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Central Otago is the southern-most grape-growing region in the world located at latitude 45° south (similar to both Oregon's Willamette Valley, U.S.A., and Bordeaux in France). The first wine-grapes were planted in Central Otago in 1864. Despite the district's potential as a wine growing area being recognised by French and Australian viticulturists from the 1860's onwards, wine-grapes were not commercially grown again in Central Otago for more than a century. Modern day wine growing began in 1972 and shortly followed in 1975 with experimental plantings at Rippon Vineyard, Lake Wanaka. The first commercial release of a Pinot Noir from Central Otago, the regions flagship variety, was the 1987 vintage from pioneer Alan Brady at the Gibbston Valley winery.



## OUR RECIPE FOR GREAT PINOT NOIR

This could be a pretty long debate, but it seems to us that there are a small number of key requirements for keeping Pinot Noir happy:

### 1. A narrow range of heat summation

GDD's (Growing Degree Days) are measured in a few different ways so numbers are hard to compare, but the

way we do it, 850 – 1100 in the growing season seems to be the sweet spot for Pinot Noir. In latitude, that generally means being at about 45-47° North or 44-45° South, (the Antarctic mass makes the Southern Hemisphere a touch cooler, so the band is a little farther North there).

### 2. Large diurnal shifts

A significant variation between maximum and minimum temperatures each day. Hot days, (but not too far above 30°C), and cool nights, develop flavour complexity. That means being a continental rather than a maritime climate, but not so far from the sea that the frosts become untenable.

### 3. A long, cool, dry autumn

Hang time seems to really improve Pinot Noir. A microclimate that gets the fruit nearly ripe, then cools off and lets it hang for a while seems to add depth to the wine. But Pinot Noir is very susceptible to Botrytis, so low humidity and low rainfall in the autumn is a big plus.

### 4. A heavy but draining soil.

In Burgundy, the combinations of Clay and Limestone achieve this. We have heavy Loess soils interspersed with gravels. Either way, the roots have heavy soil with good minerality and low organic matter, but don't get waterlogged.

It might seem surprising that given such a short list, there aren't a lot more places which fit this recipe for Pinot Noir viticulture. But a quick look at the world map shows why.

To get the diurnal shifts you need to be inland from the coast, (though the Californians get them through coastal

fogs) but if you are too far in from the windward coast, the shifts get too great and frosts in Spring and Autumn get too dangerous. In the Northern Hemisphere there are only 2 continental masses: go inland on each, following the prevailing winds, from 45-47 degrees, moving eastward until the climate gets continental and you arrive at The Willamette Valley in the USA and Burgundy in Europe.

Try the same exercise in the Southern hemisphere and there are similarly only 2 land masses, one is Patagonia, where it is too windy to grow grapes. The other is Central Otago.

## A CLEAN ENVIRONMENT

"If I were a grape, this is where I'd want to grow up"

45 North and 45 South are very different worlds. In the temperate zones, global winds flow West to East round the planet. In the North that journey takes them through heavily populated and industrialised regions. In the South, there is only Central Otago and Patagonia. While well over 100 million people live between 44° and 46° North, there are less than 400,000 living in the Southern strip. This reflects in a lack of pollution and disease pressure - there is no vineyard in Central Otago within 200 kms of a traffic light!

We believe the natural health of our vines is a reflection of our isolation. It may be a bit quiet in the evening, but the grapes don't mind that!



## AN UNIQUE CLIMATE

Central Otago's climate is positively weird! Locked in deep valleys, surrounded by snow covered mountains, the vineyards have very low rainfall, (50cms per year at Bannockburn), though just 120 kilometres to the West, Milford Sound is the second wettest place on Earth with around 28 feet of rain being often seen in a single year. This proximity to very heavy rainfall means that we have large amounts of water available, but not a lot of it comes from the sky. The very low humidity (30-40%, typically) means that Botrytis rarely causes problems and gentle anti rot regimes can be easily achieved.

Long days and very little cloud add to the heat summation. Peak temperatures are often around 31-32° in the summer, but the nights are cool - one day last year we measured 33°C maximum and 3°C minimum in one 24 hour period!

## OUR SOILS

"Some people talk about "terroir". We think we've got some pretty good dirt."

Our soils are moderately old (often windblown Loess), formed over successive ice ages as the glaciers ground Schist rocks to a fine flour. Layers of Loess of various depths are interspersed with river gravels. Add to these sandier soils, formed by water erosion and the viticulturist has a spread of challenges and opportunities.

Loess is highly prized in every winegrowing region where it is found: it seems to bring out complexity in many varieties, but there is no question that Pinot Noir and its relatives thrive on it. While it is very fine and heavy, the Schist particles from which it is made are glass like, and do not readily form clays.

The soils are therefore free draining, even when they are heavy in texture. The low rainfall has kept leaching effects low, so there is a good level of

mineral compounds present, but the low rainfall has kept plant growth sparse, which means the organic content of the soils tends to be low. The result is a soil low in vigour, but high in mineral richness, with the ability of the viticulturist to use irrigation as a finely tuned control; keeping vines at exactly the desired degree of controlled stress, to provide optimum fruit quality.

Interestingly there often seems to be a correlation between favoured planting sites and abandoned gold mines: possibly some of the geology that attracted the miners, also suits the vines.



## THE GEOGRAPHY

Central Otago is really a series of sub regions: each a pocket of possibility in a rugged mountain landscape. Many are quite different and the wines they produce already have distinctive characteristics, though individuals may differ in their definitions!

### Wanaka

The most northerly and one of the most beautiful sub regions. Wanaka is cooler than some, but often has a good frost record because of the influence of the stunning lake.

### Lowburn

This area stretches from the township of Lowburn up the Greater Cromwell valley for some 25 kilometres. It has the largest areas of potential grape land, but very few northerly slopes for such a large area. As it is one of the

warmer regions, Pinot Noir seems to ripen here without the need of slopes.

### Bendigo

Bendigo is possibly the warmest sub region, though only recently planted. Bendigo consists of a North facing ridge at the junction of the Cromwell and Lindis valleys, with more gentle Northerly slopes below it. Many wineries based elsewhere in Central Otago are growing fruit here.

### Alexandra

The most southerly sub region, Alexandra would be in the middle of the heat range of Central Otago microclimates. Spreading from gentle hills to wild rocky escarpments, it is probably the most varied as well. This was one of the earlier sub regions to be explored and planted.

### Gibbston

The first location to be planted in Pinot Noir, Gibbston is a north facing valley slope of The Kawarau Gorge, as it falls from Queenstown to Cromwell. The coolest of the sub regions, and visually very dramatic, it produces a distinctive intensity from the later harvest grapes produced here.

### Bannockburn

Currently the most intensively planted of the microclimates, Bannockburn is a North facing crescent bordering the Kawarau River as it flows across the base of the Cromwell valley to its meeting with the Clutha River. A warm site, which like Alexandra has a long fruit growing tradition. Famous for its gold mining.

