

Argentina





**LOCATION** 

**22° | 55°** SOUTH LATITUDE

WEST LONGITUDE



**TOTAL SURFACE** (continental)

2.791.810 km<sup>2</sup>

WORLD'S LARGEST COUNTRY

LARGEST COUNTRY IN SOUTH AMERICA



**POUPULATION** Estimations (July 2020)

45.4 M **INHABITANTS** 



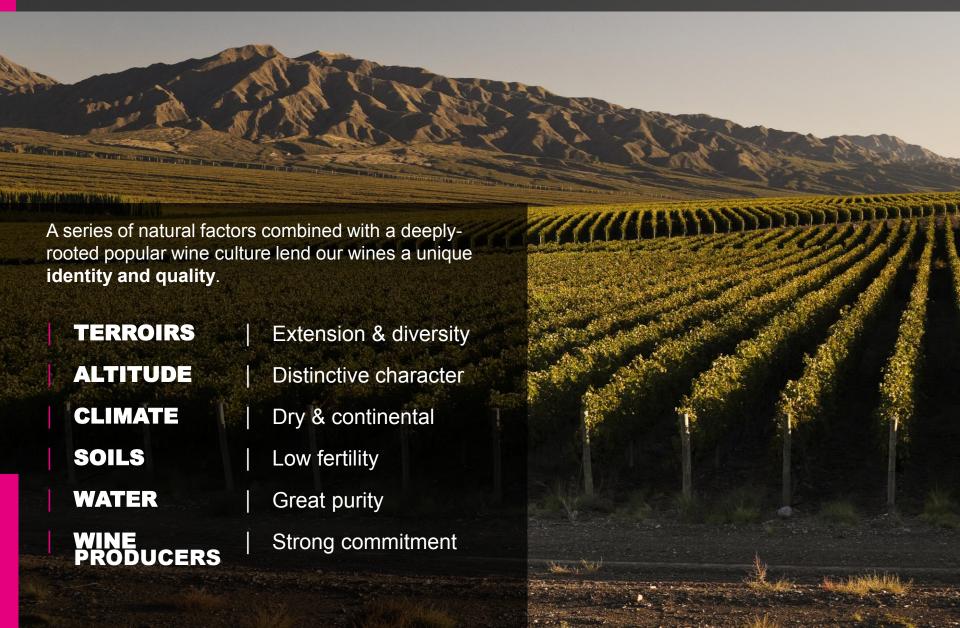






### A UNIQUE HABITAT for the creation of great wines





### TERROIRS Extension and diversity



- **Argentina's vast extension is unique**. It offers the possibility of cultivating high-quality vineyards across larger areas, creating a great diversity of *terroirs*.
- This allows to play with various grape varieties and wine styles: reds (from young and light, to full-bodied and structured), whites (from dry to fruity and aromatic), sparkling (from nature to dulce) and rosés.

#### **KEY FACTORS**

- Altitude and latitude
- The presence of the Andes range
- Rainfall regime
- Variability in soils



### ALTITUDE Distinctive character



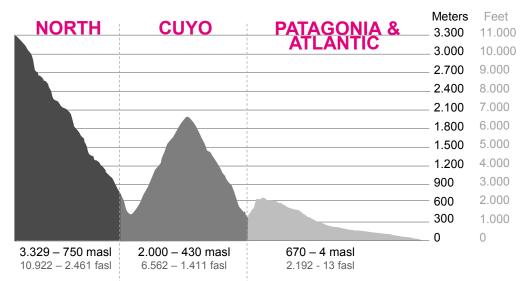
- The Andes range offers variable altitudes, generating a unique variety of terroirs and microclimates.
- Altitude serves as a temperature regulator: For every 150 meters of linear rise over a point on the map, the average temperature will drop by 1°C.
- This is reflected in the expression and diversity of Argentine wines.



- LATITUDE
- ▶ ALTITUDE
- ▶ MOUNTAINS

Argentina is the only country that adds altitude as a key factor of terroir.

#### **VINEYARD'S ALTITUDE IN ARGENTINA**



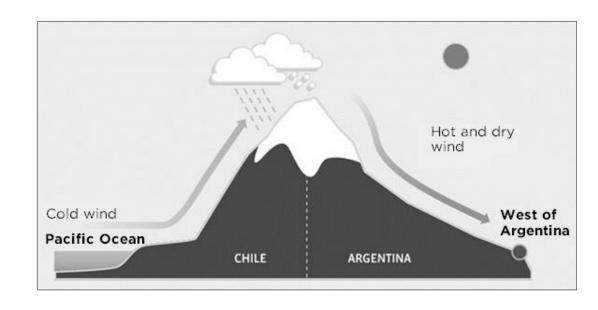
### CLIMATE Dry & continental



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

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

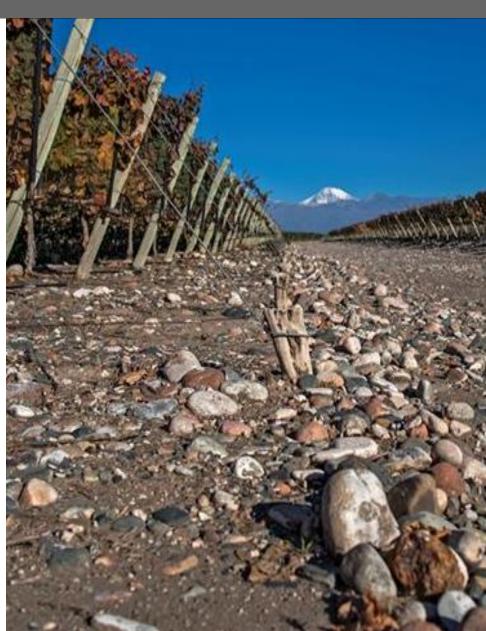
This leads to healthy vineyards and contributes to the production of organic wines.



#### SOILS Low fertility



- The soil becomes increasingly defining as a viability factor for the vine.
- Young and nutrient deprived soils, with low organic matter, which leads to restricted vine growth. Nitrogen is a fundamental macronutrient in soils. As a result of the harsh climate, nitrogen content and availability is very low.
- This arid fruitfulness favors the natural development of premium grapes with genuinely distinctive flavors.



### WATER Great purity



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.

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



### WINE PRODUCERS Strong commitment

WINES OF ARGENTINA

- Argentina's restless producers are BREAKING NEW GROUND and reshaping the country's wine offering.
- They're developing their own national identity in winemaking by increasingly focusing on 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, making them wine regions from scratch, leading to the emergence of new GIs.





### ARGENTINA TODAY Main winegrowing figures



5th

WORLD'S LARGEST WINE PRODUCER\*

Th

LARGEST COUNTRY
IN CULTIVATED
SURFACE\*

10th
WORLD'S LARGEST
WINE EXPORTER\*

**2020** EXPORTS\*\*

- 1. ITALY
- 2. FRANCE
- 3. SPAIN
- 4. UNITED STATES
- 5. ARGENTINA
- 1. SPAIN
- 2. CHINA (mainland)
- 3. FRANCE
- 4. ITALY
- 5. TURKEY
- UNITED STATES
- 7. ARGENTINA
- 1. ITALY
- 2. SPAIN
- 3. FRANCE
- 4. CHILE
- 5. AUSTRALIA

- GERMANY
- 7. UNITED STATES
- 8. SOUTH AFRICA
- 9. PORTUGAL
- 10. ARGENTINA

400.6 M L

TOTAL EXPORTS in volume (liters)

U\$S 813.5 M

TOTAL EXPORTS in value (U\$D FOB)

### ARGENTINA TODAY Main export markets 2020 (U\$D FOB)\*



st



**UNITED STATES** U\$D 226.753.273

6<sup>th</sup>



**CHINA** U\$D 24.173.025

2nd



**UNITED KIGNDOM** U\$D 127.482.928

**7**th



**MEXICO** U\$D 20.089.355

3<sup>rd</sup>



**BRAZIL** U\$D 76.207.799

8<sup>th</sup>



**GERMANY** U\$D 14.608.707

4th



**CANADA**U\$D 70.180.015

9th



**SWITZERLAND** U\$D 13.422.704

**5**<sup>th</sup>



**NETHERLANDS** U\$D 31.362.572

10



**PERU** U\$D 13.198.100

# ARGENTINA TODAY Main winegrowing data





LARGEST COUNTRY
IN WINE
CONSUMPTION\*

- 1. UNITED STATES
- FRANCE
- 3. ITALY
- 4. GERMANY
- 5. CHINA (mainland)

- 6. UNITED KINGDOM
- 7. SPAIN
- 8. RUSSIA
- 9. ARGENTINA

and

LARGEST CITY IN WINE

CONSUMPTION

AFTER PARIS\*\*

**PARIS** 697 **BUENOS AIRES** 457 **RHUR** 385 LONDON 369 **NEW YORK** 308 CONSUMPTION **MILAN** 301 (Millions of bottles) **LOS ANGELES** 241 **NAPOLES** 188 **MADRID** 181 **ROME** 



### TIMELINE Argentina's winemaking history



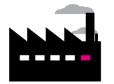




#### **1551**

- The first specimens of *Vitis Vinifera* were introduced in Argentina by the Spanish colonizers.
- The Catholic priests planted vineyards near their monasteries to ensure wine for the celebration of Holy Mass.
- The soil and weather conditions favored the growth of the *Vitis vinifera*, especially near the Andes.





#### 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.





#### **70's**

Collapse of the model based on the production of large volumes of low quality wines for domestic market.

#### **90's**

- 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.
- Argentine wines exported worldwide.



### **EVOLUTION**Argentina's winemaking industry





**Exporting wineries** 

Main export varieties

Total Exports in U\$S

Total Exports in liters

1993

10

Malbec & Torrontés

U\$S 24 millions

25M liters

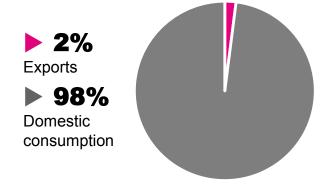
2020

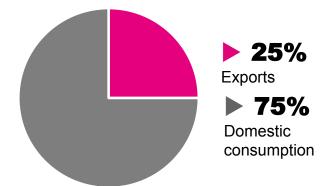
**515** 

Malbec, Torrontés & Others

**U\$S 813** millions

**400.6**M liters





### WINE LEGISLATION in Argentina



- In 1959, wine law 14.878 was promulgated. It created the **National Institute of Vitiviniculture** (INV), and established that wine is considered "food" in Argentina.
  - **INV** Function:
    - Control quality and fraud prevention
    - Labeling and wine normatives
    - Analytic and statistical control
- INV works as a Regulation Council within the European Union.
- In 1999 Argentine Wine Law equaled that of the EU in order to improve the export process.

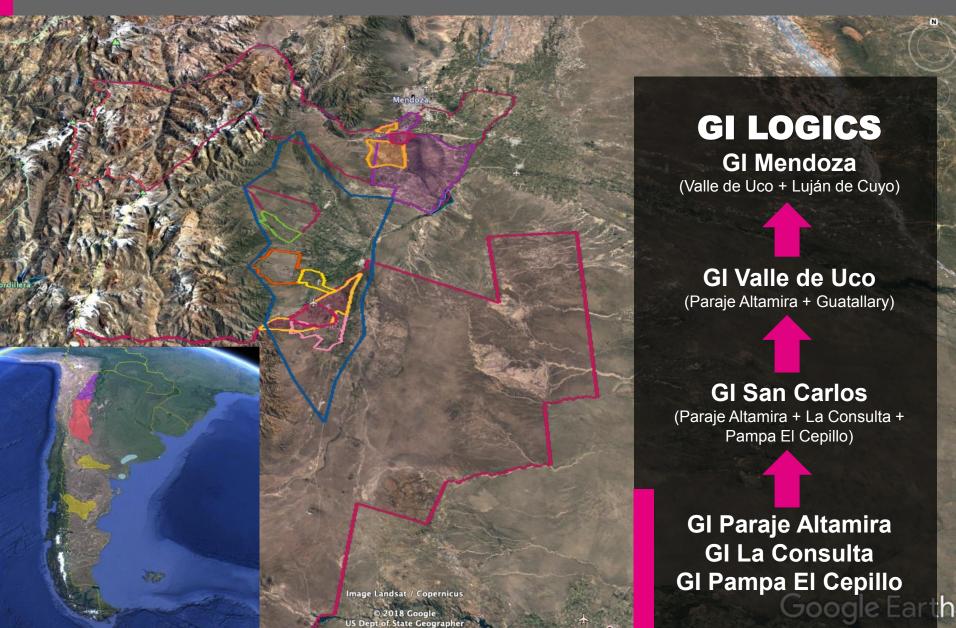
### WINE LEGISLATION in Argentina



- In 1999, the law 25.163 gave a legal framework for wine origins. It established **Geographical Indications (GIs)** and also **Designations of Origin (DO)**.
- Gls are used for quality wines, whereas flavor is attached to origin. There are 101 Gls approved in Argentina, most of them established following political boundaries.
- **DOCs** are Gls with wine style relugation. There are two DO in Argentina, Luján de Cuyo (DOC) and San Rafael (DOC). Only Luján de Cuyo is used today.
- Gls today are developing in a new way, as viticultural areas, attached to soil and climatic conditions.

## GI LOGICS in Argentina





### WINE REGIONS Argenting from porth to south

Argentina from north to south



23°-45°
SOUTH LATITUDE
22° from north to south



Ha: **198.220** 

Ac: 489.821,44



Altitude and latitude
The presence of the Andes range
Rainfall regime
Variability in soils



#### THE NORTH

Jujuy Salta Tucumán Catamarca

#### **CUYO**

La Rioja San Juan Mendoza

#### **PATAGONIA**

La Pampa Neuquén Río Negro Chubut

#### **ATLANTIC**

Buenos Aires



# The North





23°12' | 28° 10'

SOUTH LATITUDE

61°21' | 66° 12'

WEST LONGITUDE



3% of the country

Ha: **5.979,9** 

Ac: 14.776,96



750 - 3.329 masl 2.461 - 10.922 fasl



**PROVINCES** 

Jujuy Salta Tucumán Catamarca



The region is crisscrossed by a series of valleys: the Calchaquí Valley and the ones found in Jujuy (Quebrada de Humahuaca and Valles Templados).

The highest vineyard in the world is located in Jujuy (Uquía) at 3.329 masl (10.922 ft).



#### THE NORTH

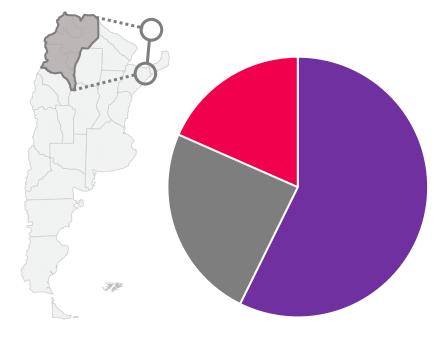




	Hectares	Acres	%
RED VARIETIES	3.432,5	8.482,1	% RED
Malbec	1.786,4	4.414,4	52,0%
Cabernet Sauvignon	792,5	1.958,3	23,1%
Syrah	256,6	634,1	7,5%
Tannat	145,5	359,5	4,2%
Bonarda	160,3	396,1	4,7%
Merlot	114,7	283,4	3,3%
Cabernet Franc	44,9	110,8	1,3%
Tempranillo	28,0	69,2	0,8%
Pinot Noir	28,7	70,9	0,8%
Petit Verdot	23,4	57,7	0,7%
Other red varieties	51,5	127,4	1,5%
WHITE VARIETIES	1.446,1	3.573,5	% WHITE
Torrontés Riojano	1.280,6	3.164,6	88,6%
Sauvignon Blanc	50,8	125,5	3,5%
Chardonnay	40,1	99,1	2,8%
Chenin	10,7	26,5	0,7%
Riesling	6,4	15,8	0,4%
Viognier	4,6	11,4	0,3%
Semillón	0,2	0,5	0,0%
Other white varieties	52,6	130,0	3,6%
PINK VARIETIES	1.101,30	2.721,42	% PINK
Criolla Chica	65,00	160,6	5,9

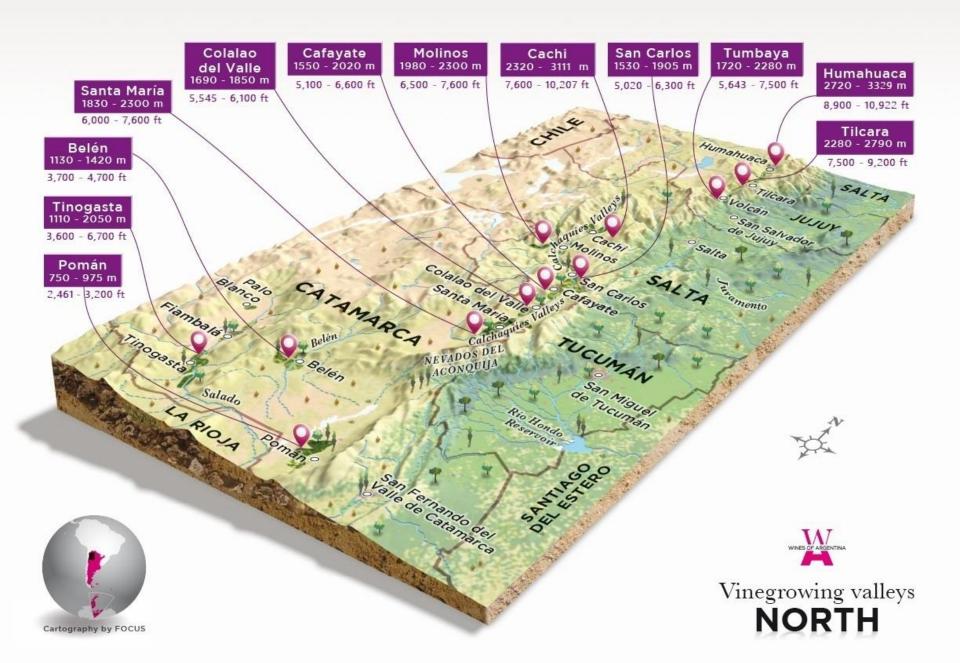
- Red grapes
  White grapes
- Pink grapes

57,4% 24,2% 18,4%



The wines of the region show remarkable influence of terroir, strongly marked by altitude, and great varietal character.

Although Malbec is the most cultivated variety, Torrontés is the emblem par excellence of the region.





### **SALTA**Terroir characteristics





25°07' | 26°05' **SOUTH LATITUDE** 

65°58' | 66°09'

**WEST LONGITUDE** 



**15°** 

**59°** 



RAINFALL Annual Average

**203** mm/year

8 in/year



**CULTIVATED SURFACE** for vinification\*

Ha: **3343,50** 

Ac: **8.262,12** 

**1.7%** of the country of the region

**56%** 



**ALTITUDE** of the vineyards

**1.530 - 3.111** masl

5.020 - 10.207 fasl



#### **HIGHLIGHTS**

- The viticultural activity is located mainly in the Calchaguí Valley.
- Strongly marked by the presence of high altitude vineyards.
- Cafayate is the main wine producer of the region.

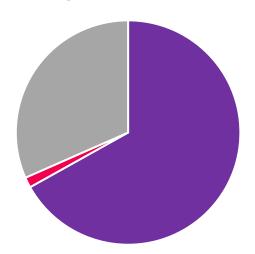
# SALTA Varieties







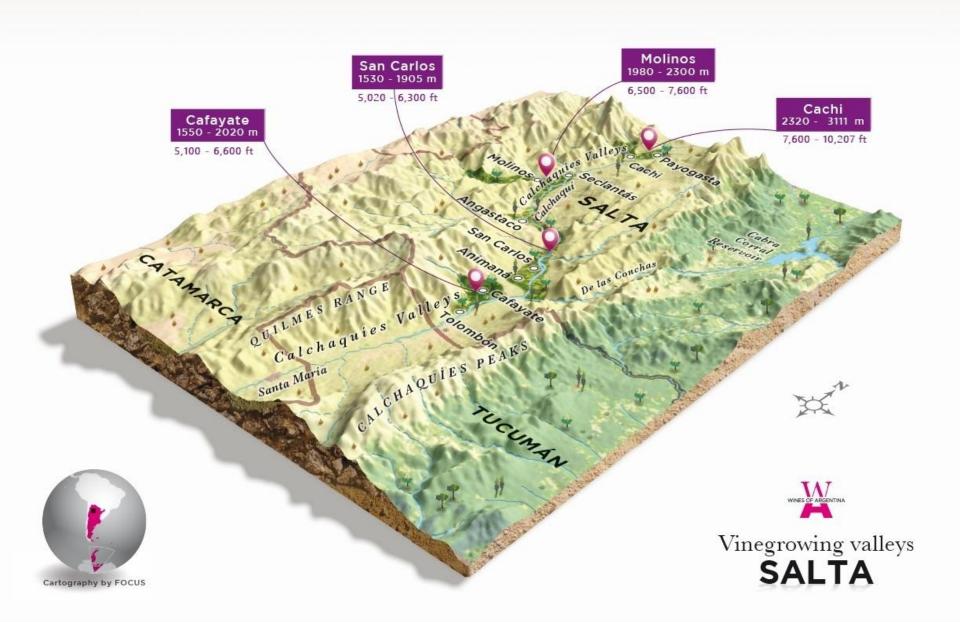
Red grapes White grapes Pink grapes 67,1% 31,3% 1,6%





Malbec Torrontés Cabernet Sauvignon Tannat Merlot

	Hectares	Acres	%
SALTA	3343,50	8.262,12	
Red varieties	2243,90	5.544,90	% Red
Malbec	1398,70	3.456,33	62,33%
Cabernet Sauvignon	457,70	1.131,02	20,40%
Tannat	133,50	329,89	5,95%
Merlot	52,00	128,50	2,32%
Bonarda	47,70	117,87	2,13%
Cabernet Franc	36,70	90,69	1,64%
Syrah	33,10	81,79	1,48%
Petit Verdot	20,90	51,65	0,93%
Pinot Noir	19,10	47,20	0,85%
Tempranillo	9,00	22,24	0,40%
Other red varieties	35,50	87,72	1,58%
White varieties	1046,60	2.586,25	% White
Torrontés Riojano	915,10	2.261,30	87,44%
Sauvignon Blanc	47,00	116,14	4,49%
Chardonnay	37,70	93,16	3,60%
Chenin	10,70	26,44	1,02%
Riesling	6,40	15,82	0,61%
Viognier	4,60	11,37	0,44%
Semillón	0,20	0,49	0,02%
Other white varieties	24,90	61,53	2,38%
Pink varieties	53,00	130,97	% Pink
Criolla Chica	40,8	100,82	76,98



### SALTA Cafayate Terroir characteristics



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



**26°05**′ |

65°58'



**TEMP.**Annual Average

16,2° C



Annual Average

**186 / 250** mm/year

**7,3**/**9,8** in/year



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.



#### TIVATED SURFACE

Ha: **2.488,00** Ac: **6.148,10** 





**1.550 - 2.020** masl

**5.100 - 6.600** fasl



Most planted\*

Malbec

**Torrontés** 

Cabemet Sauvignon

**Tannat** 

Merlot



# Cuyo



28°23' | 34° 58'

67°04' | 67° 42'

WEST LONGITUDE





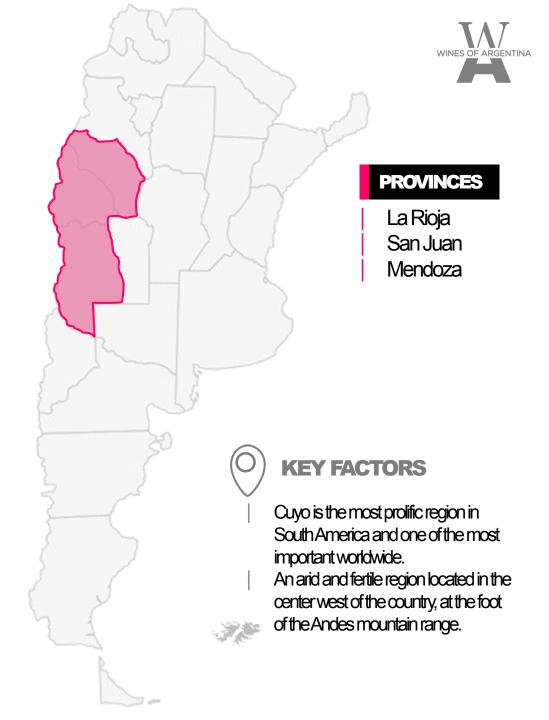
Ha: 188.028,70

Ac: **464.637,72** 



**430 - 2.000** masl

1.411 - 6.562 fasl



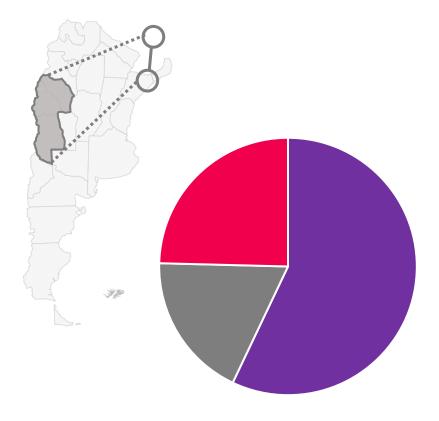
#### CUYO

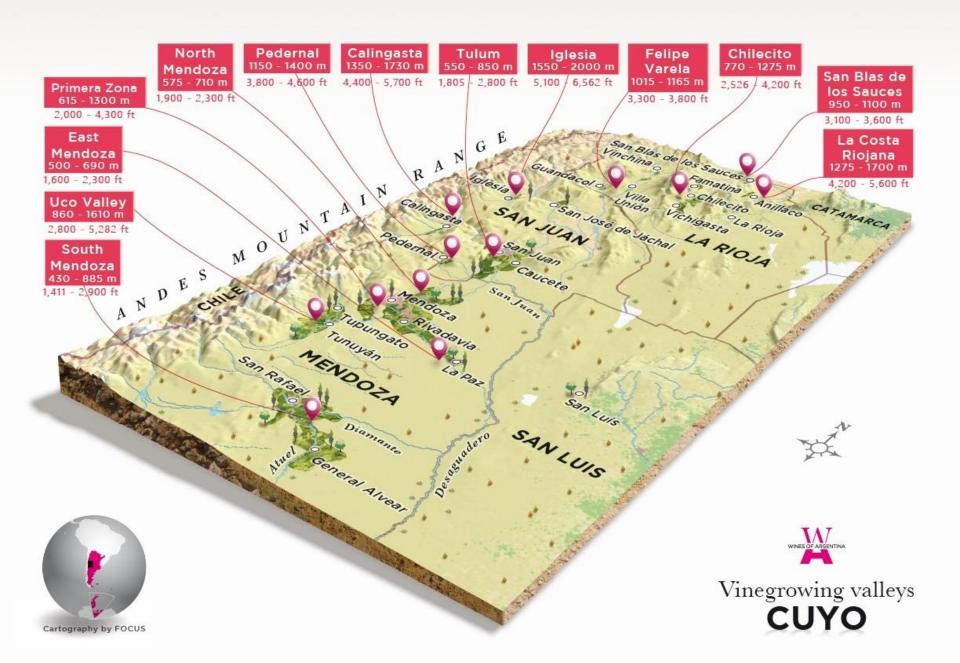




	Hectares	Acres	%
RED VARIETIES	108.309,7	267.644,1	% Red
Malbec	41.323,4	102.114,3	38,2
Bonarda	18.118,5	44.772,6	16,7
Cabernet Sauvignon	13.034,9	32.210,5	12,0
Syrah	11.509,4	28.440,9	10,6
Tempranillo	5.516,9	13.632,8	5,1
Merlot	4.466,9	11.038,2	4,1
Pinot Noir	1.520,5	3.757,3	1,4
Cabernet Franc	1.133,3	2.800,5	1,0
Tannat	681,9	1.685,0	0,6
Petit Verdot	605,2	1.495,5	0,6
Other red varieties	10.398,8	25.696,5	9,6
WHITE VARIETIES	34.093,1	84.247,46	% White
Torrontés Riojano	6.344,9	15.678,88	18,6
Chardonnay	5.646,4	13.952,82	16,6
Chenin	1.815,3	4.485,79	5,3
Sauvignon Blanc	1.745,9	4.314,29	5,1
Torrontés Sanjuanino	1.610,8	3.980,45	4,7
Semillón	596,3	1.473,52	1,7
Torrontés Mendocino	505,5	1.249,14	1,5
Viognier	701,7	1.733,97	2,1
Riesling	60,5	149,50	0,2
Other white varieties	15.065,8	37.229,10	44,2
PINK VARIETIES	45.625,90	112.746,16	% Pink
Criolla Chica	283,3	700,06	0,6

Red grapes
 White grapes
 Pink grapes
 24,3%

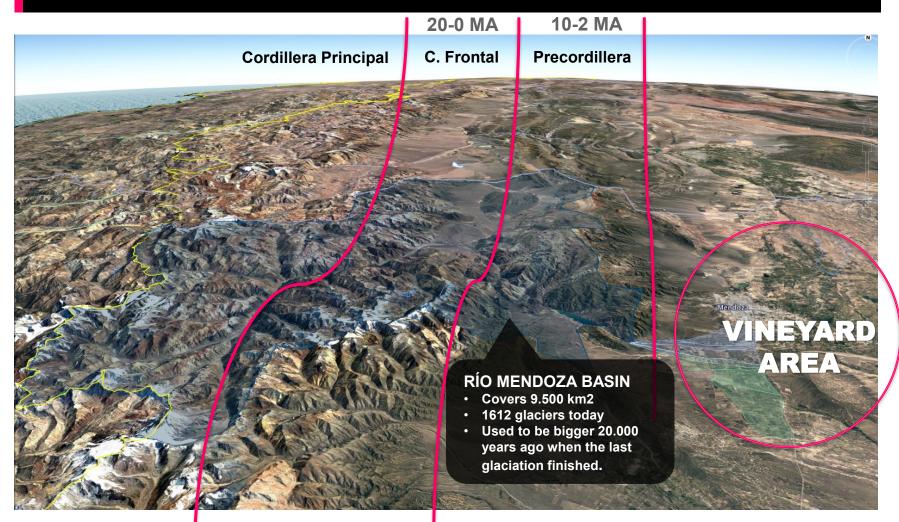




# THE ANDES RANGE Importance | Soils



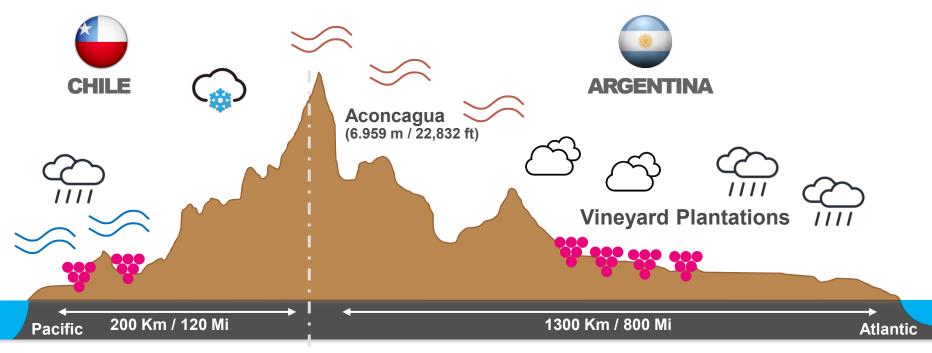
#### THE ANDES RANGE IS A MULTI-TIME & MULTI-EPISODIC EVENT 5-0



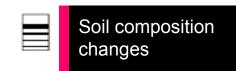
### ALTITUDE EFFECT A singular vineyard at the foothills of the Andes



#### THE ANDES MOUNTAIN RANGE



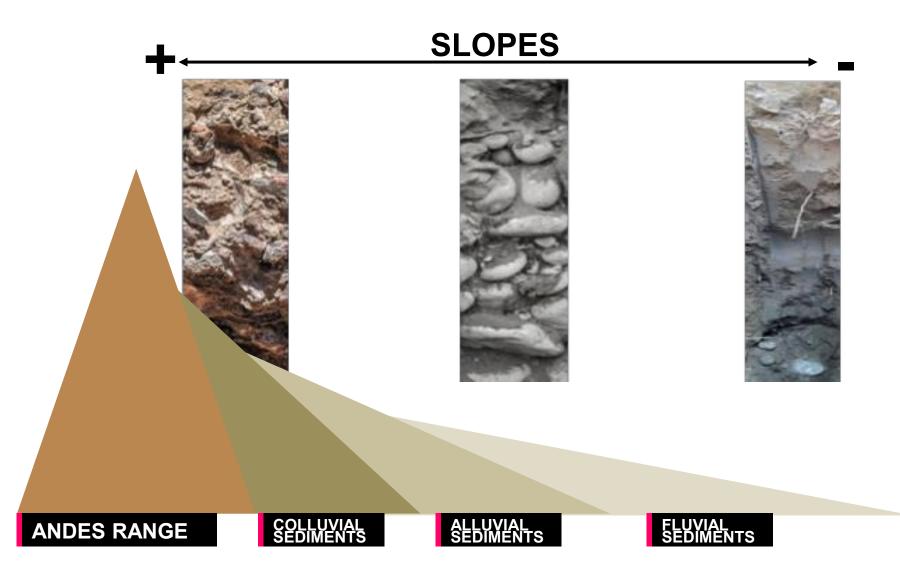






## THE ANDES RANGE Importance | Soils





## THE ANDES RANGE Importance | Soils







### MENDOZA Terroir characteristics





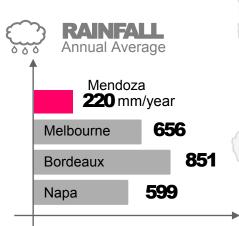
32°43' | 34° 58' SOUTH LATITUDE

67°33' | 69°15'

**WEST LONGITUDE** 



15/19° 59/66° F





### **CULTIVATED SURFACE**

for vinification\*

Ha: **149.226,9** 

Ac: **368.754,59** 

75% of the country

79% of the region



### **ALTITUDE** of the vineyards

**430 - 2.000** masl **1.411 – 6.562** fasl



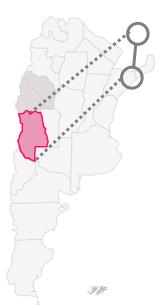
#### **HIGHLIGHTS**

- The most important wine province and one of the main producing centres in the world.
- The presence of the Andes shape the dimate generating ideal conditions for the cultivation of vines.
- It is divided into five large sub-regions: Valle de Uco; Primera Zona; Northern oasis; the East and the South.

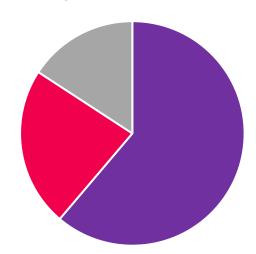
## MENDOZA Main varieties







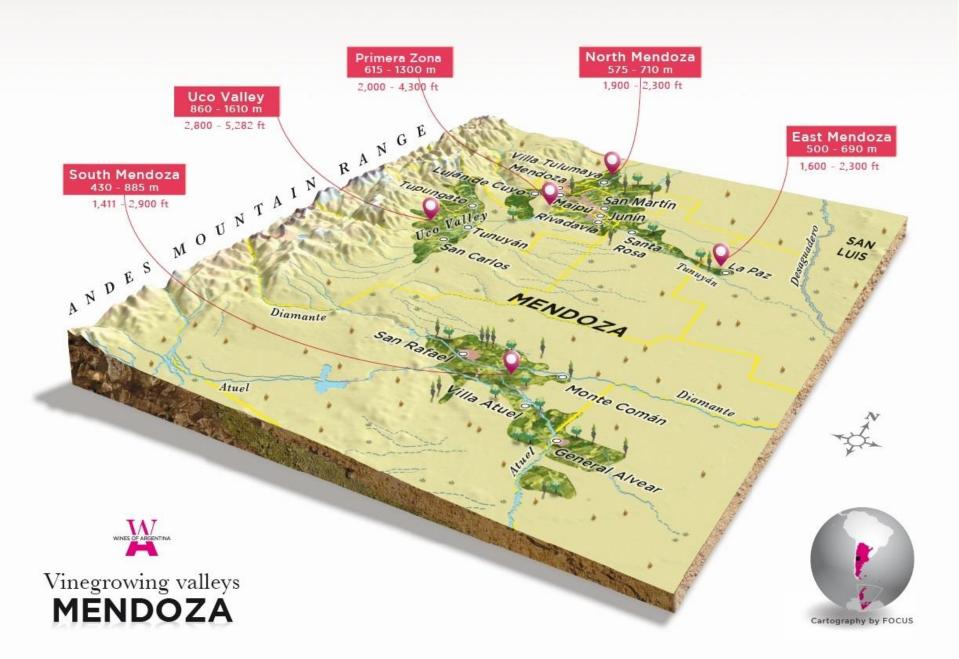
Red grapes White grapes Pink grapes 62,2% 15,4% 22,4%





Malbec Bonarda Cabernet Sauvignon Syrah Tempranillo

	Hectares	Acres	%
MENDOZA	149.226,9	368.754,59	
Red varieties	92.794,3	229.303,99	% Red
Malbec	37.754,1	93.294,16	40,69%
Bonarda	15.249,9	37.684,03	16,43%
Cabernet Sauvignon	10.888,6	26.906,82	11,73%
Syrah	8.347,4	20.627,26	9,00%
Tempranillo	5.295,3	13.085,22	5,71%
Merlot	3.930,6	9.712,91	4,24%
Pinot Noir	1.488,3	3.677,74	1,60%
Cabernet Franc	978,9	2.418,96	1,05%
Petit Verdot	470,5	1.162,65	0,51%
Tannat	352,7	871,56	0,38%
Other red varieties	8.038,0	19.862,70	8,66%
White varieties	23.039,7	56.933,40	% White
Chardonnay	4.886,2	12.074,29	21,21%
Torrontés Riojano	3.474,5	8.585,84	15,08%
Chenin	1.553,4	3.838,61	6,74%
Sauvignon Blanc	1.507,3	3.724,69	6,54%
Semillón	555,6	1.372,94	2,41%
Viognier	449,0	1.109,52	1,95%
Torrontés Mendocino	158,9	392,66	0,69%
Torrontés Sanjuanino	143,8	355,34	0,62%
Riesling	51,0	126,03	0,22%
Other white varieties	10.260,0	25.353,49	44,53%
Pink varieties	33.392,9	82.517,20	% Pink
Cariolla Chica	153,2	378,57	0,46%







## PRIMERA ZONA Location

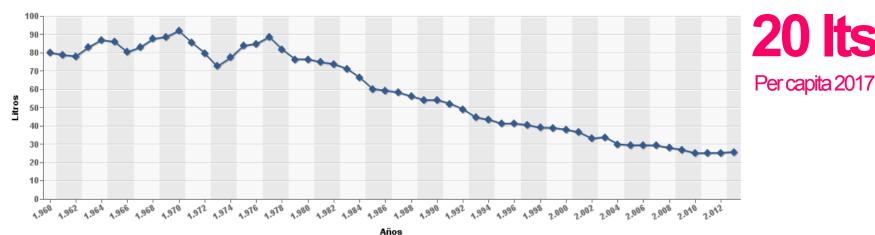




## BRIEF HISTORY | The beginnings Primera Zona



- **17th and 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 lts.
- **80's:** Changes in consumer habits. Viticultural crisis.
- **90's:** Commercial opening to the world. International advisors. Wine reconversion.



**20 Its** 

## BRIEF HISTORY | 20th Century



- Large scale irrigation network using water from Mendoza River.
- Primera Zona holds 40% of Argentina's wineries (881 in total)
- 1990: D.O.C. Luján de Cuyo



#### Some GI's:

- Agrelo
- Las Compuertas
- Lunlunta
- Barrancas
- City advancement over vineyard areas.





## PAST & PRESENT Primera Zona



### **ORIGINS**

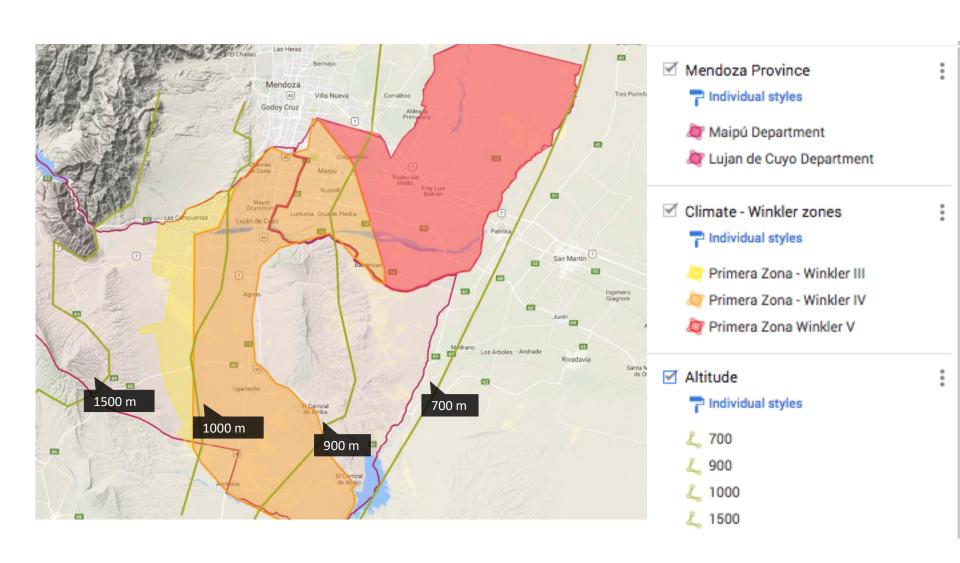
- Flood Irrigation only
- Trellising: low trellis VSP and Parral.
- High density cultivation: 1.80 m X 1 m (5000 to 6000 pl / ha)
- Root-stock.
- Mass selections.
- Vines: French, Italian, Spanish and Criolla.
- Fine wines and table red and white wines

### 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.

### CLIMATE Primera Zona





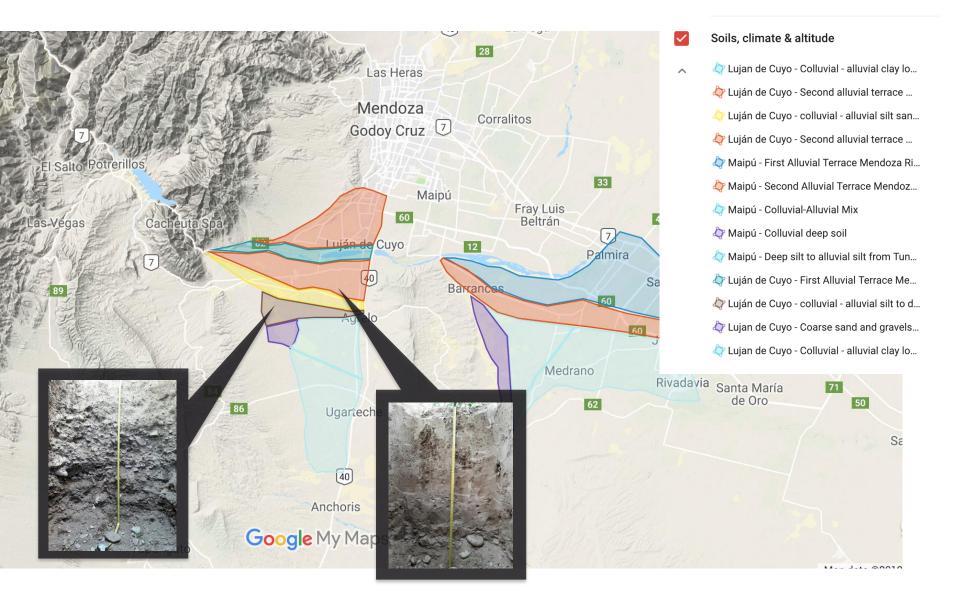
### CLIMATE Primera Zona



Country	Wine Region	City	GST (°C) GDD	(C° units) Winkler Regi	on 🚽
Washington	Puget Sound	Port Angles	13,4	710 Region la	
Germany	Ruwer	Kasel	13,8	800 Region la	Gualtallary, Cachi,
England	Kent	East Malling	14,1	850 Region la	
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	<b>-</b>
Australia	Coonawarra	Coonawarra	16,6	1401 Region II	
Spain	Rias Baixas	Vigo	16,8	1437 Region II	Gualtallary, San Pablo
Italy	Piedmont	Torino	17,7	1626 Region II	
France	Bordeaux	Merignac	17,7	1627 Region II	
France	Northern Rhône	Valence	17,8	1664 Region III	7
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	<b>1</b>
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	Cafayate
Portugal	Alentejo	Evora	20,1	2134 Region IV	Galayate
Italy	Tuscany	Firenze	20,2	2153 Region IV	
Portugal	Madeira	Funchal	21,0	2339 Region V	
Italy	Apulia	Brindisi	21,1	2343 Region V	
Greece	Patras	Patras	21,2	2367 Region V	<b>Coquimbito</b> , La Paz,
Australia	Hunter Valley	Cessnock	21,7	2481 Region V	Santa Rosa
Spain	Jerez	Jerez de la Frontera	21,9	2524 Region V	

## PROXIMAL ALLUVIAL FAN Primera Zona

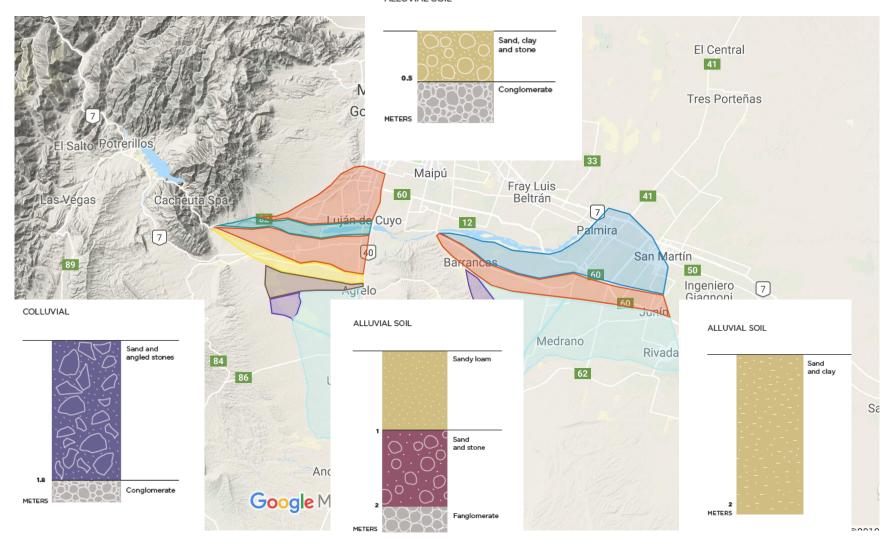




## PROXIMAL ALLUVIAL FAN Primera Zona



ALLUVIAL SOIL



## LUJÁN DE CUYO Primera Zona



### CULTIVATED SURFACE for vinification (INV - 2019)

Ha: **15.495,1** Ac: **38.289,94**  7,8% 10,3% of the province

#### MALBEC

Ha: 8.765,4 Ac: 21.633

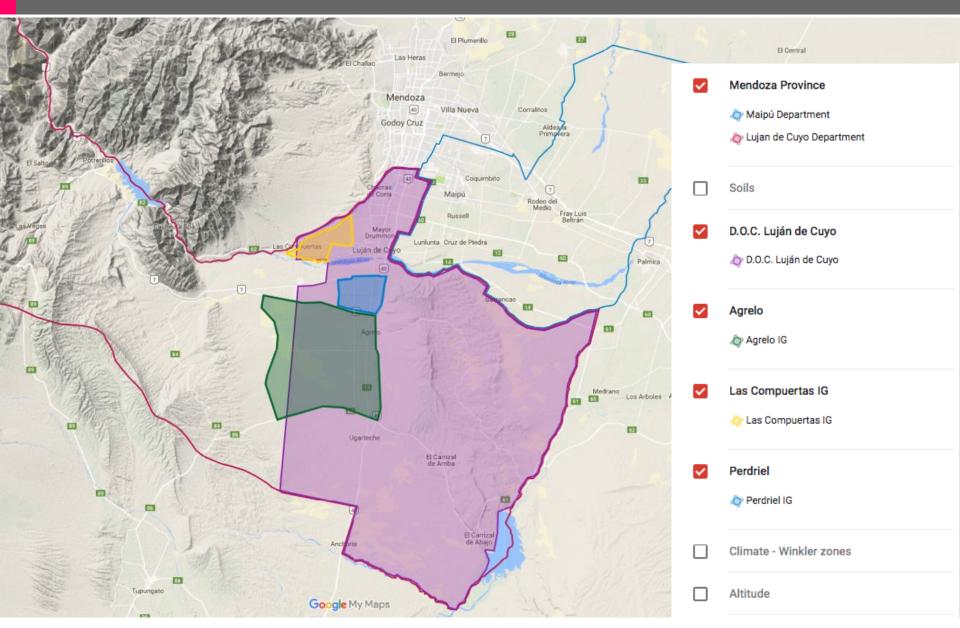
**19,7%** of the country

- Located to the south of Mendoza City, on the pre-cordillera.
- It is composed of 15 districts, some of them are GIs:
  - Agrelo
  - Las Compuertas



### LUJÁN DE CUYO Primera Zona





### LUJÁN DE CUYO GIS



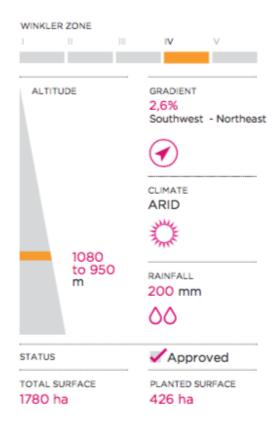
LUJÁN DE CUYO > AGRELO

#### **AGRELO**



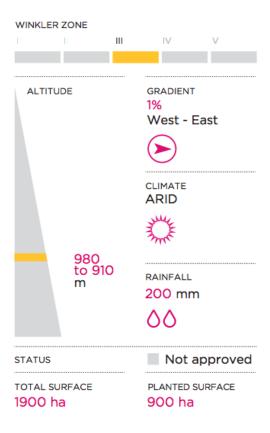
LUJÁN DE CUYO > LAS COMPUERTAS

#### LAS COMPUERTAS



LUJÁN DE CUYO > PERDRIEL

#### PERDRIEL







### CULTIVATED SURFACE (for vinification – INV 2019)

Ha: **11.242,6** 

of the country

Ac: **27.781,59** 

MALBEC

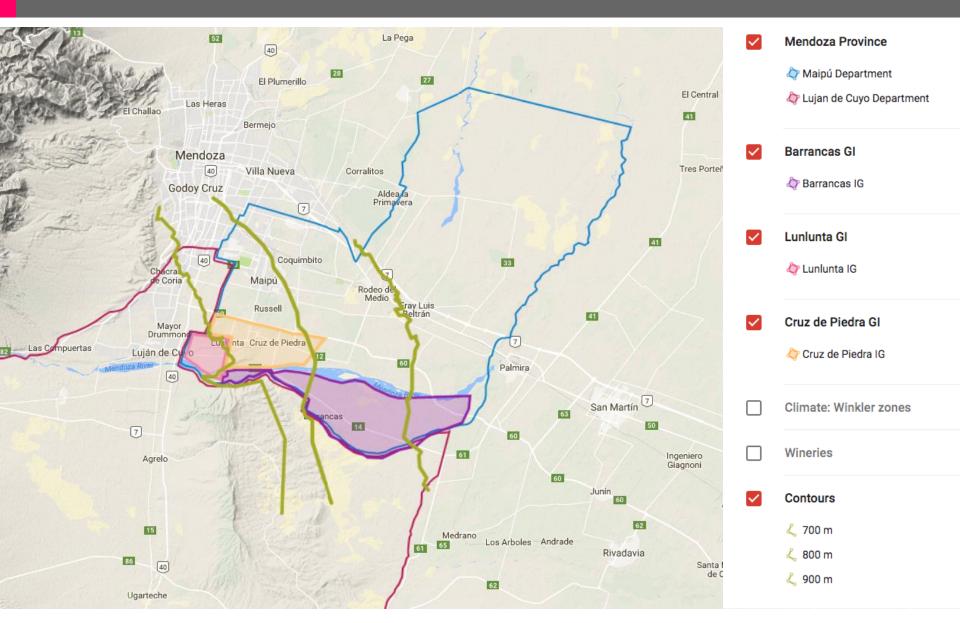
Ha: **4.011** Ac: **9.911,58**  9,04% of the country

- 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:
  - Barrancas
  - Cruz de Piedra
  - Lunlunta



### MAIPÚ Primera Zona



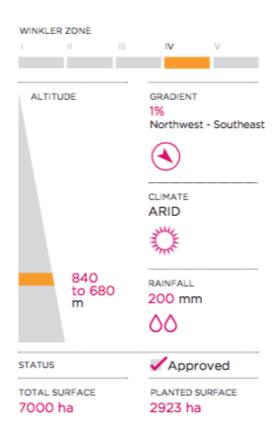






MAIPÚ > LAS BARRANCAS

#### LAS BARRANCAS

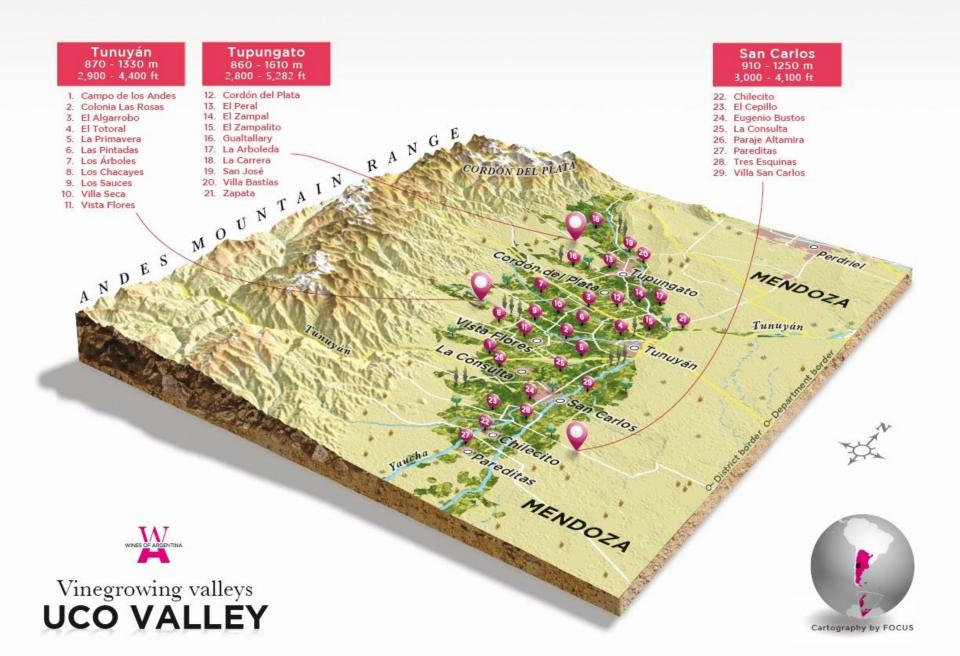


MAIPÚ > LUNLUNTA

#### **LUNLUNTA**

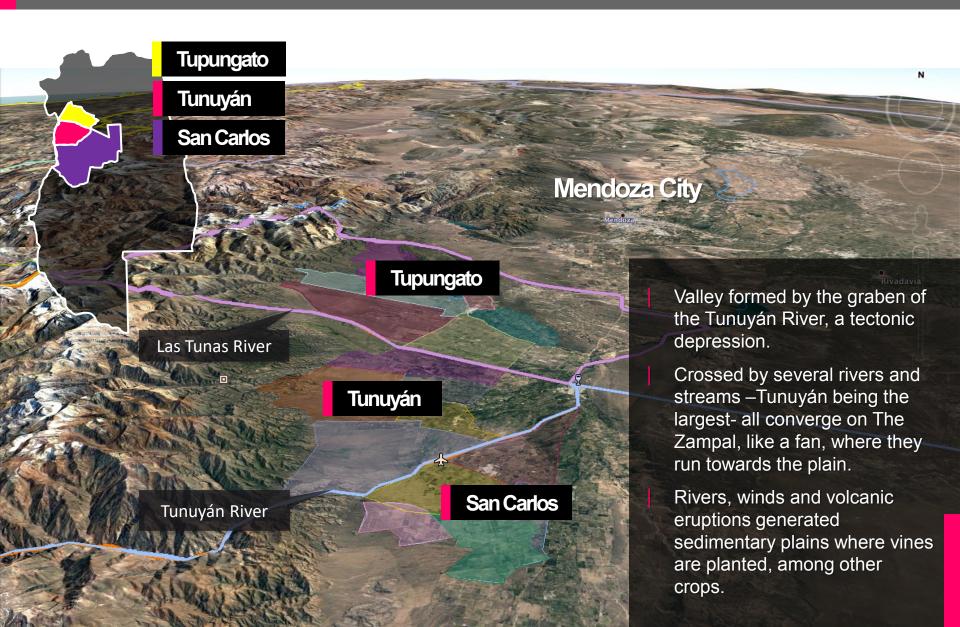






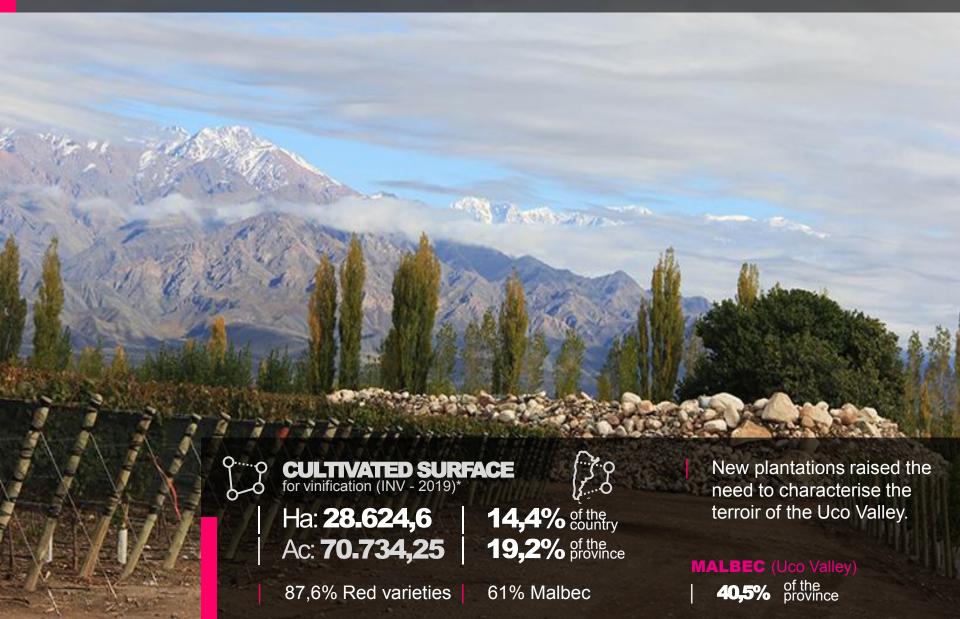
## UCO VALLEY Location





## UCO VALLEY Today's figures

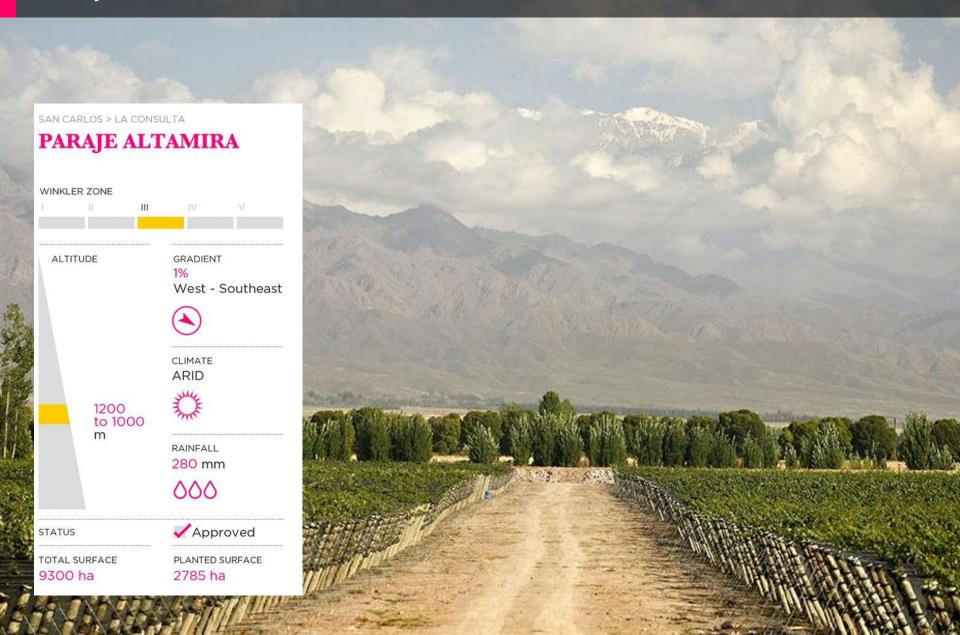






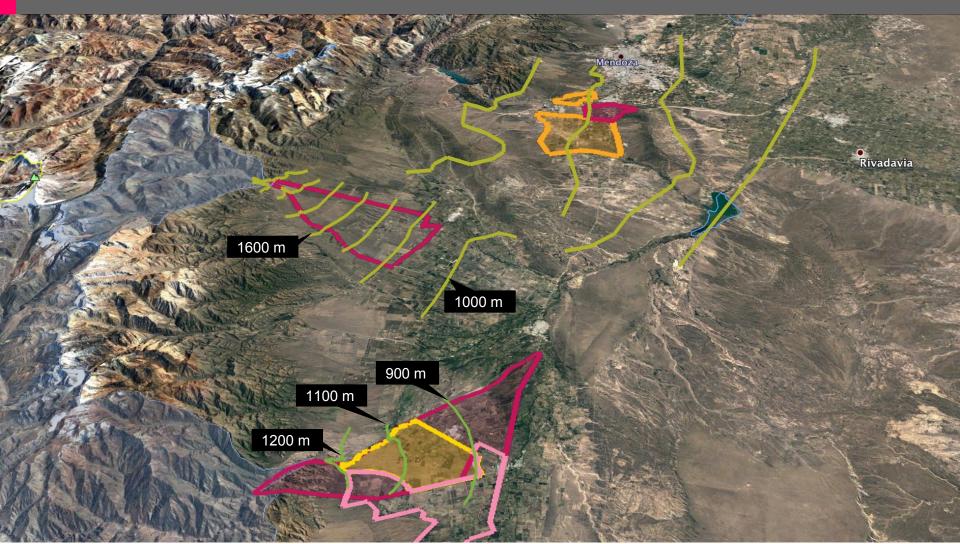
### TERROIR Paraje Altamira Gl





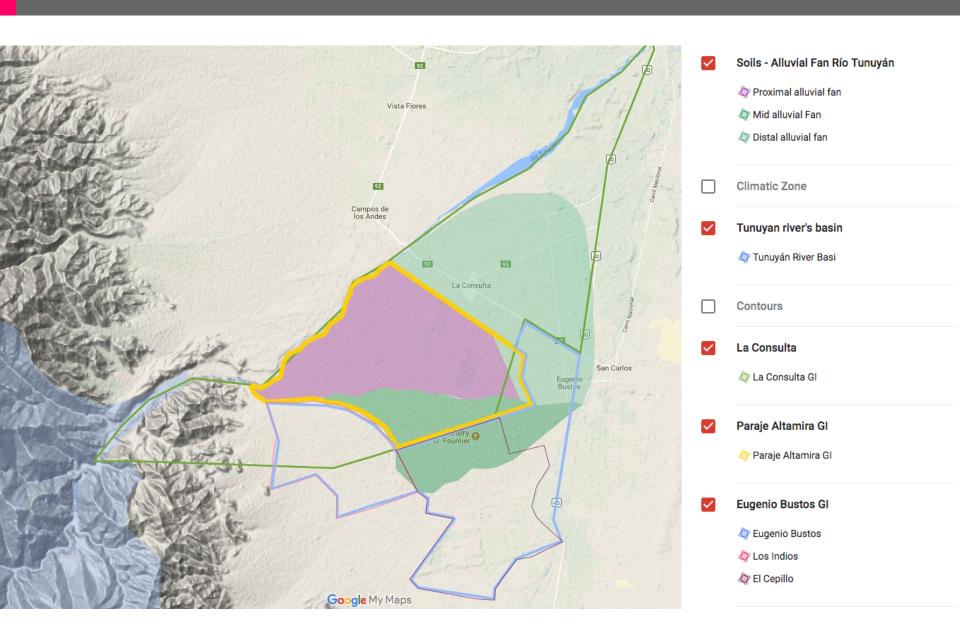
## ALTITUDE & TEMPERATURE Paraje Altamira GI





## **SOILS**Paraje Altamira GI

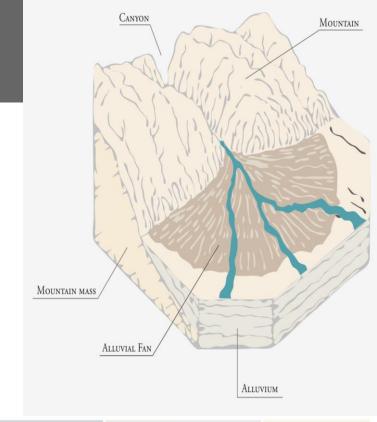




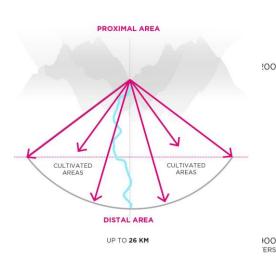
## **SOILS**Paraje Altamira GI

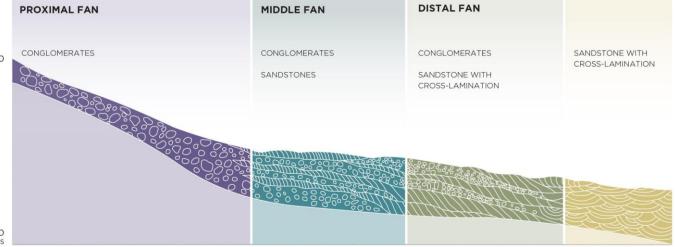
- **2009:** The need to separate it from La Consulta by soil type.
- The **alluvial cone** of Tunuyán River was the physical factor for the delimitation.
- Paraje Altamira GI was approved in 2013, then expanded in 2016.

**PROXIMAL AREA** 



**DISTAL AREA** 





UP TO 26 KM

## **SOILS**Paraje Altamira GI



SAN CARLOS > LA CONSULTA

### PARAJE ALTAMIRA

LANDSCAPE MORPHOLOGY Alluvial cone of the River Tunuyán

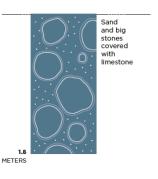
#### SOIL TYPE

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

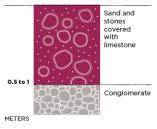
#### **VARIETIES**

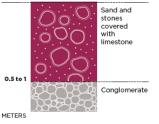
Malbec Cabernet Franc Cabernet Sauvignon Chardonnay

#### ALLUVIAL SOIL

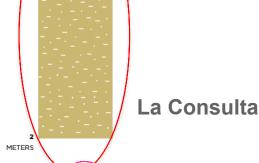


#### ALLUVIAL SOIL



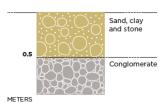


ALLUVIAL SOIL

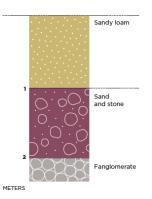


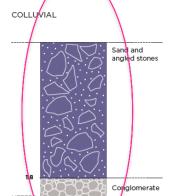
and clay

#### ALLUVIAL SOIL



#### ALLUVIAL SOIL

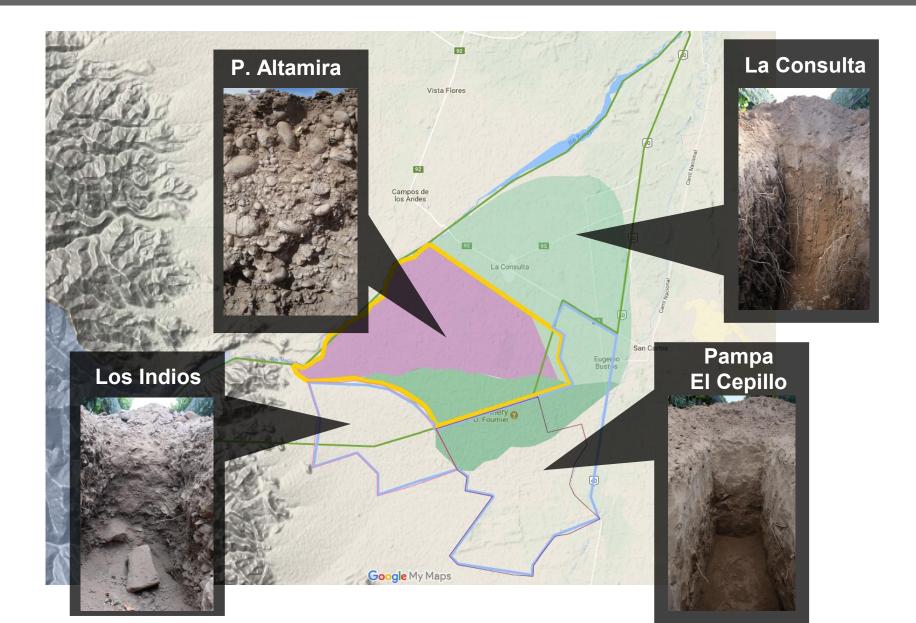




Los Indios

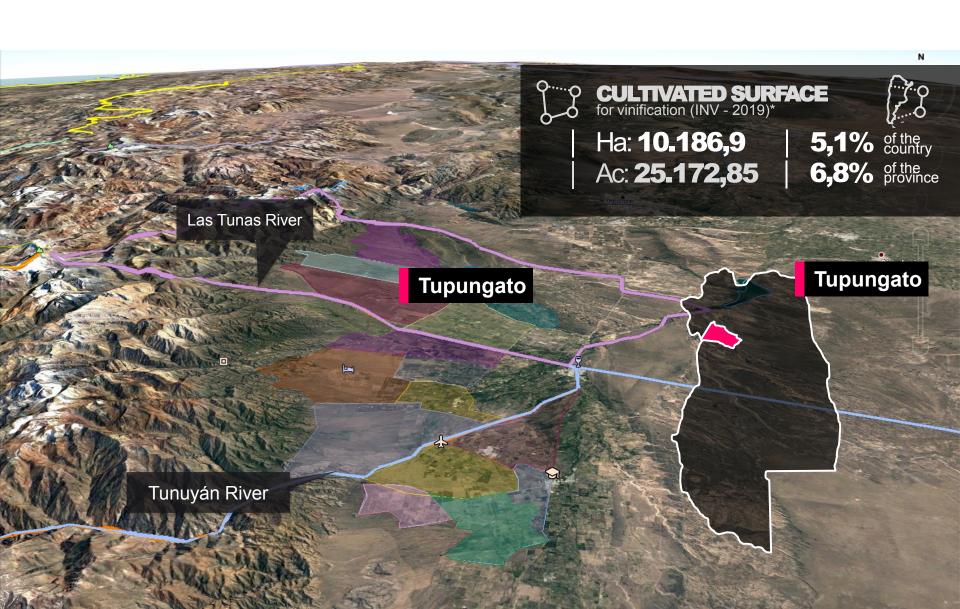
## SOIL PROFILE Comparison





### TUPUNGATO GI Location





### TUPUNGATO Brief History



- 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 Gl.
  Gualtallary is a Gl in process of approval.
- Main grape variety: Malbec. Chardonnay, Cabernet Sauvignon, Pinot Noir & Cabernet Franc are also very important grapes in the GI based on the quality of the wines made out of these varietals



# UCO VALLEY | TUPUNGATO GUALTALLARY Location





### Gualtallary boundaries:

West: The Andes range, the border with Chile;

**E**ast: Route 89

North: El Peral district

South: Las Tunas River





# TERROIR Gualtallary

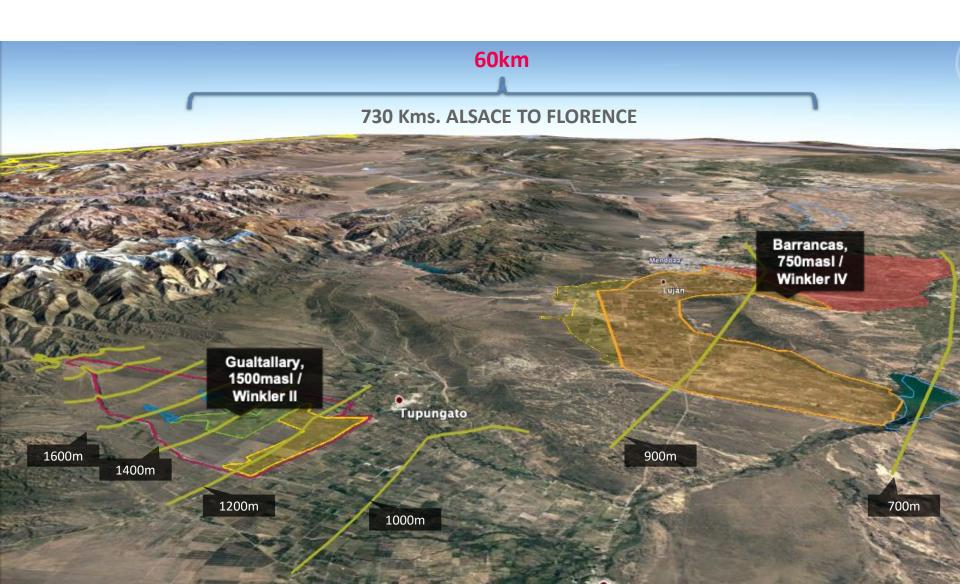






# ALTITUDE & CLIMATE Gualtallary





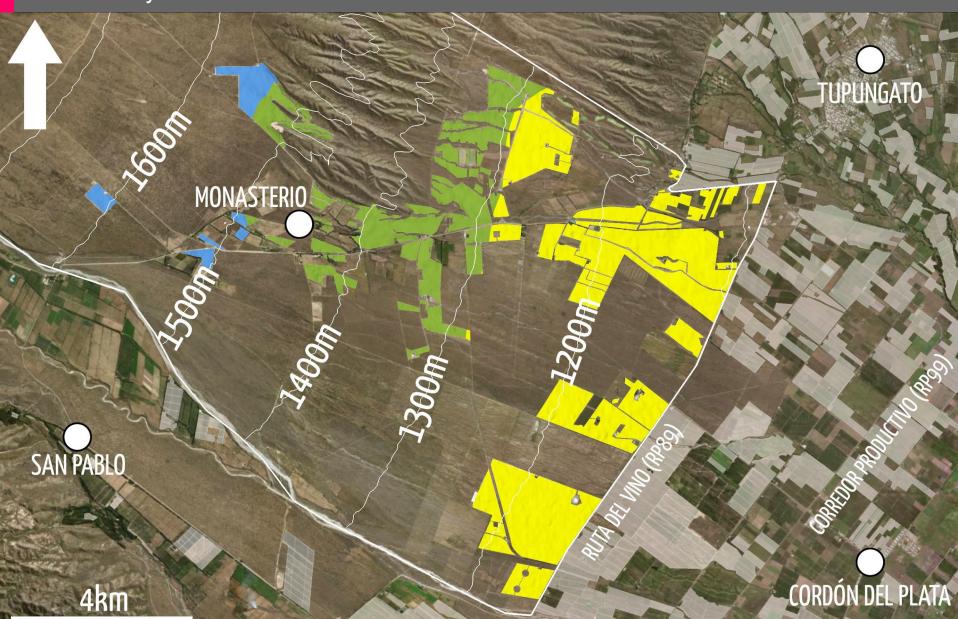
# ALTITUDE & CLIMATE Gualtallary



- The GI goes from 1.080 mts (3.500 ft) to 2.200 mts (7.200 ft) eastwest.
- There is a difference of 6\*C from the base to the top of the GI, 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 (+/-) 1500 meters ( 5000 feet) onwards.
  - Winkler II in a range that goes (+/-) 1300( 4200 feet) to 1500 meters (5000 feet)
  - Winkler III in a range that goes (+/-) 1080 (3500 feet) to 1300 meters (4200 feet)

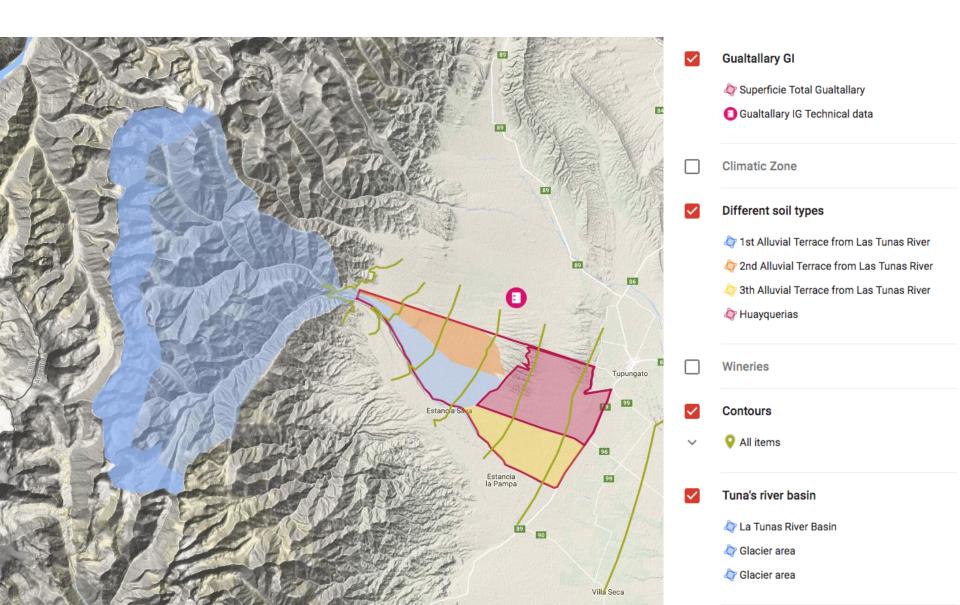
# TERROIR Gualtallary





### SOILS Gualtallary





# GUALTALLARY A very 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.

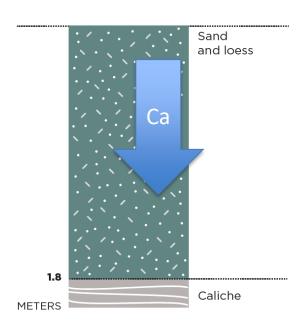




### **CALCAREOUS SOILS**

- 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









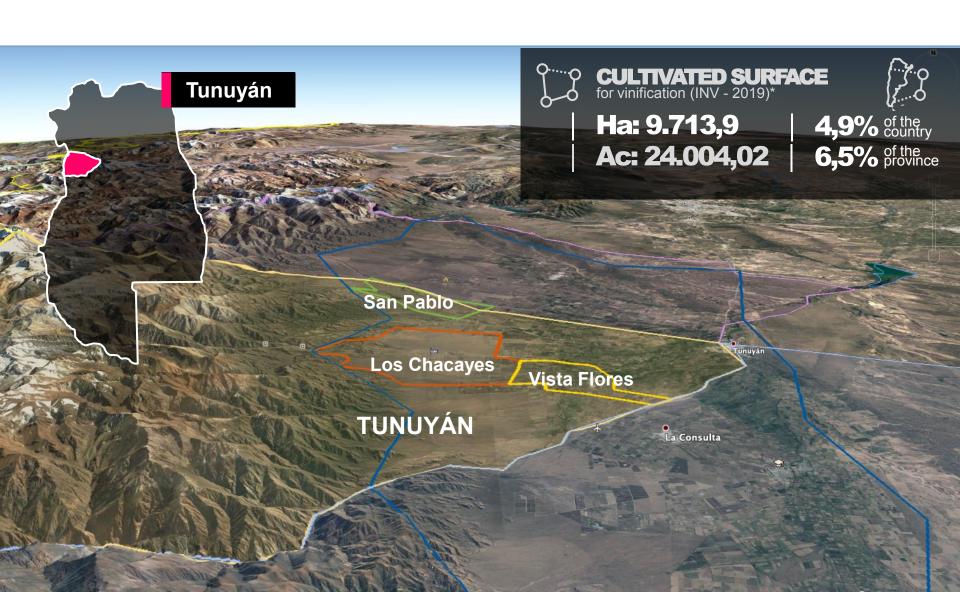
# TUPUNGATO Other relevant districts (NON-GI)





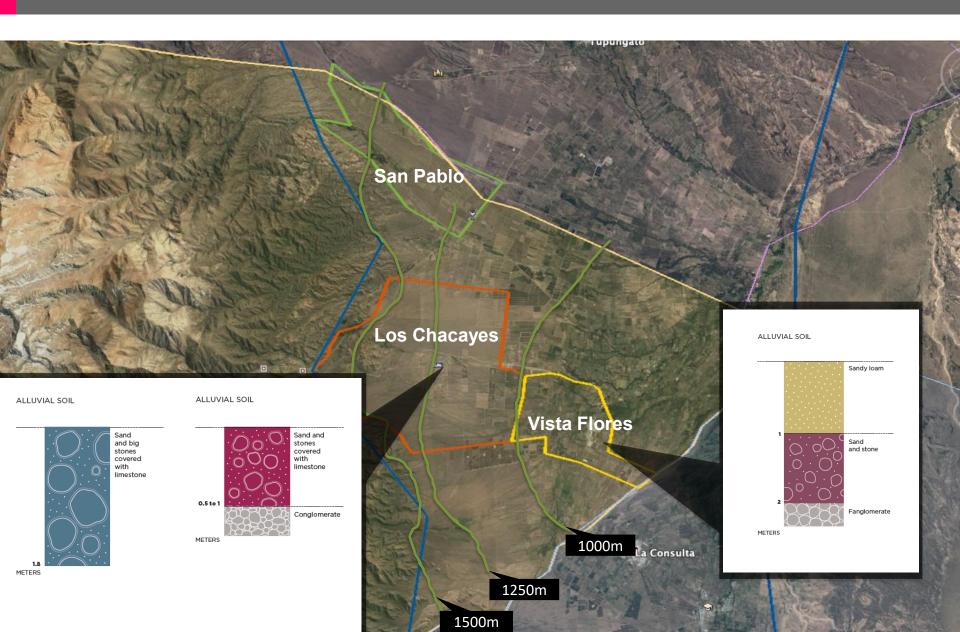
# TUNUYÁN GI Location





# TUNUYÁN GI





# TUNUYÁN GI



- 17<sup>th</sup> 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.

## UCO VALLEY I TUNUYÁN SAN PABLO GI





### TERROIR San Pablo Gl

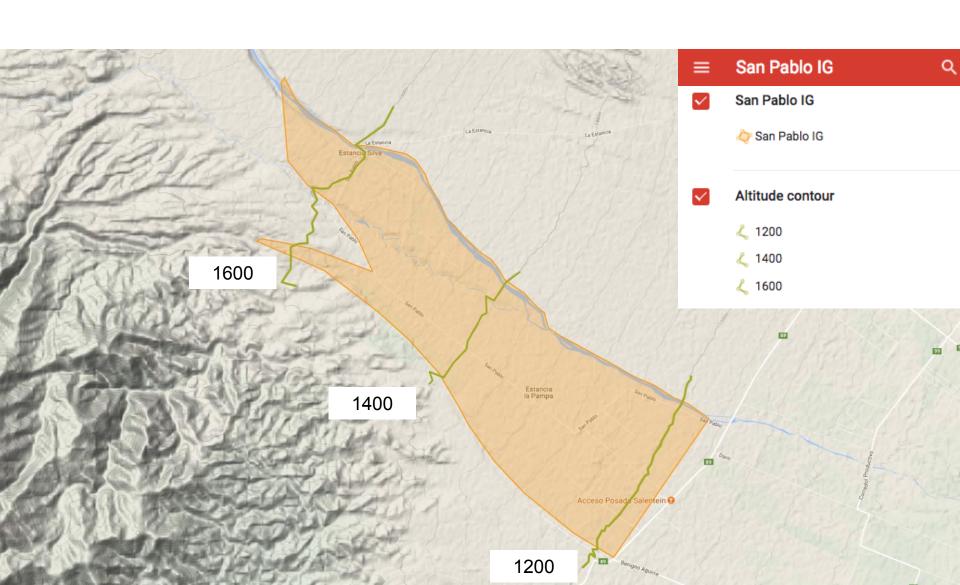






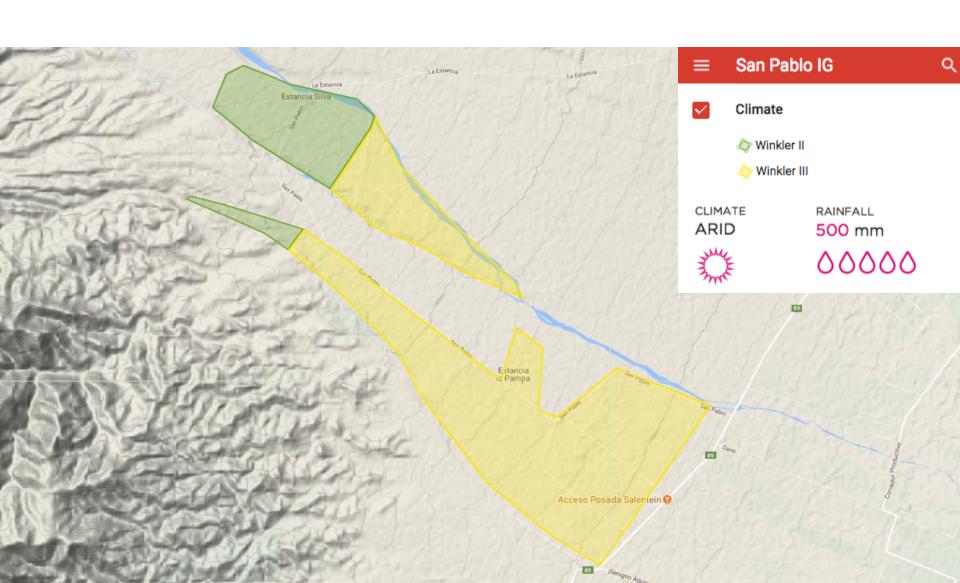
## ALTITUDE San Pablo Gl





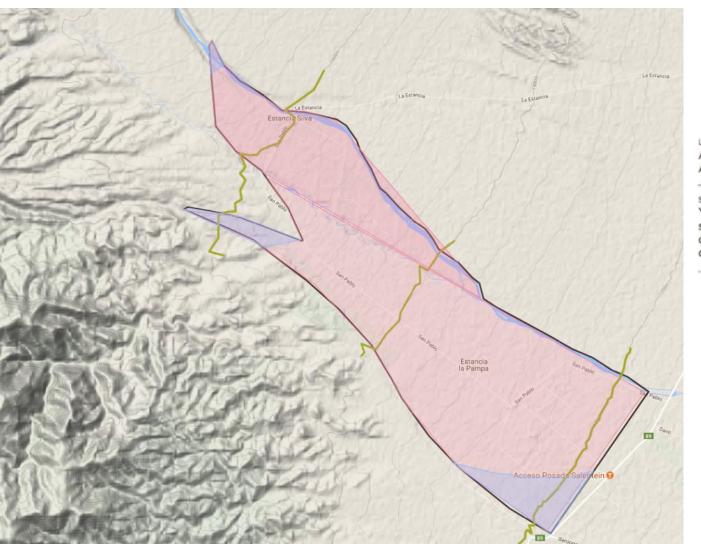
### CLIMATE San Pablo GI





### SOILS San Pablo GI







#### Las Tunas River Terraces

Las Tunas River Terrace

Las Tunas & Villegas Rivers Terrace

Calcareous Soils

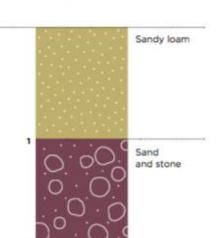
#### LANDSCAPE MORPHOLOGY

Alluvial cone of River Las Tunas and Arroyo Villegas

#### SOIL TYPE

Young soils of deep alluvial origin, sandy loam (very coarse & medium coarse sand) with low calcareous content. Medium-sized stones

#### ALLUVIAL SOIL



## SOILS San Pablo GI







# Patagonia & Atlantic





36°37' | 45° 36' SOUTH LATITUDE

57°39' | 71° 31'

WEST LONGITUDE



1.91%

Ha: **3.783,6** 

Ac: **9.349,65** 



4 - 670 masl

13 - 2.198 fasl



La Pampa

Neuquén

Río Negro

Chubut

**Buenos Aires** 



### **KEY FACTORS**

The southernmost vineyards in the world are located in Chubut, beyond 45° south latitude.

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



# PATAGONIA & ATLANTIC REGION

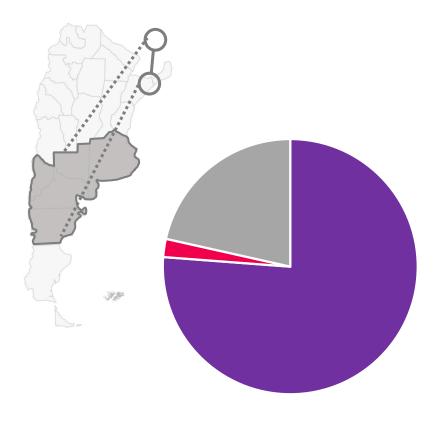




	Hectares	Hectares Acres	
RED VARIETIES	2.886,7	7.133,32	% Red
Malbec	1.177,2	2.908,98	40,78%
Merlot	542,1	1.339,58	18,78%
Pinot Noir	418,7	1.034,65	14,50%
Cabernet Sauvignon	411,1	1.015,94	14,24%
Syrah	108,3	267,69	3,75%
Cabernet Franc	70,3	173,72	2,44%
Petit Verdot	22,0	54,34	0,76%
Bonarda	19,0	46,95	0,66%
Tannat	13,8	34,10	0,48%
Tempranillo	13,5	33,38	0,47%
Other red varieties	90,6	223,99	3,14%
WHITE VARIETIES	809,4	2.000,11	% White
Chardonnay	221,6	547,64	27,38%
Sauvignon Blanc	155,8	385,00	19,25%
Torrontés Riojano	94,2	232,78	11,64%
Torrontés Mendocino	77,9	192,50	9,62%
Semillón	56,9	140,55	7,03%
Torrontés Sanjuanino	51,1	126,27	6,31%
Viognier	10,2	25,30	1,27%
Riesling	8,3	20,51	1,03%
Chenin	5,0	12,36	0,62%
Other white varieties	128,4	317,20	15,86%
PINK VARIETIES	87,5	216,22	% Pink
Criolla Chica	1,3	3,21	1,49%

- Red grapes
- White grapes
- Pink grapes

76,3% 21,4% 2,3%



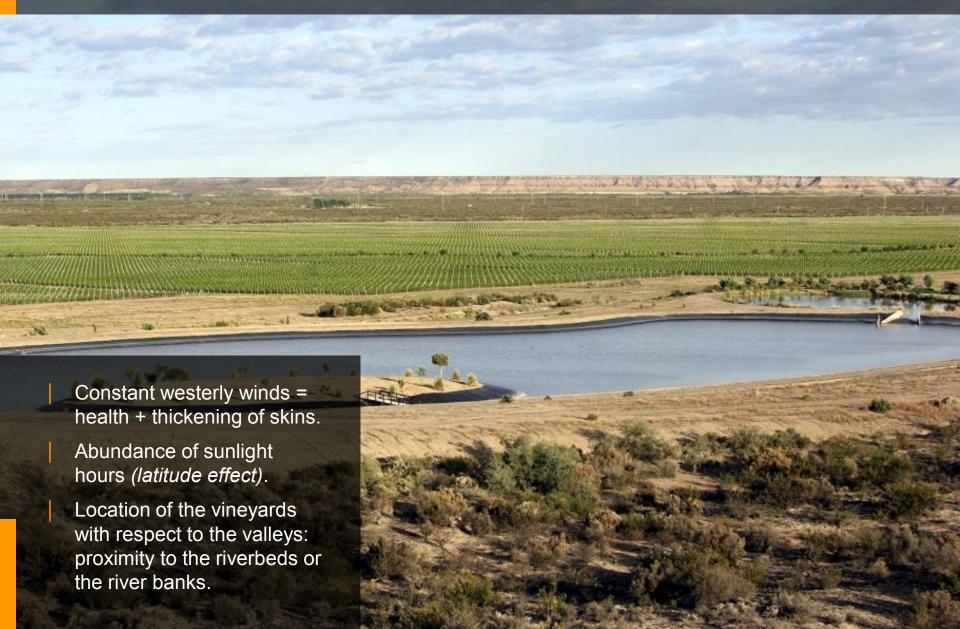
# PATAGONIA & ATLANTIC REGION Brief History



- In the **1990s** vine plantation in Argentina was deregulated.
- 1999 a new viticultural hub was born in Neuquén looking to diversify its production with wines in San Patricio del Chañar.
- 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.

# PATAGONIA Key factors of terroir











### NEUQUÉN Terroir characteristics





38°37' | 38°57' **SOUTH LATITUDE** 

68°18' | 68°14' **WEST LONGITUDE** 



TEMP.
Annual Average

12/15° C 54/59° F



RAINFALL Annual Average

150 mm/year

**5,9** in/year



### **CULTIVATED SURFACE**

for vinification\*

Ha: **1.761,7** 

Ac: 4.353,34



**0.89%** of the country

48.5% of the region



### **ALTITUDE** of the vineyards

270 - 415 masl

886 - 1.362 fasl



#### **HIGHLIGHTS**

The cultivated area is located at low altitude, but temperatures decrease as a result of latitude, which has a compensatory effect

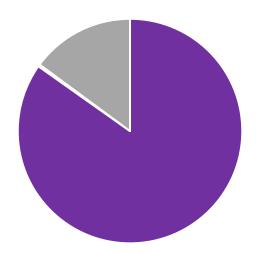
# NEUQUÉN Varieties







Red grapes White grapes Pink grapes 84,9% 14,8% 0,3%





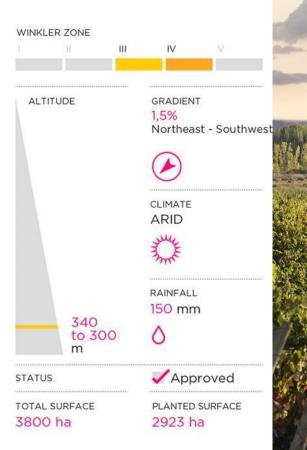
Malbec
Cabernet Sauvignon
Merlot
Pinot Noir
Chardonnay

	Hectares	Acres	%
NEUQUÉN	1.761,7	4.353,34	
Red varieties	1.495,3	3.695,04	% Red
Malbec	660,2	1.631,42	44,15%
Cabernet Sauvignon	266,7	659,04	17,84%
Merlot	239,8	592,57	16,04%
Pinot Noir	238,2	588,62	15,93%
Syrah	35,8	88,47	2,39%
Cabernet Franc	28,9	71,41	1,93%
Petit Verdot	9,4	23,23	0,63%
Tannat	5,3	13,10	0,35%
Bonarda	3,0	7,41	0,20%
Tempranillo	1,9	4,70	0,13%
Other red varieties	6,1	15,07	0,41%
White varieties	260,8	644,46	% White
Chardonnay	137,3	339,28	52,65%
Sauvignon Blanc	81,1	200,41	31,10%
Semillón	17,7	43,74	6,79%
Torrontés Riojano	12,6	31,14	4,83%
Viognier	8,1	20,02	3,11%
Torrontés Mendocino	1,4	3,46	0,54%
Chenin	0,3	0,74	0,12%
Riesling	0,1	0,25	0,04%
Other white varieties	2,2	5,44	0,84%
Pink varieties	5,6	13,84	



# NEUQUÉN Terroir characteristics







# NEUQUÉN Soils



CONFLUENCIA > CONFLUENCIA

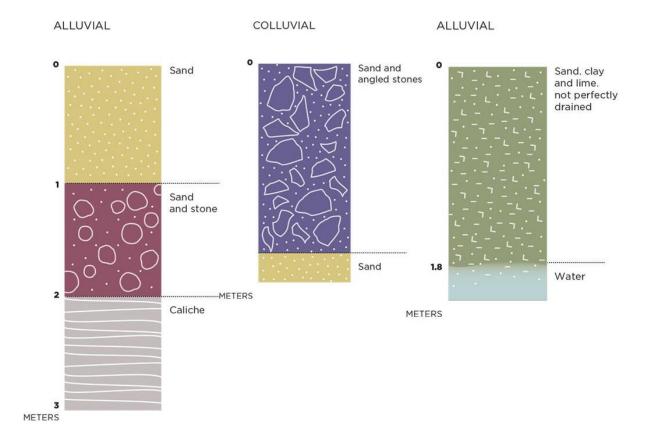
### **NEUQUÉN**

LANDSCAPE MORPHOLOGY
Pleistocene terraces, fluvial terraces, alluvial and colluvial cones.

SOIL TYPE

Variable 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.

VARIETIES
Malbec
Cabernet Sauvignon
Chardonnay
Pinot Noir
Merlot
Sauvignon Blanc



# **NEUQUÉN** | San Patricio del Chañar Terroir characteristics



- Located 37 miles to the northwest of the province's capital (in Añelo Department), 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.



**CULTIVATED SURFACE** for vinification (Añelo Department)\*

Ha: **1.592,2** 

Ac:: **3.934,49** 







68°18'
WEST



**320 - 415** masl **1.100 - 1.362** fasl





RAINFALL Annual Average

9/13° C 48.5/55° **80 / 120** mm/year

**48,5/55° F 3,2/4,7** in/year



Aluvional soils. Sandy-day-loam and calcareous soils in the highest parts of the valley.



Most planted\*

Malbec

Cabernet Sauvignon

Merlot

Pinot Noir

Chardonnay



# RÍO NEGRO Terroir characteristics





37°52' | 40°45' **SOUTH LATITUDE** 

63°16' | 67°47' **WEST LONGITUDE** 



TEMP.
Annual Average

12/16° C 54/61° F



RAINFALL Annual Average

**190** mm/year

**7,9** in/year





### **CULTIVATED SURFACE**

for vinification\*

Ha: **1.520,4** 

Ac: **3.757,06** 



**0.77%** of the country

**41.8%** of the region



### **ALTITUDE** of the vineyards

4-370 masl

13 - 1.214 fasl



#### **HIGHLIGHTS**

- Series of valleys located in the basin of the Colorado and Negro rivers, which cross the province from west to east.
- The lower valley of Río Negro receives the influence of the Atlantic ocean.

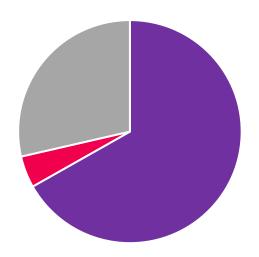
# RÍO NEGRO Varieties







Red grapes White grapes Pink grapes 66,8% 28,6% 4,6%





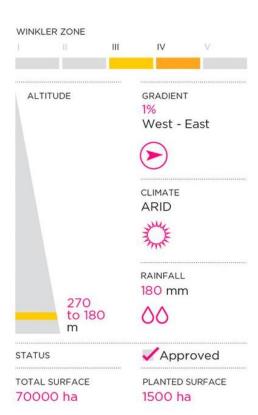
Malbec Merlot Torrontés Pinot Noir Cabernet Sauvignon

	Hectares	Acres	%
RÍO NEGRO	1.520,4	3.757,06	
Red varieties	1.016,4	2.511,63	% Red
Malbec	369,9	914,06	36,39%
Merlot	252,8	624,69	24,87%
Pinot Noir	127,4	314,82	12,53%
Cabernet Sauvignon	94,1	232,53	9,26%
Syrah	62,2	153,70	6,12%
Cabernet Franc	20,0	49,42	1,97%
Bonarda	12,4	30,64	1,22%
Petit Verdot	12,0	29,65	1,18%
Tempranillo	10,9	26,93	1,07%
Tannat	0,2	0,49	0,02%
Other red varieties	54,5	134,67	5,36%
White varieties	433,9	1.072,21	% White
Torrontés Riojano	76,7	189,53	17,68%
Torrontés Mendocino	76,5	189,04	17,63%
Torrontés Sanjuanino	51,1	126,27	11,78%
Sauvignon Blanc	44,3	109,47	10,21%
Semillón	35,8	88,47	8,25%
Chardonnay	31,2	77,10	7,19%
Chenin	4,5	11,12	1,04%
Riesling	3,4	8,40	0,78%
Viognier	1,2	2,97	0,28%
Other white varieties	109,2	269,84	25,17%
Pink varieties	70,1	173,22	% Pink
Criolla Chica	1,3	3,21	1,85%



## RÍO NEGRO Terroir characteristics







## RÍO NEGRO Terroir characteristics



GENERAL ROCA > GENERAL ROCA

### **RÍO NEGRO**

LANDSCAPE MORPHOLOGY
Pleistocene terraces, fluvial terraces, alluvial and colluvial cones.

#### SOIL TYPE

Variable 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.

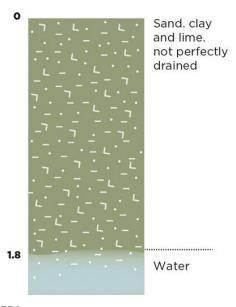
VARIETIES
Malbec
Cabernet Sauvignon
Merlot
Pinot Noir
Sauvignon Blanc

#### **ALLUVIAL**

Sand. clay

and lime

ALLUVIAL



**METERS** 





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