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9. Vineyard health

How is it that a small country at the tip of South America has always enjoyed the privilege of producing good wines? There are clear historical reasons that established Chile early on as a country with a vitivinicultural tradition. The Spanish planted the vine in all of their colonies. The crop did not prosper in Central America and the Caribbean, but was more successful in the viceroyalties of the Southern Cone, especially in Chile. Therefore by the 18th century, Chile was already the primary wine exporter to all the Spanish colonies.

The country's social habit during the 19th century were very influenced by the "French spirit" and therefore the idea of producing wines with French varieties and technology was readily accepted and developed very quickly throughout the country from midcentury on.

The varieties that exist in Chile today arrived during this time: Cabernet Sauvignon, Carmenere, Merlot, Malbec or Cot, Pinot Noir, Petit Verdot, and the white varieties Chardonnay, Sauvignon Blanc, Semillon and Riesling.

Furthermore, as a product of the phylloxera crisis that destroyed the European vineyards beginning in the 1870s, French techniques and winemakers arrived in Chile to plant new vineyards and make fine wines. The real reasons are nevertheless found in the Chilean territory's remarkable geoclimatic advantages for winegrowing, the climate in the central zone is characterized as Mediterranean, with rainfall concentrated in the winter and a long dry season from late spring through late summer. In the Central Valley, the strip adjacent to the Coastal Range presents maximum temperatures that



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top 86°F during the warmest month, and summer temperatures can vary as much as 27° to 32°F in a single day, thereby presenting both a luminous atmosphere and a relative humidity of 55 to 60% in the summer. In the strip of piedmont along the Andes Mountains, the summer is somewhat cooler and the relative humidity is slightly higher. In this zone, the nocturnal temperatures tend to be very low due to the drainage of cold air from the Andes, which creates an even greater diurnal temperature differential that can exceed 36°F. within this happy combination of factors is the origin of the vine's intense photosynthetic activity that results from the strong solar radiation along with its nocturnal repose due to the abrupt change in temperature; the combination produces a constitution and accumulation of colour and aroma in the grape plus a perfect maturation seldom found elsewhere. South of the Central Valley, in the Maule and Bío Bío regions, grapes are grown in the central part and on hills in the Coastal Range. The maritime influence in this area creates greater thermal accumulation, less luminosity, and increased relative humidity in the air.

From south to north, as a result of the high summer temperatures, the vineyard's potential evapotranspiration fluctuates between 43,000 and 91,500 ft² per hectare. Average annual precipitation also oscillates between 39 inches in the south to 12 inches in the north. Most of this water does not fall during the vine's growth period, and irrigation therefore becomes necessary by late spring. Countless irrigation canals distribute the water provided by the torrents of Andean runoff in the spring and summer. The Andes Mountains are the great irrigation reserve for Chilean agriculture. Paradoxically, irrigation water in Chile is more plentiful duting the driest months than it is during the rainy season because the mountain runoffs are provoked by high temperatures.

The dry summer is also the specific reason that Chilean vineyards are the healthiest in the world.



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The lack of rain during the vine's active growth period is a privilege of the Chilean vineyard, the consequence of which is that disease is rare. Downy mildew, for example, is nonexistent, so the grapes normally reach the vinification process free of any toxic residues. Added to this condition is the geographic isolation of the Chilean territory that acts as a barrier against the migration of disease and that has historically protected our country from the dreaded phylloxera.

Flanked to east by the Andes Mountains, to the west by the Pacific Ocean, to the north by the Atacama Desert, and to the south by the Drake Sea and Antarctica, the Chilean territory has natural sanitary barriers. It is also necessary to mention that the Agricultural and Livestock Service of the Ministry of Agriculture maintains strict control over this area. These naturally healthy conditions allow us to produce nearly organic wine free of all toxic residues. Unfortunately we have still not found the best way to take advantage of this enormous advantage.