



# MENDOZA



# MENDOZA

## Terroir characteristics



### LOCATION

Viticultural area

**32° 43' | 34° 58'**

SOUTH LATITUDE

**67° 33' | 69° 15'**

WEST LONGITUDE



### TEMP.

Annual Average

**15/19° C**

**59/66° F**



### RAINFALL

Annual Average

Mendoza

**220 mm/year**

Melbourne

**656**

Bordeaux

**851**

Napa

**599**



### 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 - 1.610 masl**

**1.411 - 5.282 fasl**



### HIGHLIGHTS

The most important wine province and one of the main producing centres in the world.

The presence of the Andes shape the climate generating ideal conditions for the cultivation of vines.

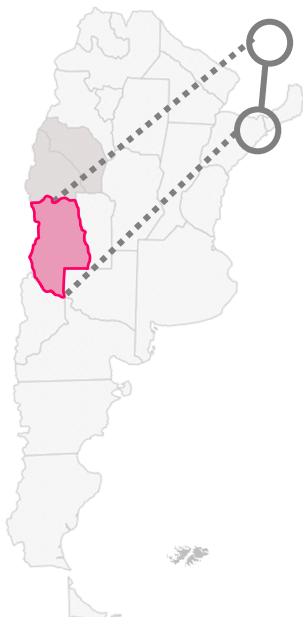
It is divided into five large sub-regions: Valle de Uco; Primera Zona; Northern oasis; the East and the South.

# MENDOZA

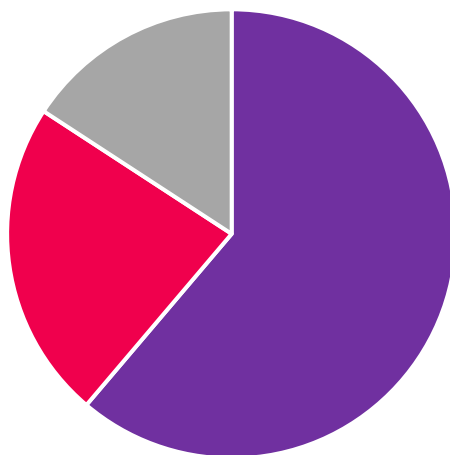
## Main varieties

### DISTRIBUTION

by colour\*



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



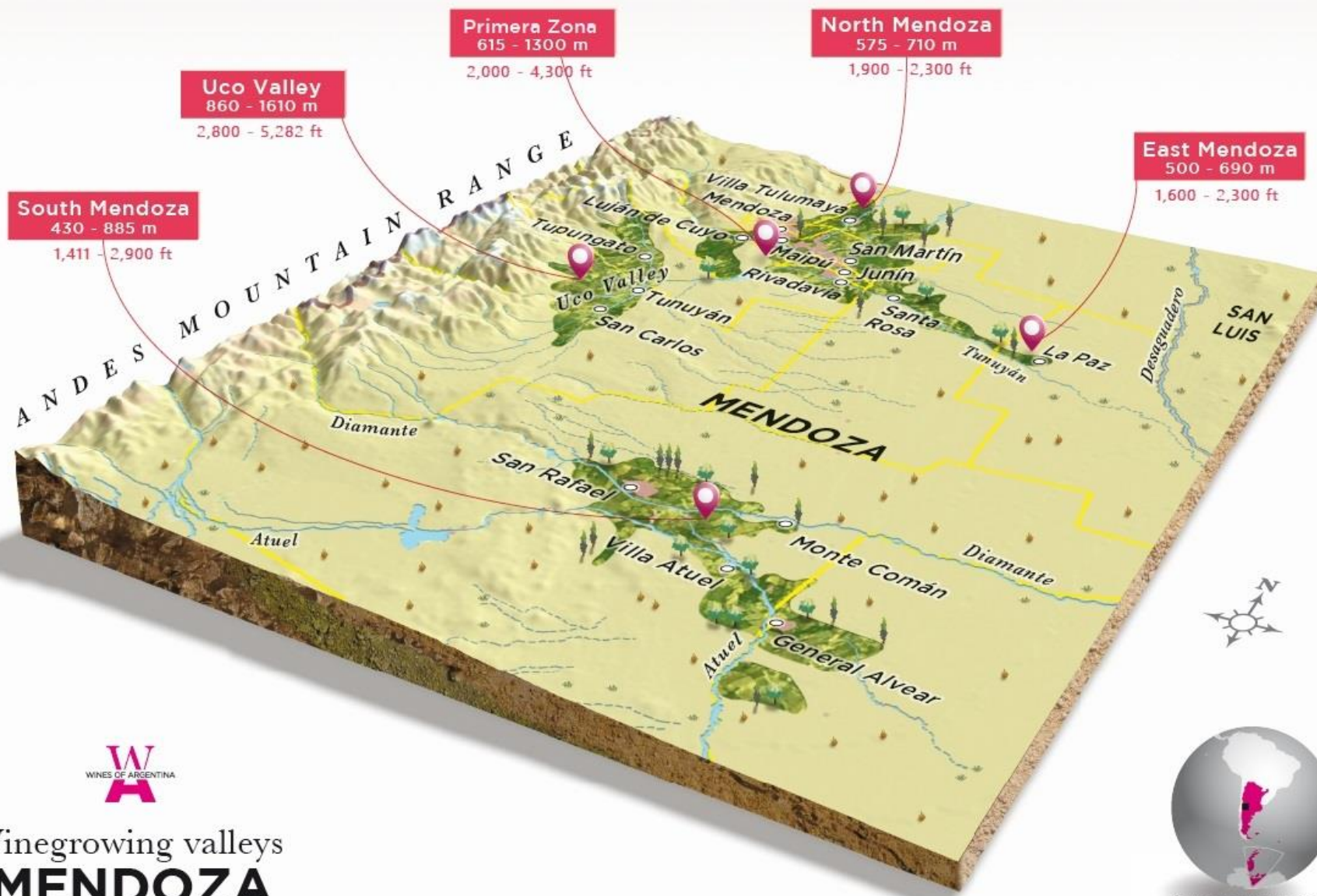
### MAIN GRAPE VARIETIES

Most planted\*

Malbec  
 Bonarda  
 Cabernet Sauvignon  
 Syrah  
 Tempranillo

	Hectares	Acres	%
<b>MENDOZA</b>	<b>149.226,9</b>	<b>368.754,59</b>	
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%





Vinegrowing valleys  
**MENDOZA**



Cartography by FOCUS





MENDOZA

**PRIMERA ZONA**

Luján de Cuyo & Maipú





### Luján de Cuyo

690 - 1300 m  
2,300 - 4,300 ft

1. Agrelo
2. Carrodilla
3. Chacras de Coria
4. El Carrizal
5. La Puntilla
6. Las Compuertas
7. Luján de Cuyo
8. Mayor Drummond
9. Perdriel
10. Ugarteche
11. Vistalba

### Maipú

615 - 940 m  
2,000 - 3,100 ft

12. Coquimbito
13. Cruz de Piedra
14. Fray Luis Beltrán
15. General Ortega
16. Gutiérrez
17. Las Barrancas
18. Lunlunta
19. Luzuriaga
20. Maipú
21. Rodeo del Medio
22. Russell
23. San Roque



Vinegrowing valleys  
**MENDOZA**  
**PRIMERA ZONA**



Cartography by FOCUS



# PRIMERA ZONA

Location

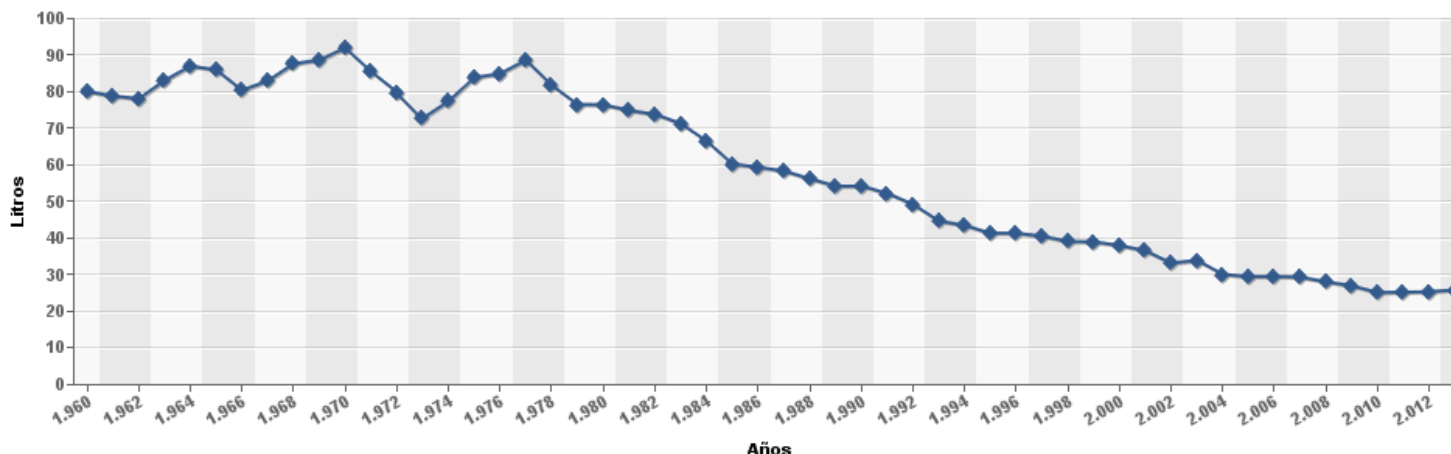


# BRIEF HISTORY | The beginnings

## Primera Zona



- 17th and 18th century:** 1<sup>st</sup> 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 lts

Per capita 2017



# BRIEF HISTORY | 20<sup>th</sup> Century

## Primera Zona



Large scale irrigation network using water from Mendoza River.

Primera Zona holds 40% of Argentina's wineries (881 in total)

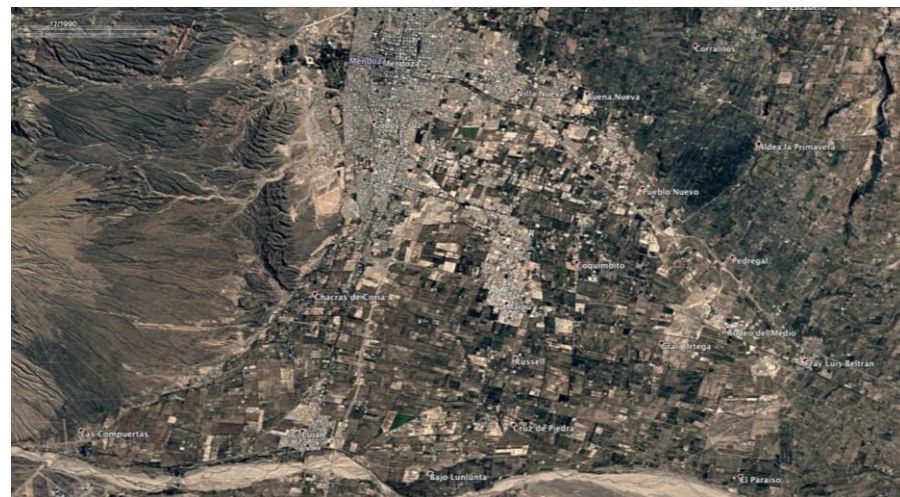
1990: D.O.C.  
Luján de Cuyo



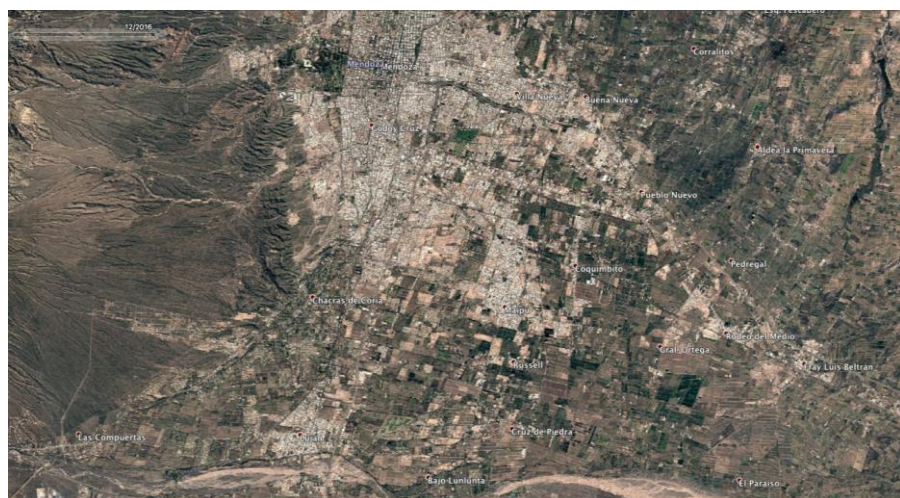
Some GI's:

- Agrelo
- Las Compuertas
- Lunlunta
- Barrancas

City advancement over vineyard areas.



1990



2016

## 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 varieties.
- | Fine wines, mainly reds.



# LUJÁN DE CUYO

Primera Zona



## CULTIVATED SURFACE

for vinification (INV - 2019)



Ha: **15.495,1**

**7,8%**

of the  
country

Ac: **38.289,94**

**10,3%**

of the  
province

## MALBEC

Ha: **8.765,4**

**19,7%**

of the  
country

Ac: **21.633**

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

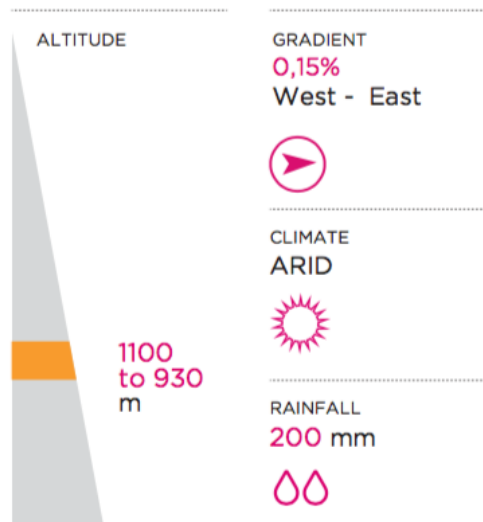
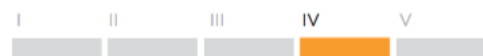
Luján de Cuyo



LUJÁN DE CUYO > AGRELO

## AGRELO

WINKLER ZONE



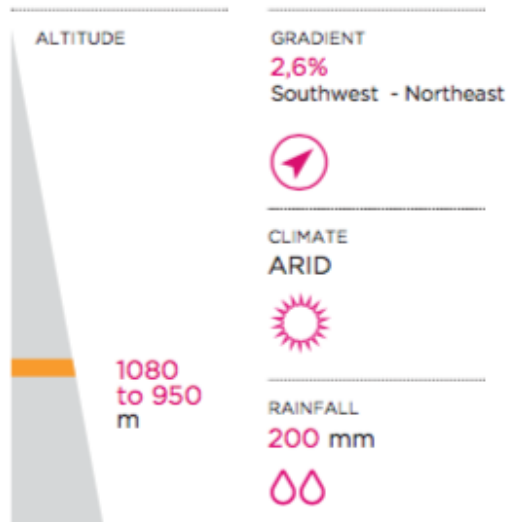
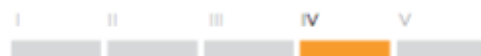
STATUS ☒ Approved

TOTAL SURFACE 14200 ha  
PLANTED SURFACE 5300 ha

LUJÁN DE CUYO > LAS COMPUERTAS

## LAS COMPUERTAS

WINKLER ZONE



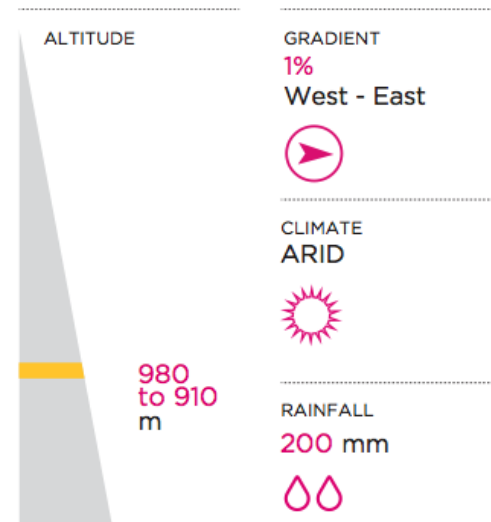
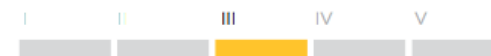
STATUS ☒ Approved

TOTAL SURFACE 1780 ha  
PLANTED SURFACE 426 ha

LUJÁN DE CUYO > PERDRIEL

## PERDRIEL

WINKLER ZONE



STATUS ☐ Not approved

TOTAL SURFACE 1900 ha  
PLANTED SURFACE 900 ha





## CULTIVATED SURFACE

(for vinification – INV 2019)

Ha: **11.242,6**

Ac: **27.781,59**

**5,7%**

*of the country*

### MALBEC

Ha: **4.011**

Ac: **9.911,58**

**9,04%**

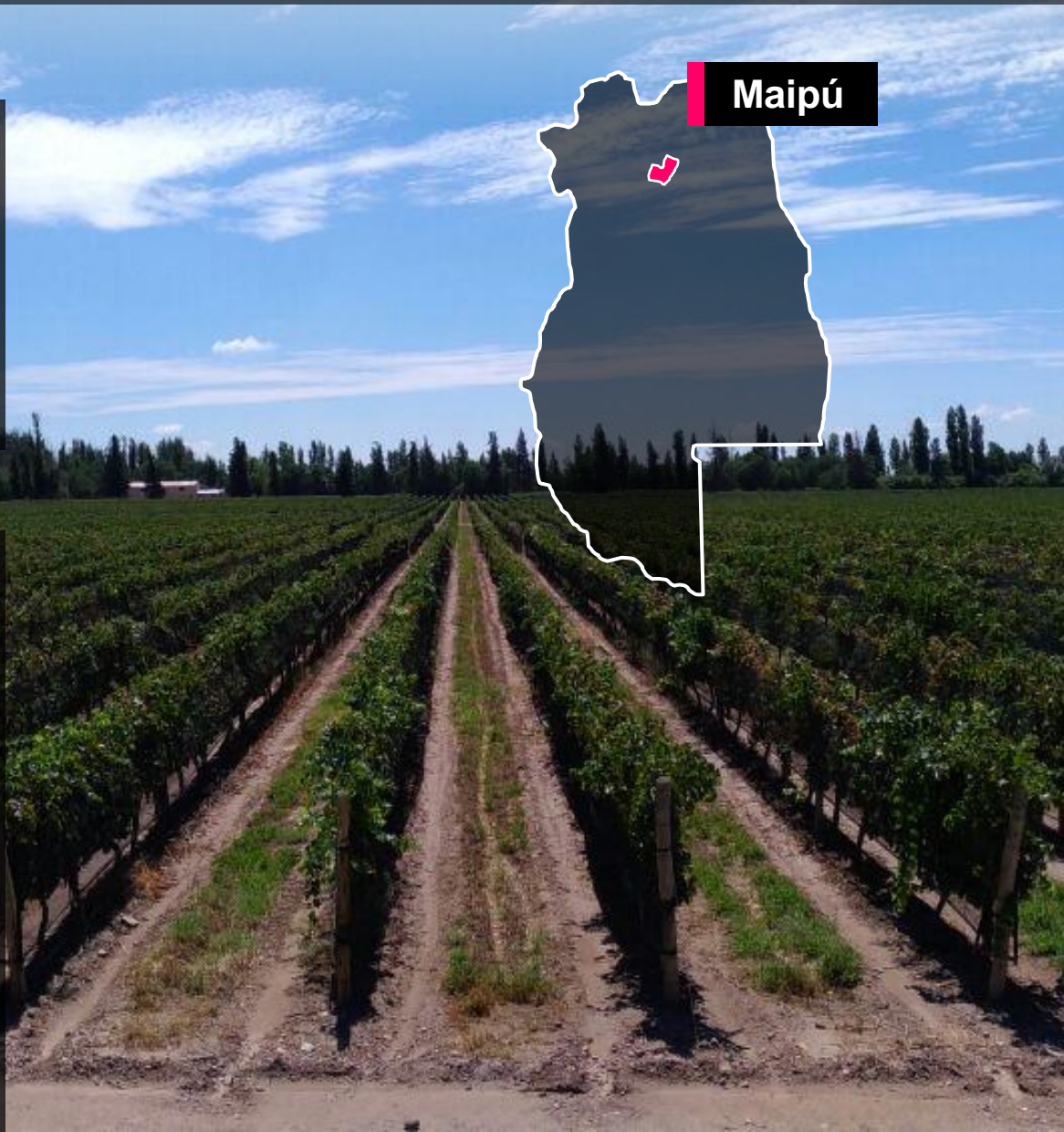
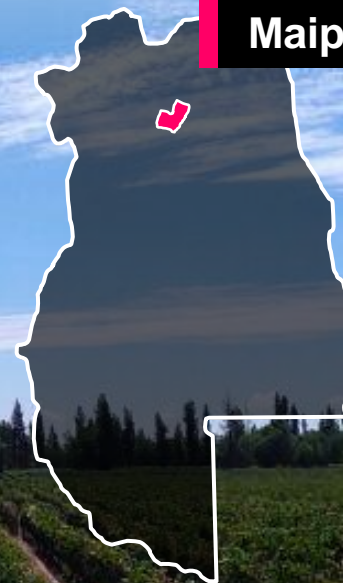
*of the country*

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 Gl's:

- Barrancas
- Cruz de Piedra
- Lunlunta

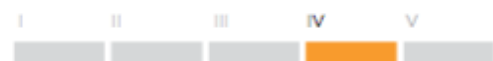
Maipú



MAIPÚ > LAS BARRANCAS

## LAS BARRANCAS

WINKLER ZONE



ALTITUDE



840  
to 680  
m

GRADIENT

1%  
Northwest - Southeast



CLIMATE

ARID



RAINFALL

200 mm



STATUS

✓ Approved

TOTAL SURFACE

7000 ha

PLANTED SURFACE

2923 ha

MAIPÚ > LUNLUNTA

## LUNLUNTA

WINKLER ZONE



ALTITUDE



930  
to 880  
m

GRADIENT

1,6 %  
Southwest - Northeast



CLIMATE

ARID



RAINFALL

200 mm



STATUS

✓ Approved

TOTAL SURFACE

1600 ha

PLANTED SURFACE

600 ha





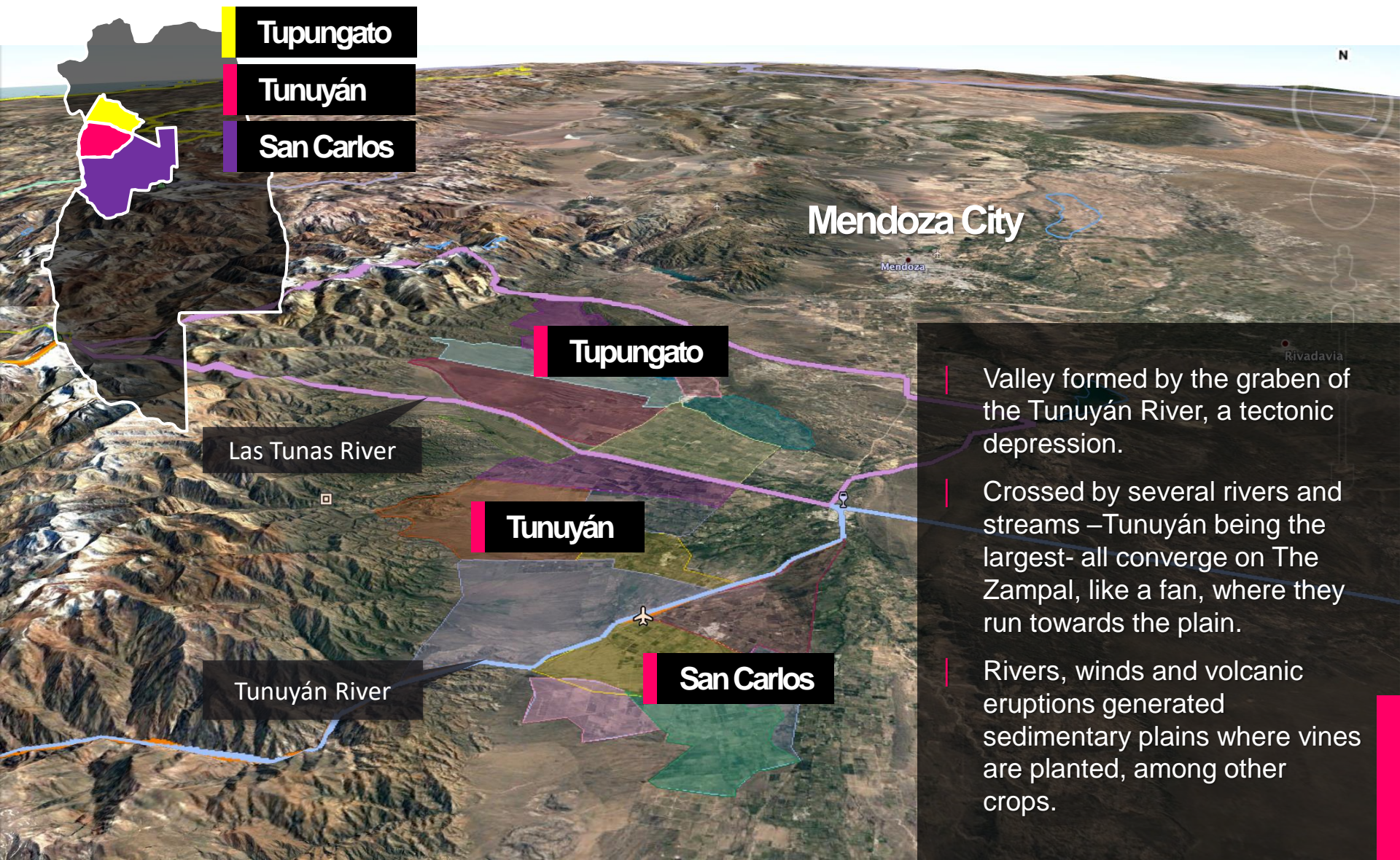
MENDOZA  
**UCO VALLEY**





# UCO VALLEY

Location



Tupungato

Tunuyán

San Carlos

Mendoza City

Tupungato

Las Tunas River

Tunuyán

Tunuyán River

San Carlos

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.



### Tunuyán

870 - 1330 m  
2,900 - 4,400 ft

1. Campo de los Andes
2. Colonia Las Rosas
3. El Algarrobo
4. El Totoral
5. La Primavera
6. Las Pintadas
7. Los Árboles
8. Los Chacayes
9. Los Sauces
10. Villa Seca
11. Vista Flores

### Tupungato

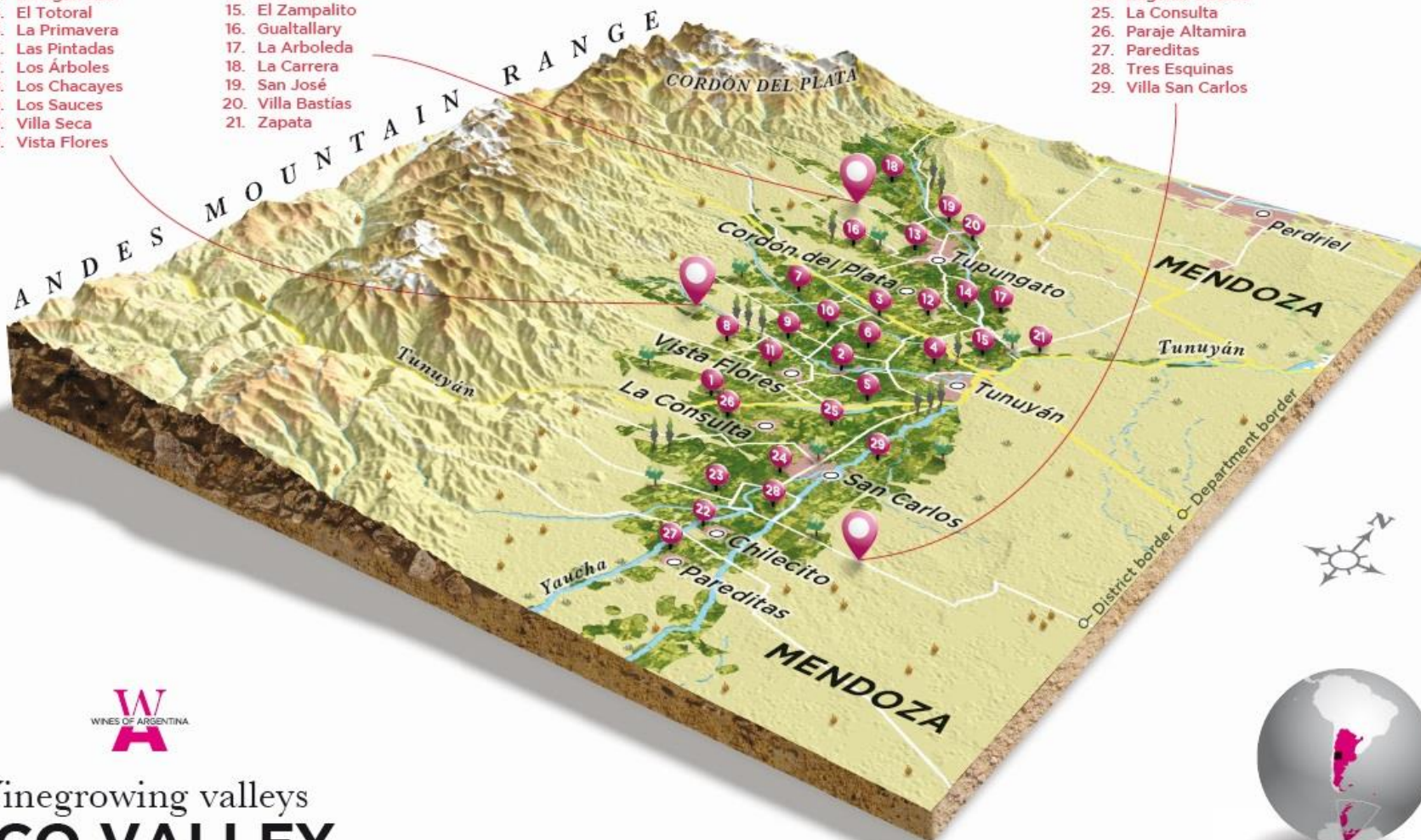
860 - 1610 m  
2,800 - 5,282 ft

12. Cordón del Plata
13. El Peral
14. El Zampal
15. El Zampalito
16. Gualtallary
17. La Arboleda
18. La Carrera
19. San José
20. Villa Bastias
21. Zapata

### San Carlos

910 - 1250 m  
3,000 - 4,100 ft

22. Chilecito
23. El Cepillo
24. Eugenio Bustos
25. La Consulta
26. Paraje Altamira
27. Pareditas
28. Tres Esquinas
29. Villa San Carlos



Vinegrowing valleys  
**UCO VALLEY**





# UCO VALLEY

Today's figures



**CULTIVATED SURFACE**  
for vinification (INV - 2019)\*



Ha: **28.624,6**

**14,4%** of the country

Ac: **70.734,25**

**19,2%** of the province

87,6% Red varieties

61% Malbec

New plantations raised the need to characterise the terroir of the Uco Valley.

**MALBEC** (Uco Valley)

**40,5%** of the province



# UCO VALLEY

## Brief History

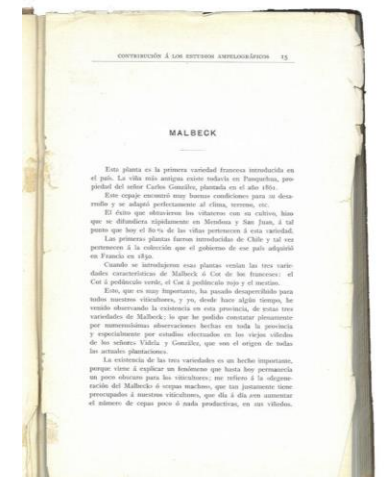
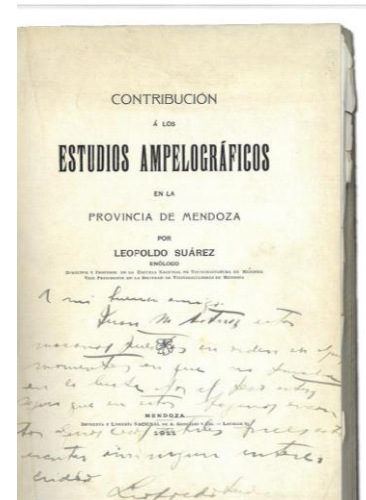


16<sup>th</sup> Century, Jesuits missionaries were the first colonizers that planted vines.

During the twentieth century Uco Valley specialized in the cultivation of fruit and vegetables, with some key places for vines: La Consulta, Eugenio Bustos, Vista Flores

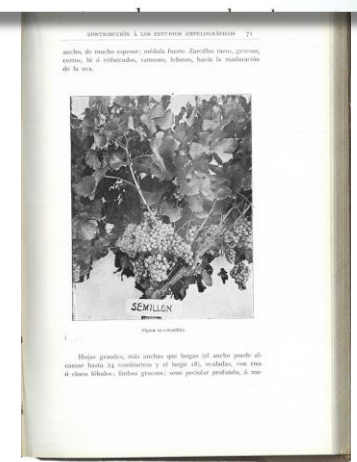
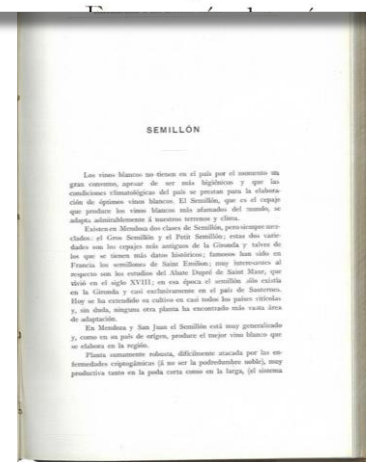
A book of 1922, written by oenologist Leopoldo Suárez, reported 16 wineries in San Carlos Department.

Also a book of the same author, reported in 1911 the potential of calcareous soils for Semillon and other grapes, like Malbec.



### 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.



Planted in 1900. For the very first part of 20<sup>th</sup> Century it was considered a qualitative place.

As it was never a political district, it was a renowned place without clear boundaries.

Therefore, the name of Altamira was commonly used to point out an imprecise place in San Carlos.

Its name derives from the panoramic view it offers from the highest point.





UCO VALLEY | SAN CARLOS

# PARAJE ALTAMIRA GI

Los Chacayes

Villa Seca

Villa Seca

Tunuyán

Vista Flores

Vista Flores

Campo  
Los Andes

La Consulta

La Consulta

PARAJE  
ALTAMIRA



Eugenio  
Bustos

San Carlos

San Carlos

Los Indios

El Cepillo

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Image © 2018 DigitalGlobe  
Image © 2018 CNES / Airbus

Google E

Located in San Carlos, on the alluvial cone of the Tunuyán River. It is not a political district.

Since 2000, it has experienced a marked growth in cultivated area.

The red grapes are renowned for their colour and acidity.



# TERROIR

Paraje Altamira GI



SAN CARLOS > LA CONSULTA

## PARAJE ALTAMIRA

WINKLER ZONE



ALTITUDE



1200  
to 1000  
m

GRADIENT

1%  
West - Southeast



CLIMATE

ARID



RAINFALL

280 mm



STATUS

✓ Approved

TOTAL SURFACE

9300 ha

PLANTED SURFACE

2785 ha





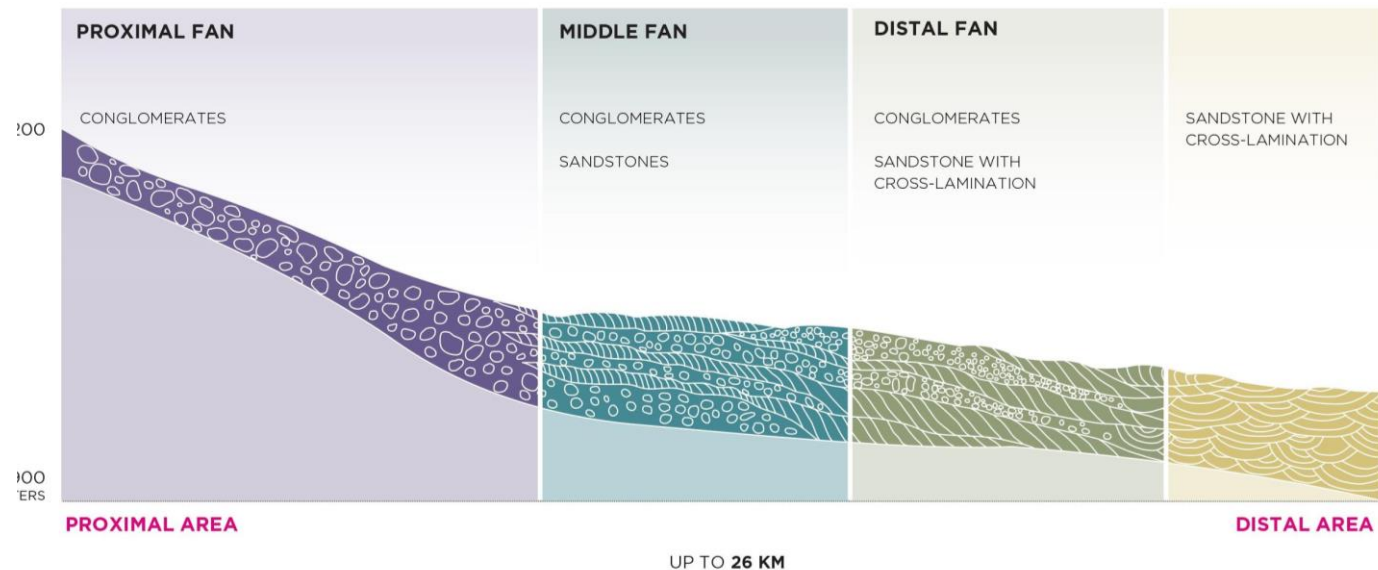
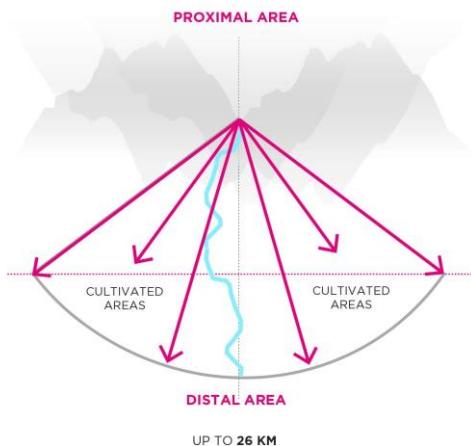
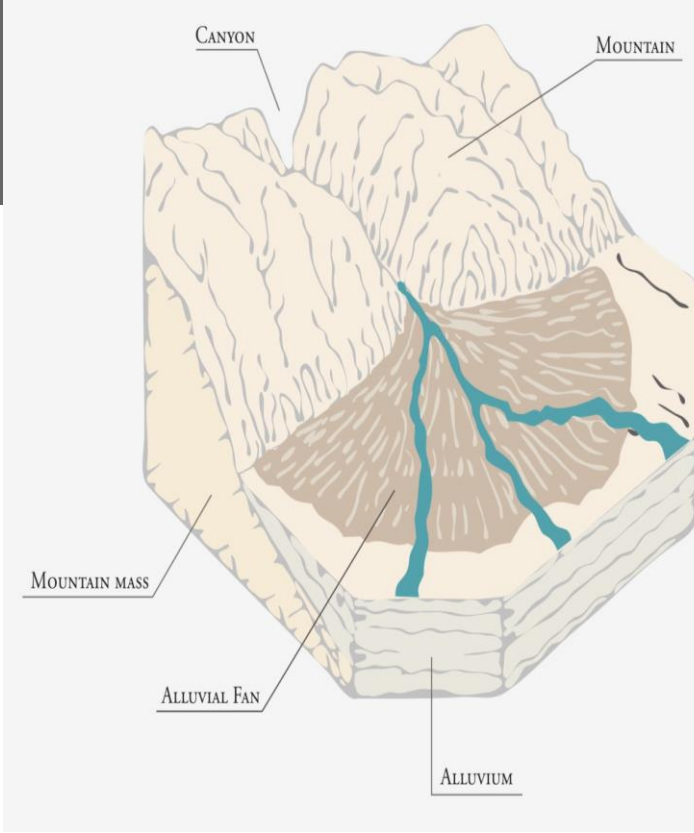
# SOILS

## Paraje Altamira GI

**2009:** The need to separate it from La Consulta by soil type.

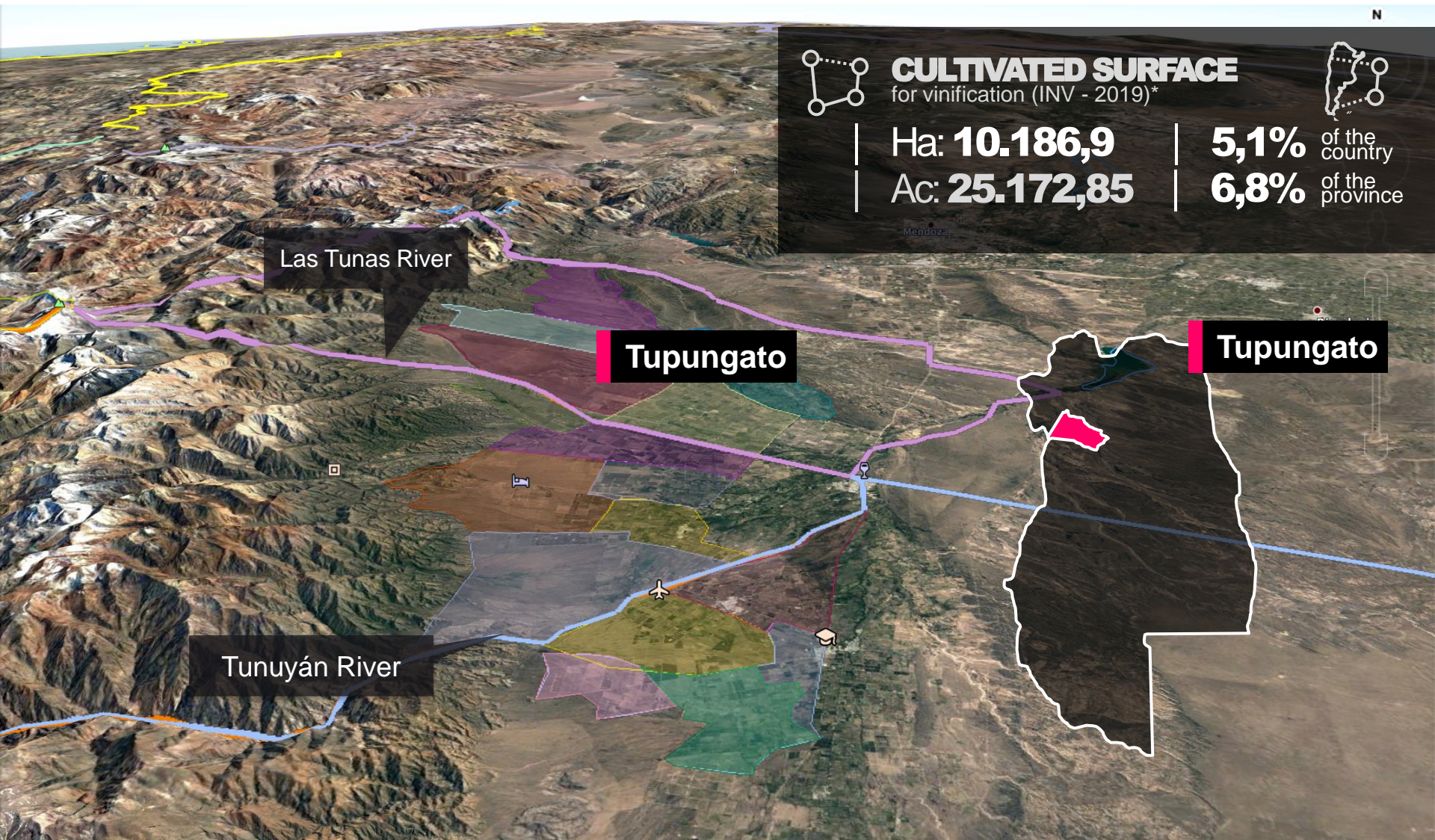
The **alluvial cone** of Tunuyán River was the physical factor for the delimitation.

**Paraje Altamira GI** was approved in 2013, then expanded in 2016.





UCO VALLEY  
**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 GI.** Gualtallary is a GI 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







| Gualtallary boundaries:

- **West:** The Andes range, the border with Chile;
- **East:** Route 89
- **North:** El Peral district
- **South:** Las Tunas River





UCO VALLEY | TUPUNGATO

# GUALTALLARY

A GI in process of approval



| Gualtallary 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 through wells or surface water rights from Las Tunas dam.

| Gualtallary is one of the most exciting wine regions of South America due to the combination of its most diverse climates and soils.





| The GI 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 of the GI, as the average temperature drops 1°C every 150 meters.



## | 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.

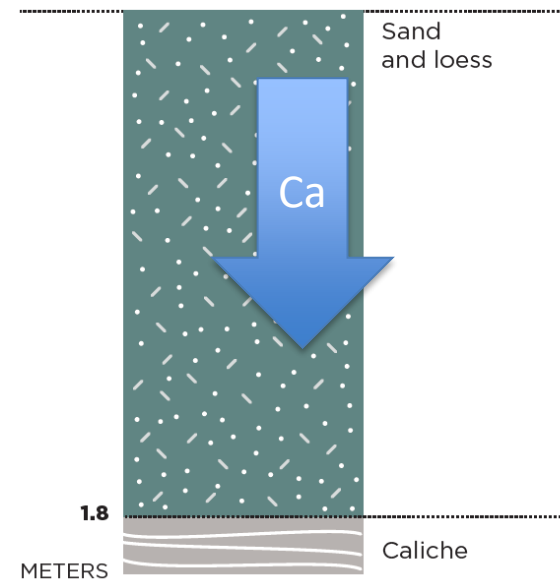
## | SUPERFICIAL BEDROCK

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





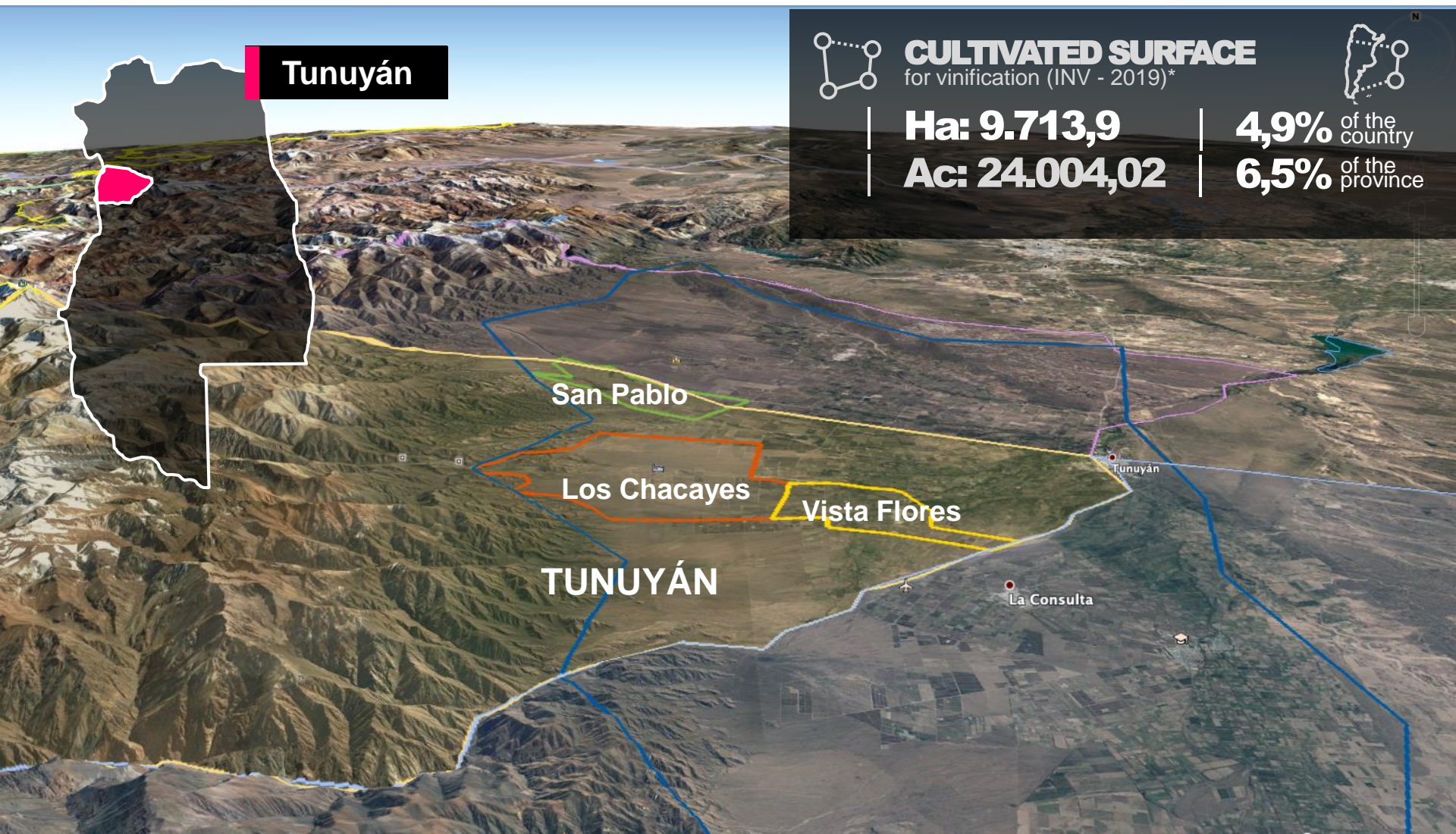
## LA CARRERA & EL PERAL

- | La Carrera: highest area under new plantings in the Valley.
- | Altitude ranges from 1300m (4200 ft) to 1900m (6200 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 20<sup>th</sup> Century.
- | Altitude ranges from 1.050 m (3500 feet) to 1.200 m (4000 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.

UCO VALLEY  
**TUNUYÁN GI**  
Location



**Tunuyán**



**CULTIVATED SURFACE**  
for vinification (INV - 2019)\*



**Ha: 9.713,9**

**4,9%** of the country

**Ac: 24.004,02**

**6,5%** of the province




- | **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.

Its name corresponds to Estancia San Pablo, a Jesuit mission established there towards the 17<sup>th</sup> Century.

In 2000, vineyard cultivation began in the higher areas.

In 2016 a group of wineries requested the delimitation of the GI on account of scientific criteria.



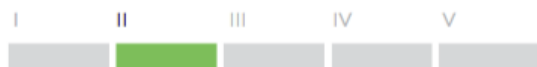
**San Pablo**



# TERROIR

San Pablo GI

## WINKLER ZONE



## ALTITUDE



## GRADIENT

4%  
Northwest - Southeast



## CLIMATE

ARID




## RAINFALL

500 mm



## STATUS

 Pending approval

## TOTAL SURFACE

5335 ha

## PLANTED SURFACE

475 ha



# UCO VALLEY | TUNUYÁN

# LOS CHACAYES

Other relevant GIs



TUNUYÁN > LOS CHACAYES

## LOS CHACAYES

WINKLER ZONE



ALTITUDE



GRADIENT

4,1%  
Northwest -Southeast



CLIMATE

ARID



RAINFALL

280 mm



STATUS

✓ Approved

TOTAL SURFACE

20000 ha

PLANTED SURFACE

1000 ha

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.





UCO VALLEY | TUNUYÁN

# VISTA FLORES

Other relevant Gls



TUNUYÁN > VISTA FLORES

## VISTA FLORES

WINKLER ZONE



ALTITUDE



1000  
to 950  
m

GRADIENT

0,5%  
West - East



CLIMATE

ARID



RAINFALL  
280 mm



STATUS

✓ Approved

TOTAL SURFACE

4700 ha

PLANTED SURFACE

1500 ha

LANDSCAPE MORPHOLOGY

Alluvial plain

SOIL TYPE

Deep soils, predominantly sand and silt. An upwelling of natural waters, peat and isolated flooding.

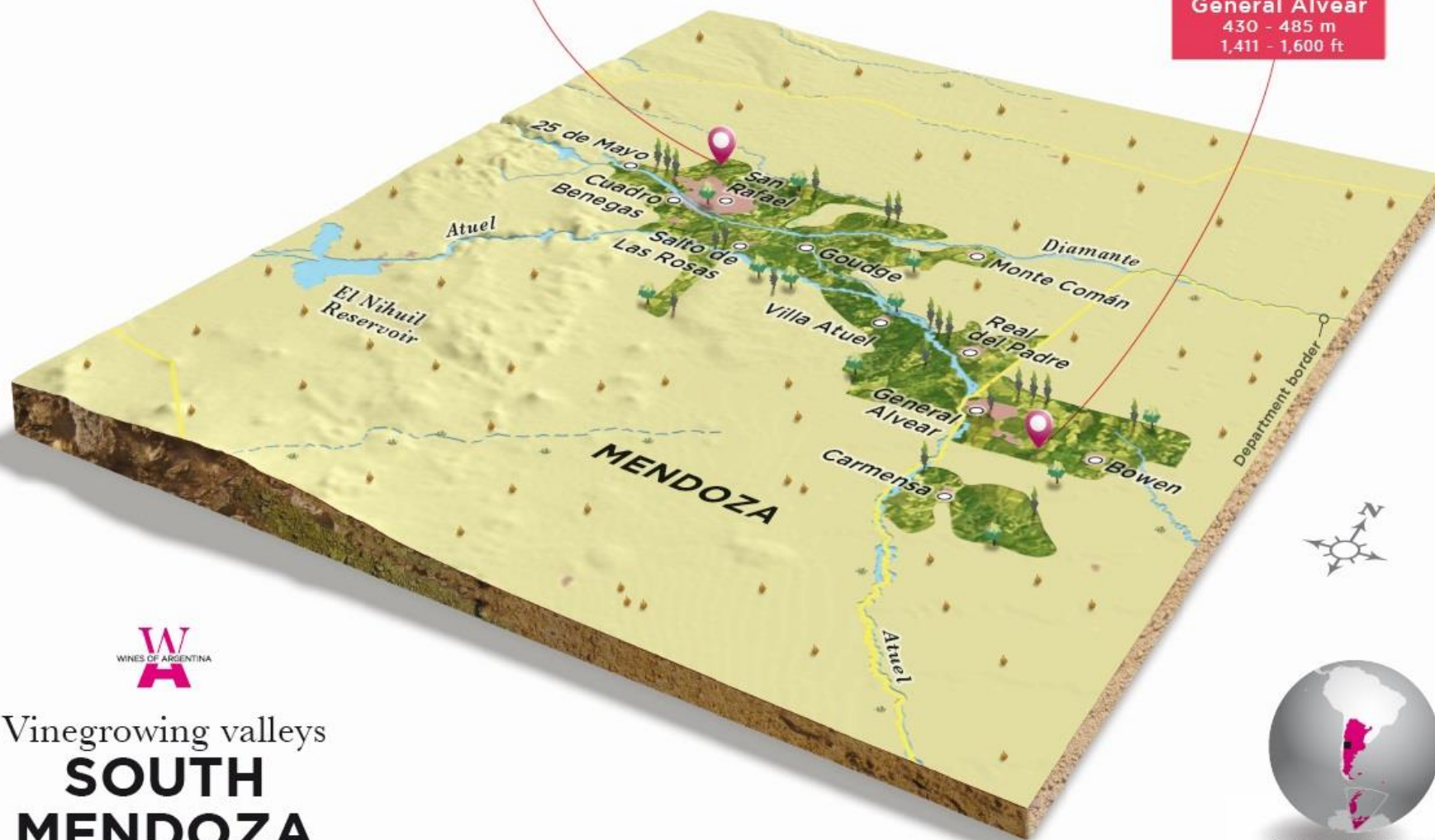






**San Rafael**  
485 - 950 m  
1,600 - 3,100 ft

**General Alvear**  
430 - 485 m  
1,411 - 1,600 ft



Vinegrowing valleys  
**SOUTH  
MENDOZA**



Cartography by FOCUS



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