001. Consumer



Mechanised punch-down for Pinot Noir

For a detailed look at the uptake of screwcaps in Australia, New Zealand and beyond, see <u>The New Zealand Screwcap</u> <u>Wine Seal Initiative – Ten years on</u>

acceptance of screwcap, even for premium wines, is well established in the New Zealand market and in some key export markets, such as the UK.

32.3. Regions NORTH ISLAND

Greater Auckland

This area was once the heart of the New Zealand wine industry. Whilst several larger producers retain their headquarters in Auckland most of the production facilities have been moved to Marlborough or Hawkes Bay.

Overall, Greater Auckland can be split into three sub-regions, Waiheke Island, West Auckland and Matakana. They share a moderate maritime climate, often with high humidity, and therefore fungal diseases can be an issue.

Only 40 minutes away via ferry from the central business district of Auckland, **Waiheke Island** specialises in red wines based on Cabernet Sauvignon or Syrah. The island is slightly warmer than most of Auckland and the surrounding water leads to a relatively low diurnal range, helping mid- to late-ripening black varieties to ripen fully. The undulating landscape





Second map to show topography within the regions



Fermenting Chardonnay in barriques

has allowed the best producers to find sheltered positions for their vineyards to protect their vines from the onshore winds. Wines are made in a medium to full bodied, black fruited style with hints of oak spice, and can be outstanding. Again, due to expansion and proximity to Auckland, land prices are rising. This, paired with the expense of transportation to the island, means the wines are generally premium in price. Significant producers include Man O'War and Stonyridge.

A handful of producers still have vineyards in **West Auckland**, the most well-known being Kumeu River, but the high cost of land in the Auckland area and increasing urbanisation means the vineyard area is unlikely to expand and will probably decrease. Some wineries have cellar doors in West Auckland but source most of their fruit from other regions, including Marlborough and Hawke's Bay, due to the high land prices.

Further to the north, **Matakana** produces wines from a range of grape varieties that mainly sell to the strong local tourist trade.

Gisborne

Gisborne, at the eastern tip of North Island, was once the country's largest region of production. However, between 2009 and 2019, the area under vine halved because fruit farmers could get higher prices for kiwi fruit and apples.⁶ The majority of the vines are situated on a flat, fertile floodplain consisting of clay, loam and silt. Chardonnay makes up more than 50 per cent of all plantings. There is a mixture of boutique and high-volume producers, with the highest quality wines coming from vineyards on the hillsides where soils are poorer.

The moderate maritime climate with high hours of sunshine and warming breezes from the north mean Gisborne has few issues with frost and is one of the first regions to harvest each season. High levels of precipitation (1,000 mm) mean there is less need for irrigation than in many other regions. However, this, paired with the fertile soils, means devigorating rootstocks and precise canopy management are needed to prevent excessive growth of the canopy. With a high chance of rain falling during the harvest period, monitoring weather forecasts and picking at the right time is crucial to avoid issues such as dilution or rot.

Chardonnay – The wines can range from inexpensive examples, made in a simple, fruity, unoaked style to premium, outstanding quality, full- bodied, barrel-fermented styles with ripe stone fruit, creamy flavours and medium to medium (+) acidity.

Pinot Gris – This is the second most planted grape, with sweetness levels ranging from dry to medium-dry. It is made in different styles from simple, inexpensive, fruity wines to good quality ones that attract a premium price, having often benefitted from lees stirring and old oak maturation.

Gisborne produces smaller quantities of other white varieties including Sauvignon Blanc, Gewürztraminer and Viognier. Black grape varieties account for a low proportion of plantings with Merlot the most planted. Significant producers include Lindauer who source fruit here for sparkling wine and the biodynamic Millton Vineyards.

Hawke's Bay

Wine has been made, if intermittently, in Hawke's Bay since 1851. Today it is the second largest region in terms of production. It is centred around the cities of Napier and Hastings. The moderate maritime climate is similar to that of Bordeaux, with typically 2,180 sunshine hours and 1,000 mm of rainfall annually. These conditions, paired with gravelly, alluvial soils similar to those found in the Médoc, have led to Bordeaux-inspired, Merlot-dominant blends. Very small amounts of Cabernet Sauvignon are grown as it has struggled to ripen in cooler years but the quality of fruit in warm years, as well as improved planting materials and viticultural understanding, means producers are excited about its future potential.

Gimblett Gravels and **Bridge Pa** are the two best-known sub-regions. Their inland location means these areas have relatively warm days. However, with little moderating influence from the coast, frost can be an issue. Both sub-regions are located on alluvial terraces with gravelly soils. The stony topsoil of Gimblett Gravels in particular becomes very warm during the day and releases heat into the evening, helping Syrah, Merlot and Cabernet Sauvignon to ripen. The free-draining nature of these soils means that even with high annual rainfall levels, irrigation is necessary. Bridge Pa has a deeper topsoil of sandy and clay loam aiding water retention and limiting the need for irrigation.

In areas close to the coast the moderating influence of the Pacific breezes cool daytime temperatures and lead to slower ripening and fresher expressions of Chardonnay and Syrah.

Bordeaux varieties and blends – Merlot, the dominant variety, is made in a range of styles. Simple, fruity, inexpensive Merlot wines are made with little oak influence whereas outstanding, premium-priced wines, usually Bordeaux-styled blends with Cabernet Sauvignon and Cabernet Franc contributing, are more concentrated and usually matured in French oak barrels for 12–18 months.

Deeply coloured, very good quality perfumed Malbec is also becoming more popular in both blends and as a single varietal bottling, attracting premium prices.



Fermentation hall for premium red winemaking, Hawke's Bay

Syrah – Hawke's Bay is home to 77 per cent of total Syrah plantings in New Zealand but even so the quantity is tiny (343 hectares).⁷ The wines display concentrated ripe blackberry aromas and a black pepper spice or floral character, medium to medium (+) body and medium (+) acidity. They tend to be matured in French oak with a proportion of new barrels typically for 12–18 months. The finest examples are of outstanding quality and premium priced.

Chardonnay – A range of styles of Chardonnay is produced from relatively simple wines intended for early drinking, to premium wines with grapefruit and white stone fruit aromas. They are typically medium to full bodied with medium acidity. Barrel fermentation is commonly practised especially in premium priced wines, adding vanilla and spice notes. Chardonnay grown by the coast tends to be higher in acidity with lower alcohol and a citrus fruit character. The wines are typically good to outstanding in quality and premium priced.

Although Chardonnay is the most planted white variety there are also sizeable plantings of Sauvignon Blanc, and to a lesser extent, Pinot Gris. Significant producers in Hawke's Bay include Craggy Range and Te Mata Estate.

Wairarapa

This is the most southerly region of North Island and focuses on premium wines, accounting for two and a half per cent of the total area under vine in New Zealand, but only one per cent of overall volume, which indicates low yielding vines.⁸ Wine tourism flourishes here as it is only a one-hour drive from the capital city of Wellington. Of the three sub-regions now collectively known as Wellington Wine Country, Masterton, Gladstone, and **Martinborough**, the latter is the

most renowned, though all three produce intensely flavoured, though elegant, styles of Pinot Noir, and perfumed, but not overtly herbaceous Sauvignon Blanc.

The region has a cool maritime climate. Although days in the summer can be warm, the diurnal range is large, which slows ripening and helps to retain acidity. Low yields can be caused by strong winds coming directly from the Cook Strait during flowering and fruit set. The grapes also tend to be small with thick skins, so that the resulting style of Pinot has higher levels of fine-grained tannins than other New Zealand regions. Sauvignon Blanc is also lower yielding increasing the cost of production. Frosts can also negatively impact yields in some years, though the installation of wind machines has improved this situation.

Wairarapa has a range of soil types but the most dominant is free-draining alluvial gravel terraces with silt loam and loess. The silt loam and loess are considered a cooling influence as they take more time to warm up than rocky soils. This slows ripening, which elongates the growing season, allowing for more concentrated and complex fruit flavours. Significant producers include Ata Rangi and Dry River.

Pinot Noir – This accounts for more than half of all plantings in Wairarapa and produces premium priced, very good to outstanding quality examples. The wines tend to display medium (+) acidity and red cherry and black plum fruit flavours often with some spicy notes. Low yields lead to intense concentration of fruit and medium to medium (+) tannins. Many of the wines are matured in French oak barrels for a period of 12–18 months.

A range of clones can be found. The Abel clone, thought to have been propagated from a cutting taken from Pinot Noir vines at Domaine de la Romanée Conti in Burgundy, is particularly suited to Martinborough's climate. It flowers late and hence misses some of the worst weather periods that could reduce yields. It is also a productive clone with large berries, however, Martinborough's strong winds naturally help to restrict its yields. Dijon clones, such as 667 and 777 are also common.

Sauvignon Blanc – These wines are typically also premium in price and are often of very good quality with some outstanding examples. They tend to show more restrained herbaceous and fruit notes than in Marlborough, though with similarly high acidity. Lower yields can also create wines with more intensity. Some premium examples use wild yeast, partial barrel fermentation and extended lees contact to impart greater texture and complexity.

SOUTH ISLAND

Marlborough

Marlborough is by far New Zealand's largest grape growing region with more than 70 per cent of all hectares planted.⁹ The first vines were planted in Marlborough in 1873. However, due to a growing temperance movement and a climate many perceived to be too cool, further attempts to grow grapes and make wine were limited. The modern era of Marlborough's wine industry began in 1973 (thus, it is celebrating 50 years in 2023), when the director of Montana Wines (now named Brancott Estate) saw the potential for making high quality wines and bought over 1,000 ha of land for turning into vineyards.

Marlborough's climate, cheap land and then, from the 1980s, critical acclaim for the wines meant that, in the following decades, particularly from the 1990s, Marlborough's wine industry grew rapidly.

The Maori name for the region, *Kei puta te Wairau*, meaning 'the place with the hole in the cloud', is an appropriate description of this very sunny region that receives 2,410 sunshine hours per year. The climate is cool with moderately warm summers and mild winters. Marlborough is protected from much rainy weather by surrounding mountain ranges, meaning annual precipitation is around 650 mm. Free-draining alluvial soils mean that irrigation is important, with underground aquifers providing the main source of this water.

The high levels of sunshine coupled with a relatively dry growing season, allowing grapes to be kept on the vine into the autumn, leads to very intensely flavoured fruit. The long, dry growing season means that fungal disease is less of an issue here than in the more humid North Island.

Machine harvesting is commonplace. Whilst this is mainly due to the flat landscape, research has shown that machine harvesting promotes the flavour precursors that generate the passionfruit and green bell pepper aromas that are typical of Marlborough Sauvignon Blanc. Research has shown these aromas can be 5–10 times higher when the grapes have been machine harvested compared to when the grapes have been hand-harvested due to the short period of maceration on the skins that happens as the grapes are being picked and transported.¹⁰

Generally, grapevines are planted in the two main valleys, the Wairau (the largest) and the Awatere, though newer vineyard plantings on the slopes of the Southern Valleys are becoming more common as valley floor space is limited in the Wairau and the Awatere, and because of new irrigation systems being implemented in the Southern Valleys.

Wairau runs from the westernmost edges of Marlborough along the Wairau River to the mouth of Cloudy Bay at the eastern end. Climatic influences differ slightly along the valley, with the western inland end experiencing less moderating influence from the ocean, and hence warmer days and cooler nights (greater diurnal range). These vineyards are also at greater risk of frost. The Wairau Valley is a former riverbed providing a combination of gravel, silt, sand, loam and clay soils that vary in their composition according to the site. In general, the soils



Large vineyard, Wairau Valley, Marlborough

are more fertile and the water table higher nearer the coast, meaning these sites are more naturally able to produce higher yields than those further inland. These free draining soils require irrigation, but also provide the warmth needed to extend the growing season in this area, allowing for intense aromas and flavours to build up over the season. Sauvignon Blanc is the most planted grape variety and depending on the soil and site can vary from tropical passionfruit notes to grassy, herbaceous notes. Pinot Noir, Chardonnay and Pinot Gris are also widely planted.

Southern Valleys is the collective name for a number of north-south running valleys, located south of the main plain of the Wairau, with vineyards planted on the surrounding hillsides. Soils here have more clay than in the rest of Marlborough, which helps retain water and has a cooling influence. This slows ripening and harvesting time can be up to two weeks later than in the Wairau. Pinot Noir therefore thrives, as it needs a long season to develop pronounced aromatics, and tannins and flavours can ripen without risking very high sugar, and hence alcohol, levels.

To south of the Wairau, over the Wither Hills, lies the **Awatere** which is cooler and windier due to its proximity to the coast and higher elevation. Harvest here is later than in the rest of Marlborough. Sauvignon Blanc wines from this area are generally more herbaceous and less tropical than those found in the Wairau with very high levels of acidity, due to the cooler temperatures. Due to the windy weather, Awatere Pinot Noir tends to have smaller berries with thicker skins, leading to more deeply coloured wines than in the Wairau.



Sauvignon Blanc, Awatere, Marlborough

The following wine styles are made:

Sauvignon Blanc – Over 80 per cent of all the plantings in Marlborough are Sauvignon Blanc.¹¹ The most typical and best-known style is dry with high acidity and intensely aromatic with a mixture of herbaceous, floral and tropical fruit aromas, particularly passionfruit.

Quality levels typically range from good to very good, and prices from inexpensive to mid-priced, though there are premium examples. Producers may blend grapes from the different sub-regions or vineyard sites to obtain a desired range of aromas. Blending may also be necessary for high volume producers to acquire the volume of grapes necessary for their top-selling wines. This style is generally produced using cool fermentation temperatures and cultured yeasts, preventing malolactic conversion and not using oak in maturation. Producers are also experimenting with ambient yeasts, partial barrel fermentation and lees stirring to create more complex, highly textured examples that can be very good to outstanding in quality and premium priced. Depending on where the grapes are grown, some producers are focusing on more site-specific expressions rather than blending with fruit from across the region.



Large-volume winemaking, Marlborough

Pinot Noir – Accounting for only 10 per cent of all plantings, Pinot Noir is becoming more and more popular as the quality of fruit coming from the Southern Valleys has been recognised. There tends to be three main styles coming from Marlborough. Wines made in a light-bodied, juicy red-fruited style, suitable for early drinking, tend to come from the alluvial plains of the Wairau valley, and generally fall into the mid-priced sector. On the clay and loess slopes of the Southern Valleys, Pinot Noir has more intense fruit aromas and flavours, often red cherry and plum, and a medium to full body. These wines tend to be matured in oak, can be very good

to outstanding in quality and are premium priced. Pinot Noir grapes from the windier, cooler Awatere Valley tend to have thicker skins, leading to deeper coloured wines, but can also have a floral and herbal character in addition to red plum fruit. They also tend to be matured in oak and can range from good to outstanding.

Chardonnay – A range of styles of Chardonnay is produced in Marlborough. Chardonnay can be unoaked, made in a medium-bodied style with simple stone fruit and citrus fruit flavours. They are usually good to very good quality and mid-priced. However, there are also outstanding complex examples that display intense stone fruit and citrus aromas and spicy oak notes of toast, very subtle dairy aromas from malolactic conversion and yeast notes from lees stirring. This latter style tends to be premium in price.

Pinot Gris – Two main styles of Pinot Gris are produced; lighter-bodied with youthful fresh fruit and full-bodied with riper fruit and sometimes barrel maturation. They range from crisp semi-aromatic, easy drinking mid-priced styles to wines with intense, ripe stone fruit with honeysuckle and spicy notes. The simpler, less intense versions can range from dry to off-dry and tend to be fermented in stainless steel tanks at cool fermentation temperatures with a little lees contact. They are often of good quality and mid-priced. The richer, more intense wines also range from dry to off-dry and tend to show ripe stone fruit, honeysuckle and spicy notes. A range of techniques are being experimented including partial barrel fermentation, reliance on ambient yeasts, lees stirring and oak maturation.

There are also much smaller plantings of aromatic varieties such as Riesling, Gewürztraminer and Viognier. Significant producers, among many, include Villa Maria and Cloudy Bay.

Nelson

Nelson sits in the north-west corner of South Island. Its westerly location means it is not quite as protected as Marlborough from the cool, wet winds from the west, receiving an average of 970 mm of rain per year. Much of the precipitation tends to fall in heavy, sudden storms, which means that despite higher levels of rain than Marlborough, Nelson has a similarly high number of sunshine hours (2,405 hours). Nelson has a cool, maritime climate, the proximity to the coast meaning it experiences cooling sea breezes during the day and remains relatively warm at night.

Nelson focuses on small-scale production as, when the vineyards were first being established, land prices were higher than in Marlborough. Sub-regions include Moutere Hills and Waimea Plains.

Moutere Hills is situated north-west of the town of Nelson and the soils here are clay-



based gravel soils with sandy loam topsoil on undulating terrain. Despite the word 'hills' in its name, vineyards are located at 50–150 m above sea level, and so altitude is not a significant factor. The soils are low in nutrients but their ability to retain water means a number of producers dry farm. The wines from this area tend to be fuller bodied and more concentrated than those from the Waimea Plains. This area remains the source of some of the region's highest quality wines.

The **Waimea Plains** comprise low-lying former riverbed of alluvial soils with fine silt and clay loams of moderate fertility (Waimea in Maori means 'River Garden'). Despite high levels of rainfall, the very free draining soils require irrigation. The wines from this sub-region tend to be lighter in body with fresh fruit characteristics.

The following wine styles are made:

Sauvignon Blanc – This variety from Nelson tends to be quite restrained in style compared with Marlborough. Gentle, subtle expressions of stone fruit, tropical fruit, and herbal nuances are common. Some producers may add complexity by barrel fermentation and maturation, as well as lees stirring. Sauvignon Blanc wines generally range from good to very good and mid-to premium-priced.

Pinot Noir – The wines from Waimea Plains are typically fresh and red fruited with light to medium bodies. These wines tend to be unoaked or spend only a short time in oak and be mid-priced and of good to very good quality. Full-bodied Pinot Noir with fine, ripe tannins and expressive fruit often come from the Moutere Hills. These wines tend to have some French oak maturation adding spicy notes. They can be very good to outstanding in quality and command premium prices.

Plantings of Chardonnay are relatively small, but a number of producers are making very good or outstanding examples. Pinot Gris, Riesling and Gewürztraminer are also among the most common grape varieties. Significant producers include Neudorf.

Canterbury

Situated on the flat, open plain facing the Pacific Ocean, the Canterbury region covers over 200 kilometres (125 miles) but can be broken into two principal sub-regions. Approximately 90 per cent of the region's vineyards are located in the north of the region in **North Canterbury**, which includes the smaller sub-regions of Waipara Valley and Waikari. **Canterbury Plains** has a small number of vineyards around the town of Christchurch and on the Banks Peninsula.

North Canterbury has a cool climate. Nevertheless, sheltered from cooler weather by the Southern Alps and with a high number of sunshine hours, daytime summer temperatures can be surprisingly warm at this southerly latitude. However, nights are usually much cooler, and, in spring, frost can be an issue. Hot, dry north-west winds can also be a warming influence. These winds can be strong enough to damage the green parts of the vine and some growers choose to address this by planting trees as a windbreak. The region lies directly in the rain shadow of the Southern Alps, leading to a relatively low 650 mm of annual rainfall. This, together with the hot, dry winds, which lead to high evapotranspiration rates, mean that irrigation is generally necessary. However, dry summers and autumns and windy conditions keep risk of fungal disease low, and therefore grapes can be left on the vine until the desired harvesting time.

Waipara Valley is slightly warmer than the rest of the region due to the Teviotdale Hills that protect it from the cold, easterly winds. Wines made from grapes grown on the flat valley floor on gravelly sandy loam tend to be lighter bodied and less intense than those made from grapes grown on north and north-west facing slopes on clay loams with differing proportions of limestone. **Waikari**, in the hills just inland from those of the Waipara Valley, has clay-limestone soils. Despite producing a very small proportion of New Zealand's total production, wines from both Waipara and Waikari, particularly Pinot Noir, have received strong critical acclaim over recent years. Significant producers include Bell Hill and Pegasus Bay.



Wine tourism, Canterbury

The following wine styles are made:

Pinot Noir – These wines can range from delicate, red-berried styles to full-bodied, darkfruited examples, both of which have high levels of acidity and can be very good to outstanding quality. The dry sunny summers and cool nights enables the fruit to ripen slowly but fully, producing wines with pronounced fruit expression.

Riesling – Riesling, particularly from the Waipara Valley, produces very expressive, intense, ripely fruited styles, with high levels of acidity, thanks to the high diurnal range, the long growing season and the dry autumns. The wines can be made in a range of ways from dry to sweet, late-harvest styles and are of very good to outstanding quality with premium pricing.

Sauvignon Blanc – This is widely planted and made in a range of styles, from pronounced to those that are more restrained. As in Marlborough, many producers are experimenting with various winemaking techniques to create new and more complex styles.

There are also significant plantings of Pinot Gris, both made in a crisp, fruity style and a riper, full-bodied style, sometimes with skin contact or oak maturation. Chardonnay plantings are small, but there are a number of very good and outstanding quality wines.

Central Otago

With a claim to be one of the most southerly wine growing regions in the world at 46° S, Central Otago is surrounded by the Southern Alps, making it the only region with a semi continental climate in New Zealand.

For another introduction to this region, see Tim Atkins MW, Central Otago

Protected by several mountain ranges from rain-bearing westerly winds, Central Otago is very dry, with an average of 360 mm of rainfall annually. Whilst this means that irrigation is necessary, reduced risk of fungal diseases provides good conditions for organic and biodynamic viticulture.

Summers are warm and dry and the southerly latitude means daylight hours are long. This, paired with the high UV levels, means that the grapes have no problem ripening. However, most vineyards are sited above 300 m of altitude and this, along with shelter from maritime influences, gives a high diurnal range helping to preserve acidity and delicate fruit and floral aromas.

Cold nights mean that spring frosts can be a particular problem with some producers using costly helicopters to help mix colder and warmer bands of air to prevent frost damage. Later in the season, the high level of UV radiation and hot summer days means that canopies need to be carefully managed, with grapes shaded on the west-facing side to provide protection from sunburn against the hot afternoon sun.



Sunlight intensity, Central Otago

There are a range of soils in the area from gravel to clay, with schist as the parent rock. Most of the soils are low in organic matter, and compost and cover crops are widely used to improve nutrient levels and soil structure.

There are six sub-regions in Central Otago, each with its own climatic characteristics due to the lakes, rivers and valley sides within this part of the Southern Alps.

Alexandra is the furthest sub-region south yet regularly records New Zealand's hottest summer temperatures. Cool nights moderate the high temperatures, meaning that the harvest here is not necessarily earlier than elsewhere in the region. The marked diurnal range contributes to wines with fresh fruit aromas and medium (+) acidity.

Gibbston is the highest and coolest of the sub-regions, with vineyards planted at between 320 and 420 metres on the north-facing slopes above the Kawarau Gorge. The grapes tend to ripen later here than in neighbouring subregions and produce wines with fresh flavours and often high acidity. Site selection is important both to enhance ripening and to reduce risk of autumn frosts.

East of Gibbston and slightly lower, the vineyards of **Bannockburn** are planted on the southern banks of the Kawarau River, as it meets the Cromwell Valley. It is the most intensively planted sub-region and vineyards are found on a diverse range of soils. It is also one of the warmest and driest parts of Central Otago and produces ripe, concentrated styles of wine.

The vineyards of **Cromwell, Lowburn and Pisa** run from Cromwell in the south up the western side of Lake Dunstan, planted on semi-arid moraines, fans and terraces as the Pisa mountains slope down towards the lake. They enjoy a warm climate similar to Bannockburn and Bendigo.

At and beyond the northern end of Lake Dunstan, **Bendigo** is possibly the warmest of all the sub-regions, hot enough to ripen Syrah, with vines planted on gentle north-facing slopes and terraces. Semi-arid, with poor stony, free-draining soils, and a continental climate of hot summer days and clear cold nights together produce low yields of intensely concentrated wines.

Wanaka is the smallest and most northerly of the sub-regions and somewhat isolated from the other five. Its vineyards are scattered between the shores of Lake Wanaka and the town of Luggate to the east. With vineyards at 290 to 320 metres above sea level, the regions have a climate slightly cooler than those of Bannockburn, Cromwell and Bendigo, with the lake also moderating temperature extremes.

The following wine styles are made:

Pinot Noir – Pinot Noir dominates Central Otago, accounting for 80 per cent of the region's plantings and nearly 30 per cent of all New Zealand's Pinot Noir plantings.¹² They are generally very good to outstanding in quality and almost always premium or super premium in price. The high UV levels, warm summers and cold nights lead to wines that are deeply coloured and relatively full bodied, but that have a good level of acidity, ripe tannins, and intense red plum and black cherry notes. Ageing in oak barrels adds to complexity and producers are experimenting with whole cluster ferments.

Pinot Gris and Riesling are the next most planted grape varieties. The cool nights help preserve acidity and aromas in these grapes, which can produce wines of very good to outstanding quality. The wines can be made in a dry to medium-sweet style or even fully

sweet for Riesling. Due to the very dry climate, there is no noble rot. Significant producers include Felton Road and Rippon.

Waitaki (North Otago)

At broadly the same latitude of Central Otago's most northerly sub-region, Wanaka, but to the east of the Southern Alps, the Waitaki River flows east to the cool southern Pacific Ocean. The first vineyards were established in 2001 and the remoteness of the area means that plantings remain very small. In the rain shadow of the Southern Alps, the vineyards experience hot and dry summers, with breezes off the ocean providing some temperature relief, cold winters and springs with significant frost risk, and long and dry autumns that allow for long hang times and fully ripe flavours and tannins. Not seen in Central Otago, the underlying geology is limestone. The signature varieties from the area include Pinot Noir and whites, such as Pinot Gris, Riesling, Chardonnay and Gewürztraminer, and wines tend to be of very good quality. Significant producers include Ostler.

32.4. Wine Law and Regulations

Unlike in Europe, there are no restrictive appellation laws and growers are free to plant whatever they like wherever they wish, and to experiment with various types of winemaking to make new styles of wine.

The Geographical Indications Act came into force in New Zealand in 2017. This registers regional place names for wines in New Zealand to ensure these names are protected overseas. As of July 2017, there were 18 names registered, with examples including Marlborough, Martinborough and Hawke's Bay. The Act also allows overseas Gls, such as Prosecco, to be registered in New Zealand, allowing them to have a protected status within New Zealand.

In 2018, Marlborough created a new trademark 'Appellation Marlborough Wine' with the aim of protecting the region's reputation as production volumes and export volumes continue to grow. Wines must be made entirely from grapes grown in Marlborough to agreed maximum yields, certified sustainable, and bottled in New Zealand. Currently this new trademark is only applicable to Sauvignon Blanc.

32.5. Wine Business

As a relative newcomer to the wine business, there have been particular issues for New Zealand wine. Following rapid expansion of the sector post-2000, many small wineries were created that then struggled with the burden of debt in the years after the financial crisis of 2008.¹² The number of growers dropped by 40 per cent in the decade to 2019, pointing to consolidation in the industry. The larger companies continue to see higher levels of profitability. In 2022, 16 large companies had annual sales above four million litres, while there were 66 medium-sized companies with sales between 200,000 and four million litres, and 662 small companies with sales of less than 200,000 litres.¹³

New Zealand produces around 3.25 million hL of wine per year (average of 2020–22) but domestic sales accounts for less than 15 per cent by volume. Supermarket, hospitality and specialist wine stores (in that order) are the most important routes to market. 85 per

cent of companies use cellar door sales to build their brands, while digital sales now account for more sales than cellar door.¹⁴

Due to its small domestic market, exports are very important. Exports are worth about \$1.9 billion NZD, with 60 per cent growth in the decade to 2022.¹⁵ The largest export markets were the USA, the UK and Australia. New Zealand only produces one per cent of the world's wine in volume but is the seventh largest exporter in value and tenth in volume.¹⁶ The rapid increase in production (500 per cent increase between 2000 and 2019)¹⁷ has contributed to the importance of bulk shipping, which now represents approximately forty per cent by volume of all New Zealand wine exports,¹⁸ reflecting the growth in production volumes and trends for in-market bottling.

New Zealand has developed a reputation for high quality wines, with consumers willing to pay above average bottle prices in their respective countries. This quality image has been reinforced through a commitment to sustainable agriculture, particularly grape growing. New Zealand also has a global reputation for its clean and environmentally friendly credentials with 96 per cent of its vineyard certified under the country's sustainability programme, Sustainable Wine New Zealand (SWNZ).¹⁹

With Sauvignon Blanc representing 86 per cent of all exports by volume,²⁰ some producers have concerns that they have relied too heavily on this variety. However due to the culture of experimentation that is prevalent in New Zealand, new and interesting styles of Sauvignon Blanc are being explored and put out to the market place.

Though there are some adventurous consumers trying the new and different styles of Sauvignon Blanc, many are still looking for the very pungent, intensely aromatic, high acid, unoaked style. Big brands are not as prevalent in New Zealand as they are in neighbouring Australia, though some of the larger producers have labels that have become very well known throughout the world. New Zealand wine labels focus on the natural beauty of the country, again helping reinforce the high-quality and eco-friendly image associated with it.

New Zealand Winegrowers, known as <u>New Zealand Wine</u>, coordinates the marketing of the country's wines. Many of its marketing campaigns focus on bringing influencers to the country to immerse them in the culture, landscape, and wine industry. Key promotional initiatives are the two yearly events, the International Sauvignon Blanc Celebration and a similar Pinot event.

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