Insights into **ARGENTINA'S** WINE REGIONS



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West Longitude

KEY FACTORS for the creation of **the best wines ever**



A series of natural factors combined with a deeply-rooted popular wine culture lend Argentine wines a **unique identity and quality**.



Terroirs Extension & diversity



Altitude Distinctive character



Climate Dry & continental



Soils Low fertility



Water Great purity



Wine Producers Strong commitment



Argentina's got range. Its vast extension offers the possibility of cultivating high-quality vineyards across larger areas compared to other wine producing countries, creating a **great diversity of terroirs.**

This allows to play with various grape varieties and wine styles.





3,700 km 2,299 miles

Distance between North and South **extreme points**





Argentina has a handful of vineyards next to the ocean, like most growing regions of the world, but has the bulk of its vineyards between 600 and 2,000 meters above sea level. This factor means that along a 1,500km line of mountains several oases are developed in which the vines grow under widely varying conditions, all linked to a single factor: **altitude.**



Altitude serves as a temperature

regulator. For every 150 meters (3,28 feet) of linear rise over a point on the map, the average temperature will drop by 1°C.







The Andes range offers variable altitudes, generating a unique variety of terroirs and microclimates.

It is possible to make wines in Jujuy, on the Tropic of Capricorn, and in Sarmiento (Chubut) on the 45° parallel south latitude. And the scenery changes from rugged mountain valleys and villages of cactus in the north, to desert plains and broad valleys in the centre, finishing off in well nourished forests or on the green coastline of the ocean. Naturally, this is reflected in the expression and diversity of Argentine wines.







Argentina's traditional wine regions are located in high-altitude valleys far from the oceans, which makes us **one of the few continental viticultural areas in the world**.

The majority of vineyards are located in arid areas, with dry climates and plenty of sunshine, with no need of artificial intervention.

Argentine wines are "naturally natural". This leads to healthy vineyards and contributes to the production of organic wines.



A COUNTRY OF CONTRASTS Topographic & climatic contrasts











The soil becomes increasingly defining as a viability factor for the vine.

Low organic matter contents (nutrient deprived soils) lead to restricted vine growth. This arid fruitfulness favors the natural development of premium grapes with genuinely distinctive flavors.



The Andes have a physical effect on soils in regions located to the west of the country. The higher you go, the steeper the slopes get and the soil is newer while its composition– determined initially by gravity– changes depending on when it comes into contact with rivers.





The main source of irrigation in mountain valleys is the **meltwater from the Andes**. Therefore, water is completely pure and free from the influence of any contaminating activity.

Due to the water crisis in some provinces at the foot of the Andes, savvy management of water is vital.

Wineries are making an effort to reduce water consumption by improving their irrigation systems as much as possible. Other are making sustainable use of water one of its primary policies.



DRIP IRRIGATION

FLOOD IRRIGATION

There are two main irrigation methods in Argentine viticulture: flood irrigation (especially used in old vineyards) and drip irrigation (introduced in the 90's).





Argentina boasts a whole host of wine producers who are inventing and reinventing wines, therefore reshaping the country's wine offering and developing a national identity in winemaking.

- Increased focus on terroir. What's currently taking place in Argentina is a journey to the land of terroir with much emphasis on parcels, where attention to detail will allow for the declassification of vineyards and wines and ultimately, the best and unique to be produced from a micro-terroir.
- Combination of tried-and-true **traditions** with cutting edge technology and **modern** techniques.
- New projects and new ways of producing wine to showcase the country's diverse and unique terroir.
- **Experimentation with new regions**, turning them into wine regions from scratch, leading to the emergence of new GIs.

Argentina's WINE INDUSTRY **FIGURES**





























World's largest country in cultivated surface













	USD (MIII.)	VARIATION	LITRES (Mill.)	VARIATION	AVERAGE PRICE	VARIATION
BOTTLED WINES & SPARKLING	851,1	♠ 13,2%	235,4	♠ 7,3%	3,62	♠ 5,4%
BULK WINE	71,6	-18,8%	100,6	-39,2%	0,71	
TOTAL	922,6	1 9,8%	336,0	-12,7%	2,75	1 25,8%













TOP 10 MARKETS IN VOLUME (Bottled wines and sparkling)

	USD (MIII.)	PARTICIPATION	LITRES (MIIL)	PARTICIPATION
United States	246,9	29,0%	54,7	23,2%
Brazil	92,6	10,9%	38,7	16,4%
United Kingdom	106,2	12,5%	29,7	12,6%
Canada	67,4	7,9%	14,8	6,3%
Paraguay	18,O	2,1%	13,2 7,9	5,6%
Netherlands	29,8	3,5%		3,3%
Mexico	24,7	2,9%	7,4	3,1%
China	24,7	2,9%	6,3	2,7%
Russia	10,9	1,3%	4,5	1,9%
Colombia	13,5	1,6%	4,3	1,8%
Others	216,3	25,4%	53,9	22,9%
TOTAL	851,1	100,0%	235,4	100,0%

Argentina's WINEMAKING **HISTORY**







XVI

1551

Spanish colonizers introduce the first specimens of Vitis Vinifera in Argentina.

- The soil and weather conditions offered by Argentina's surface favoured the growth of *Vitis Vinifera* near the Andes.
- The Catholic priests planted vineyards near their monasteries to ensure wine for the celebration of Holy Mass.

XIX

1850 | 1880

Development of viticulture as a national industry.

- Expansion of the railway.
- Expansion of vineyard acreage and increase in the amount of wine production.
- European immigrants introduced new vinegrowing techniques and grape varieties.
- Implementation of measures promoting agricultural development.

1853

The first School of Agriculture (Quinta Normal de Agricultura) is inaugurated.

• The objective was to introduce new grape varieties in the country to enhance the national wine industry. Michel Aimé Pouget (French agronomist) was in charge of its management.





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1959

The National Viticulture Institute (INV) was created.

- Wine law N° 14.878 also established that wine is considered "food" in Argentina. INV functions:
- · Control quality and fraud prevention;
- · Labeling and wine normatives;
- Analytic and statistical control.

1970's

• The prevailing model, based on the production of large volumes of low quality wines geared towards the domestic market, collapsed. The sweeping entry of soft drinks and beer into the market led to a drop in the consumption of wine.

1990's

Argentine wines exported worldwide.

- Introduction of Neoliberalism in the national economy.
- Modernization of the wine industry.
- Incorporation of Argentina into the global market: local & foreign investments increased and were complemented by a search for new markets.

1999

- Argentine Wine Law equaled that of the EU in order to improve the export process.
- Law N° 25.163 gave a legal framework for wine origins. It established Geographical Indications (GIs) and also Designations of Origin (DO).



What's the classification system for Argentine wines?









In 1999, a law established how wines should be classified in Argentina **based on their origin**. It was a necessity for the country, and an international requirement to be able to export.

Where does the wine come from? Where the winery is located or where the grapes are grown? To clarify this point, **Geographical Indications** (GIs) and a particular type of them, **Controlled Designation of Origin (DOC)**, were established.

GI (Geographical Indication)

Refers to labeling, that is, if the place where the wine comes from is recognized for its **quality** and explains its taste, but also has legal status to be mentioned on the label.

DOC (Controlled Designation of Origin)

Approved GIs, most

political boundaries.

of them follow

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Gls

Applies to wines from a recognized region, which also has a specific **style**. DOCs are GIs with wine style relugations.



2 DOCs

- Luján de Cuyo (DOC). It is the only one used.
- San Rafael (DOC)

GIs + DOCs complete list <u>here</u>.

ARGENTINA's **WINE REGIONS** from North to South







Traditional vine-growing regions in Argentina are located in an *extensive strip that crosses the country from north to south*, at the foothill of the Andes.

In recent years, producers *have extended the limits of Argentine wine* to the west, into the heights, and south looking for cooler temperatures, and to the east, next to the Atlantic Ocean.

Non-traditional wine regions are also gaining relevance in the center and northeast of the country, contributing to *showcase Argentina's diversity*.



NORTH

WINES OF ARGENTINA

DI

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VARIETIES Distribution by color (vinification)*







- Malbec
- Torrontés Riojano
- Cabernet Sauvignon
- Syrah
- Bonarda

NORTH REGION	Hectares	% Total variety in Argentina	% Total Region
RED GRAPE VARIETIES	3.750,9	3,26%	59,68%
Malbec	2.038,7	4,40%	32,44%
Cabernet Sauvignon	801,5	5,81%	12,75%
Syrah	253,3	2,20%	4,03%
Bonarda	154,3	0,87%	2,45%
Tannat	148,8	17,49%	2,37%
Merlot	112,6	2,32%	1,79%
Cabernet Franc	49,2	3,14%	0,78%
Pinot Noir	28,7	1,44%	0,46%
Tempranillo	28,0	0,53%	0,45%
Petit Verdot	23,8	3,65%	0,38%
Other red varieties	60,5	0,57%	0,96%
WHITE GRAPE VARIETIES	1.427,0	4,13%	22,70%
Torrontés Riojano	1.254,0	16,95%	19,95%
Sauvignon Blanc	52,4	2,75%	0,83%
Chardonnay	41,9	0,73%	0,67%
Moscatel de Alejandría	24,5	1,14%	0,39%
Pedro Giménez	14,0	0,15%	0,22%
Chenin	10,9	0,66%	0,17%
Riesling	6,8	9,18%	0,11%
Viognier	4,6	0,70%	0,07%
Semillón	1,3	0,21%	0,02%
Other white varieties	16,6	0,54%	0,26%
PINK GRAPE VARIETIES	1.107,3	2,47%	17,62%
Cereza	1.018,5	4,00%	16,20%
Criolla Chica	65,4	20,29%	1,04%
Criolla Grande	9,8	0,08%	0,16%
Criolla Mediana	O,1	1,33%	0,00%
Other pink varieties	13,6	0,22%	0,22%



Geographical Indications (GIs)

JUJUY

- → Jujuy
- → Quebrada de Humahuaca

SALTA

- → Cachi
- → Cafayate / Valle de Cafayate
- \rightarrow Molinos
- → Salta
- → San Carlos

TUCUMÁN

- → Tafí
- → Tucumán

CATAMARCA

- → Belén
- → Catamarca
- → Pomán
- → Santa María
- → Tinogasta

CALCHAQUÍ VALLEY



JUJUY NORTH



> NORTH REGION







- Malbec
- Syrah
- Cabernet Franc
- Cabernet Sauvignon
- Merlot
- Sauvignon Blanc

JUJUY	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	51,5	0,03%	0,82%	91,64%	100,00%
Malbec	25,7	0,01%	0,41%	45,73%	49,90%
Bonarda	0,5	0,00%	0,01%	0,89%	0,97%
Cabernet Sauvignon	3,94	0,00%	0,06%	7,01%	7,65%
Syrah	8,44	0,00%	0,13%	15,02%	16,39%
Merlot	2,9	0,00%	0,05%	5,16%	5,63%
Tempranillo	0,02	0,00%	0,00%	0,04%	0,04%
Pinot Noir	0,4	0,00%	0,01%	0,71%	0,78%
Tannat	1,4	0,00%	0,02%	2,49%	2,72%
Cabernet Franc	7,4	0,00%	0,12%	13,17%	14,37%
Petit Verdot	0,4	0,00%	0,01%	0,71%	0,78%
Other red varieties	0,40	0,00%	0,01%	0,71%	0,78%
White grapes (vinification)	4,2	0,00%	0,07%	7,47%	100,00%
Pedro Giménez	0,0	0,00%	0,00%	0,00%	0,00%
Torrontés Riojano	O,1	0,00%	0,00%	0,18%	2,38%
Chardonnay	1,3	0,00%	0,02%	2,31%	30,95%
Moscatel de Alejandría	0,03	0,00%	0,00%	0,05%	0,71%
Chenin	0,0	0,00%	0,00%	0,00%	0,00%
Riesling	0,0	0,00%	0,00%	0,00%	0,00%
Sauvignon Blanc	1,7	0,00%	0,03%	3,02%	40,48%
Semillón	1,0	0,00%	0,02%	1,78%	23,81%
Torrontés Mendocino	0,0	0,00%	0,00%	0,00%	0,00%
Torrontés Sanjuanino	0,0	0,00%	0,00%	0,00%	0,00%
Viognier	0,0	0,00%	0,00%	0,00%	0,00%
Other white varieties	O,1	0,00%	0,00%	0,12%	1,67%
Pink grapes (vinification)	0,5	0,00%	0,01%	0,89%	100,00%
Cereza	0,01	0,00%	0,00%	0,02%	2,00%
Criolla Grande	0,05	0,00%	0,00%	0,09%	10,00%
Criolla Chica	0,39	0,00%	0,01%	0,69%	78,00%
Criolla Mediana	0,0	0,00%	0,00%	0,00%	0,00%
Other pink varieties	0,05	0,00%	0,00%	0,09%	10,00%

NORTH REGION



Geographical Indications (GIs)

JUJUY

- → Jujuy
- → Quebrada de Humahuaca

SALTA NORTH

> NORTH REGION

WINES OF ARGENTINA







- Malbec
- Torrontés Riojano
- Cabernet Sauvignon
- Tannat
- Merlot

SALTA	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	2519,7	1,30%	40,09%	69,91%	100,00%
Malbec	1646,6	0,85%	26,20%	45,68%	65,35%
Cabernet Sauvignon	469,9	0,24%	7,48%	13,04%	18,65%
Tannat	135,5	0,07%	2,16%	3,76%	5,38%
Merlot	52,1	0,03%	0,83%	1,45%	2,07%
Bonarda	48,0	0,02%	0,76%	1,33%	1,90%
Cabernet Franc	41,8	0,02%	0,67%	1,16%	1,66%
Syrah	33,5	0,02%	0,53%	0,93%	1,33%
Petit Verdot	21,4	0,01%	0,34%	0,59%	0,85%
Pinot Noir	19,3	0,01%	0,31%	0,54%	0,77%
Pinot Noir	19,3	0,01%	0,31%	0,54%	0,77%
Tempranillo	9,0	0,00%	0,14%	0,25%	0,36%
Other red varieties	42,6	0,02%	0,68%	1,18%	1,69%
White grapes (vinification)	1033,1	0,53%	16,44%	28,66%	100,00%
Torrontés Riojano	896,9	0,46%	14,27%	24,88%	86,82%
Sauvignon Blanc	48,7	0,03%	0,77%	1,35%	4,71%
Chardonnay	38,1	0,02%	0,61%	1,06%	3,69%
Moscatel de Alejandría	13,7	0,01%	0,22%	0,38%	1,33%
Chenin	10,9	0,01%	0,17%	0,30%	1,06%
Riesling	6,8	0,00%	0,11%	0,19%	0,66%
Viognier	4,6	0,00%	0,07%	0,13%	0,45%
Pedro Giménez	1,4	0,00%	0,02%	0,04%	0,14%
Semillón	0,3	0,00%	0,00%	0,01%	0,03%
Other white varieties	11,7	0,01%	0,19%	0,32%	1,13%
Pink grapes (vinification)	51,6	0,03%	0,82%	1,43%	100,00%
Criolla Chica	41,1	0,02%	0,65%	1,14%	79,65%
Cereza	2,4	0,00%	0,04%	0,07%	4,65%
Criolla Grande	0,4	0,00%	0,01%	0,01%	0,78%
Other pink varieties	7.7	0.00%	0.12%	0.21%	14.92%
NORTH REGION

Geographical Indications (GIs)

SALTA

- → Cachi
- → Cafayate / Valle de Cafayate
- → Molinos
- → Salta
- \rightarrow San Carlos

CALCHAQUÍ VALLEY



NORTH REGION > SALTA Cafayate (GI)

- Cafayate (GI) is the most important valley in Salta and the main wine producer of the region.
- It concentrates 60% of the vineyards in the Calchaquí Valley (GI).









Sandy-loam soils made from thick grains with gravel and fine sands on the surface. These characteristics are similar to the layers of subsoil but with fractions of finer sand located deeper and with presence of round stone.

*Source: National Viticulture Institute - Annual Surface Report (12/31/2021 database).



> NORTH REGION TUCUMÁN

WINES OF ARGENTINA







- Malbec
- Torrontés Riojano
- Cabernet Sauvignon
- Cabernet Franc
- Criolla Chica

TUCUMÁN	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	95,7	0,05%	1,52%	75,35%	100,00%
Malbec	57,3	0,03%	0,91%	45,12%	59,87%
Cabernet Sauvignon	20,9	0,01%	0,33%	16,46%	21,84%
Cabernet Franc	6,4	0,00%	0,10%	5,04%	6,69%
Merlot	5,1	0,00%	0,08%	4,02%	5,33%
Tannat	3,0	0,00%	0,05%	2,36%	3,13%
Petit Verdot	1,7	0,00%	0,03%	1,34%	1,78%
Syrah	1,3	0,00%	0,02%	1,02%	1,36%
Pinot Noir	0,01	0,00%	0,00%	0,01%	0,01%
White grapes (vinification)	23,1	0,01%	0,37%	18,19%	100,00%
Torrontés Riojano	20,9	0,01%	0,33%	16,46%	90,48%
Sauvignon Blanc	1,6	0,00%	0,03%	1,26%	6,93%
Moscatel de Alejandría	0,2	0,00%	0,00%	0,16%	0,87%
Chardonnay	0,04	0,00%	0,00%	0,03%	0,17%
Torrontés Sanjuanino	0,01	0,00%	0,00%	0,01%	0,04%
Other white varieties	0,4	0,00%	0,01%	0,28%	1,52%
Pink grapes (vinification)	8,2	0,00%	0,13%	6,46%	100,00%
Criolla Chica	6,0	0,00%	0,10%	4,72%	73,17%
Cereza	O,1	0,00%	0,00%	0,08%	1,22%
Other pink varieties	2,1	0,00%	0,03%	1,65%	25,61%

NORTH REGION **TUCUMÁN**



CATAMARCA NORTH

> NORTH REGION CATAMARCA









- Torrontés Riojano
- Malbec
- Cabernet Sauvignon
- Syrah
- Bonarda

CATAMARCA	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	1084,0	0,56%	17,25%	43,40%	100,00%
Malbec	334,8	0,17%	5,33%	13,40%	30,89%
Cabernet Sauvignon	310,7	0,16%	4,94%	12,44%	28,66%
Syrah	218,5	0,11%	3,48%	8,75%	20,16%
Bonarda	106,3	0,05%	1,69%	4,26%	9,81%
Merlot	55,4	0,03%	0,88%	2,22%	5,11%
Tempranillo	19,0	0,01%	0,30%	0,76%	1,75%
Tannat	10,3	0,01%	0,16%	0,41%	0,95%
Pinot Noir	9,4	0,00%	0,15%	0,38%	0,87%
Cabernet Franc	1,00	0,00%	0,02%	0,04%	0,09%
Petit Verdot	0,7	0,00%	0,01%	0,03%	0,06%
Other red varieties	17,9	0,01%	0,28%	0,72%	1,65%
White grapes (vinification)	366,6	0,19%	5,83%	14,68%	100,00%
Torrontés Riojano	336,1	0,17%	5,35%	13,46%	91,68%
Pedro Giménez	12,6	0,01%	0,20%	0,50%	3,44%
Moscatel de Alejandría	10,6	0,01%	0,17%	0,42%	2,89%
Chardonnay	2,5	0,00%	0,04%	0,10%	0,68%
Sauvignon Blanc	0,4	0,00%	0,01%	0,02%	0,11%
Chenin	0,03	0,00%	0,00%	0,00%	0,01%
Other white varieties	4,4	0,00%	0,07%	0,17%	1,19%
Pink grapes (vinification)	1047,0	0,54%	16,66%	41,92%	100,00%
Cereza	1016,0	0,52%	16,16%	40,68%	97,04%
Criolla Chica	17,9	0,01%	0,28%	0,72%	1,71%
Criolla Grande	9,3	0,00%	0,15%	0,37%	0,89%
Criolla Mediana	0,1	0,00%	0,00%	0,00%	0,01%
Other pink varieties	3,7	0,00%	0,06%	0,15%	0,35%

NORTH REGION

Geographical Indications (GIs)

CATAMARCA

- → Belén
- → Catamarca
- ➔ Pomán
- → Santa María
- → Tinogasta

CALCHAQUÍ VALLEY



NORTH REGION > CATAMARCA Tinogasta (GI)

The Tinogasta-Fiambalá area holds a string of valleys located at the mountain foothill in the southwest of Catamarca.

59.4%

Province





- Cereza
- Syrah
- Bonarda •
- Torrontés Riojano
- Malbec







Exploring the Calchaquí Valley

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> NORTH REGION CALCHAQUÍ VALLEY GI





- Mountain valley of 270km that crosses 3 provinces: Salta, Tucumán and Catamarca.
- Formed 5 million years ago with the ascent of the Sierras de Quilmes and Aconquija.
- More than 2.000 years of Calchaquí Diaguita's history.
- Viticultural tradition since the 18th Century.
- Remarkable **effect of terroir**: Reds with character & Torrontés.



> NORTH REGION CALCHAQUÍ VALLEY GI

- Vineyards range from **1,650 masl** (5,410 ft) on the valley base around Cafayate, **to 3,111 masl** (10,201 ft) in Altura Máxima (Payogasta, Cachi).
- Six of the world's highest vineyards in Argentina are located in the Calchaquí Valley and, compared to other regions, **it's a high point in the world map of wine.**
- 23 small producers are working at over 2,200 masl (7,220 ft) in Upper Calchaquí Valley and the neighboring province of Jujuy.
- Producing wine in the Calchaquí Valley is more complicated and more expensive than Mendoza due to the lower yields at higher altitudes and the lack of infrastructure and suppliers (located mainly in Mendoza).

NORTH REGION CALCHAQUÍ VALLEY GI Geography









- The best aspects of wine come from the skins, including color, flavor intensity, and concentration of polyphenols.
- The thick skins of the grapes created by extreme conditions of the terroir also produce a different flavor profile compared to other regions, with strong, spicy aromas of black olives, black fruits, herbal notes and muscular tannins.
- Research on high altitude wine **health benefits** confirm that **regular consumption** of these wines contributes to a **longer and more active life**.
- This is due to the **higher concentration of polyphenols**, a naturally occurring antioxidant.



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SP







- Malbec
- Torrontés Riojano
- Cabernet Sauvignon
- Syrah
- Bonarda

CUYO REGION	Hectares	% Totalvariety in Argentina	% Total Region
RED GRAPE VARIETIES	108.091,6	93,91%	58,74%
Malbec	42.982,5	92,70%	23,36%
Bonarda	17.532,3	98,98%	9,53%
Cabernet Sauvignon	12.544,5	90,89%	6,82%
Syrah	11.099,3	96,54%	6,03%
Tempranillo	5.240,0	99,15%	2,85%
Merlot	4.188,3	86,44%	2,28%
Pinot Noir	1.495,4	74,91%	0,81%
Cabernet Franc	1.421,2	90,57%	0,77%
Tannat	660,5	77,63%	0,36%
Petit Verdot	600,9	92,04%	0,33%
Other red varieties	10.326,7	98,08%	5,61%
WHITE GRAPE VARIETIES	32.301,6	93,40%	17,55%
Pedro Giménez	9.233,1	99,17%	5,02%
Iorrontes Riojano	6.051,6	81,79%	3,29%
Chardonnay	5.418,1	94,90%	2,94%
Moscatel de Alejandria	2.124,8	98,50%	1,15%
Sauvignon Blanc	1.686,5	88,55%	0,92%
Chenin	1.642,5	99,04%	0,89%
Torrontés Sanjuanino	1.440,4	96,09%	0,78%
Viognier	633,5	95,96%	0,34%
Semillón	562,3	91,19%	0,31%
Torrontés Mendocino	467,1	86,77%	0,25%
Riesling	53,9	72,74%	0,03%
Other white varieties	2.987,8	97,66%	1,62%
PINK GRAPE VARIETIES	43.615,4	97,31%	23,70%
Cereza Crialla Cranda	24.415,7	95,93%	13,27%
	12.833,4	99,89%	6,97%
Criolla Mediana	230,2	79,49%	0,14%
Other pink varieties	6.102.7	98.53%	3.32%
		50,0070	_, 0 _/0

CUYO REGION







LA RIOJA

- → Arauco
- → Castro Barros
- → Chilecito
- → Famatina
- → Felipe Varela
- → General Lamadrid
- → La Rioja Argentina
- → San Blas de los Sauces
- → Sanagasta
- → Valle de Chañarmuyo
- → Valles del Famatina
- → Vinchina



SAN JUAN

- → 25 de Mayo (→ 9 de Julio
- → Albardón
- → Angaco
- → Barreal
- → Calingasta / Valle de Calingasta
- → Caucete
- → Chimbas
- → Iglesia
- → Jáchal
- → Pocito
- → Pozo de los Algarrobos
- → Rawson
- → Rivadavia
- → San Juan
- → San Martín
- → Santa Lucía
- → Sarmiento
- → Ullum
- → Valle del Pedernal
- → Valle del Tulum
- → Valle Fértil
- → Valle de Zonda
- → Zonda

MENDOZA

- → Agrelo
- → Barrancas
- → Canota / Valle de Canota
- → Distrito Medrano
- → El Paraíso
- → General Alvear
- → Godoy Cruz
- → Guaymallén
- → Junín
- → La Consulta
- → La Paz
- → Las Compuertas
- → Las Heras
- → Lavalle Desierto de Lavalle
- → Los Chacayes
- → Luján de Cuyo (DOC)
- → Lunlunta
- → Maipú

- → Mendoza
- → Pampa el Cepillo
- ➔ Paraje Altamira
- ➔ Rivadavia
- → Russel
- → San Carlos
- → San Martín
- → San Rafael (DOC)
- → San Pablo
- → Santa Rosa
- → Tunuyán
- → Tupungato / Valle de Tupungato
- → Valle de Uco
- → Vista Flores
- CUYO

The influence of the Andes



Región Metropolitana

V Region

400

Million years

SOUTH AMERICAN PLATE 27 – 34 MM/Y

Researchers in the early 21st Century were able to determine that the uplift started about 25 million years ago.

San Luis

antiquo del Estero

Cordoba

Pampean orogenic cycle

Million years

570

Famatinian orogenic cycle

Frontal Cordillera orogenic cycle

CUYO REGION The influence of the Andes Mountain Range

WINES OF ARGENTINA



> CUYO REGION **The influence of the Andes** Soil examples

ALLUVIAL SOILS: IT'S NOT ALL THE

SAME



LOS CHACAYES FAN

TUNUYÁN RIVER FAN

Viticultural Area

CUYO REGION The influence of the Andes Soil examples





LA RIOJA CUYO



> CUYO REGION







- Torrontés Riojano
- Malbec
- Cabernet Sauvignon
- Bonarda
- Syrah
- Cereza

LA RIOJA	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	3390,9	1,74%	1,84%	53,51%	100,00%
Malbec	817,8	0,42%	0,44%	12,91%	24,12%
Cabernet Sauvignon	701,2	0,36%	0,38%	11,07%	20,68%
Bonarda	591,9	0,30%	0,32%	9,34%	17,46%
Syrah	576,3	0,30%	0,31%	9,09%	17,00%
Merlot	127,0	0,07%	0,07%	2,00%	3,75%
Tempranillo	47,3	0,02%	0,03%	0,75%	1,39%
Petit Verdot	39,4	0,02%	0,02%	0,62%	1,16%
Cabernet Franc	27,4	0,01%	0,01%	0,43%	0,81%
Tannat	13,1	0,01%	0,01%	0,21%	0,39%
Pinot Noir	4,6	0,00%	0,00%	0,07%	0,14%
Other red varieties	444,9	0,23%	0,24%	7,02%	13,12%
White grapes (vinification)	2379,8	1,22%	1,29%	37,55%	100,00%
Torrontés Riojano	1917,4	0,99%	1,04%	30,26%	80,57%
Moscatel de Alejandría	271,6	0,14%	0,15%	4,29%	11,41%
Chardonnay	59,2	0,03%	0,03%	0,93%	2,49%
Pedro Giménez	22,7	0,01%	0,01%	0,36%	0,95%
Chenin	17,2	0,01%	0,01%	0,27%	0,72%
Viognier	19,4	0,01%	0,01%	0,31%	0,82%
Sauvignon Blanc	14,9	0,01%	0,01%	0,24%	0,63%
Torrontés Sanjuanino	6,5	0,00%	0,00%	0,10%	0,27%
Semillón	5,6	0,00%	0,00%	0,09%	0,24%
Riesling	0,6	0,00%	0,00%	0,01%	0,03%
Other white varieties	44,7	0,02%	0,02%	0,71%	1,88%
Pink grapes (vinification)	566,3	0,29%	0,31%	8,94%	100,00%
Cereza	441,5	0,23%	0,24%	6,97%	77,96%
Criolla Chica	33,9	0,02%	0,02%	0,53%	5,99%
Criolla Grande	15,4	0,01%	0,01%	0,24%	2,72%
Other pink varieties	75,5	0,04%	0,04%	1,19%	13,33%

CUYO REGION **LA RIOJA**

Geographical Indications (GIs)

LA RIOJA

- → Arauco
- → Castro Barros
- → Chilecito
- → Famatina
- → Felipe Varela
- → General Lamadrid
- → La Rioja Argentina
- ightarrow San Blas de los Sauces
- → Sanagasta
- → Valle de Chañarmuyo
- ightarrow Valles del Famatina
- → Vinchina





> CUYO REGION









- Malbec
- Torrontés
- Syrah
- Pedro Giménez
- Moscatel de Alejandría

SAN JUAN	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	11649,4	5,99 <u>%</u>	6,33%	37,75%	100,00%
Malbec	2916,7	1,50%	1,59%	9,45%	25,04%
Syrah	2332,2	1,20%	1,27%	7,56%	20,02%
Bonarda	2116,9	1,09%	1,15%	6,86%	18,17%
Cabernet Sauvignon	1349,0	0,69%	0,73%	4,37%	11,58%
Merlot	339,1	0,17%	0,18%	1,10%	2,91%
Tannat	283,2	0,15%	0,15%	0,92%	2,43%
Tempranillo	146,1	0,08%	0,08%	0,47%	1,25%
Cabernet Franc	128,4	0,07%	0,07%	0,42%	1,10%
Petit Verdot	95,3	0,05%	0,05%	0,31%	0,82%
Pinot Noir	27,6	0,01%	0,01%	0,09%	0,24%
Other red varieties	1914,9	0,98%	1,04%	6,21%	16,44%
White grapes (vinification)	7923,7	4,07%	4,31%	25,68%	100,00%
Pedro Giménez	2124,5	1,09%	1,15%	6,89%	26,81%
Moscatel de Alejandría	1617,6	0,83%	0,88%	5,24%	20,41%
Torrontés Sanjuanino	1309,4	0,67%	0,71%	4,24%	16,53%
Torrontés Riojano	774,4	0,40%	0,42%	2,51%	9,77%
Chardonnay	648,2	0,33%	0,35%	2,10%	8,18%
Torrontés Mendocino	320,8	0,16%	0,17%	1,04%	4,05%
Sauvignon Blanc	225,2	0,12%	0,12%	0,73%	2,84%
Chenin	190,3	0,10%	0,10%	0,62%	2,40%
Viognier	190,2	0,10%	0,10%	0,62%	2,40%
Semillón	33,6	0,02%	0,02%	0,11%	0,42%
Riesling	7,1	0,00%	0,00%	0,02%	0,09%
Other white varieties	482,4	0,25%	0,26%	1,56%	6,09%
Pink grapes (vinification)	11283,1	5,80%	6,13%	36,57%	100,00%
Cereza	10481,9	5,39%	5,70%	33,97%	92,90%
Criolla Grande	406,6	0,21%	0,22%	1,32%	3,60%
Criolla Chica	78,2	0,04%	0,04%	0,25%	0,69%
Criolla Mediana	6,6	0,00%	0,00%	0,02%	0,06%
Other pink varieties	309,8	0,16%	0,17%	1,00%	2,75%

*Source: National Viticulture Institute - Annual Surface Report (12/31/2021 database).

CUYO REGION **SAN JUAN**

Geographical Indications (GIs)

SAN JUAN

- → 25 de Mayo
- → 9 de Julio
- → Albardón
- → Angaco
- → Barreal
- → Calingasta / Valle de Calingasta
- → Caucete
- \rightarrow Chimbas
- → Iglesia
- → Jáchal
- ➔ Pocito
- \rightarrow Pozo de los Algarrobos
- → Rawson
- → Rivadavia
- → San Juan
- → San Martín
- → Santa Lucía
- → Sarmiento
- → Ullum
- \rightarrow Valle del Pedernal
- → Valle del Tulum
- → Valle Fértil
- → Valle de Zonda
- → Zonda



> CUYO REGION SAN JUAN

HIGHLIGHTS

- Historically San Juan played a key role in the wine industry.
- Wine tradition since 17th Century. Historical producer of table wines.
- **1990's** | Regions of altitude, cold climates.
- **2000's** | Global recognition for its wines.



CUYO REGION SAN JUAN Geographical Indications





> CUYO REGION > SAN JUAN **Pedernal Valley GI**

Annual Ava.

- Located in the southwest part of the province, 90 km (56 miles) from the city of San Juan, between two precordilleras and protected by hills.
- Landscape of hillsides with different orientations, exposures, altitudes and slopes.
- Pedernal Valley GI was approved in 2007.

2.66%

Province

Continental, arid and desert climate. For its average temperatures, it is Winkler III zone.



OOO MAIN VARIETIES 00

> Malbec, Cabernet • Franc, Syrah, Sauvignon Blanc, Chardonnay, Gewurztraminer






> CUYO REGION > SAN JUAN Pedernal Valley GI





- > CUYO REGION > SAN JUAN
 Pedernal Valley GI
 Soil origin
 - The Sierras of Pedernal and the Sierra de Los Pozos constitute a unit of the Eastern Precordillera, which is composed of rocks from the Cambrian period, from the Paleozoic geological era, formed more than 485 million years ago.
 - The rocks of these ranges are of marine origin, formed in a marine sedimentary environment of carbonaceous platform, composed mainly of limestones and alternating dolomites with Black Flint (a silicon oxide).





> CUYO REGION > SAN JUAN Pedernal Valley GI Soil formation



. Los Eerros

ANDES MOUNTAIN RANGE

DEVONIAN

416-359 million years (detritic sedimentary rocks, no limestone)

CENTRAL PRECORDILLERA

Fragments of different mineralogical composition that moved eastward. ORDOVICIAN 510 to 480 million years. Marine sedimentary environment -Limestone.

EASTERN PRECORDILLERA

PEDERNAL

Limestone soils of geological source

> CUYO REGION > SAN JUAN Pedernal Valley GI Soil formation

Winery 0 7/3



WINES OF ARGENTINA

> CUYO REGION > SAN JUAN Pedernal Valley GI Soil composition

WINES OF ARGENTINA

The soils of Pedernal mix elements of **varying antiquity**.

- **Eastern slopes** (Sierra de Pedernal and Los Pozos) Cambrian origin, from the Palaeozoic era (485 million years). Rocks of marine origin: limestones, dolomites and Pedernal negro. Calcareous material of geological origin.
- Western slopes (Sierra del Tontal and Santa Clara) Upper Cretaceous origin (85 million years). Colluvial and alluvial material with trailing rocks that define the sedentary filling of the valley combined with calcareous rock.



- Alluvial and colluvial soils. Sandy loam soils rich in calcareous and flint (pedernales) rocks.
- Good porosity in all the pit, this allows the roots explore it completely.

> CUYO REGION > SAN JUAN Pedernal Valley GI Soil composition

From the mountainous chains of the West (Andes) and by similar processes acting on different parent rocks, fragments of different mineralogical composition originated that moved towards the East, constituting part of the sedimentary fill of the valley.

Calcareous rocks that -by different weathering processes and with the passage of time- were fragmented and displaced by natural transport agents from the mountains to the west of the valley.



> CUYO REGION > SAN JUAN Calingasta GI



- 100km long valley, located between the Cordillera de los Andes (W) and Precordillera (E).
- Planted in mid 20th Century mainly with Criolla (native) grapes: Moscatel blanco, Torrontés Sanjuanino y Listán Prieto.
- Development is currently focused on red varieties.









- Malbec
- Cabernet Sauvignon
- Syrah
- Torrontés Sanjuanino
- Cabernet Franc



Mainly alluvial soil, with several deposits, some coluvial.



> CUYO REGION MENDOZA









- Malbec
- Bonarda
- Cereza
- Criolla Grande
- Cabernet Sauvignon

MENDOZA	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	93051,3	47,84%	50,57%	63,38%	100,00%
Malbec	39248,0	20,18%	21,33%	26,73%	42,18%
Bonarda	14823,5	7,62%	8,06%	10,10%	15,93%
Cabernet Sauvignon	10494,3	5,40%	5,70%	7,15%	11,28%
Syrah	8190,8	4,21%	4,45%	5,58%	8,80%
Iempranillo	5046,6	2,59%	2,74%	3,44%	5,42%
Meriot Direct Main	5722,2	1,91%	2,02%	2,54%	4,00%
Pinot Noir Cabarnat Franc	1463,2	0,75%	0,80%	1,00%	1,57%
Tappat	1205,4	0,65%	0,69%	0,86%	1,30%
Detit Verdot	466.2	0,15%	0,20%	0,23%	0,59%
Other red varieties	7966,9	4,10%	4,33%	5,43%	8,56%
White grapes (vinification)	21998,1	11,31%	11,95%	14,98%	100,00%
Pedro Giménez	7085,9	3,64%	3,85%	4,83%	32,21%
Chardonnay	4710,7	2,42%	2,56%	3,21%	21,41%
Torrontés Riojano	3359,8	1,73%	1,83%	2,29%	15,27%
Sauvignon Blanc	1446,4	0,74%	0,79%	0,99%	6,58%
Chenin	1435,0	0,74%	0,78%	0,98%	6,52%
Semillón	523,1	0,27%	0,28%	0,36%	2,38%
Viognier	423,9	0,22%	0,23%	0,29%	1,93%
Moscatel de Alejandría	235,6	0,12%	0,13%	0,16%	1,07%
Torrontés Mendocino	146,3	0,08%	0,08%	0,10%	0,67%
Torrontés Sanjuanino	124,5	0,06%	0,07%	0,08%	0,57%
Riesling	46,2	0,02%	0,03%	0,03%	0,21%
Other white varieties	2460,7	1,27%	1,34%	1,68%	11,19%
Pink grapes (vinification)	31766,0	16,33%	17,26%	21,64%	100,00%
Cereza	13492,3	6,94%	7,33%	9,19%	42,47%
Criolla Grande	12411,4	6,38%	6,75%	8,45%	39,07%
Criolla Chica	144,1	0,07%	0,08%	0,10%	0,45%
Criolla Mediana	0,8	0,00%	0,00%	0,00%	0,00%
Other pink varieties	5717,4	2,94%	3,11%	3,89%	18,00%

CUYO REGION MENDOZA

Geographical Indications (GIs)

MENDOZA

- → Agrelo
- → Barrancas
- → Canota / Valle de Canota
- → Distrito Medrano
- → El Paraíso
- → General Alvear
- → Godoy Cruz
- → Guaymallén
- → Junín
- → La Consulta
- → La Paz
- → Las Compuertas
- → Las Heras
- → Lavalle Desierto de Lavalle
- → Los Chacayes
- → Luján de Cuyo (DOC)
- → Lunlunta
- → Maipú
- → Mendoza
- → Pampa el Cepillo
- → Paraje Altamira
- → Rivadavia
- → Russel
- → San Carlos
- → San Martín
- → San Rafael (DOC)
- → San Pablo
- → Santa Rosa
- → Tunuyán
- → Tupungato / Valle de Tupungato
- → Valle de Uco
- ➔ Vista Flores



PRIMERAZONA Luján de Cuyo & Maipú



CUYO REGION MENDOZA PRIMERA ZONA

Geographical Indications (GIs)

MENDOZA

- → Agrelo
- → Barrancas
- → El Paraíso
- → Las Compuertas
- → Luján de Cuyo
- → Lunlunta
- → Maipú
- → Russel



> CUYO REGION > MENDOZA PRIMERA ZONA







CUYO REGION > MENDOZA PRIMERA ZONA Brief History - The beginnings

- **17th & 18th Century:** 1st vineyards in Mendoza. Family own and handcraft viticulture of 'criollas' grapes.
 - **1850's:** beginning of industrial viticulture. European varieties planted.
 - **1880:** Railway arrives to Mendoza bringing European immigration, also helping to develop the wine consumption market in Buenos Aires.
 - **70's:** Maximum historical consumption per capita: **90 Its.**
 - **80's:** Changes in consumer habits. Viticultural crisis.
 - **90's:** Commercial opening to the world. International advisors. Wine reconversion.



WINES OF ARGENTINA

> CUYO REGION > MENDOZA **PRIMERA ZONA**Brief History - 20th Century

WINES OF ARGENTINA

- Large scale irrigation network using water from Mendoza River.
- Primera Zona holds 40% of Argentina's wineries.
- City advancement over vineyard areas.
- 1990: D.O.C. Luján de Cuyo.





> CUYO REGION > MENDOZA PRIMERA ZONA Past & Present



ORIGINS

- Flood Irrigation only
- Trellising: low trellis VSP and Parral.
- High density cultivation: 1.80 m X 1 m (5000 to 6000 pl / ha)
- Root-stock.
- Mass selections.
- Vines: French, Italian, Spanish and Criolla.
- Fine wines and table red and white wines

PRESENT DAY

- Flood and drip irrigation.
- Conduction system: low trellis and high trellis.
- Low density cultivation: 2.2 meters X
 1.2 meters (3000 to 4000 pl / ha)
- Grafted/ungrafted rootstock.
- Mass selections of old vineyards and clones.
- French varietals.
- Fine wines, mainly reds.

> CUYO REGION > MENDOZA **PRIMERA ZONA**Climate





> CUYO REGION > MENDOZA **PRIMERA ZONA**Climate

Country .

Mine Decier

Olto.

Country	wine Region	City	GST (C) GDD (C	units) winkler Region	
Washington	Puget Sound	Port Angles	13,4	710 Region la	
Germany	Ruwer	Kasel	13,8	800 Region la	
England	Kent	East Malling	14,1	850 Region la	Gualtallary, Cachi,
Australia	Tasmania	Launceston	14,4	932 Region la	Chubut
New Zealand	Central Otago	Queenstown	14,5	945 Region la	
France	Champagne	Reims	14,7	985 Region la	
Australia	Coonawarra	Coonawarra	16,6	1401 Region II	
Spain	Rias Baixas	Vigo	16,8	1437 Region II	Gualtallary San Dablo
Italy	Piedmont	Torino	17,7	1626 Region II	Sualtanary, San Fabio
France	Bordeaux	Merignac	17,7	1627 Region II	
France	Northern Rhône	Valence	17,8	1664 Region III	
Italy	Friuli	Udine	18,0	1694 Region III	Gualtallary, Paraje Altamira,
Spain	Rioja	Logrono	18,2	1742 Region III	Agrelo, Las Compuertas
Australia	Yarra Valley	Healesville	18,6	1829 Region III	
California	Napa Valley	St Helena	19,3	1983 Region IV	
California	Northern Sonoma	Healdsburg	19,5	2010 Region IV	
Australia	Barossa Valley	Nuriootpa	19,8	2069 Region IV	Lunlunta, Cruz de Piedra,
France	Roussillon	Perpignan	19,8	2076 Region IV	Cafavate
Portugal	Alentejo	Evora	20,1	2134 Region IV	
Italy	Tuscany	Firenze	20,2	2153 Region IV	
Portugal	Madeira	Funchal	21,0	2339 Region V	
Italy	Apulia	Brindisi	21,1	2343 Region V	Coquimbito, La Paz.
Greece	Patras	Patras	21,2	2367 Region V	Santa Rosa
Australia	Hunter Valley	Cessnock	21,7	2481 Region V	
Spain	lerez.	Jerez de la Erontera	21.0	2524 Region V	

CCT (%C) CDD (CS units) Winkley Design

> CUYO REGION > MENDOZA **PRIMERA ZONA**Terroir - Proximal Alluvial fan





Soils, climate & altitude

Lujan de Cuyo - Colluvial - alluvial clay lo...
 Luján de Cuyo - Second alluvial terrace ...
 Luján de Cuyo - colluvial - alluvial silt san...
 Luján de Cuyo - Second alluvial terrace ...
 Luján de Cuyo - Second alluvial terrace ...
 Maipú - First Alluvial Terrace Mendoza Ri...
 Maipú - Second Alluvial Terrace Mendoz...
 Maipú - Colluvial-Alluvial Mix
 Maipú - Colluvial deep soil
 Maipú - Deep silt to alluvial silt from Tun...
 Luján de Cuyo - First Alluvial Terrace Me...
 Luján de Cuyo - colluvial - alluvial silt to d...
 Lujan de Cuyo - Coarse sand and gravels...
 Lujan de Cuyo - Colluvial - alluvial clay lo...

> CUYO REGION > MENDOZA PRIMERA ZONA Terroir - Proximal Alluvial fan





> cuyo region > mendoza > primera zona Luján de Cuyo GI

- Located to the south of Mendoza City, on the pre-cordillera.
- It is composed of 15 districts, some of them are GIs: Agrelo and Las Compuertas.
- It is one of the 2 DOC in Mendoza, together with San Rafael.





> cuyo region > mendoza > primera zona Luján de Cuyo GI





CUYO REGION > MENDOZA > PRIMERA ZONA Luján de Cuyo GI Subregions

WINES OF ARGENTINA



LUJÁN DE CUYO > PERDRIEL



LUJÁN DE CUYO > LAS COMPUERTAS LAS COMPUERTAS (GI)



LAS COMPUERTAS (GI) Soil Composition





> CUYO REGION > MENDOZA > PRIMERA ZONA Maipú GI

- Located in Mendoza city's southeast boundary, between Luján de Cuyo and the eastern departments of Mendoza.
- It is composed of 12 districts, some of them are GIs:
 - Barranças
 - El Paraíso
 - Lunlunta
 - Russel





INES OF ARGENTIN

> CUYO REGION > MENDOZA > PRIMERA ZONA Maipú GI





> cuyo region > mendoza > primera zona Maipú GI Subregions







WINKLER ZONE IV. V ALTITUDE GRADIENT 1,6 % Southwest - Northeast 1 CLIMATE ARID The 930 to 880 RAINFALL m 200 mm 00 Approved STATUS TOTAL SURFACE PLANTED SURFACE 1600 ha 600 ha







>MENDOZA UCO VALLEY Tunuyán | Tupungato | San Carlos



CUYO REGION MENDOZA UCO VALLEY

Geographical Indications (GIs)

UCO VALLEY

- → La Consulta
- → Los Chacayes
- → Pampa el Cepillo
- → Paraje Altamira
- → San Carlos
- → San Pablo
- → Tunuyán
- → Tupungato / Valle de Tupungato
- → Valle de Uco
- \rightarrow Vista Flores



> CUYO REGION > MENDOZA UCO VALLEY GI

- Valley formed by the graben of the Tunuyán River, a tectonic depression.
- Crossed by several rivers and streams –Tunuyán being the largest- all converge on The Zampal, like a fan, where they run towards the plain.
- Rivers, winds and volcanic eruptions generated sedimentary plains where vines are planted, among other crops.
- New plantations raised the need to characterise the terroir of the Uco Valley.



> CUYO REGION > MENDOZA UCO VALLEY GI Cultivated Surface





WINES OF ARGENTINA

> CUYO REGION > MENDOZA UCO VALLEY GI Brief History

- **16th Century**, Jesuits missionaries were the first colonizers that planted vines.
- During the **20th Century** Uco Valley specialized in the cultivation of fruit and vegetables, with some key places for vines: La Consulta, Eugenio Bustos, Vista Flores
- A book of **1922**, written by oenologist Leopoldo Suárez, reported 16 wineries in San Carlos Department.
- Also a book of the same author, reported in **1911** the potential of calcareous soils for Semillon and other grapes, like Malbec.

CONTRIBUCIÓN ESTUDIOS AMPELOGRÁFICOS MALBECK PROVINCIA DE MENDOZA EOPOLDO SUÁREZ

70 CONTRIBUCIÓN Á LOS ESTUDIOS AMPELOGRÁFICOS

ideal es la mixta), su producción es constante, se adapta muy bien á los terrenos pedregosos, especialmente calcáreos, donde su mosto adquiere excelentes cualidades.



> CUYO REGION > MENDOZA > UCO VALLEY San Carlos

-

Villa Seca

Villa Seca

Los Chacayes Vista Flores

> Campo Los Andes

La Consulta

La Consulta

PARAJE ALTAMIRA

1

Vista Flores

San Carlos Eugenio Bustos

Tunuyán

Los Indios

El Cepillo

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Google E

- San Carlos

> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI

- Located in San Carlos, on the alluvial cone of the Tunuyán River.
- Planted in 1900. For the very first part of 20th Century it was considered a qualitative place.
- As it is not a political district, it is a renowned place without clear boundaries.
- Therefore, the name of Altamira was commonly used to point out an imprecise place in San Carlos. It derives from the panoramic view it offers from the highest point.
- Since 2000, it has experienced a marked growth in cultivated area. The red grapes are renowned for their colour and acidity.
- Paraje Altamira GI was approved in 2013, then expanded in 2016.


> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI





> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI Terroir



SAN CARLOS > LA CONSULTA

PARAJE ALTAMIRA





> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI Climate





> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI Altitude and Temperatures





> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI Soils



 \mathbf{V}

WINES OF ARGENTINA



> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI Soils

- 2009: The need to separate it from La Consulta by soil type.
- The alluvial cone of Tunuyán River was the physical factor for the delimitation.
- Paraje Altamira GI was approved in 2013, then expanded in 2016.



UP TO 26 KM



> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI Soil profile

WINES OF ARGENTINA

SAN CARLOS > LA CONSULTA PARAJE ALTAMIRA

LANDSCAPE MORPHOLOGY Alluvial cone of the River Tunuyán

SOIL TYPE

Alluvial and heterogeneous: sandy with big stones (up to 2m) to sandy with smaller rounded stones, rich in limestone deposits; variable depth.



> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI Soil profile comparison





> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Paraje Altamira GI Soils





> CUYO REGION > MENDOZA > UCO VALLEY San Carlos | Los Indios Eugenio Bustos



> CUYO REGION > MENDOZA > UCO VALLEY San Carlos La Consulta GI





> CUYO REGION > MENDOZA > UCO VALLEY

Tupungato

WINES OF ARGENTINA





- > CUYO REGION > MENDOZA > UCO VALLEY
 Tupungato
- It's been part of a Jesuit encomienda since 17th Century.
- The valley has been farmed with orchards, vineyards and horticultural crops since the beginning of 20th Century.
- Flood irrigation was common until mid 90's. Since then, drip irrigation has become more popular mainly on slopes and difficult topographies.
- The personality and uniqueness of the wines has attracted the attention of wine critics and consumers worldwide.
- Tupungato is the only approved GI. Gualtallary is a GI in process of approval.





> CUYO REGION > MENDOZA > UCO VALLEY Tupungato | Gualtallary

- Gualtallary is one of the most exciting wine regions of South America due to the combination of its most diverse climates and soils.
- It has already been requested as a GI by grape growers & a winery consortium.
- There are over 20,000 ha of agricultural land. Only 2,200 ha are planted to date.
- There is limited access to water trough wells or surface water rights from Las Tunas dam.



> CUYO REGION > MENDOZA > UCO VALLEY **Tupungato** | Gualtallary Terroir





> CUYO REGION > MENDOZA > UCO VALLEY **Tupungato** | Gualtallary
Altitude and Climate

WINES OF ARGENTINA



> CUYO REGION > MENDOZA > UCO VALLEY Tupungato | Gualtallary Altitude and Radiation





- Gualtallary goes from 1,080 mts (3,500 ft) to 2,200 mts (7,200 ft) east-west.
- There is a difference of 6°C from the base to the top, as the average temperature drops 1°C every 150 meters.
- Applying Winkler (degree-days or heat summation from budbreak until harvest), the result is:
 - Winkler I from (+/-) 1,500 meters (5,000 feet) onwards.
 - Winkler II in a range that goes (+/-) 1,300(4,200 feet) to 1,500 meters (5,000 feet)
 - **Winkler III** in a range that goes (+/-) 1,080 (3,500 feet) to 1,300 meters (4,200 feet).

> CUYO REGION > MENDOZA > UCO VALLEY **Tupungato** | Gualtallary Terroir





> CUYO REGION > MENDOZA > UCO VALLEY Tupungato | Gualtallary Soils



 \mathbf{V}

WINES OF ARGENTINA

CUYO REGION > MENDOZA > UCO VALLEY
 Tupungato | Gualtallary
 A unique geology with astonishing diversity

• ALLUVIAL DEPOSITS FROM LAS TUNAS RIVER

The alluvial cone of the river delimits three terraces; 2 and 3 are plantation areas. They have similar compositions, pebbles, sand (75/80%), silt (15/20%) and clay (2/5%).

COLLUVIAL DEPOSITS FROM THE FRONTAL MOUNTAIN RANGE

They occupy small areas around the mountain range. They are not relevant nowadays from the point of view of new plantings.

• WIND BLOWN DEPOSITS

They form an extensive area in the heart of the GI, between Las Huayquerías and Las Tunas stream. Formed by loess with variable depth.

• SUPERFICIAL BEDROCK

Extremely rare plantings over calcium carbonate coated stones & stone encrusted calcareous mother rock.

CUYO REGION > MENDOZA > UCO VALLEY Tupungato | Gualtallary Soils - The CO3Ca Index





CALCAREOUS SOILS

- These are desert soils with the typical small bush vegetation in which the leaching of the calcium carbonates by the alluviums takes place, moving the mineral to deeper horizons.
- There, the calcium builds up and solidifies forming a hard coarse rock called caliche as well as coating the stones with a white patina of chalk..
- This type of soil is the most frequent in Gualtallary.







WIND-DEPOSITED SOIL



> CUYO REGION > MENDOZA > UCO VALLEY
 Tupungato | Gualtallary
 Soils

WINES OF ARGENTINA

> CUYO REGION > MENDOZA > UCO VALLEY Tupungato | Gualtallary Soils











> cuyo region > mendoza > uco valley Tupungato | La Carrera Terroir



- It is located at the northwest of Chubut, on the banks of the Chubut River.
- Full-bodied wines, with less acidity. White wines: quite fleshy and can be aged in oak.
- Varietals: the most outstanding is Chardonnay. There is also an unprecedented variety in Argentina, a white grape called "corniola bianca".



> CUYO REGION > MENDOZA **Tupungato**Other relevant districts non GIs

LA CARRERA & EL PERAL

- La Carrera: highest area under new plantings in the Valley.
- Altitude ranges from 1,600m (5,400 ft) to 1,900m (6,200 ft). Winkler II and I.
- There are small and scattered vineyards in the area.
- Alluvial soil.
- There are four rivers flooding the plain: La Carrera and Santa Clara are the most important, linked by Anchayuyo River.
- Wind blown and calcareous deposits. Rich organic matter in the topsoils
- They form an extensive area in the heart of the GI, between Las Huayquerías and Santa Clara creek.

SAN JOSÉ & VILLA BASTÍAS

- Old vineyards developed in the early 20th Century.
- Altitude ranges from 1,050 m (3,500 feet) to 1,200 m (4,000 ft).
- This area is mostly planted with cherry, walnuts and vineyards.
- Predominantly small grapegrowers.
- Chardonnay is widely planted.
- Alluvial and colluvial soils.
- Both banks in the Anchayuyo River are planted over alluvial soils.
- The eastern bank is colluvial with wind blown topsoils.

> CUYO REGION > MENDOZA > UCO VALLEY Tunuyán







CUYO REGION > MENDOZA > UCO VALLEY Tunuyán Soils





- **17th Century:** First settlers arrived in Tunuyán. Before that, it was a land of Huarpes, whose Cacique (chief) was called 'Cuco'.
- During the last 200 years the lower land was used for grazing, fodder and fruit trees (apples and pears).
- Since **1995** new, high-lands were developed for vines at the foot of the Andes, where pressurized irrigation has allowed new plantations.
- New investors quickly arrived and increased vineyard areas. All new areas were planted above 1,000 meters (3,300ft).
- Since **2010**, when these vineyards matured, it was clear that high altitude vines in Tunuyán create a different wine style.
- The need for better understanding of terroir pushed for new GI developments.
- Approved GIs so far: Tunuyán, Los Chacayes, Vista Flores and San Pablo. San Pablo is a well studied and supported GI as it's not fixed on political boundaries.

> CUYO REGION > MENDOZA > UCO VALLEY Tunuyán | San Pablo GI

- Its name corresponds to Estancia San Pablo, a Jesuit mission established there towards the 17th Century.
- In 2000, vineyard cultivation began in the higher areas by Bodega Salentein.
- In 2016 a group of wineries (Salentein, Tapiz and Zuccardi) requested the delimitation of the GI on account of scientific criteria.

	I IV V
ALTITUDE	GRADIENT 4% Northwest - Southeast
1175 to 1720 m	
	RAINFALL 500 mm
	00000
STATUS	···· Pending approval
TOTAL SURFACE	PLANTED SURFACE 475 ha

San Pablo

> CUYO REGION > MENDOZA > UCO VALLEY Tunuyán | San Pablo GI Altitude





> CUYO REGION > MENDOZA > UCO VALLEY Tunuyán | San Pablo GI Climate



WINES OF ARGENTINA

> CUYO REGION > MENDOZA > UCO VALLEY Tunuyán | San Pablo GI Soils



> cuyo region > mendoza > uco valley Tunuyán | San Pablo GI Soils

WINES OF ARGENTINA

Calcareous deposits of microbial origin

> CUYO REGION > MENDOZA > UCO VALLEY Tunuyán | Los Chacayes G|

LOS CHACAYES (GI)

WINKLER ZONE



LANDSCAPE MORPHOLOGY Foothill Plain with Arroyo Grande alluvial fan.

SOIL TYPE

"Torriorthents soils with an abundance of stones in the upper part and some colluvial stretches, well attached to the mountain range." Sand is the central component, mainly in the area of the stream, with fine loess deposits.


> CUYO REGION > MENDOZA > UCO VALLEY Tunuyán | Vista Flores GI

VISTA FLORES (GI) WINKLER ZONE ALTITUDE GRADIENT 0,5% West - East CLIMATE ARID me 1000 to 950 RAINFALL m 280 mm 000 Approved STATUS TOTAL SURFACE PLANTED SURFACE 4700 ha 1500 ha LANDSCAPE MORPHOLOGY Alluvial plain SOIL TYPE Deep soils, predominantly sand and silt. An upwelling of natural waters, peat and isolated flooding.

CUYO REGION > MENDOZA Precordillera Other exciting wine zones



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CANOTA 1000 / 1200m

CHALLAO 1500m

US Dept of State Geographer Image Landsat / Copernicus Mendoza

> CUYO REGION > MENDOZA Las Heras | Uspallata Terroir

• Estancia Uspallata is located in the Quebrada del Minero at the southern tip of the Uspallata Valley. This valley extends 150 km to the north through Mendoza into the province of San Juan, padding through the towns of Barreal and Calingasta.





PATAGONIA & ATLANTIC

WINES OF ARGENTINA

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PATAGONIA & ATLANTIC

VIÑEDOS

7.6

metros/pies





Atlantic ocean.

Chapadmalal GI is the most eastern wine area in Argentina (Atlantic viticulture).

*Source: National Viticulture Institute - Annual Surface Report (12/31/2021 database)





- Malbec
- Merlot
- Cabernet Sauvignon
- Pinot Noir
- Chardonnay

PATAGONIA & ATLANTIC	Hectares	% Total Variety in Argentina	% Total Region
RED GRAPE VARIETIES	2892,2	2,51%	76,39%
Malbec	1234,8	2,66%	32,61%
Merlot	503,3	10,39%	13,29%
Cabernet Sauvignon	414,9	3,01%	10,96%
Pinot Noir	392,8	19,68%	10,38%
Syrah	103,2	0,90%	2,73%
Cabernet Franc	87,9	5,60%	2,32%
Petit Verdot	25,2	3,86%	0,67%
Tannat	18,1	2,13%	0,48%
Bonarda	18,1	0,10%	0,48%
Tempranillo	13,8	0,26%	0,37%
Other red varieties	80,8	0,77%	2,13%
WHITE GRAPE VARIETIES	802,7	2,32%	21,20%
Chardonnay	235,7	4,13%	6,23%
Sauvignon Blanc	155,6	8,17%	4,11%
Torrontés Riojano	81,4	1,10%	2,15%
Torrontés Mendocino	71,2	13,23%	1,88%
Pedro Giménez	63,3	0,68%	1,67%
Torrontés Sanjuanino	58,6	3,91%	1,55%
Semillón	52,4	8,50%	1,38%
Viognier	10,1	1,54%	0,27%
Riesling	9,5	12,82%	0,25%
Moscatel de Alejandría	7,6	0,35%	0,20%
Chenin	5,0	0,30%	0,13%
Other white varieties	52,3	1,71%	1,38%
PINK GRAPE VARIETIES	91,1	0,20%	2,41%
Cereza	12,8	0,05%	0,34%
Criolla Grande	5,0	0,04%	0,13%
Criolla Chica	0,3	0,09%	0,01%
Other pink varieties	73,0	1,18%	1,93%

PATAGONIA & ATLANTIC REGION

Location

It is a very extensive region cultivated from parallel 36° to beyond parallel 45° South latitude.



PATAGONIA & ATLANTIC REGION

Geographical Indications (GIs)

NEUQUÉN

- → Añelo
- → Confluencia
- → Neuquén
- → Alto Valle de Río Negro

RÍO NEGRO

- → Alto Valle de Río Negro
- → Avellaneda
- → General Conesa
- → General Roca
- ➔ Pichimahuida
- ➔ Río Negro

PATAGONIA / PATAGONIA ARGENTINA



PATAGONIA & ATLANTIC REGION

Geographical Indications (GIs)

CHUBUT

→ Trevelin

BUENOS AIRES

- → Chapadmalal
- → Villa Ventana



PATAGONIA & ATLANTIC REGION

Brief history





- **18th & 19th Century** numerous colonies settled in Patagonia, with strong European influence.
- The Negro River was then known as the South American Nile.
- Began the construction of the first irrigation canal. In successive stages it stretched to form a string of agricultural colonies: General Roca, Cinco Saltos, Fernández Oro, among others (all in the province of Río Negro).
 - The 20th Century was an important productive period for wines until the crisis of 1980 ended the expansive cycle.
- The first winery was established in Alto Valle del Río Negro (Northern Patagonia, General Roca).
- 990'S Vine plantation in Argentina was deregulated.
- A new viticultural hub was born in Neuquén looking to diversify its production with wines in San Patricio del Chañar.
- **2000**'S The 2000's saw other areas flourish further north, such as Colonia 25 de Mayo, or further south, such as Hoyo de Epuyén and Sarmiento.
 - GI Patagonia has been approved since 2002. The cultivated surface is separated mainly into two GIs: Neuquén and Río Negro.

LA PAMPA PATAGONIA

WINES OF ARGENTINA





Annual Avg.







- Malbec
- Cabernet Sauvignon
- Merlot
- Cabernet Franc
- Pinot Noir

LA PAMPA	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	269,7	0,14%	7,44%	86,39%	100,00%
Malbec	155,9	0,08%	4,30%	49,94%	57,80%
Cabernet Sauvignon	38,0	0,02%	1,05%	12,17%	14,09%
Merlot	28,3	0,01%	0,78%	9,06%	10,49%
Cabernet Franc	16,2	0,01%	0,45%	5,19%	6,01%
Pinot Noir	13,3	0,01%	0,37%	4,26%	4,93%
Syrah	8,1	0,00%	0,22%	2,59%	3,00%
Petit Verdot	2,8	0,00%	0,08%	0,90%	1,04%
Tannat	1,6	0,00%	0,04%	0,51%	0,59%
Bonarda	1,5	0,00%	0,04%	0,48%	0,56%
Other red varieties	4,0	0,00%	0,11%	1,28%	1,48%
White grapes (vinification)	38,6	0,02%	1,07%	12,36%	100,00%
Chardonnay	11,4	0,01%	0,31%	3,65%	29,53%
Sauvignon Blanc	6,4	0,00%	0,18%	2,05%	16,58%
Pedro Giménez	3,7	0,00%	0,10%	1,19%	9,59%
Torrontés Riojano	2,7	0,00%	0,07%	0,86%	6,99%
Semillón	2,9	0,00%	0,08%	0,93%	7,51%
Viognier	0,9	0,00%	0,02%	0,29%	2,33%
Moscatel de Alejandría	0,7	0,00%	0,02%	0,22%	1,81%
Other white varieties	9,9	0,01%	0,27%	3,17%	25,65%
Pink grapes (vinification)	3,9	0,00%	O,11%	1,25%	100,00%
Criolla Grande	1,3	0,00%	0,04%	0,42%	33,33%
Cereza	0,4	0,00%	0,01%	0,13%	10,26%
Other pink varieties	2.2	0.00%	0.06%	0.70%	56.41%



NEUQUÉN PATAGONIA

WINES OF ARGENTINA

» PATAGONIA NEUQUÉN





VARIETIES Distribution by color (vinification)*





- Malbec
- Cabernet Sauvignon

WINES OF ARGENTINA

- Merlot
- Cabernet Franc
- Pinot Noir
- Chardonnay

NEUQUÉN	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	1497,6	0,77%	41,32%	84,88%	100,00%
Malbec	661,9	0,34%	18,26%	37,52%	44,20%
Cabernet Sauvignon	266,7	0,14%	7,36%	15,12%	17,81%
Merlot	239,8	0,12%	6,62%	13,59%	16,01%
Pinot Noir	238,6	0,12%	6,58%	13,52%	15,93%
Syrah	35,8	0,02%	0,99%	2,03%	2,39%
Cabernet Franc	29,2	0,02%	0,81%	1,66%	1,95%
Petit Verdot	9,4	0,00%	0,26%	0,53%	0,63%
Tannat	5,3	0,00%	0,15%	0,30%	0,35%
Bonarda	3,0	0,00%	0,08%	0,17%	0,20%
Tempranillo	1,9	0,00%	0,05%	O,11%	0,13%
Other red varieties	6,0	0,00%	0,17%	0,34%	0,40%
White grapes (vinification)	261,1	0,13%	7,20%	14,80%	100,00%
Chardonnay	137,5	0,07%	3,79%	7,79%	52,66%
Sauvignon Blanc	81,1	0,04%	2,24%	4,60%	31,06%
Semillón	17,7	0,01%	0,49%	1,00%	6,78%
Torrontés Riojano	12,6	0,01%	0,35%	0,71%	4,83%
Viognier	8,1	0,00%	0,22%	0,46%	3,10%
Torrontés Mendocino	1,4	0,00%	0,04%	0,08%	0,54%
Moscatel de Alejandría	1,0	0,00%	0,03%	0,06%	0,38%
Chenin	0,3	0,00%	0,01%	0,02%	0,11%
Riesling	O,1	0,00%	0,00%	0,01%	0,04%
Other white varieties	1,3	0,00%	0,04%	0,07%	0,50%
Pink grapes (vinification)	5,6	0,00%	0,15%	0,32%	100,00%
Cereza	0,3	0,00%	0,01%	0,02%	5,36%
Criolla Grande	0,02	0,00%	0,00%	0,00%	0,36%
Other pink varieties	5,3	0,00%	0,15%	0,30%	94,29%



» PATAGONIA NEUQUÉN

WINES OF ARGENTINA

Soil Type

CONFLUENCIA

- Landscape morphology: Pleistocene terraces, fluvial terraces, alluvial and colluvial cones.
- Variable soil type according to the position:

Petrogypsic Calcium on the pleistocene terrace; loam, sandy, clayey in the cones, a presence of stones; loam, silty clay inadequately drained in the fluvial terrace.



PATAGONIA REGION > NEUQUÉN San Patricio del Chañar

- Located 37 miles to the northwest of the province's capital (in Añelo Department GI), it has been chosen by the largest winegrowing establishments.
- In the last few years, the vineyards of this valley have grown rapidly in extension and importance.
- The climatic conditions ensure extremely healthy grapes with great concentration of colors and aromas, slowly developing tannins and perfect levels of acidity, which will then yield high quality wines





- Malbec
- Cabernet Sauvignon
- Merlot
- Pinot Noir
- Chardonnay



SOIL

90.2%

Province

Añelo Department

RÍONEGRO PATAGONIA

> PATAGONIA RÍO NEGRO









- Malbec
- Merlot
- Torrontés
- Pinot Noir
- Cabernet Sauvignon
- Pedro Giménez

-					
RÍO NEGRO	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	971,6	0,50%	26,81%	66,75%	100,00%
Malbec	377,7	0,19%	10,42%	25,95%	38,87%
Merlot	220,3	0,11%	6,08%	15,14%	22,67%
Pinot Noir	126,1	0,06%	3,48%	8,66%	12,98%
Cabernet Sauvignon	94,0	0,05%	2,59%	6,46%	9,67%
Syrah	49,8	0,03%	1,37%	3,42%	5,13%
Cabernet Franc	26,7	0,01%	0,74%	1,83%	2,75%
Bonarda	12,4	0,01%	0,34%	0,85%	1,28%
Petit Verdot	12,3	0,01%	0,34%	0,85%	1,27%
Tempranillo	10,3	0,01%	0,28%	0,71%	1,06%
Tannat	0,2	0,00%	0,01%	0,01%	0,02%
Other red varieties	41,8	0,02%	1,15%	2,87%	4,30%
White grapes (vinification)	414,2	0,21%	11,43%	28,46%	100,00%
Torrontés Mendocino	69,8	0,04%	1,93%	4,80%	16,85%
Torrontés Riojano	63,8	0,03%	1,76%	4,38%	15,40%
Torrontés Sanjuanino	58,6	0,03%	1,62%	4,03%	14,15%
Pedro Giménez	59,6	0,03%	1,64%	4,09%	14,39%
Sauvignon Blanc	46,0	0,02%	1,27%	3,16%	11,11%
Chardonnay	39,1	0,02%	1,08%	2,69%	9,44%
Semillón	31,3	0,02%	0,86%	2,15%	7,56%
Moscatel de Alejandría	5,9	0,00%	0,16%	0,41%	1,42%
Chenin	4,5	0,00%	0,12%	0,31%	1,09%
Riesling	4,2	0,00%	0,12%	0,29%	1,01%
Viognier	1,1	0,00%	0,03%	0,08%	0,27%
Other white varieties	30,3	0,02%	0,84%	2,08%	7,32%
Pink grapes (vinification)	69,7	0,04%	1,92%	4,79%	100,00%
Cereza	11,3	0,01%	0,31%	0,78%	16,21%
Criolla Grande	3,7	0,00%	0,10%	0,25%	5,31%
Criolla Chica	0,3	0,00%	0,01%	0,02%	0,43%
Other pink varieties	54,4	0,03%	1.50%	3,74%	78,05%



*Source: National Viticulture Institute - Annual Surface Report (12/31/2021 database).

RÍO NEGRO Soil Type

GENERAL ROCA

> PATAGONIA

- Landscape morphology: Pleistocene terraces, fluvial terraces, alluvial and colluvial cones.
- Variable soil type according to the position: Petrogypsic Calcium on the pleistocene terrace; loam, sandy, clayey in the cones, a presence of stones; loam, silty clay inadequately drained in the fluvial terrace.





PATAGONIA REGION > RÍO NEGRO Río Negro Upper Valley



- It is a 100 mile-long (160km), 6 mile-wide (10km) oasis standing in the Patagonian plateau. It develops mostly on the north margin of the upper course of the Negro River.
- The GI Alto Valle de Río Negro includes the departments of General Roca and El Cuy (Río Negro); Confluencia and Añelo (Neuquén).





• In the same period there's a high frequency of days with strong winds (above 43 km/h). Its predominant direction is of the West and Southwest, cold and dry. The period with the highest frequency of calm conditions is recorded during the months of April to July. Consequently, this factor brings benefits to the crop, as it greatly reduces the danger of diseases in the vine.

265 180 870 590	O ====	\sim
	15.5 °C	197.7 mm/year
ALTITUDE OF	59.9 °F	7.78 in/year
VINEYARDS	TEMPERATURE	RAINFALL
masl/fasl	Annual Avg.	Annual Avg.



Soils of fluvial origin, poor in organic matter. Stony subsoil, gravel type, with granulometries that can go from 3 to 10 cm in diameter. Mixed clay and sandy loam soils with different percentages of gravel in surface, which range from 5% to 30%.

PATAGONIA REGION > RÍO NEGRO Río Negro Lower Valley

- It is located to the east of the province of Río Negro (Adolfo Alsina Department). It extends over 100 km from west to east following the southern margin of the Negro River. The area receives the influence of the Atlantic ocean.
- It is delimited by two plateaus, Cuchillas North and South (25 to 35 m high). It is a plain with a gentle slope to the sea and an average altitude of 4 masl, with some depressions of about 2 m



• The rainiest month is March with 52.8 mm and the driest is August with 23.1 mm. The rains are more abundant in spring-summer (64.9% of the rains), of great importance for agricultural purposes. This is due to the requirements of the crops in full growth, as well as to the incidence of high temperatures and the dominant winds and of greater intensity that usually come from dry sectors.





CHUBUT PATAGONIA

WINES OF ARGENTINA

> PATAGONIA CHUBUT





СНИВИТ	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	50,7	0,03%	1,40%	54,99%	100,00%
Pinot Noir	37,5	0,02%	1,03%	40,67%	73,96%
Merlot	9,2	0,00%	0,25%	9,98%	18,15%
Malbec	3,3	0,00%	0,09%	3,58%	6,51%
Cabernet Franc	0,4	0,00%	0,01%	0,43%	0,79%
Bonarda	O,1	0,00%	0,00%	0,11%	0,20%
Syrah	0,2	0,00%	0,01%	0,22%	0,39%
White grapes (vinification)	33,2	0,02%	0,92%	36,01%	100,00%
Chardonnay	26,5	0,01%	0,73%	28,74%	79,82%
Riesling	2,1	0,00%	0,06%	2,28%	6,33%
Torrontés Riojano	2,0	0,00%	0,06%	2,17%	6,02%
Sauvignon Blanc	1,9	0,00%	0,05%	2,06%	5,72%
Semillón	0,3	0,00%	0,01%	0,33%	0,90%
Other white varieties	0,4	0,00%	0,01%	0,43%	1,20%
Pink grapes (vinification)	8,3	0,00%	0,23%	9,00%	100,00%
Other pink varieties	8,3	0,00%	0,23%	9,00%	100,00%



- Pinot Noir
- Chardonnay
- Merlot
- Malbec
- Riesling

PATAGONIA CHUBUT





> PATAGONIA CHUBUT



Terroir

El Hoyo de Epuyén
 Gualjaina & Paso del Sapo
 Capitán Sarmiento
 Trevelin
 Río Chubut

Andean vineyard are located in humid zones, where it rains as much as 800 mm a year. Frost can happen even in January like in 2006/2009. Soils are acidic and organic with volcanic ash. Variable textures.



PATAGONIA CHUBUT

Terroir

Sarmiento's latitude is the same as Lyon (France) and almost the same as Central Otago (New Zealand).

Chubut

El Hoyo de Epuyén

Río Chubut

🏷 Capitán Sarmiento

ζ 400 m

ζ 400 m

L 300 m

2 45,5° Parellel South



PATAGONIA REGION > CHUBUT Comarca Andina Paralelo 42

- Group of villages, towns and cities located close to each other, in the northwest of the province of Chubut and southwest of Río Negro.
- It includes El Bolsón (Río Negro), El Hoyo, Lago Puelo, Epuyén, among other cities within the Cushamen Department (Chubut). The most important production is found in El Hoyo.
- Temperate-cold climate, with great thermal amplitude.



WINES

- Red: light-bodied, very aromatic, elegant wines with good natural acidity.
- White: very aromatic wines, with high acidity and a long finish;
- Sparkling: ideal climate for producing sparkling wines, 8 years on lees. European style, 100% traditional and natural.





Soils of volcanic origin.

PATAGONIA REGION > CHUBUT 16 de Octubre Valley

- 16 de Octubre Valley was the name given by the Welsh settlers to Trevelin and its surroundings. It is located 150km to the South of Comarca Andina Paralelo 42, with similar soil and climatic conditions.
- Trevelin was recognized as a GI in August 2020. As a mountain range area, it has very marked seasonal cycles and different from the traditional wine-growing regions, such as frosts, rain and snow concentrated between the months of April and August, which usually reach an average of 1000 mm/year, and in spring the winds that predominate from the mountain range and the limit with Chile. In addition, the minimum temperatures usually exceed -4.5°C in spring and autumn, with the possibility of frost during the summer, and the maximum temperatures are registered in January and February, exceeding +30°C.
- Unique wines with marked natural acidity due to climatic conditions. An ideal area to make sparkling wines with low alcohol content.


PATAGONIA REGION > CHUBUT

Paso del Sapo

- It is located at the northwest of Chubut, on the banks of the Chubut River.
- Full-bodied wines, with less acidity. White wines: quite fleshy and can be aged in oak.
- Varietals: the most outstanding is Chardonnay. There is also an unprecedented variety in Argentina, a white grape called "corniola bianca".





PATAGONIA REGION > CHUBUT

Sarmiento

- It is the most important valley in Chubut, where the southernmost vineyards in the world are located (beyond 45°south latitude).
- White wines: aromatic, apt for oak ageing.
- Red wines: medium-bodied, promising wines.





- Pinot Noir
- Chardonnay
- Traminer
- Merlot / Pinot Gris / Torrontés



Río Chubut Lower Valley

- It is a fertile zone located in the northeast of Chubut, crossed by the Chubut River.
- It includes part of the departments of Gaiman and Rawson.





SOIL

ATLANTIC REGION

CHARDONNAY





HIGHLIGHTS

- In the 1990s vine plantation in Argentina was deregulated.
- Some ventures emerged in the Atlantic region.
- The idea of developing oceanic wines gained new strength in 2007 with the development of new vineyards in Chapadmalal.
- GI Chapadmalal was approved in 2014.



ATLANTIC REGION The influence of the Ocean





ATLANTIC REGION Climate / Maturity





ATLANTIC REGION Ripening period - mean temperature (°C)



Image Landsat / Copernicus Data SIO, NOAA, U.S. Navy, NGA, GEBCO © 2018 Google US Dept of State Geographer

16 - 18 18 - 20 20 - 22

ATLANTIC REGION Climate - The impact of temperature





BUENOS AIRES ATLANTIC REGION

TAT AN

*Source: National Viticulture Institute - Annual Surface Report (12/31/2021 database).

- CULTIVATED SURFACE 161,8 0.08% 4.27% $\left(\circ \right)$ Region Hectares Country Patagonia & Atlantic 57° 39' W Argentine wine producers have 500 extended the wine limits to the east, 1.641 where vineyards receive the influence of the Atlantic ocean.
 - Chapadmalal represents the easternmost point for vine cultivation in Argentina.
 - Plenty of new projects are starting to emerge in the region.



> ATLANTIC REGION

38° 08' S

38° 49' S

7.6

62°40' W







ATLANTIC BUENOS AIRES



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WINES OF ARGENTINA



- Chardonnay
- Sauvignon Blanc
- Pinot Noir
- Malbec
- Cabernet Sauvignon

BUENOS AIRES	Hectares	% Country	% Region	% Province	% Colour
Red grapes (vinification)	102,6	0,05%	63,41%	63,41%	100,00%
Pinot Noir	14,4	0,01%	8,90%	8,90%	14,04%
Malbec	13,6	0,01%	8,41%	8,41%	13,26%
Cabernet Sauvignon	12,3	0,01%	7,60%	7,60%	11,99%
Merlot	12,0	0,01%	7,42%	7,42%	11,70%
Tannat	9,6	0,00%	5,93%	5,93%	9,36%
Cabernet Franc	8,4	0,00%	5,19%	5,19%	8,19%
Tempranillo	1,6	0,00%	0,99%	0,99%	1,56%
Syrah	1,1	0,00%	0,68%	0,68%	1,07%
Bonarda	0,7	0,00%	0,43%	0,43%	0,68%
Petit Verdot	0,3	0,00%	0,19%	0,19%	0,29%
Other red varieties	28,6	0,01%	17,68%	17,68%	27,88%
White grapes (vinification)	55,6	0,03%	34,36%	34,36%	100,00%
Chardonnay	21,2	0,01%	13,10%	13,10%	38,13%
Sauvignon Blanc	20,2	0,01%	12,48%	12,48%	36,33%
Riesling	3,1	0,00%	1,92%	1,92%	5,58%
Torrontés Riojano	0,3	0,00%	0,19%	0,19%	0,54%
Chenin	0,2	0,00%	0,12%	0,12%	0,36%
Semillón	0,2	0,00%	0,12%	0,12%	0,36%
Viognier	0,04	0,00%	0,02%	0,02%	0,07%
Other white varieties	10,4	0,01%	6,40%	6,40%	18,63%
Pink grapes (vinification)	3,6	0,00%	2,22%	2,22%	100,00%
Cereza	0,8	0,00%	0,49%	0,49%	22,22%
Other pink varieties	28	0.00%	173%	173%	7778%

ATLANTIC BUENOS AIRES

Geographical Indications (GIs)

- → Chapadmalal
- → Villa Ventana
- → Balcarce



> ATLANTIC REGION > BUENOS AIRES Chapadmalal Terroir





	Temperatura Mínima	11,26°C	
	Temperatura Máxima	23,24°C	
₿ ^c •	Temperatura Media	16,99°C	
***	Amplitud térmica Marzo	10,65°C	
(* °)	Índice de Frescor Nocturno Noches Frías	13,53°C	
	Precipitaciones	511,04mm	
🛓 ()c°	Índice de Winkler Región 2	1478,55	
	Periodo Libre de Heladas	181 Días	
	Carga Térmica	116,3 Hs 57 °C	
≝ ∬ ^{c•}	Índice de Continetalidad Semihiperoceánico	13,21	

ARGIUDOLES SOIL



LANDSCAPE MORPHOLOGY Pampa

SOIL TYPE

Aeolian and marine sediment, with deposits of quaternary shells and deep deposits of silt. Abundant in organic matter.

ATLANTIC REGION > BUENOS AIRES Chapadmalal Soil profile

- Rolling hilly landscape
- Loessic soils: Eolic deposit from volcanic origin (Los Andes) during the quaternary period.
- Silty clay loam texture with a petrocalcic horizon (Argiudoll)
- Vineyards planted at the top of the hills.



ATLANTIC REGION > BUENOS AIRES Chapadmalal Climate - Winds



Mín de Vel viento prom km/h

Promedio de Vel viento prom km/h

Máx de Vel viento prom km/h





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