

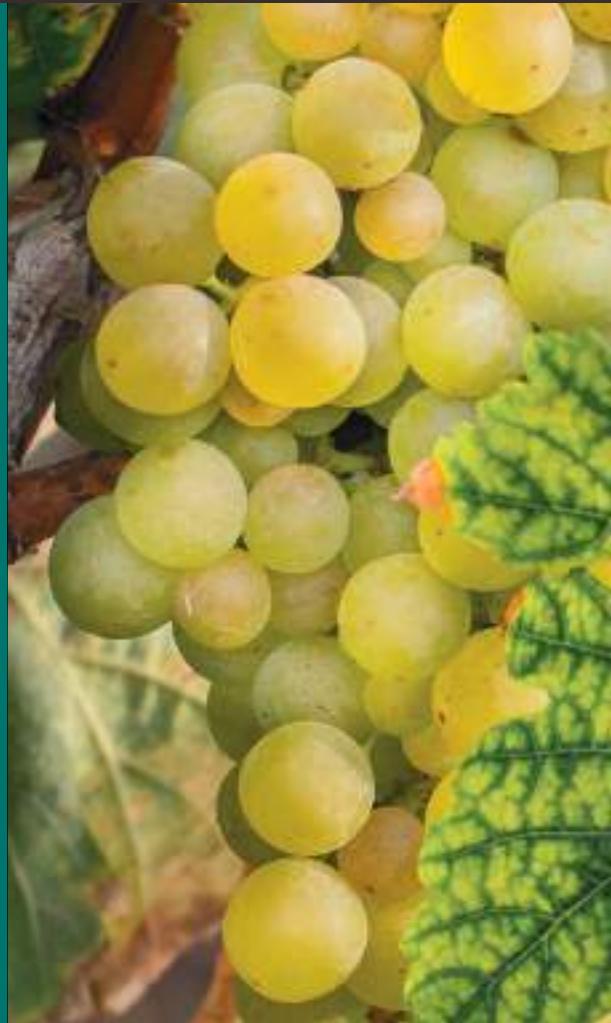
About *Canary Wine*

*Compendium of vitiviniculture in the
Canarian archipelago*

Islas
CANARIAS
DENOMINACIÓN DE ORIGEN PROTEGIDA



Canary
WINE



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Canary
WINE

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*«But i' faith you have drunk too much canaries,
and that's a marvellous searching wine,
and it perfumes the blood ere one can say: what's this?»*

Henry IV
William Shakespeare

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In the middle of the Atlantic Ocean, the Canary Islands are home to wines that are unique in the world. Here you will find local ancestral varieties, nurtured for generations and grown with traditional techniques that increase the intangible value of their wines.

Heroic vines, free of phylloxera, whose plants penetrate directly into our fertile, volcanic soils caressed by the trade winds that, from the sea to the summit, provide us with the perfect raw material to create wines that are diverse but at the same time unique. The Canary Islands are thus one of the treasures of the world's wine heritage.

Welcome to the Canary Islands.
Welcome to the land of *Canary Wine*.

Vine cultivation in the Canary Islands



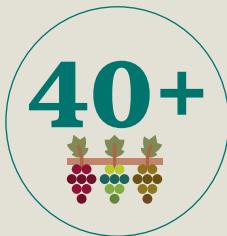
Listán blanco
Malvasía volcánica
Vijariego blanco



Most cultivated
white and red
grape varieties



Listán negro
Negramoll
Vijariego negro

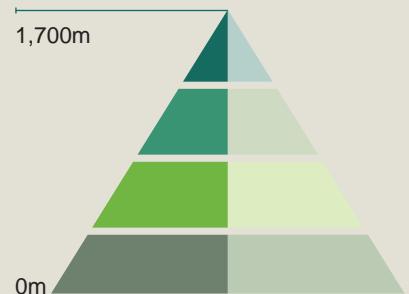


Local varieties that **exist nowhere else in the world**. 20 confirmed plus different mutations and other varieties currently under study.



1,700m

From sea level to an altitude of 1,689 metres, the vineyards of the Canary Islands are the **highest in Europe**



Ancestral crops



The Canary Islands, phylloxera-free territory, a plague that ravaged the world's vineyards



Preservation of varieties and centuries-old vineyards, among the oldest in Europe



Free-standing crop. The plant is inserted and nourished directly from the soil.

Local training systems



Wine production in the Canary Islands

Types of Canary Wine



White



Red



Rosé



Sweet



Sparkling

The Canary Islands has 11 Denominations of Origin

11



320

wineries in the Canary Islands,
of which 242 are bottlers



8,000

winegrowers on all islands



10+ million

litres per year are produced in the whole
of the Canary Islands



1.0

The wines of the volcanoes

Influence of the geological and volcanic development of the Islands on Canary Wine

Jorge Méndez Díaz

Graduate in Agricultural and Rural Environment Engineering from the University of La Laguna and Master's Degree in Vitiviniculture and Oenology from the Polytechnic University of Madrid. He is currently part of the Bodegas Viñátigo project, as the second generation of the project, and the fifth generation of the family in the winemaking tradition. He has spent time in different regions of the world such as Argentina, Chile and Burgundy, as well as in various parts of Spain.





The volcanic origin of the Canary Islands has led to the generation of a unique geological mosaic, characterised by young and fertile soils, on which characteristic crops are grown, giving us equally unique wines.

Introduction

Successive volcanic eruptions have created a complex geological mosaic on each island, a perfect example of the great complexity that characterises the Canary Islands' wine-growing soils and which justifies the exceptional singularity of the wines produced on our islands. Bearing in mind that the soils found today in the Canary Islands are characterised by having undergone sedimentation processes or by having derived from pyroclastic or lavaic materials, there is no clear pattern of zoning or classification by zones, making it even more complex to study them. Likewise, human intervention - transforming hillsides and slopes into cultivable terraces and generating a culture of terraced agriculture on the islands with steeper slopes - has also led to changes in the composition of the Canary Islands' agricultural soils.

Contrary to what one might think, the oldest geological areas of the islands are not necessarily clayey in composition, nor are the younger ones more sandy or stony, since, due to landslides and accumulations of sedimentation of materials, there is no clear and unique evolutionary pattern.

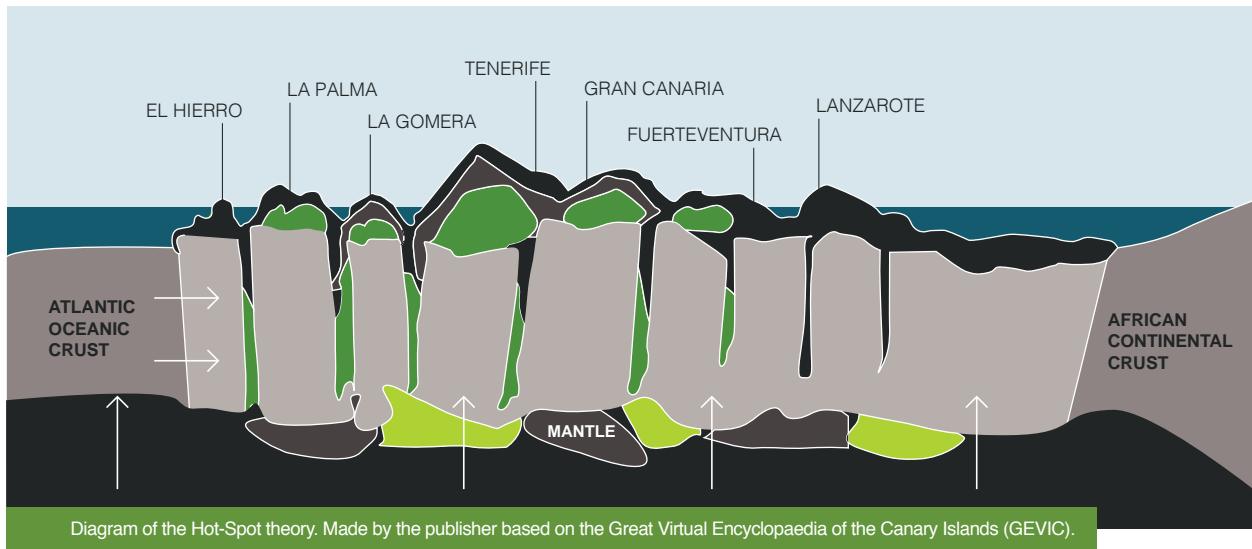
On the other hand, in addition to the exceptional nature of the Canary Islands' soils, there are two further components of heterogeneity in terms of vitiviniculture: **the richness of the wine-growing heritage**, with dozens of grape varieties that arrived on the islands with European colonisation, and **the absence of phylloxera**, which has contributed to the fact that these varieties have been preserved over time and have not disappeared. The lack of need for rootstock and the fact that the soils are extremely young compared to those of the continents mean that the Canary Islands have the **capacity to produce wines with a very unique identity**.

The geological formation of the Canary Islands and its wine-producing areas

The Canary archipelago is made up of a group of islands located on the African plate. It is part of Macaronesia, a group of archipelagos located in the Atlantic Ocean to which Cape Verde, Madeira and the Azores Islands also belong. Like the Canary Islands, Cape Verde and Madeira are located on the African plate, while the Azores are on the Eurasian plate, which is closer to the North American plate.

To make great wines it is necessary to have a thorough knowledge of the geological processes that have shaped our islands. Only in this way can they be interpreted and, consequently, we will get to know our territory and its potential better.

The Canary Islands extend inland into the Atlantic Ocean, so that islands such as La Palma and El Hierro are 450 km off the west coast of Africa. Lanzarote and Fuerteventura, on the other hand, are barely a hundred kilometres from it, making them the closest to the mainland. It is very important to note that the age of the islands differs from that of the continents. From a geological point of view, these are considerably older than 500 million years or more, whereas the Canary Islands began to appear



approximately 20 million years ago, which makes us understand their soils as young.

The easternmost islands, Fuerteventura and Lanzarote, were the first to appear. The rest of the islands of the archipelago began to emerge from the oceanic crust, forming submarine basal complexes from a depth of four or five thousand metres. The subaqueous volcanic series that would drive the islands to the surface are much younger. Islands such as La Palma and El Hierro are between one and a half and four million years old, being the most recent ones, while Tenerife is on average twelve million years old.

There are many hypotheses about the origin of the Canary Islands that revolve around two main ideas. One of them is based on the existence of a system of fractures in the oceanic crust, induced by tectonic stresses, which due to decompression at deep levels of the crust and the upper part of the mantle produce the massive melting

of the mantle and the genesis of the magmas that would have originated the islands. In contrast, the other idea is that a magmatic system was generated that caused the fracturing of the oceanic crust, through which these magmas ascended and formed the Canary Islands.

The formation of the islands is divided into several stages, similar in each and every one of them, and which are summarised in a series of cycles of volcanic activity. These cycles are made up of two large, clearly differentiated units. The first is known as the **Basal Complexes**, composed of the oldest rocks of all the islands. On top of a first submarine volcanic series, the airborne volcanic series would be generated. These Basal Complexes are visible at different points along the geography of the Archipelago, and can be found on the island of Fuerteventura, with the Betancuria Massif; in the north of the island of Tenerife, on the Anaga Massif; on the island of La Gomera, in the Caldera of Vallehermoso; or in the Caldera of Taburiente on the island of La Palma.

On the other hand, in contrast to this series of Basal Complexes, **airborne volcanic series** have formed above them, overlying the ocean surface and creating islands. With the appearance of these series, the great volcanic edifices have emerged.

Throughout the geological creation of the Islands, the materials that make up these eruptions are divided into three types:

A. Pyroclastic materials or volcanic rocks from the fractionation or splitting of the emitted magmas, which in turn form large deposits. A good example of these pyroclastic materials can be found on the southern slopes of Tenerife.

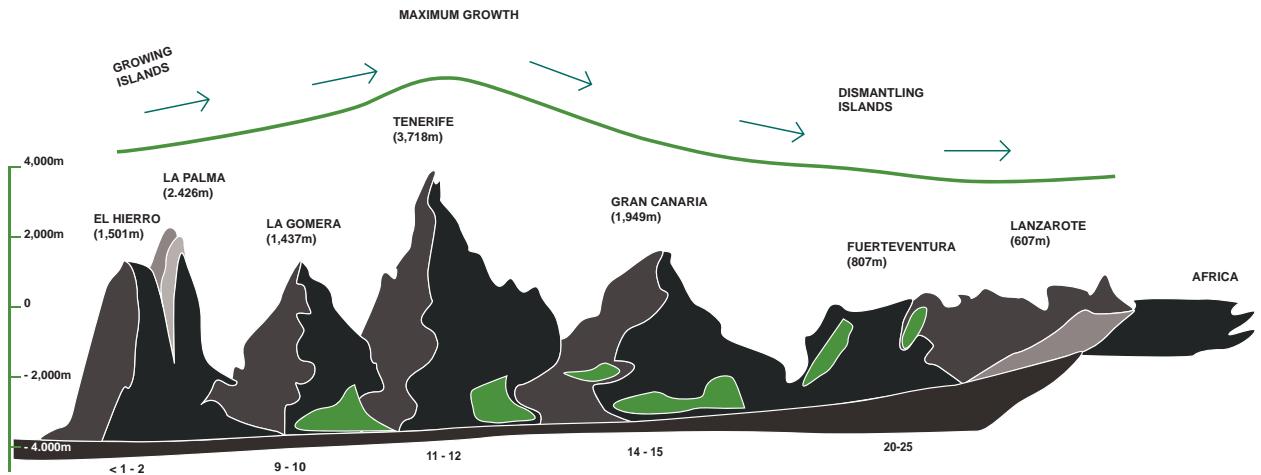
B. Lava materials in the form of lava flows of different types, which may be basaltic, trachytic, phonolitic or ignimbritic.

C. Sedimentary structures which exhibit highly variable behaviour depending on the degree of their cementation. These can be found in different gullies.

In conclusion, we can highlight the following key points about the geological characteristics of the Canary Islands:

→ As to their origin, all the hypotheses revolve around the two ideas mentioned above. Fractures that, by decompression, originate the magma that subsequently forms the islands, or the magma that induces the fractures through which the materials that would form the islands ascend.

→ The type of materials that make up the geology of the archipelago can be both pyroclasts and lava and sedimentary materials.



Oldest subaerial volcanic formations (in millions of years). Made by the publisher based on Carracedo et al. (2002).

Lanzarote

The island of Lanzarote is the northernmost and easternmost of the Canary Islands. Its geology is divided into three totally different phases that have given a very unique shape to what is known today as the *island of volcanoes*.

During the first phase, which takes place in the Miocene era, the oldest geological zones of the island emerge on the ocean surface. This includes the Famara-Guatifay Massif to the north and the Ajaches to the south. The second phase of geological formation encompasses all the processes of evolution of the island's morphology that occurred between the Miocene and Pleistocene. These are long processes of erosion that caused the Famara and Ajaches Massifs to alter their original morphology, resulting in totally eroded edifices with U-shaped valleys that can be seen today. The Risco de Famara is the highest point of the island and the highest point of Lanzarote, known as **Las Peñas del Chache**, 671 metres above sea level.

After these processes and from several magmatic foci, new magma emissions arose between the two old formations (Famara-Guatifay and Ajaches Massifs), which caused these formations to merge into a single island. This explains the existence of the alignment of volcanic edifices in the central area of the island, axes which match those of Fuerteventura. Most of these volcanoes are already in a state of dismantling, due to the continuous influence of winds. It is astonishing to discover that, during this period, the islands of Lanzarote and Fuerteventura were joined by the strait that separates them, known as the Bocaina Strait, where the island of Lobos is located today. The last phase includes volcanic activity resulting from magmatic emissions aligned in parallel to those of the previous phase in the centre of the island. Throughout the 17th and 18th centuries, volcanic edifices not exceeding 200 metres in height continued to form. During these three phases of

geological formation there were three important events that determined the current morphology of Lanzarote:

- Two massifs with a marked geological ageing. Famara-Guatifay in the north of the island and Los Ajaches in the south.
- Two areas of recent volcanism that originated the central part of the island, known as Timanfaya, the Volcán and the Malpaís de La Corona.
- As a final landmark, a tongue of sand of marine origin crossed the island through its centre, in the area known as the Jable.

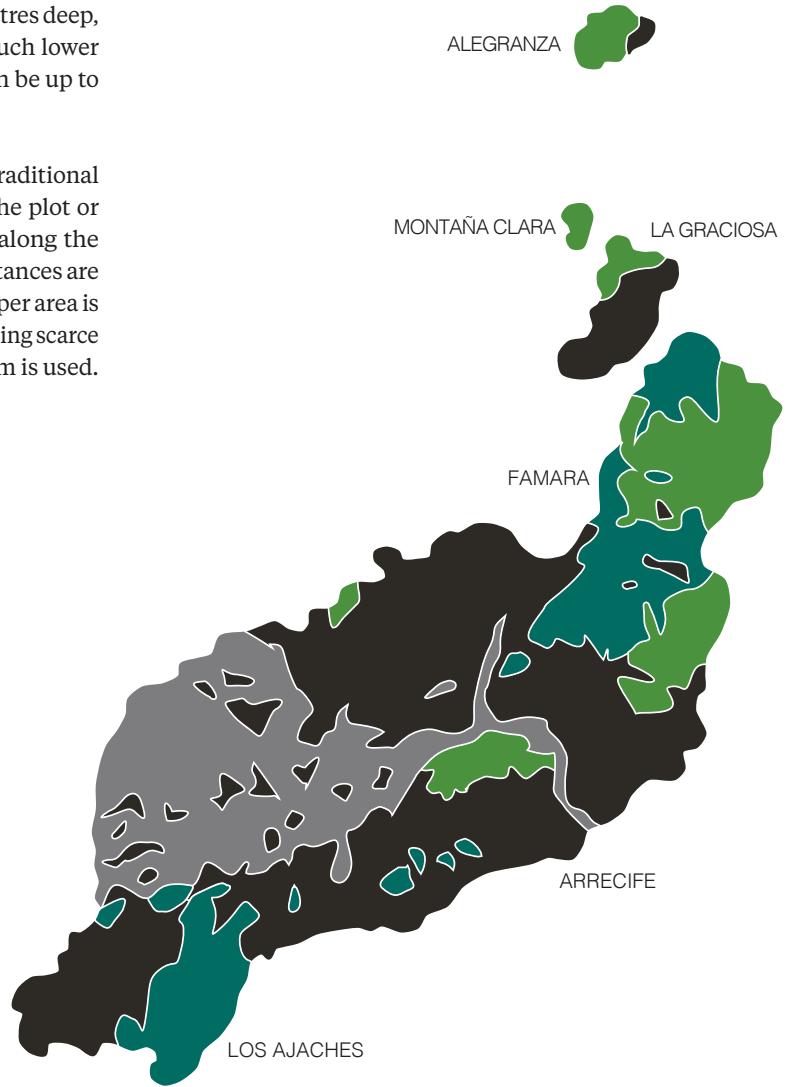
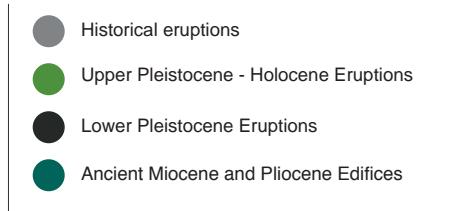
Between 1730 and 1736, some historical eruptions took place and ended up occupying approximately a quarter of the island's surface. **The Timanfaya National Park is the area of greatest geological interest, which borders La Geria: one of the island's wine-growing landscapes.**

As a result of these volcanic eruptions, farmers had to look for fertile soil under the volcano's ash. This gave rise to an agricultural system that made it possible to grow vines despite the hostility of the environment. Under the *lapilli*, *picón* or *rofe* (as it is known on the island), the fertile soil, which had been buried, was searched for. The farmers decided to plant the vines and cover them with the same *picón* to retain the moisture, and built walls to protect the vines from the strong influence of the wind.

Vineyards in La Geria are also traditionally grown using the **pit system**. This is because the *lapilli* layer is much thicker here, as the area is geographically closer to the aforementioned 18th century eruptions. There are some

areas in which these holes can be up to three metres deep, which is why the density of planting here is much lower than in the rest of the island, and the plants can be up to four metres apart.

However, in the area of Tinajo and Haría the traditional vineyard system is in ditches, either around the plot or generating a system of intermediate ditches along the entire surface of the plot. Here, the planting distances are reduced to two metres and the density of plants per area is increased. The *lapilli* layer in this area is lower, being scarce in some areas, which is why this planting system is used.



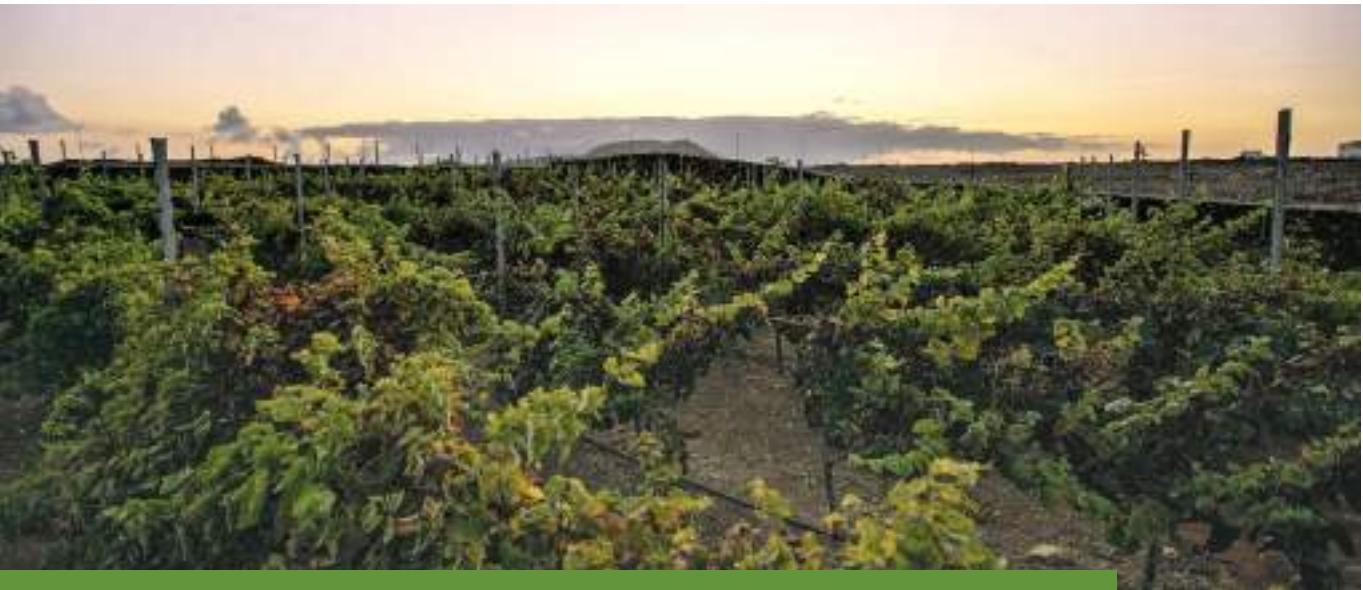
Fuerteventura

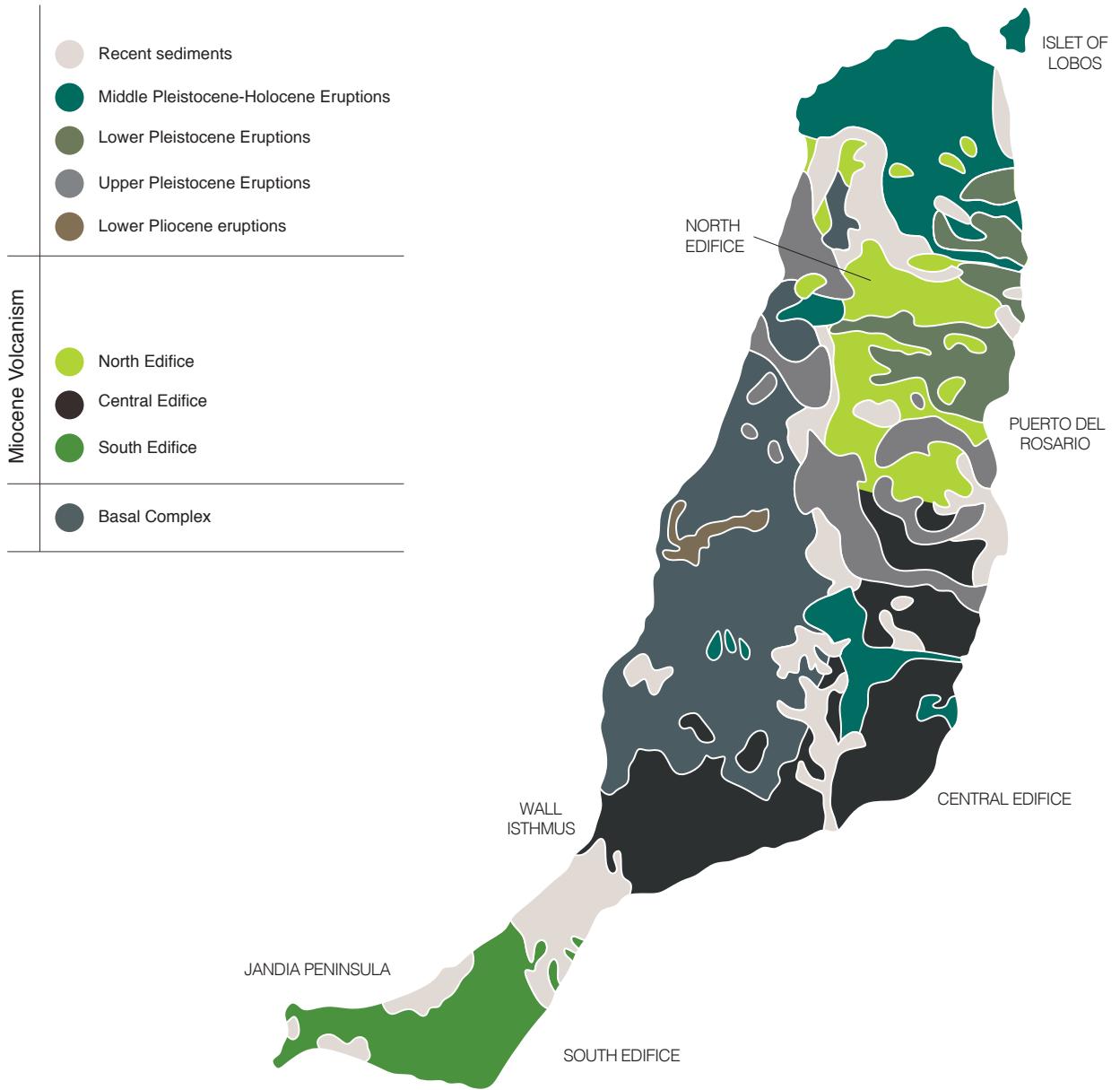
After the formation of the basal complexes originating in the deep ocean floor, which occurred approximately twenty million years ago, a series of underwater volcanic activities began, which led to the emergence of the island of Fuerteventura.

As a result of this volcanic series on the surface, three large strato-volcanoes were generated. These structures appeared in different areas of the present-day island: the volcanoes of the southern area, in the present-day area of Jandía; and the volcanoes that shaped the central edifice, which reached heights above sea level similar to those of Teide today. Due to the instability of these structures, approximately fifteen million years ago, the central geological edifice collapsed westwards into the depths

of the Atlantic Ocean, which can be seen today. Later, a third building was generated in the north of the island, of which some rocks of the basal complex remained visible to the naked eye after the events described above: these are the areas of Betancuria and Ajuy. As with Lanzarote, as one of the oldest islands in the archipelago, winds and rainfall have played a fundamental role in the erosion of the terrain, altering its initial shape.

Fuerteventura has a small area of vineyards, located in the municipality of La Oliva and the area of Tetir, although the **first varieties that arrived on the islands after the conquest were planted here**. The varieties are grown on yellowish-white clay soils known as *jable*.





Tenerife

The island of Tenerife, being the largest in terms of surface area and geological and geographical development, is perhaps the most complex island to explain. Intense volcanic activity and the displacement of the major structural axes that have been forming the archipelago led to the emergence of the largest of the islands in terms of size and height. **Tenerife is crowned by the Teide-Pico Viejo complex, which is almost 4,000 metres above sea level** and more than 3,000 metres deep from the ocean floor.

Tenerife itself is, like the rest of the islands that make up the Canary archipelago, a volcanic edifice that emerges on its own from the depths of the Atlantic Ocean. It is estimated that it began to form its basal complexes about ten to fifteen million years ago, in the Miocene era. During this time, the generated materials were successively accumulated, forming the initial basal complexes.

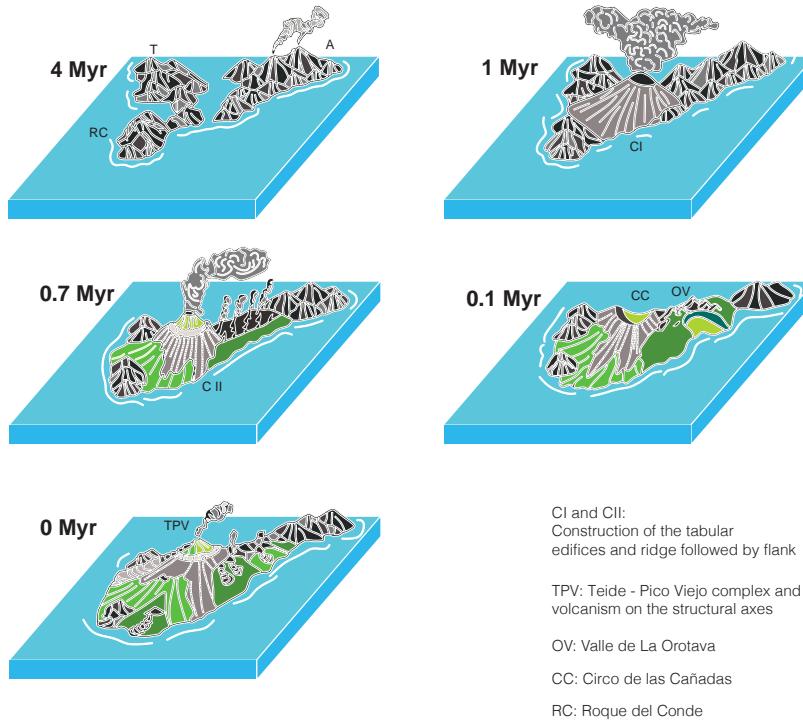
These submarine eruptions resulted in pillow lavas due to the rapid cooling of the magma in an underwater environment. In Tenerife, these lavas are interspersed with a dense network of dykes that make up the well-known island basal complex. As formation progressed through the accumulation of eruptions and sedimentation of various origins, the edifice emerged to the surface, consolidating the first phase of the island's formation in its subaerial stage.

There are several theories about how the island of Tenerife was formed. Some authors defend the idea of the appearance of three main independent islets known as Series I or Ancient Basaltic Series, and place them in the current massifs of Anaga, Teno and Adeje. Other authors put forward the idea that the emerged land from the beginning already made up the bulk of the present volume of the island.

This idea is supported by the discovery in the Tamadaya ravine, where rocks dating back up to three and a half million years have been found, which coincide with the geological age of the last eruptive phases of the Anaga and Adeje massifs.

After this first phase of formation, a period of volcanic inactivity began in which the erosive agents (wind, rain and others) began to modify the structures formed in Series I. This period of inactivity is thought to have lasted around one million years, and undoubtedly shaped a large part of the island's network of ravines. After this period, volcanic activity was reactivated, but this time the volcanic series did not focus on the extreme axes of the island, but in the central area. This period is referred to as the Recent Series. New volcanic activity in Series I areas is limited to areas such as Punta de Teno, Buenavista and El Palmar in the Teno Massif, and Punta del Hidalgo in the Anaga Massif. The erosive processes that form the gullies towards the interior of the island will continue at these geologically much older points.

Due to intense volcanic activity over the last three million years, a large structure has developed in the central part of the island, reaching an altitude of more than 2,000 metres. This large structure is called the **Pre-Cañadas I Edifice**, and it will be the support on which the **Cañadas I Edifice** is erected and on which a large structure of a future stratovolcano continues to form. The Cañadas I Edifice collapsed several times, resulting in volcanic activity that transported large quantities of explosive materials that covered a large area of the island. A third stratovolcano was erected on the structure of the Cañadas I Edifice, reaching a height of more than 2,500 metres above sea level, giving rise to the so-called **Cañadas II Edifice**.



Evolution of the island of Tenerife in five stages. Made by the publisher based on Ancochea (2004a).

It is estimated that this structure may have reached a height of 5,000 metres. Due to its high altitude and the instability caused by the low platform on which it stood, two gravitational landslides caused the structure to fall, giving rise to the semi-caldera of Las Cañadas. After several topographic studies, it has been proven that these large landslides submerged the island's materials to the ocean floor.

Prior to the landslides in the Cañadas I Edifice, a period of very intense volcanic activity began, from which the **Cordillera Dorsal of the island**, also known as the Dorsal

de Pedro Gil, was formed. This will have two opposing slopes, linking one of the oldest geological structures on Tenerife, the Anaga Massif, with Las Cañadas del Teide. On each slope of this ridge there are two large depressions open towards the sea: the Güímar and La Orotava valleys. The former was created by a landslide seven hundred thousand years ago, while the latter was formed five hundred thousand years ago.

After the collapse of the Cañadas Edifices, a large caldera opened up to the north because the northern flank collapsed and slid into the sea in the Icod de Los Vinos landslide.

A small valley was formed in the area of La Guancha and Icod de Los Vinos, which was later covered by post-caldera eruptions (Pico Viejo, Teide, Domos, etc.). Just after the landslide of the Cañadas II Edifice, some two hundred thousand years ago, the first eruptions began, which **gave rise to the great stratovolcano Teide-Pico Viejo**. This volcano originated as a result of different eruptions and is now almost four thousand metres high. The Teide-Pico Viejo complex, together with the Dorsal de Pedro Gil, are the most active volcanic areas in Tenerife.



On the island of Tenerife, the **oldest soils dedicated to wine growing** can be found in the **Anaga and Teno Massifs**, with the sub-areas corresponding to Taganana and the valley of El Palmar, respectively. The soils here are optimal for the cultivation of red varieties due to their high silt and clay content, balanced with a stony component of interest. Near the Teno Massif, the high area of the northwest slope above the village of Icod de Los Vinos and La Guancha was buried by the eruptions that generated the Teide-Pico Viejo stratovolcano and forms one of the youngest soils on the island with a large component of sand and volcanic rock.

In the **Valle de la Orotava** several production areas can be distinguished, but they differ from west to east in the same way as it is traditionally decided to cultivate white to red varieties in the same direction. The soils in the areas of Calzadilla, La Ferruja, Palo Blanco or La Cruz Santa are somewhat stonier than those in areas such as La Perdoma or La Florida, which are better suited to red varieties. It is not a compulsory rule, but it is a tendency for varieties to be distributed in this way.

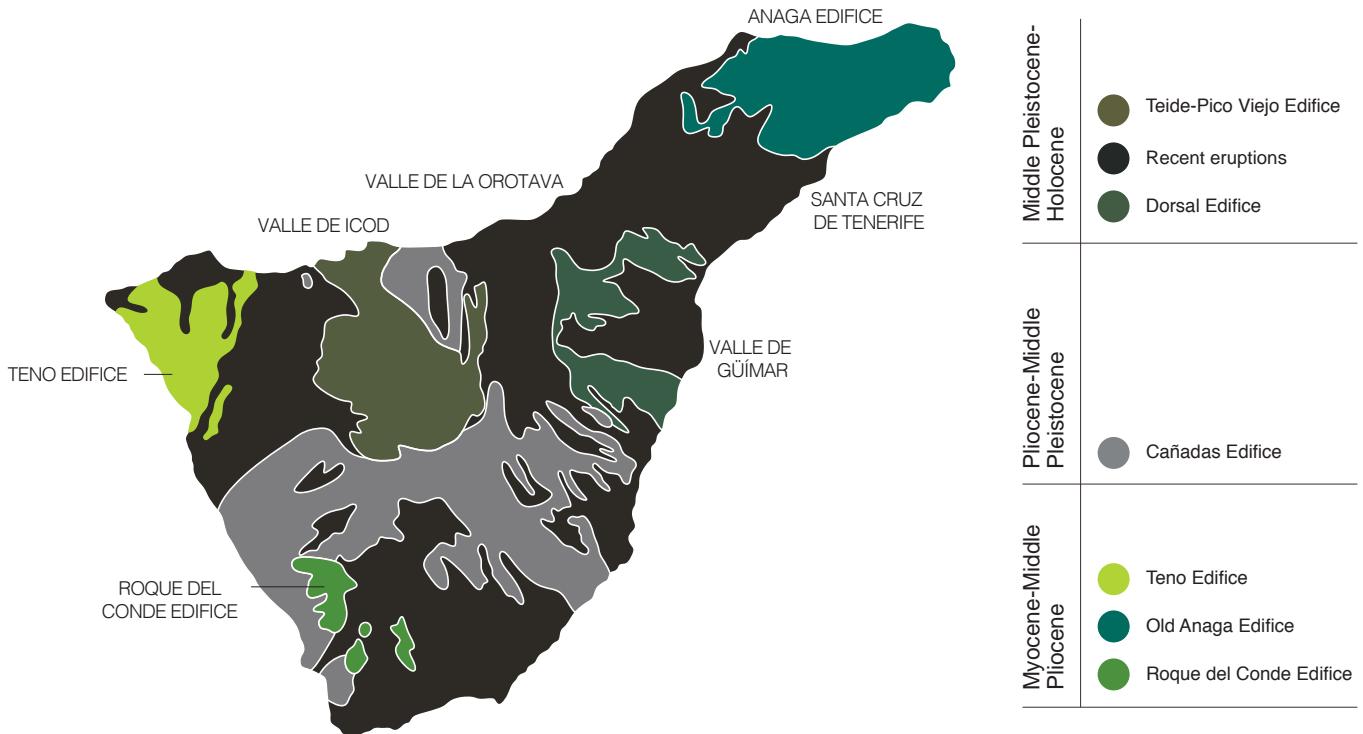
On the northern slope of the island, covering the municipalities of Santa Úrsula, La Victoria, La Matanza, El Sauzal and Tacoronte, where there is a long tradition of growing mostly red varieties, the soils derive from the evolution of the basaltic lava flows that formed the ridge that connected Anaga with the central edifice of the island.

In this area the clay content is somewhat higher and the concentration in the final result of the wines is noticeable. Even so, there are many different places throughout this geography, from the high areas of Santa Úrsula such as La Corujera, Tamaide or El Farrobbillo, the high areas of La Matanza, Las Riquelas, La Hollera, etc. Tegueste also has a large extension of vineyards with soils derived from the degradation of the same ridge.

If we look towards the southern slopes of the island, vineyards are traditionally cultivated from the midlands up to almost 1,500 metres above sea level, one of the highest altitude wine-growing landscapes in Europe. In the midlands, the terrain is predominantly sandy and covered with *jable*, a white volcanic ash.

However, in the higher areas on the southern slopes of the island, the predominant soil type has a higher clay content, as the shield formed by the Cañadas edifice has made the evolution of these old soils possible.

Depending also on the area where we are, it will be combined with stony content, to a greater or lesser extent. The best-known areas are those located in the highlands of the municipality of **Arafo and Güímar, in Los Pelados and Las Dehesas, among other places, and in the area of Vilaflor**, where the vines are traditionally trained in the gobelet fashion. The area of Santiago del Teide is also important for its gobelet cultivation with soils derived from alluvial deposits and the historical eruptions near the area.



Gran Canaria

Gran Canaria is the third oldest island of the archipelago, dating back fourteen million years. Its geology is as complex as that of each of the islands that make up the Canary archipelago, with alternating episodes of eruption that have shaped the structures that make up the island edifice and episodes of erosion. The latter have occurred throughout its geological history, although two intermediate cycles in the major eruptive cycles are noteworthy.

The first eruptive cycle corresponds to when the volcanic activity on the basal complexes was activated and an island began to form above sea level, this first small island being of low height. Emissions of magma to the surface from different points or foci continued to become more and more intense, generating a vacuum in the internal magmatic chamber of the edifice, which collapsed to form the original Caldera de Tejeda. Future eruptions refilled this caldera with younger materials, forming the highest peaks of this first edifice to the west of the island. This first island was formed on top of the basal complex and was shaped like a shield.

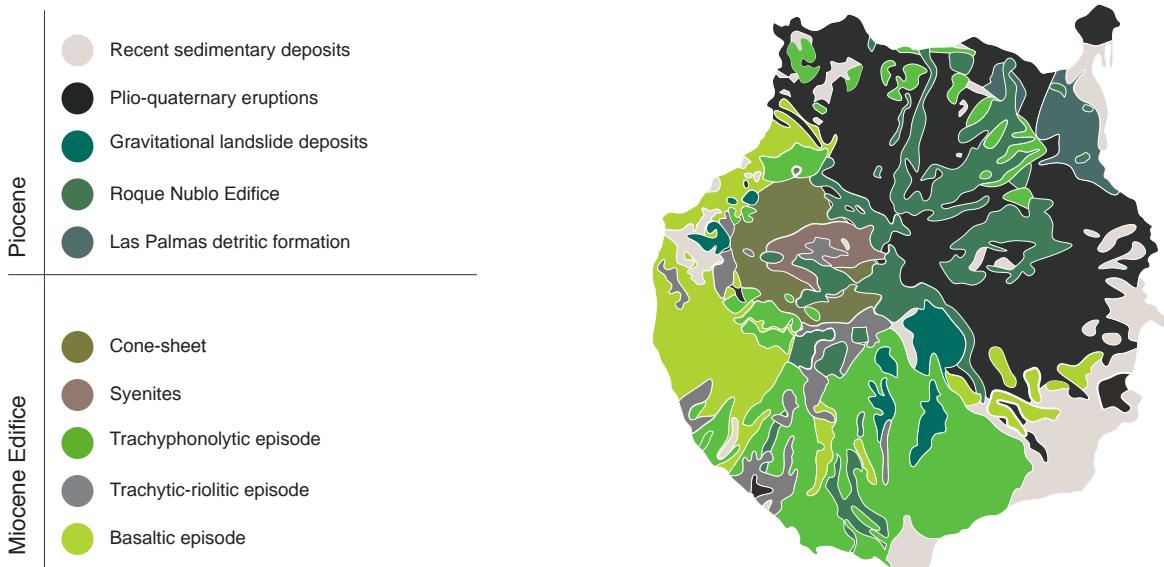
After a first cycle of volcanic inactivity, the influence of the Atlantic Ocean and the wind caused the appearance of large cliffs and large deposits of sediments at the bottom of the ravines, thus beginning a second cycle of eruptive activity that gave rise to Roque Nublo. This second cycle is of high eruptive intensity, forming a large stratovolcano that will de-structure and generate landslides towards the southwest of the island. Prior to the third cycle of volcanic activity, the **Caldera de Tejeda** was formed as a result of major erosion. In this last cycle, activity was concentrated in the northern part of the island.

From this time onwards, volcanic eruptions practically ceased and a long process of erosion began that shaped

the appearance and geological morphology of the island of Gran Canaria, a process that continues to this day.

Grapes are produced all over the island of Gran Canaria. Historically, **the peak of Bandama** and its adjacent caldera is one of the areas with the largest areas of vine cultivation. This site is made up of a crater and a volcanic cinder cone similar to the landscape of the island of Lanzarote described above.

The vineyards are grown on soils with a thick layer of *picón* on the slopes of the Bandama peak, generated from the adjacent caldera after its volcanic eruption. Other important production areas on the island are those next to the **Vega de San Mateo**, where large sloping hillsides mark a unique landscape resulting from the accumulation of different geological processes. **The Caldera de Tejeda** is also an important production area on the island, whose origins we have already mentioned.

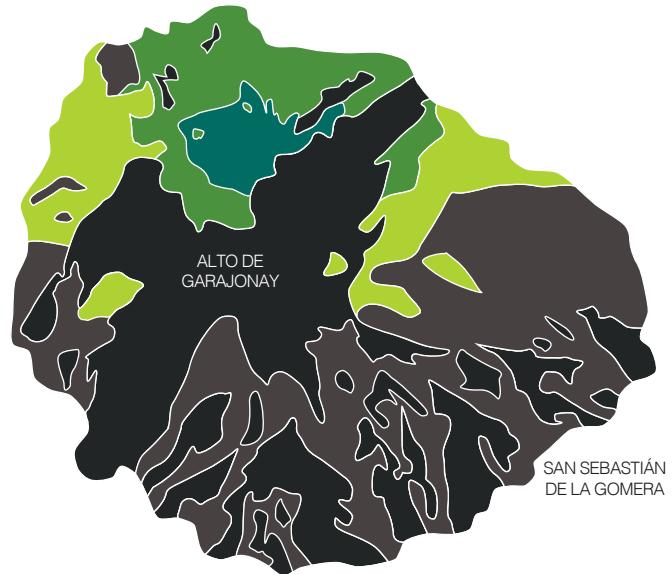
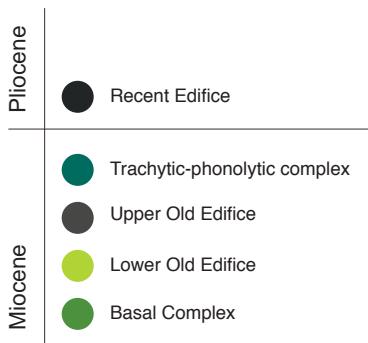


La Gomera

La Gomera is the fifth island from the African coast into the Atlantic Ocean in the Canary archipelago. It is a volcanic edifice that has not been active for two million years, and is therefore considered to be undergoing a long phase of inactivity.

Like all the islands of the archipelago, La Gomera was formed by the accumulation of rocks from multiple ancient eruptions, rising from approximately five thousand metres below the seabed to the surface. Due to such a long period of volcanic inactivity, **erosion has created a radial network of deep ravines**. At sea level, the erosive processes derived from the marine influence have created high cliffs.

The basal complex underwent vertical displacement and rose above sea level, becoming exposed to the erosive elements. Today, vestiges of this basal complex can be observed in the northern area. The period of subaerial volcanic activity resumed approximately ten million years ago, forming another important geological unit on the island. This is divided into two volcanic series that are distinguished by the different time periods in which they occurred: one between ten and six million years ago, and the other between five and two million years ago, just before the end of volcanic activity on the island. Thus, after the basal complex, the lower and upper ancient edifices were successively created. The former was oriented towards the formation of the northern part of the island, while the latter drifted more towards the southern part of it.





The recent edifice, **crowned by the Alto de Garajonay peak**, formed new soils towards all the slopes of the island, supported by this dense radial network of ravines.

La Gomera has remained practically intact from a geological point of view for millions of years. Its steep slopes and its radial network of ravines, from the central and highest point of the island to the different coasts, have been created by wind and marine influences over time. As a general rule on the northern side and traditionally

cultivated in low vine arbours or free training with the **Forastera Gomera** variety, the Gomeran vineyards are located in the villages of **Vallehermoso, Tamargada, Agulo and Hermigua**. Therefore, the wine-growing soils of La Gomera are evolved and sometimes compared with those of the nearby Teno Massif on the neighbouring island of Tenerife.

La Palma

The island of La Palma is divided into two large volcanic structures. The oldest is located in the north of the island and is known as Dominio de Taburiente. The other, which is geologically younger, is in the south of the island. The **Dominio de Taburiente** originated due to a continuous volcanic activity that triggered the formation of several volcanoes and stratovolcanoes whose craters followed one after the other in the same area. Since the island began to emerge from its submarine basal complex four million years ago, continuous underwater eruptive stages have been laid on top of each other, reaching more than 3,000 metres above sea level. When this volcanic activity ceased, the resulting island was circular in shape, with a unique stratovolcano at its centre. During the initial periods of volcanic activity of this first eruptive phase, different emissions occurred. The earliest one took place

one million seven hundred thousand years ago and gave rise to the Garafía volcano, which has been buried by the eruptions of later eruptive phases.

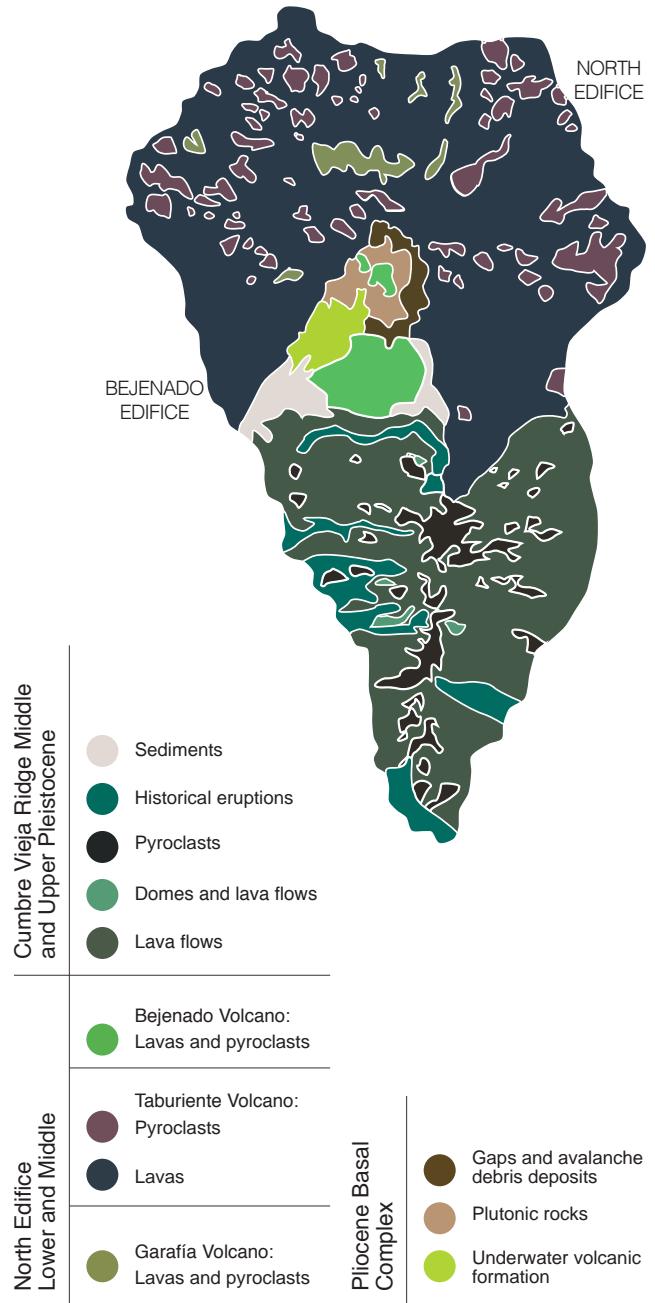
One million two hundred thousand years ago, the **Taburiente volcano** was erected on the Garafía volcano. Due to such an important eruptive activity, the ejected materials covered almost the entire island at that time. This island was buried by the large amount of eruptive material from the subsequent phases of volcanic activity, in the period from one million years ago to eight hundred thousand years ago. This amount of material was supported by the basal complex, but, being of such an important magnitude, a phenomenon similar to that which occurred in the creation of the central part of the island of Tenerife took place. Due to gravitational instability, a huge collapse



occurred, which is called the Aridane Landslide. In the area left behind by this landslide, the Bejenado volcano later emerged half a million years ago.

Volcanic activity in the north of the island ceased at this time, and eruptions occurred on the north-south ridge from the Bejenado volcano downwards, thus creating the second island volcanic complex in which two particular sectors can be clearly distinguished. The former is known as **Cumbre Nueva**, and the latter as **Cumbre Vieja**, which arose further south one hundred and twenty thousand years ago. This ridge created two very pronounced slopes on either side, east and west.

La Palma is divided into three distinct production areas. The first one matches the oldest geological area of the island, located on the north face. It should be noted that the island was created here and then shifted its emission foci to the south by the Cumbre Vieja ridge. In this northern sub-area, the slope is very steep and the vineyards are cultivated on terraces. It includes the municipalities of **Puntallana, San Andrés y Sauces, Barlovento, Garafía Puntagorda and Tijarafe**. Being the oldest area, the soils are the most evolved, with a higher organic matter content and an interesting clay component. The sub-area of Fuencaliente, located in the extreme south of the island, is made up of the municipalities of **Fuencaliente, El Paso, Los Llanos de Aridane and Tazacorte**. These vineyards are grown on younger soils where the most recent eruptions have occurred. In contrast to the northern slopes of the island, here the soils are covered with volcanic ash, *lapilli* or *picón*. This is the region par excellence of Malvasía wines. Finally, we have the **area of Mazo**, in the east of the island, where the soils are also young and composed of *picón* or very stony.



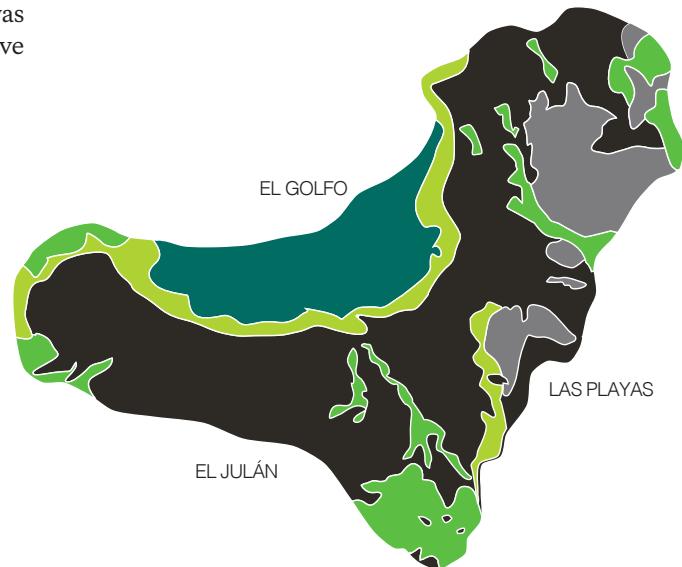
El Hierro

The island of El Hierro is the westernmost and youngest of the Canary Islands. It emerged from the depths of the ocean, some four thousand metres below sea level, approximately one and a half million years ago. Aerial activity can be divided into three phases.

The first one took place just over a million years ago, and caused the formation of the Tiñor edifice in the northwest of the island. After the emergence of the lower section of the edifice, a first landslide occurred due to gravitational de-structuring. After this event, the middle section and the Ventejís volcanic complex were formed following the most explosive volcanic activity of this first cycle. Approximately eight hundred thousand years ago another great landslide occurred. During the second phase, which corresponds to the period from half a million years ago to 170,000 years ago, the formation of the Gulf edifice took place. This edifice is located on the basin that was formed by the landslide of the Tiñor volcano, above

mentioned. The third phase of formation is represented by the volcanic activity experienced by the island's rifts, which is identified with a period of island growth from 150,000 years ago to 2,000 years ago.

There are other geological events that would end up modelling and shaping the contour that today forms the island edifice. These are the vertical collapse of the Las Playas area, the great landslides of El Julán to the south one hundred and sixty thousand years ago, and the one caused by a mega-slide that, together with the walls already formed by the Tiñor landslide, would end up forming the Valle del Golfo.





On the island of El Hierro there are three production areas. Firstly, the area known as the **northern zone**, located in the north-eastern part of the island, around the village of Echedo and normally at an average altitude of 400 metres above sea level. A second production area is located to the **northwest in El Golfo, covering almost the entire area from the town of Frontera to the town of Sabinosa**, and reaching altitudes of up to 700 metres above sea level. The soils of El Hierro are very young and those in this particular area are a mixture of deposits from

the large El Golfo landslides and eruptive activity in the form of poorly evolved basaltic lava flows. The last area of reference is **El Pinar**, where grapes are grown at altitudes of between 600 and 900 metres above sea level. The soils here are also young, merging into a soil heterogeneity due to numerous ridge eruptions. *Lapilli* and stony soils with little evolution can be found.





2.0

Climatology and topography

Miguel Febles Ramírez

Mr Febles is the administrator and technical director of GEODOS, Planificación y Servicios S.L.U., a consultancy firm dedicated to territorial and environmental analysis in the Canary Islands. He is also a partner at BIDUEÑO, a business initiative dedicated to the design of enogastronomic experiences and training on Canary Wine.



The Canary Islands, being an anomaly in its geographical environment, are subtropical in character, with mild thermal conditions and scarce and irregular rainfall that varies according to its orientation and altitude, resulting in a large number of microclimates on and within each island.

Introduction

Climate is one of the most influential factors in the cultivation of vines. If we look at the geographical distribution of wine growing in the world and compare it with the temperature distribution isotherm lines (**Figure 1**), we can see a relationship between the crop and a range of temperatures between 10 to 20 °C (50-68 °F).

However, outside this range we also find quality vines, due to specific microclimatic conditions or specialised management. **One example is the Canary Islands.** Due to their geographical location in the Atlantic Ocean, they should have a warm and dry climate, but they have subtropical characteristics instead.

General characteristics of the climate of the Canary Islands

The Canary Islands have different climatic conditions to those that would correspond to their geographical location, conditioned by their insularity and the interaction with the relief. By combining them we have a wide group of microclimates on the islands, the most numerous being on the islands with the highest relief. All these microclimates have common characteristics that are reflected in the climogram in **Figure 2**.

Rainfall tends to be scarce and irregular, although, depending on the relief, it is scarcer in the coastal areas than in the midlands, where it can reach 800-1,000 mm

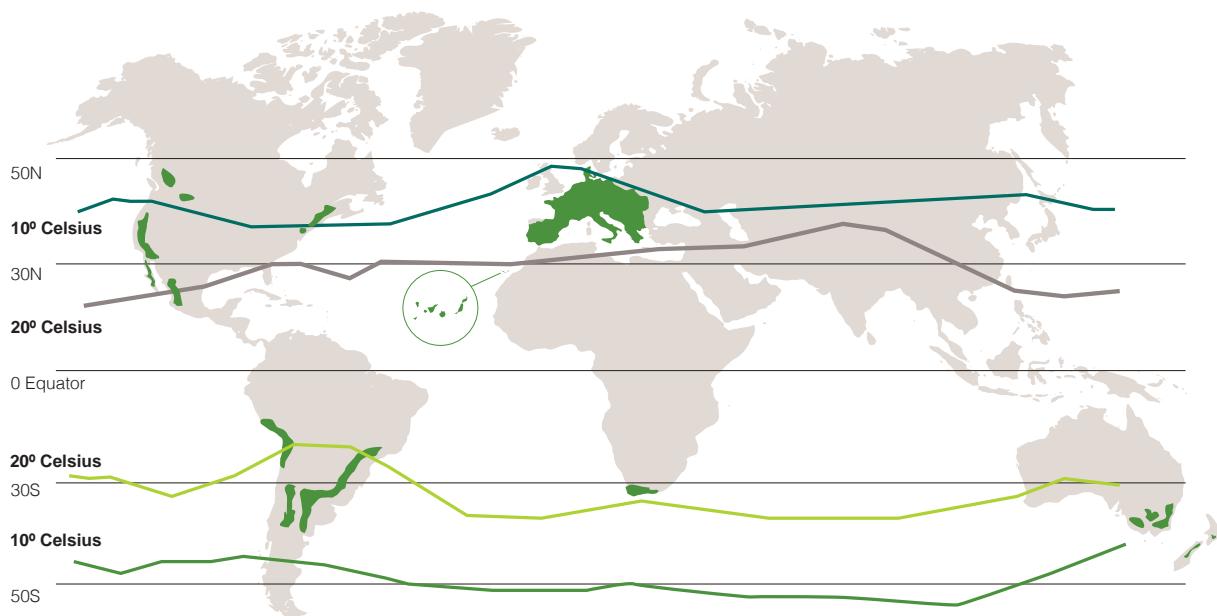


Figure 1. Wine-producing regions of the world. Made by the publisher based on Blij, H.J. (1983)



Figure 2. Made by the publisher based on average data obtained from the State Meteorological Agency (AEMET)

on the windward slopes. Rainfall is distributed throughout the year, with the rainy season in autumn and winter and the dry season in the summer months. Lanzarote and Fuerteventura, due to their low relief, are more arid.

Average annual temperatures are around 20-21 °C, tempered by our island status and geographical location factors. The highest temperatures are in summer and the lowest in winter. The highest temperatures are recorded on the lower islands (Lanzarote and Fuerteventura) and on the south-southwest slopes (leeward) of the rest of the islands.

On the north-northeast slopes of the islands with the highest relief, the **sea of clouds** stagnates, providing ambient humidity and water volume, making this slope, specifically the midlands, the optimum area for agriculture. In the summit area of the higher altitude islands, the trade winds cease to have an effect and rainfall decreases.

Climate conditioning factors

The Canary Islands are located in an Atlantic region of extraordinary meteorological interest. Just 97 kilometres from the lighthouse of La Entallada, Fuerteventura is home to the world's largest hot desert: the Sahara. With this environment, **how is it possible that the Canary Islands are subtropical in character?**

Well, because of the influence of the atmospheric circulation and the Azores anticyclone, which directly results in the trade wind regime. These are combined with a series of location factors, such as the proximity to the African continent, belonging to the subtropical climate band, the cold current of the Canary Islands and the importance of the relief of the islands themselves. Let us look at each of these factors in detail.

Trade wind circulation

Atmospheric circulation is caused by the uneven warming between the equator and the poles. At the equator the air is heated and rises. As it does so, it cools and moves horizontally towards the poles, until it has been cooled enough to begin to descend towards the earth's surface. Part of this air mass moves back towards the equator. **This air movement from 30° latitude towards the equator forms the trade winds.**

Therefore, trade winds blow from the NE in the northern hemisphere and have a moderate intensity. In summer they are very regular in direction and speed, while in winter they alternate occasionally with other different circulations, such as the arrival of tropical-continental air masses from the Sahara, the influence of disturbances from mid-latitudes and, more rarely, some of tropical origin (**Figure 3**).



Figure 3. Satellite view of the Canary Islands, showing the influence of the trade winds and the accumulation of clouds in specific areas of the northern slope.

The relief

The thickness of the trade wind ranges from 1,200 metres in summer to 1,800 metres in winter. Another warmer and drier layer, called the **trade wind thermal inversion**, lies on top of this layer. On hitting the relief and not being able to ascend due to the thermal inversion, a condensation effect of water and cloudiness is produced, causing the appearance of the so-called **sea of clouds** at around 1,500 m above sea level. The affected area benefits from water discharges through precipitation or horizontal rainfall (uptake of water droplets from condensation by vegetation). At higher altitudes, the air mass has lost its moisture and crosses the summit as dry air that descends more rapidly and increases in temperature (**Figure 4**).

Canary Marine Current

In the northern hemisphere, the circular gyrations of these currents are clockwise. In the North Atlantic we find the Canary Cold Current that descends from the Azores to Cape Verde. On its way down, this air mass is in contact with the sea surface, helping to maintain the temperature and loading up with water. By bathing the islands, it insulates them from the influence of the African continent, thus softening and levelling temperatures (**Figure 5**).

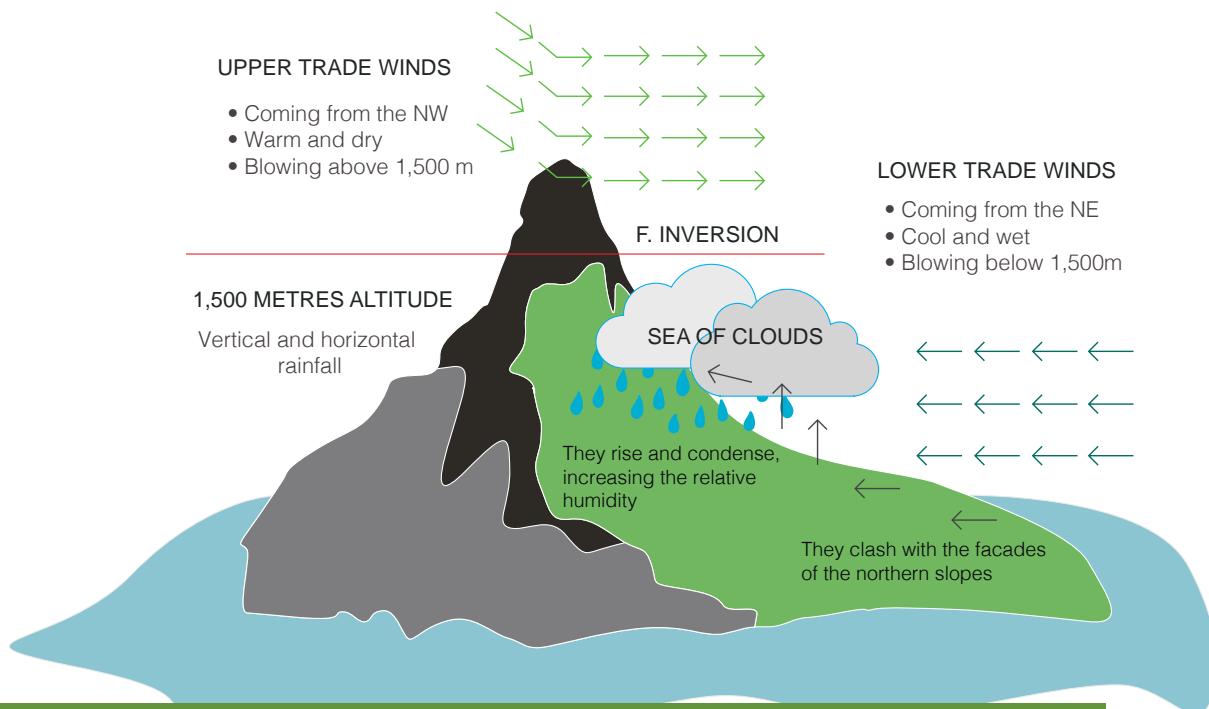


Figure 4. Drawings of the interaction between relief and trade winds. Made by the publisher based on the Great Virtual Encyclopaedia of the Canary Islands (GEVIC).

Climate zoning

Taking into account the factors described above, we can make a climatic classification within the archipelago. First, we have the barren islands as opposed to the rest. The maximum heights of Fuerteventura (801 metres) and Lanzarote (671 metres) do not offer a relief that favours the appearance of the sea of clouds; the trade winds pass over it without discharging the accumulated water. In the case of the rest of the islands, these are more or less favoured by the humidity of the trade winds and we can therefore speak of windward and leeward slopes.

Windward zoning

Coastal zone: the strip from the sea to 300-400 metres. Arid, with less than 250 mm annual rainfall and mild temperatures (18-22 °C). It has a strong marine influence. This area is traditionally linked to intensive irrigated agriculture (bananas, vegetables, flowers), in the western islands and Gran Canaria; and to the *enarenados* (sanding) and *gavias* (ditches), agricultural systems typical of Lanzarote and Fuerteventura.

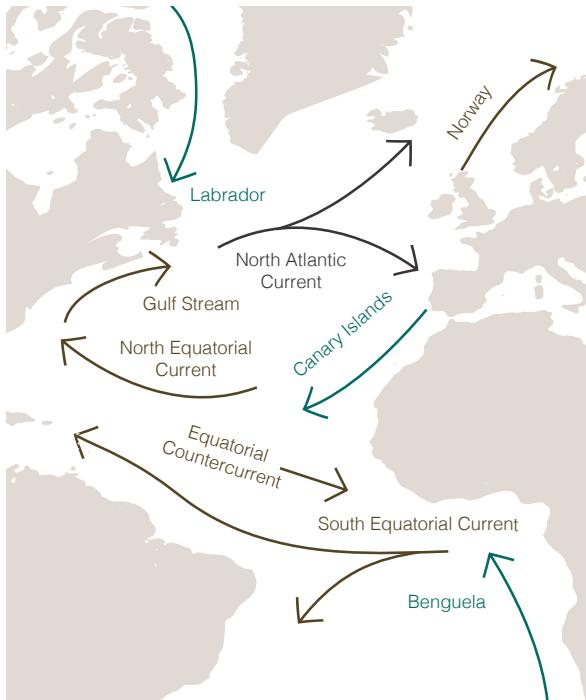


Figure 5. Main Surface Ocean Currents. Cold currents are shown in turquoise; warm currents are shown in brown.

Midland zone: from 300-400 to 1,000 metres altitude, within the influence of the trade wind. Temperatures decrease when compared to the coast and rainfall increases. It can be subdivided into three sub-zones.

The lower midland, which ranges from 300-400 metres to 600 metres. Here the influence of the sea decreases and there is a greater oscillation of temperatures, ranging from 16 °C to 21 °C. The atmosphere is cooler than on the coast and it begins to be influenced by the trade winds. Precipitation is similar to coastal precipitation. This is the area with the largest area under vine cultivation. It can be found on all the islands.

Canarian vitiviniculture mainly takes place in the midland areas (between 300 and 600 metres), although we can find vines planted from almost sea level up to 1,700 metres above sea level.



The intermediate midland, from 600 metres to 1,000-1,100 masl, associated with the traditional agricultural area of the islands and where most of the non-coastal population centres are located.

This area is directly influenced by the trade winds. Therefore, climatic conditions are more humid and cooler. Rainfall can be, depending on the year, between 500 to 1,000 mm. This strip is characteristic of the islands of greater relief and cannot be easily identified in Lanzarote and Fuerteventura.

Lastly, there is a range from 1,000-1,100 to 1,500 m above sea level, which coincides with the pine forest areas, also influenced by the trade winds and where temperatures decrease and average rainfall is maintained.

Summit area: from 1,500 metres to the summit. It only appears in Gran Canaria, La Palma and Tenerife. It is characterised by a dry climate, as it has already lost the influence of the trade winds.

Leeward zoning

On the leeward side, the wet trade wind has no effect, which increases temperatures. The absence of the sea of clouds results in a high number of sunshine hours. This is an area of low rainfall. We can also classify this insular side of the island into several zones.

Coastal area: islands' most arid and highest temperatures. It ranges from 0 to 300 metres.

Midland zone: is more arid than those in the north of the island with low rainfall. It has a sub-zone with characteristics similar to the coastal zone, although with less marine influence, which is found on all the islands, and a second sub-zone from 600-700 metres above sea level, which only appears on the islands of greater relief, where temperatures decrease and rainfall increases somewhat. In this midland area, vines are grown at higher altitudes than those found in the windward areas, reaching 1,400-1,500 m above sea level.

Summit area: with similar characteristics to those of the windward slope.



Las Palmas — Grapes recollection, Monte





3.0

A tale of Canary Wine

Javier Luis Álvarez Santos

Professor of Modern History at the University of Las Palmas de Gran Canaria and researcher at the CHAM-Centro de Humanidades of the Universidade Nova de Lisboa. He is a specialist in the history of the Canary Islands and one of his main lines of research is the study of the Portuguese influence on Canarian wine culture.



The history of the Canarian vineyard tells us of a singular and Atlantic identity, open to the diverse influences that derive from its location between continents. From this, it built a solid reputation in the international market, which is re-emerging today.

Introduction

The Canarian wine-growing landscape has a relatively short history, just over five centuries. And yet, this is not a landscape of recent origin, as opposed to the one created by the millenary wine-growing culture of most of Europe's regions. Because the best of this culture arrived in the Canary Islands, gained a unique development and identity here and then followed its Atlantic course. Part of Europe's varietal heritage succumbed with the arrival of phylloxera and this plague did not affect the Canary Islands' crops. Consequently, its present landscape of *Vitis vinifera* in direct contact with a soil that vivifies its fruit is one of the best-preserved examples of Europe's oldest varietal heritage.

The wine-growing landscape is first and foremost a cultural, historical construction. And here, it emerged in the first decades of the 16th century, when European settlers introduced their vine-growing techniques to the new island scenery. But they soon discovered that the old techniques did not work here in the same way as on their home site. The vines grew too vigorously and became old very quickly, so new systems of pruning and rejuvenation of the plant had to be tried out; the excessive humidity and high summer temperatures were detrimental to the formation and correct ripening of the fruit, and new systems of plant management had to be experimented with, even taking into account the varieties of the vines.

The efforts of the winegrower were compensated by an international market, as the Canary Islands' wine industry was born with an export orientation and for three centuries (1550-1850) it was the main export activity of the Islands; it also generated knock-on effects on the rest of the agricultural sector, as well as the articulation of a labour market between sowing and winegrowing and, in general, the whole regional economy was dependent on the pulse of its wine economy. But presence on the

international market demanded to be competitive and this competition, sometimes adverse, led to the creation of new techniques and new viticultural landscapes. Finally, despite the ruin of its presence on the international market since the mid-19th century, vineyards have remained a part of the cultivated area and, most notably, the techniques that have nurtured them for more than five centuries have given the wine-growing landscape a genuine character all of its own.

The origin of the Canary Islands vitaceae

The discussion on this subject has started recently with the discovery of seeds in archaeological sites in Tenerife, El Hierro and Gran Canaria; furthermore, it seems that these are wild vine seeds whose closest biotype is located in North Africa. The existence of vitaceae on the islands before the arrival of the first human group could therefore be suggested; a thesis which, on the other hand, seems obvious, as these plants have a tertiary origin, like all the native flora of the archipelago.

But, as happened to other populations of this flora, the wild *vinifera* disappeared at an uncertain date and for reasons that are still unknown. Consequently, the first cultivated vine varieties were introduced by European colonisation.

The first phase began in the mid-14th century and was evangelistic in nature: the Majorcan friars planted the first vines in the Iberian archipelagos of the Atlantic. Most likely this took place in Telde (Gran Canaria), the seat of indigenous power and the first evangelising centre, as this is where the Fogoneu grape variety - considered to be the indigenous red variety of Mallorca - has been found. However, there was no first wine-growing landscape. In 1392, the aborigines killed the friars and the Fogoneu vine trellises were short-lived.

However, in the creation of this first wine-growing landscape, several circumstances concurred. The first is the institutional incentive. The royal delegates distributed the land and water in order to increase the supply, especially of bread and wine. The second was the workforce. A highly qualified group of immigrant winegrowers, mostly of Portuguese origin, who were attracted by a land with new and excellent opportunities. The third was the development of a market. Initially, during the first third of the 16th century, an internal wine market was created, protected by council ordinances. And when this market was covered, in the mid-1520s, the conquest of the foreign market began; first the Lusitanian, then the colonial and finally the northwest European market.

The rise and fall of Canary Wine

Between the late 16th century and the end of the 18th century, **vines became the dominant crop on the islands for the foreign market.** Canary Wine was very popular in the north-western European countries and in the commercial plazas of America. However, the first crisis in production occurred precisely in the 1620s and 1630s, as a result of the severe limitations imposed by the Consejo de las Indias (*Council of the Indies*) and the House of Trade (*Casa de Contratación*) on traffic with America. With the American option put on hold, the archipelago was soon forced to look for other ways out, like the Lusitanian colonial empire - Angola and Guinea, Cape Verde and Brazil -, whose market was an important outlet for price regulation, especially when it reached its peak after the incorporation of the Portuguese crown into the Spanish dominions of Philip II. But the independence of that kingdom and the policy of the powers that favoured the uprising of 1640 - especially England - led both to the closure of this outlet and to the shifting of production in favour of *Madeira* and *Porto* wines. Indeed, the end of Canary Islands exports to the Portuguese colonies led to

In a short period of time, from the conquest to the middle of the 16th century, islands such as Tenerife went from being a territory where there was not a single vineyard to becoming an exporter of wines to the other islands, the Indies, Portugal and its Atlantic possessions, even Flanders and England.

an unfavourable balance of payments. The same merchants then asked the sovereign to remedy the disaster with the creation of the Canary Islands Company by the British. With the support of the Captain General - later accused of having over-favoured the British - the Company imposed rock-bottom prices on the harvesters, while fabrics and other manufactured goods rose to such an extent that unrest spread from the winegrowers to the entire population. It was a similar social climate that led to the Garachico riot in July 1666, according to events that became known as the ***Derrame del vino*** (Wine spill).

At the beginning of the seventh decade of the 17th century, the *Canary* had lost the colonial markets of Portugal and England, exports to the Indies were limited to very meagre quantities and the metropolitan market of Great Britain was in sharp decline. On top of that, the extent of vine cultivation in the prosperous period had been excessive. Vines had been planted on unsuitable land and in unsuitable areas, causing, at such a delicate moment, a double irreparable damage: the low quality of the wines and the excess of production and supply.

One way out was to increase exports, recovering the Barbados market and maintaining British purchases. However, between 1685 and 1687, Malvasía was drunk less and less in Great Britain, which meant that the islands suffered the consequences of the collapse of the foreign market. In the absence of a radical reconversion of vineyard land in the face of the crisis, the islands suffered a process of impoverishment and population stagnation, which in turn was the cause of emigration. Nor was there any shortage of social tensions, which exploded into white riots motivated by hunger for land, thirst for water, tax pressure, abuse of power, etc.

The difficulties continued well into the 18th century. The Methuen Treaty (1703), also known as the ***Tratado de los Paños y los Vinos*** (Treaty of Cloth and Wines), benefited Portuguese wines to the detriment of Canary Island wines, as Britain granted tax advantages to the former. The situation worsened considerably three years later with the eruption of the Trevejo volcano, which buried the commercial port of the town of Garachico, making exports difficult from then on. Portuguese competition continued to threaten the marketing of the Canary Wine during the 18th century and reached another turning point in 1756, when **the Portuguese monarchy created the Douro Demarcation Region**, the world's first designation of origin, with the aim of boosting Port wine production for the benefit of the Crown.

However, two events of different origins allowed the Canary Islands' economy to be freed up during the last quarter of the 18th century: the proclamation of Free Trade with the Indies in 1778 and the opening of the American market to wine growing expansion. With the independence of the British colonies in North America, the new-born states soon began to receive Canary Island wines in large shipments, arriving via the ports of Philadelphia and New York. The first phenomenon is due to the wider range of commercial activities, but also to increased competition.





While Malvasía is almost exclusively confined to the pharmacopoeia, vineyard wines will gain in volume. On the other hand, Canary Island producers introduced red varieties to stain the wines and pass them off as Portuguese wine (fake Madeira) on the British and American markets, thus avoiding customs duties and allowing the island's wine sector some breathing space. However, the wars at the end of the century and some domestic calamities

prevented a period of prosperity and the consequent accumulation of capital. Although it is true that it was the US market that prevented the contraction of exports during the Napoleonic Wars, the *oidium* plagues from 1852 and mildew in 1878 almost wiped out the Canary Island vineyards. The free trade economic and institutional framework imposed in 1852 also brought about other problems for wine production. Franchising opened up the

domestic market to foreign wine supply and encouraged fraud in the production of inferior wines and spirits. In the end, the production was already in short supply. It is true that some winemakers made efforts to improve their production and got deserved praise at exhibitions in Paris, Madrid, London and New York. But these were traders and small consignments, far removed from any links with the rest of the wine sector.

The 20th century: from agony to revival

The final agony came in the first decade of the 20th century. Having lost all hope of recovering foreign markets, the domestic market was left at the expense of wine imports from the Peninsula. This trend continued throughout most of this century, encouraged by the low prices on the mainland. Production was limited to the local market, oriented towards domestic consumption, with no desire to export.

The situation took an important turn in the last decade of the 20th century, when different designations of origin were created that were to transform the Canary Islands' wine-growing panorama at all levels. Increase in production and cultivation area, professionalisation and organisation of the sector, public aid, implementation of new conduction systems, improvement of the means of production, introduction of varieties and recovery of other local species... All this has contributed in recent decades to a substantial improvement in the wine sector, once again enabling Canary Island wines to be positioned on both the local and foreign markets.

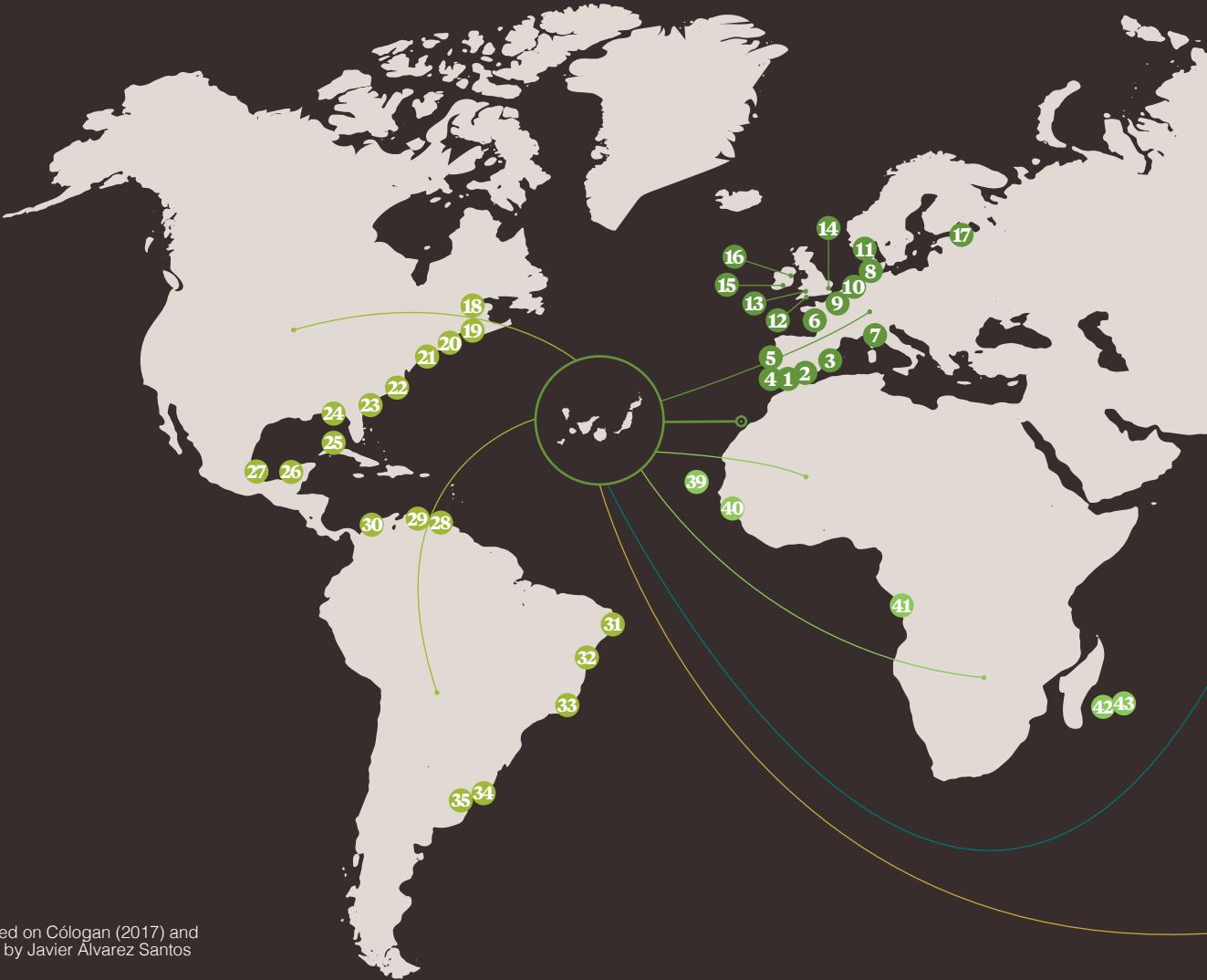
The Canary Islands currently have eleven designations of origin: Ycoden-Daute-Isora, Valle de La Orotava, Valle de Güímar, Tacoronte-Acentejo, Abona (all in Tenerife), Lanzarote, La Palma, La Gomera, Gran Canaria and El Hierro. Finally, at the regional level, we have the Islas

Canarias PDO, which was born with the purpose of making Canary Islands wine visible in foreign markets, just as the *Canary* had conquered the main Atlantic ports centuries ago.

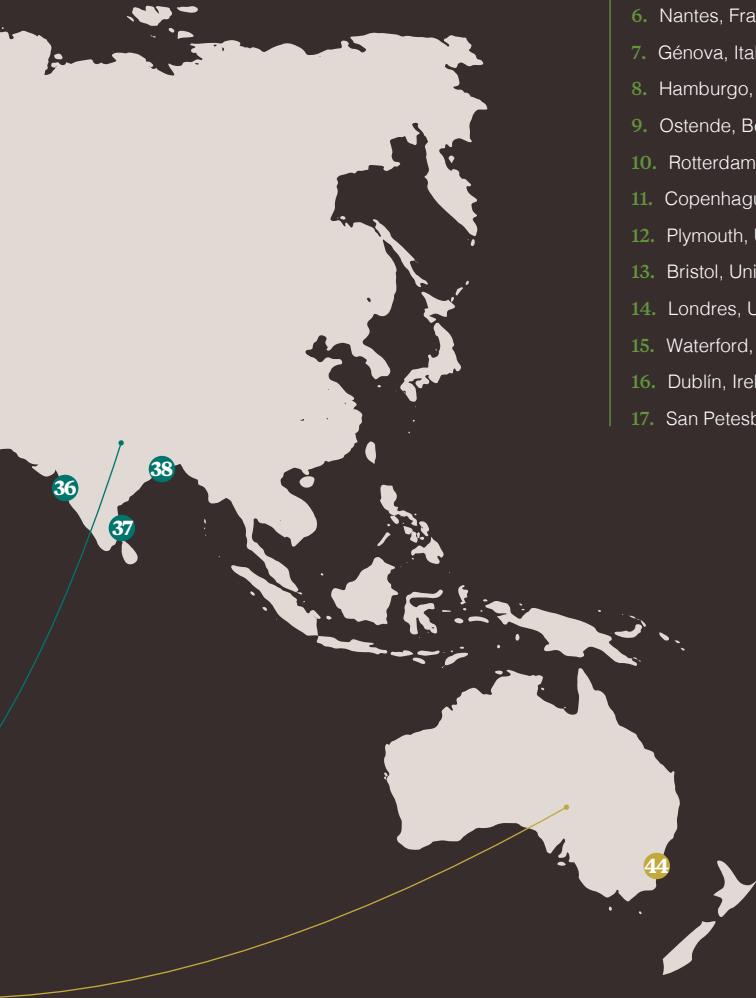


The historical expansion of Canary Wine

Main ports of destination for Canary Island wine (16th-18th centuries)



Map based on Cologan (2017) and enlarged by Javier Alvarez Santos



Europe

1. Cádiz, Spain
2. Málaga, Spain
3. Valencia, Spain
4. Sevilla, Spain
5. Lisboa, Portugal
6. Nantes, France
7. Génova, Italy
8. Hamburgo, Germany
9. Ostende, Belgium
10. Rotterdam, The Netherlands
11. Copenhagen, Denmark
12. Plymouth, United Kingdom
13. Bristol, United Kingdom
14. Londres, United Kingdom
15. Waterford, Ireland
16. Dublín, Ireland
17. San Petesburgo, Russia

America

18. Quebec, Canada
19. Boston, USA
20. Nueva York, USA
21. Filadelfia, USA
22. Charlotte, USA
23. Newberry, USA
24. Nueva Orleans, USA
25. La Habana, Cuba
26. Campeche, Mexico
27. Veracruz, Mexico
28. La Guaira, Venezuela
29. Caracas, Venezuela
30. Cartagena de Indias, Colombia
31. Olinda, Brazil
32. Salvador de Bahía, Brazil
33. Río de Janeiro, Brazil
34. Montevideo, Uruguay
35. Buenos Aires, Argentina

Asia

36. Bombay, India
37. Madrash, India
38. Calcuta, India

Africa

39. Praia, Cape Verde
40. Cacheu, Guinea-Bissau
41. Luanda, Angola
42. Saint-Denis, Réunion
43. Port Louis, Mauritius

Oceania

44. Sydney, Australia





4.0

The Canary Islands, one of the world's centres of vine biodiversity

The singularity in the glass of wine from varieties that are unique in the world.

María Francesca Fort Marsal

Degree in Biological Sciences from the University of Barcelona. PhD in Chemical Sciences from the Universitat Rovira i Virgili. Lecturer in the Department of Biochemistry and Biotechnology at the Universitat Rovira i Virgili, attached to the Faculty of Oenology in Tarragona. Coordinator of the Vine Biology Area of the Oenological Technology Research Group (URV).



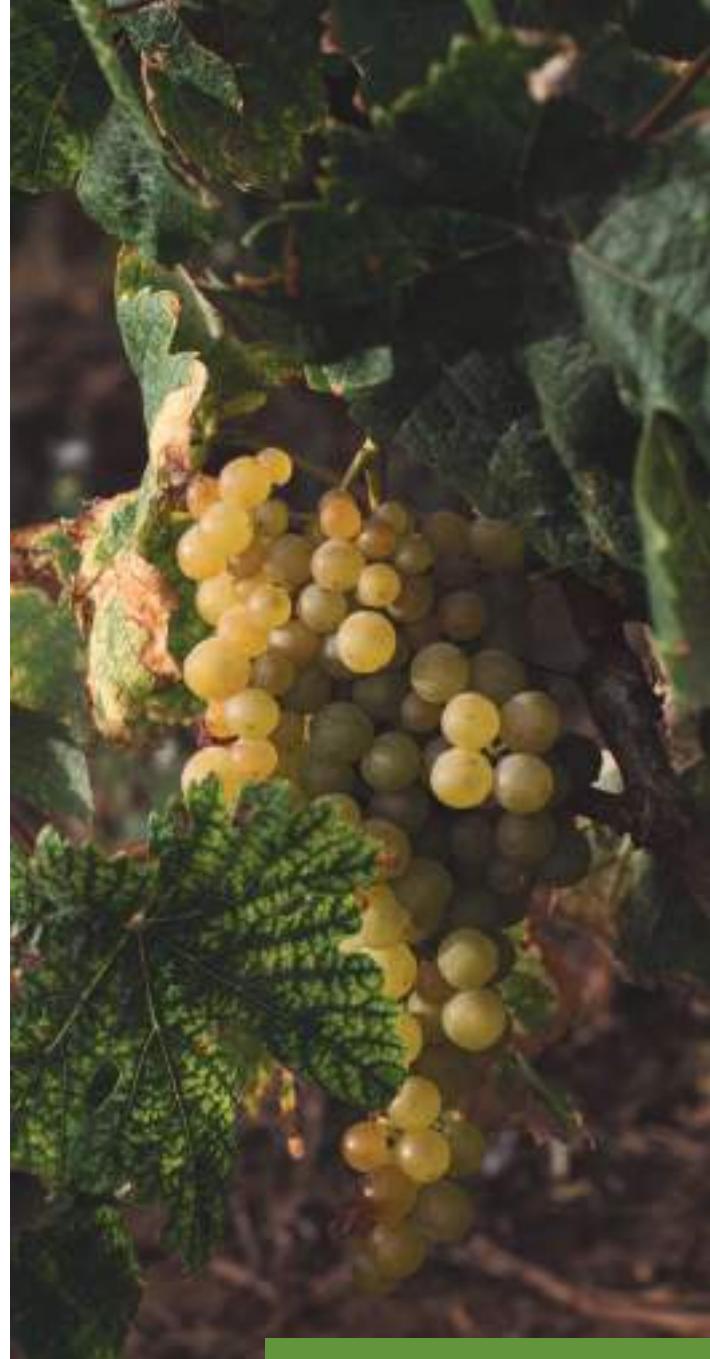
***Vitis vinifera* L. has evolved for more than five hundred years in the Canary Islands, resulting in specimens that are unique in the world and making the archipelago one of the world's main centres of vine biodiversity.**

Introduction of the vine in the Canary Islands: its biodiversity in the Islands

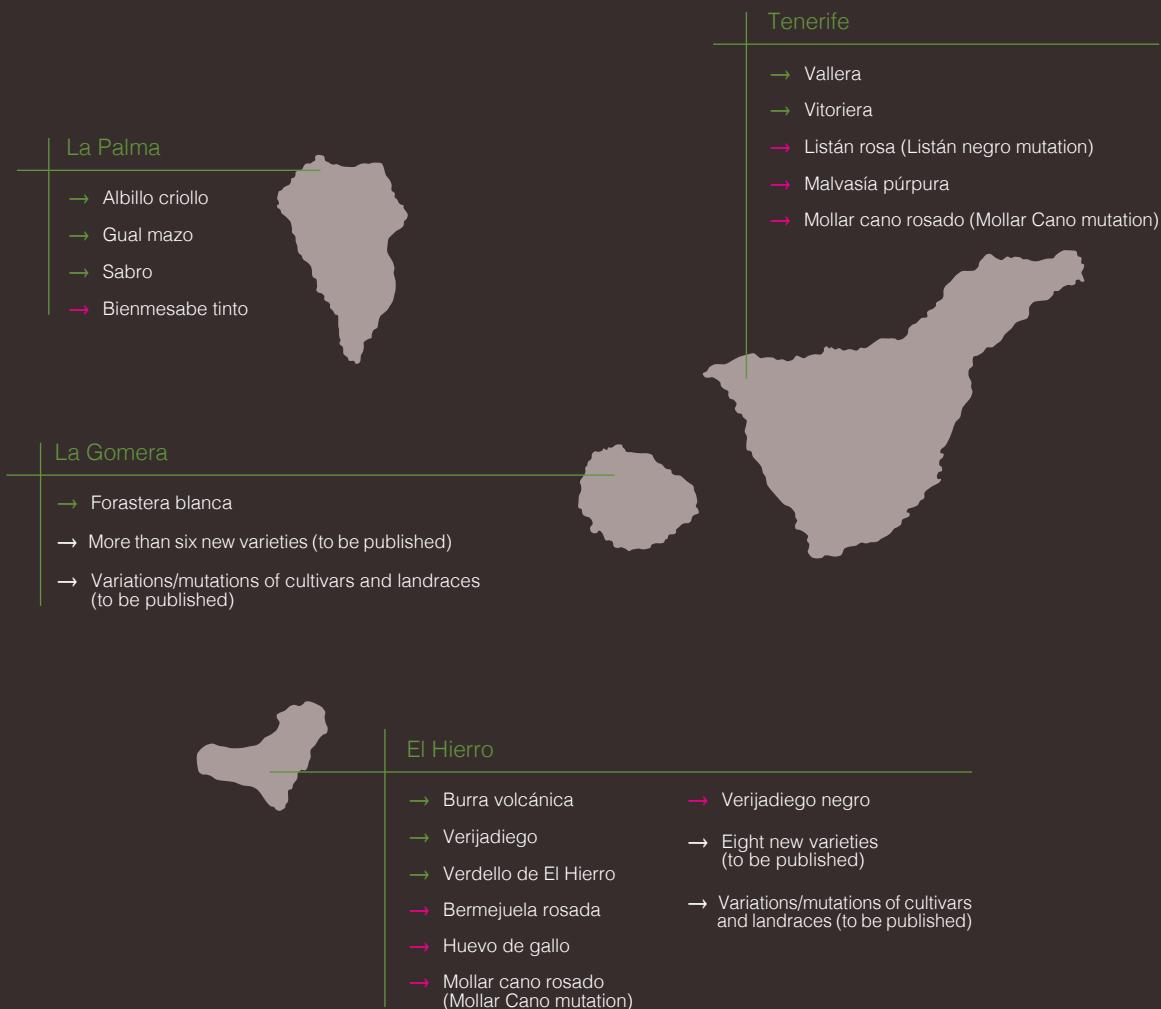
The cultivated vine (*Vitis vinifera* subsp. *vinifera*) which appeared in the Mediterranean basin/Asia Minor between the 6th and 5th millennium BC. (Forni, 2012), later differentiated into more than 5,000 species today (This et al., 2006), did not reach the Canary Islands until the 14th and 15th centuries by the hand of European monks, expeditionaries and conquerors (Macías, 2005). The vines introduced in the Canary Islands adapted to the new volcanic environment, interbred with each other and both nature and man selected the best individuals. This means that they have evolved for more than 500 years, making them unique specimens in the world, as the Canary Islands were never affected by the phylloxera plague which devastated almost all the European and world vineyards at the beginning of the 20th century. For all these reasons, scientists describe this volcanic archipelago as one of the few **“Vine Biodiversity Centres” that currently exist in the world** (Marsal et al., 2019).

As a result of this evolution (creation of new vine varieties), different scientific groups (Zero et al., 2006; Rodríguez-Torres, 2018; Marsal et al., 2019) have now described **20 local varieties that are unique in the world** (since the term autochthonous is no longer used for vines) and 5 colour mutations (also unique) that are distributed throughout the archipelago as shown in **Figure 1**. More than 20 new varieties are also being studied, in addition to more than 60 genetic profile variations (mutants) of known and local varieties.

Not only are the Canary Islands biodiverse, but this population of vines, unique in the world, is singular. This is to emphasise that their unique genetic profiles are so genuine that they differ significantly from other varieties originating from different wine-growing ecosystems on our planet.



Local varieties only existing in the Canary Islands



Canary Islands

- Bermejuela
- Listán negro
- Listán rosado (Palomino fino mutation)
- Malvasía Rosada (mutation of Malvasía Dubrovacka. Synonym: Malvasía Aromática)

Lanzarote

- Malvasía volcánica
- Breal negro
- Torrontés volcánico
- Uva de año (young grape)
- Eleven new varieties (to be published)
- Variations/mutations of cultivars and landraces (to be published)

Gran Canaria

- Albillo monte Lentiscal

Fuerteventura

- A new variety (to be published)
- Variations/mutations of cultivars and landraces

Figure 1. Location of Canarian vineyards: those found throughout the archipelago and those located on each island. White varieties marked with green arrows. Red and rosé varieties marked with purple arrows. According to Zerolo et al. (2006), Rodríguez-Torres (2017), Marsal et al. (2019).



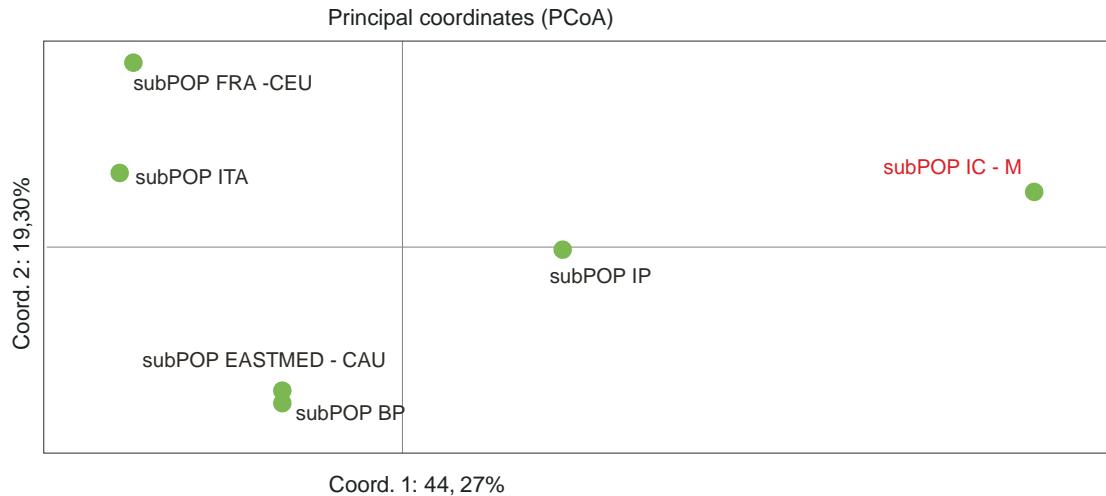


Figure 2. Principal coordinates diagram to demonstrate the uniqueness of the Canarian landrace population (subPOP IC-M) consisting of 17 vines: Albillo Criollo, Bermejuela, Bienmesabe Tinto, Burra Volcánica, Albillo Forastero, Huevo de Gallo, Listán Negro, Listán Rosa, Malvasía Dubrovacka Rosada (Pink Malvasía), Malvasía Volcánica, Mollar Cano Rosado, Sabro, Torrontés Volcánico, Young Grapes, Vallera, Verijadiego and Verijadiego Negro. Total remaining population of 276 molecular profiles from: Eastern Mediterranean/Caucasus area (subPOP EASTMED-CAU), Balkan Peninsula area (subPOP BP), Italy (subPOP ITA), Central Europe and France area (subPOP FRA-CEU) and the Iberian Peninsula (subPOP IP).

The population structure studies (genetic studies) carried out by Marsal et al. (2019) demonstrate this peculiar singularity, comparing the Canarian individuals in their study with those belonging to their database (disregarding hybrids, authors creations, mutants and mixes) from 24 countries around the world (**Figure 2**). This figure clearly shows how the subpopulation of Canary Island vines (in red) is clearly distant from the rest of the world's subpopulations, taking up a quadrant of the graph on its own. In any case, as history tells us, the vines of the archipelago are heavily influenced by those of the Iberian Peninsula. This figure shows how the peninsular subpopulation, although it also occupies a quadrant of its

own due to its genuineness, is the closest to the Canary Islands subpopulation. These local varieties have shared the terroir with other varieties from other places but which have become very important in the archipelago, due to their wide use in the production of Canary Island wines. Thus, the main vine varieties grown in the Canary Islands are a compendium of local and foreign varieties that have settled in the archipelago, making up the current vine stock of Canary Island vitiviniculture (vine stock: number and type of varieties that make up the vine population of a given area).

Corpus of the most cultivated varieties of *Vitis vinifera* L. in the Canary Islands





→ **1.** The description of each variety is given in general terms. The specificities due to the external factors of each island, or sub-area of an island, will probably not be covered in this document.

→ **2.** The comments on the musts and wines are generic, with the aim of describing the generalities that will identify them on the basis of their varietal characteristics.

→ **3.** The *Vitis* International Variety Catalogue (VIVC) is the worldwide database.

→ **4.** PN refers to the Prime Name of a variety, according to the VIVC database.

→ **5.** When a variety in the Canary Islands is known by its synonym, its Prime Name is written in brackets.

→ **6.** Denominación de Origen Protegida (Protected Designation of Origin) is abbreviated as PDO.

Albillo criollo



→ WHAT YOU NEED TO KNOW

Albillo Criollo is a local variety from the island of La Palma that can also be found in Tenerife, and is allowed in many PDOs of the Canary Islands. It is now known that, together with the Forastera Blanca (PN: Albillo Forastero), are the offspring of a cross between Listán Blanco (PN: Palomino Fino) and Verdello (PN: Verdelho Branco). This variety is also known by two other synonyms: Albillo Chriolle and Albillo Grano Menudo. The word Albillo comes from the Latin word *album*, which means “white” and is widely used to refer to certain white varieties.



→ DESCRIPTION OF THE PLANT

Five-lobed, medium-sized, green (not very intense) and orbicular leaf. The cluster is medium-sized, funnel-shaped, broad, has one or two wings and is compact. The berry is short elliptical, yellow-green, with no special taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

In its traditional management, the most common way of growing is in gobelet fashion. In these conditions and in high altitude areas, it allows short pruning (2 or 3 buds seen). It has a rather short ripening cycle (in certain circumstances it can be harvested one or two weeks earlier). It is a vigorous variety with a low average bunch production. It is fairly resistant to the most common fungal diseases.



→ CHARACTERISTICS OF MUSTS AND WINES

The good concentrations of sugars produced at the time of harvest are balanced by the high acidity of the musts. These are characterised by a high concentration of primary (varietal) aromas. The Albillo Criollo is a very suitable variety for young, fresh, aromatic and elegant wines. In terms of aromas, the wines are dominated by ripe stone fruit aromas (often peach), together with tropical fruits and white flowers. Spicy and mineral notes are also present. All of this is balanced by the very delicate citric acidity, which brings out some very pleasant savoury notes on the finish.

Baboso blanco

PN: Bastardo blanco / Samarrinho



→ WHAT YOU NEED TO KNOW

It is mainly distributed on the island of El Hierro. The PN of the Baboso Blanco vine is Bastardo Blanco according to the VIVC. In the same database, the molecular profile corresponds to a white mutation of the French variety Trousseau Noir. However, both Marsal et al. (2019) and Rodríguez-Torres (2018) describe Baboso Blanco / Bastardo Blanco as coinciding with the Portuguese variety known by its PN Samarrinho, whose synonyms are Budelho and Pedro Ximénez Canario. Samarrinho is a minority variety, originally from the Alto Douro area (Portugal). Only one single parent is known, the ancestral Savagnin Blanc, originally from the Austrian Tyrol, and very possibly introduced to the Iberian Peninsula via the Camino de Santiago. It is not related to either the Baboso Negro or the Bastardo Negro.



→ DESCRIPTION OF THE PLANT

Five-lobed, small and pentagonal leaf. The cluster is medium-sized, cylindrical, narrow, has one or two wings and is compact. The berry is short elliptical, yellow-green, with no special taste and well-formed seeds.



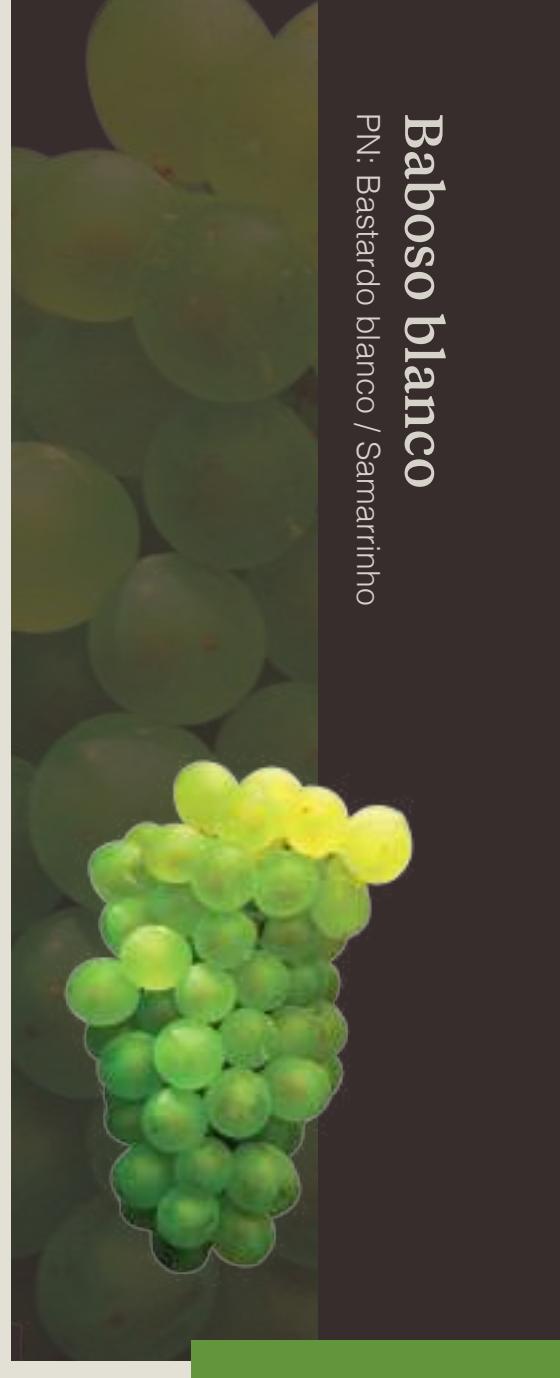
→ BEHAVIOUR IN THE FIELD

The most common way of training is in gobelet fashion. Early budding variety, medium ripening and shorter cycle than varieties such as Verjadiego and Listán Blanco (PN: Palomino Fino). Vigorous (low Ravaz Index) and with low bunch production. It is a vine sensitive to grey rot.



→ CHARACTERISTICS OF MUSTS AND WINES

It produces single-varietal wines marked by elegance, freshness and minerality. Citrus aroma, with notes of honey, light resin and white fruit. Not so expressive on the palate, it is full and intense, with medium acidity and very fresh. It has a medium body and a voluminous finish, showing very peculiar characteristics.



Baboso negro

PN: Alfrocheiro



→ WHAT YOU NEED TO KNOW

The term Baboso Negro in the VIVC refers to the Portuguese vine Alfrocheiro. One of its progenitors is Savagnin Blanc (also known as Traminer), originally from the Austrian Tyrol, and very possibly introduced in the Iberian Peninsula through the Camino de Santiago. The Alfrocheiro variety is the most common in the Canary Islands. It has 22 synonyms (VIVC) including Albarín Negro, Bruñal (Iberian Peninsula) and Baboso Negro. Mostly present on the islands of El Hierro and Tenerife. Not to be confused with the variety Bastardo Negro (PN: Trousseau Noir).



→ DESCRIPTION OF THE PLANT

Five-lobed, medium-sized and orbicular leaf. The cluster is small, cylindrical, broad, one or two-winged and compact. The berry is short elliptical, bluish-black, with no special taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

It prefers low fertile and sandy soils. It poorly tolerates water stress, excessive sunshine and boron deficiency. Thanks to the good fertility of the basal buds, it is also suitable for short pruning. Medium-early budding and early ripening. It has a short cycle. Variety of medium vigour and medium-low production. Medium sensitivity to downy mildew and powdery mildew, above average sensitivity to *Botrytis* and tiner. Baboso Negro grows well in places where trade winds do not directly affect the vineyards, where humidity is low and where high altitudes provide large thermal jumps (wide temperature ranges).



→ CHARACTERISTICS OF MUSTS AND WINES

It produces wines with good alcohol content, high polyphenolic index, low aggressive tannin, deep colour, high acidity and intense aromas (violets, black fruits, berries and even blond tobacco). Suitable for long macerations and high colour extraction. Ability to produce quality red wines (including young wines). It has a high potential for the production of sweet wines due to its high sugar content.

Bastardo negro

PN: Trousseau noir



→ WHAT YOU NEED TO KNOW

The terms Bastardo Negro or Verdejo Negro are two of the 54 synonyms for the French variety Trousseau Noir (VIVC). Like the variety Bastardo Blanco or Baboso Blanco, in the Canary Islands (PN: Samarrinho), or the variety Baboso Negro (PN: Alfrocheiro), they share a parent, the Central European variety Savagnin Blanc. Trousseau Noir originates from eastern France (Jura department). Another molecular profile has been described under the same name, that of the Portuguese variety Molar or Saborinho (Rodríguez-Torres, 2018). Not to be confused with the variety Baboso Negro (PN: Alfrocheiro).



→ DESCRIPTION OF THE PLANT

The adult leaves are orbicular and five-lobed. The cluster is small, cylindrical and compact. The berry is elliptical, short and medium-sized, bluish-black to violet, but always of medium intensity. Medium-thick skin, soft flesh.



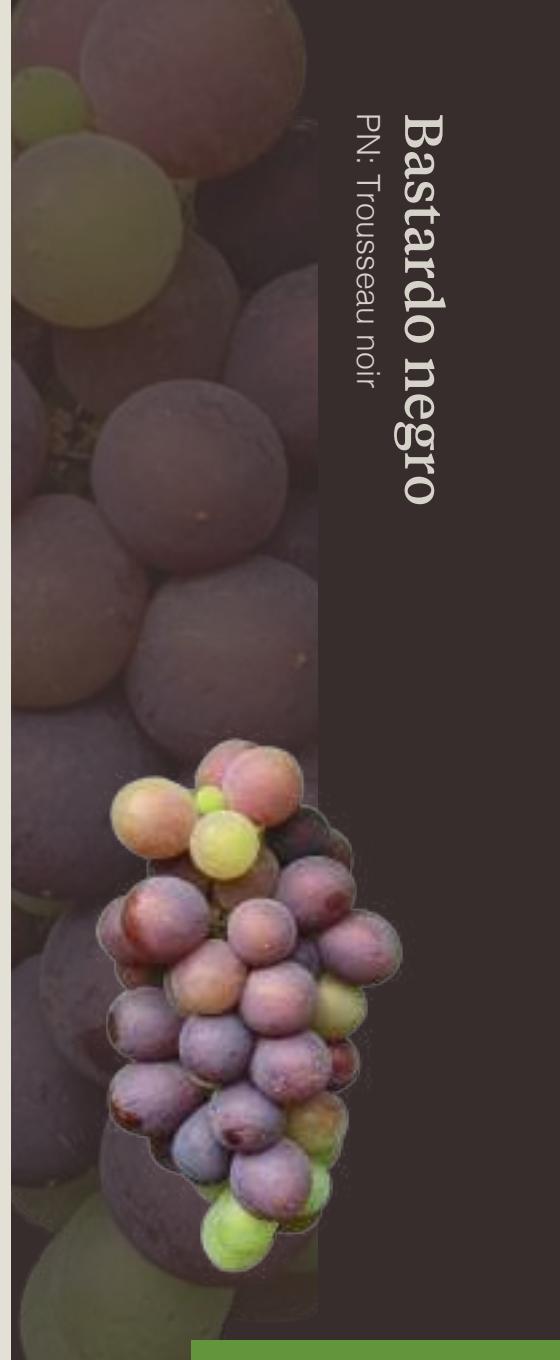
→ BEHAVIOUR IN THE FIELD

The Trousseau Noir grapevine is a vigorous variety that must be planted in soils well exposed to sunlight to achieve optimum ripening. Requires fairly warm gravelly soils or shallow loams. It can be managed in short or long pruning, depending on climatic conditions. Early budding and ripening. It is quite sensitive to cryptogamic diseases and in particular to grey rot. It is also quite sensitive to *cicadellidae* (leafhoppers) and susceptible to wood diseases.



→ CHARACTERISTICS OF MUSTS AND WINES

It allows the production of quality wines with character, warm, robust and structured, but with a low sustained colour if the yields are high. High sugar accumulation potential. Good ageing potential. When young, it is reminiscent of berries and fruits, but develops into complex aromas with smoky notes, coffee, dried herbs, prunes and tobacco. With ageing, the aromas simultaneously become more diverse and deeper. After 10 years, even wines not aged in wood acquire a woody tone.



Breval

PN: Beba



→ WHAT YOU NEED TO KNOW

In the Canary Islands, the dual-purpose (table and vinification) Extremadura variety Beba is known by the term Breval, one of its 195 synonyms. It is known that one of its progenitors is a Castilian variety, known as Hebén. The Hebén variety, also dual-purpose, is very old (female flower) and the parent that is present in most crosses of Spanish varieties.



→ DESCRIPTION OF THE PLANT

Its leaf has 7 lobes, is large and pentagonal. The cluster is long, conical, of medium width, has one or two wings and is compact. Long, elliptical, yellow-green berry with no special flavour and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

Very vigorous and very productive variety. Late budding and harvesting, especially when used as table grapes. Medium sensitivity to powdery mildew.



→ CHARACTERISTICS OF MUSTS AND WINES

Until now in the Canary Islands, it has not shown good quality indexes for vinification and has therefore been considered of little oenological interest. At present, in Extremadura, a firm commitment is being made to this minority variety, and based on various studies in the field and in wineries, wines are being obtained with characteristics that are far from negligible. These can be defined as pale, with bright greenish tones, low alcohol content and a very good balance of acidity, while presenting aromas of tropical and white fruits.



→ WHAT YOU NEED TO KNOW

The Airén variety is grown in the Canary Islands under the name of Burrablanca or Burra Blanca, two of the 26 synonyms of this variety. This Castilian-Manchego vine is one of the most widely planted in this community and in Spain. It is a descendant of the ancestral variety Hebé (with female flowers), like more than 60 peninsular varieties. It also has a dual use: vinification and table grapes. In the Canary Islands it can be found in Lanzarote and El Hierro.



→ DESCRIPTION OF THE PLANT

Its leaf is 7-lobed, large and pentagonal. The cluster is long and of medium width, funnel-shaped, with one or two wings and medium compactness. Its berry is medium-sized, spherical, green-yellow, with no special flavour and well-formed seeds.



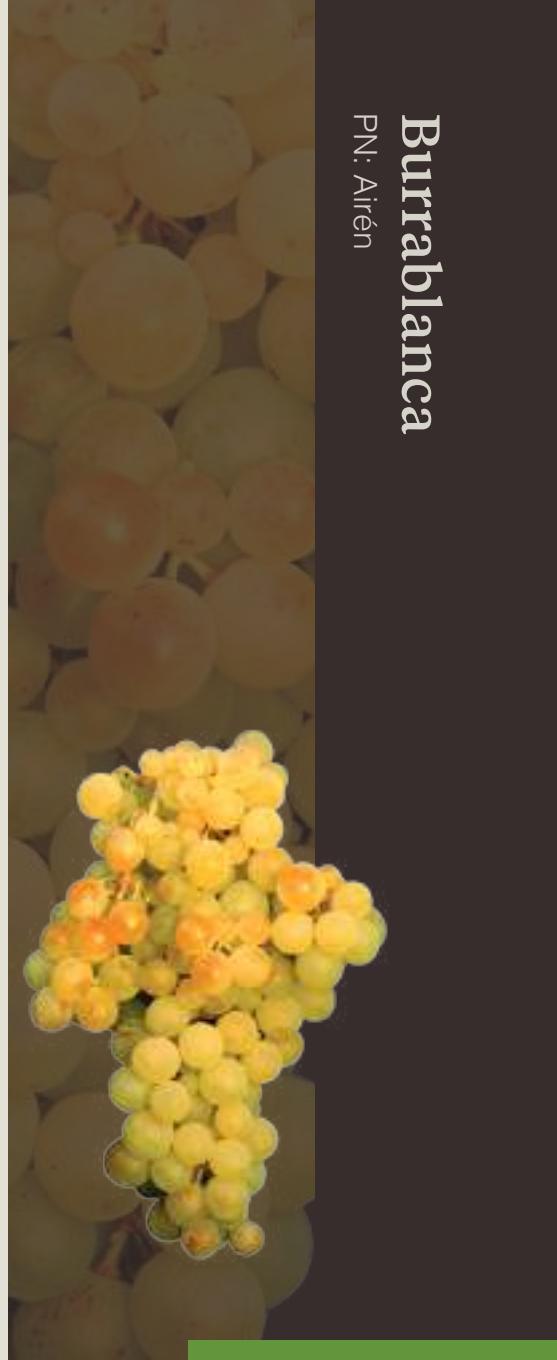
→ BEHAVIOUR IN THE FIELD

Vigorous vines with a low or creeping growth habit, with high production (although in the Canary Islands it is considerably reduced). Medium-late budding and ripening. Drought resistant, adapted to poor, infertile soils. It is usually gobelet-trained. Fairly resistant to the most common pests and diseases, so it is recommended for organic vitiviniculture.



→ CHARACTERISTICS OF MUSTS AND WINES

It gives pale yellow musts. If young wines are made correctly, they can retain green reflections. The musts and young wines have fruity aromas of medium intensity, with some notes of ripe fruit. After the first evolution, secondary aromas appear, reminiscent of bananas and citrus fruits (especially grapefruit), but maintaining very fresh vegetal aromas. The wines are not very complex, not very aromatic, with low acidity, full-bodied and pale yellow in colour.



Diego / Bujariego

PN: Vijariego blanco



→ WHAT YOU NEED TO KNOW

The Andalusian vine Vijariego Blanco is known in the Canary Islands under the names of Diego (Lanzarote), Bujariego (La Palma), Vijariego Blanco (Tenerife, north-eastern area), Vijiriega Blanca, Vijiirego, Vijariego, which correspond to 6 of the 14 synonyms of this variety in the VIVC. It is the offspring of the ancestral peninsular variety Hebén, and is intended for winemaking. It is mainly cultivated on the islands of Lanzarote and La Palma. In the northwest of Tenerife, this name is used to refer to the local Herreña variety Verijadiego. They should not be confused, since they are absolutely different profiles.



→ DESCRIPTION OF THE PLANT

Its leaf is 5-lobed, medium-sized and pentagonal in shape. The cluster is medium-sized and wide, funnel-shaped, with 3 or 4 wings and medium compactness. It has a short, long, medium-sized, elliptical, yellow-green berry with no specific taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

Long cycle (medium sprouting and late ripening). Medium vigour and production. Short pruning can be applied, despite its relatively low fertility; its budding is very irregular, with a predominance of the acrotonous character of the vine. It shows very good acidity and medium resistance to diseases and pests.



→ CHARACTERISTICS OF MUSTS AND WINES

The young and dry wines, due to their high acidity, are very fresh. With complex but subtle aromas, the notes range from apple, pear and lemon/lime to floral notes of sweet alder and a certain herbaceous touch reminiscent of bitter fennel. On the palate, it is striking at first, then follows with elegant layers of flavour and a long finish. The more ecological versions are characterised by the appearance of minerality and salinity due to the volcanic terroir. The best vintages evolve very well in the bottle, acquiring more structure, with sweet, savoury and bitter notes.



→ WHAT YOU NEED TO KNOW

The PN of the Forastera Blanca is Albillo Forastero, a local Canary Island variety from the island of La Gomera. It is now known that, together with the Albillo Criollo, they are the offspring of a cross between Listán Blanco (PN: Palomino Fino) and Verdello (PN: Verdelho Branco). This variety is also known by three other synonyms: Forastera, Forastera Gomera and Gomera. It has a dual use: table and vinification. In most specifications for the 11 PDOs of the Canary Islands, the name Forastera Blanca is associated with Doradilla, which is a mistake. The Doradilla is an Andalusian variety that is different in every way.



→ DESCRIPTION OF THE PLANT

Five-lobed, medium-sized, pentagonal leaf. The cluster is long, broad and cylindrical, has one or two wings and is compact. The berry is short elliptical, yellow-green, with no special taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

This variety has a medium sprouting period and medium ripening. Not very productive in relation to its vigour (low Ravaz Index). There is no limitation in its productivity, as it is cultivated at different levels. With a good quality index, it is not particularly sensitive to pests and diseases, but it seems to have its greatest weakness in the compactness of the bunches, which are very sensitive to acid rot.



→ CHARACTERISTICS OF MUSTS AND WINES

A variety with great oenological potential. Wines with high alcohol content are obtained, with a characteristic aroma (wild flowers and stone fruits), beautiful golden tones, interesting acidity (lemon), powerful salinity. Although young wines can be obtained, if the grapes are properly processed, they are clearly crianza-orientated. When the alcohol content of the wine obtained is slightly lowered, notes of pear, sweet red apple, flower and nectar appear. In these latter conditions, the salinity remains, but it is joined on the finish by a lingering sensation of honey and orange blossom sweetness, which is delicious.



Gual

PN: Malvasía fina



→ WHAT YOU NEED TO KNOW

The Portuguese variety Malvasía Fina, the result of a cross between the Portuguese Alfrocheiro (known in the Canary Islands as Baboso Negro) and the ancestral Spanish Hebén, is known in this archipelago under the name of Gual. The Canary Island term Gual, together with Boal (in Madeira), is one of the 26 synonyms of the variety. It is used exclusively for winemaking. It is preferably grown on the westernmost islands.



→ DESCRIPTION OF THE PLANT

Its leaf is 7-lobed, large and pentagonal. The cluster is long, wide and conical, with one or two wings and of medium compactness. The berry is ovoid, medium-long and narrow, yellow-green, with no special flavour and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

Its cultivation is limited to preferably low and windless areas. Short cycle variety, early sprouting, with medium-high vigour in accordance with its yield. Low tendency to form unproductive secondary shoots and very high bud fertility. It requires deep, well-drained soils and should be avoided in places that are too hot. Sensitive to drought, boron and magnesium deficiencies. Highly susceptible to *Peronospora* and powdery mildew, and therefore also to *Botrytis* especially during flowering. Medium sensitivity to vine leafhopper.



→ CHARACTERISTICS OF MUSTS AND WINES

Quality wines and sweet wines are obtained. With a medium-high alcohol content and a lemon yellow colour, the musts have a medium acidity. The quality is as fine as the name suggests. Compelling nose with notes of wax, honey, nutmeg and some smokiness. Lately, several Canarian wineries have succeeded in creating good dry wines that are characterised by their bright appearance, distinctive toasty and vanilla flavours, achieved without any application of oak. Gual can also show other aromas and flavours, such as jasmine, melon and/or pineapple (depending on the level of ripeness), all of them well integrated with good acidity and an unctuous (almost buttery) texture, which gives a lot of volume and is persistent. Great potential for ageing in the bottle.



→ WHAT YOU NEED TO KNOW

Palomino Fino Andaluz is known as Listán Blanco de Canarias or Listán Blanco (part of its 141 synonyms). Along with the also Andalusian red Mollar Cano (Negramoll), it is the parent of the grape variety Listán Negro and, together with the Portuguese Verdelho Branco, it is the parent of the Albillo Criollo and the Albillo Forastero (PN: Forastera Blanca). Dual use: table grapes and winemaking. It bears no resemblance to Listán Negro; it is not a colour mutation of this variety.



→ DESCRIPTION OF THE PLANT

Its leaf is 7-lobed, large and pentagonal. The cluster is long and wide, conical in shape, has one or two wings and is of medium compactness. The berry is medium-sized, spherical, yellow-green, with no special taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

It is trained in gobelet or with short pruning (Royat). Variety with medium-high vigour and very fertile. It requires deep, water-retentive, calcareous soils; in poor soils, it prefers not to get too much sunlight. Resistant to high temperatures and heat shock. It has a long cycle, with medium-long budding and ripening. It is cultivated at all altitudes. Although there is a deficiency of acidity in the musts in the lower areas, this is gradually corrected in the higher areas. It is also less aromatic than other white varieties. Risk of berry rot due to excess humidity. Generally robust to diseases and pests (exception: susceptible to *Peronospora* and *Anthraco*se; less susceptible to powdery mildew, medium-low susceptibility to *Botrytis* and medium susceptibility to downy mildew).



→ CHARACTERISTICS OF MUSTS AND WINES

The Palomino grape produces a wine of medium alcohol content, very pale yellow in colour and very neutral on the nose, although it displays great structure on the palate. Due to its low acidity, it is harvested prematurely to give it a touch of freshness. It shows light and subtle herbal (fennel), peach and dried fruit aromas. This low aromatic power and intensity translates into an enhancement of the mineral and saline character of the terroir, volcanic in this case.



Listán negro



→ WHAT YOU NEED TO KNOW

It is the most cultivated red vine in the archipelago. Local variety named after its PN, which has 10 synonyms. It is the result of crossing the two Andalusian varieties: Listán Blanco (PN: Palomino Fino) and Negramoll (PN: Mollar Cano). Not to be confused with the Listán Prieto variety. Used for winemaking.



→ DESCRIPTION OF THE PLANT

Its trilobed leaf is large and pentagonal. The cluster is very long and wide, funnel-shaped, has one or two wings and is very compact. The berry is medium-sized, spherical, blue-black, with no special taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

It is a vigorous and productive strain. It has medium budding and ripening, with a medium-long cycle. Its cultivation is widespread at all altitudes and in all microclimates, although in the field it is more difficult for it to acquire colour on the southern slopes due to the greater sunshine. It adapts very well to northern slopes, medium altitude and more evolved soils with a higher level of clay, where it maintains acidity, achieves good alcohol content and good phenolic ripening. Listán Negro is remarkably resistant to diseases and pests (medium sensitivity to *Botrytis* and mildew).



→ CHARACTERISTICS OF MUSTS AND WINES

It is used for young wines, even with carbonic maceration, and conveys the minerality of the volcanic terroir. It has a cherry-red colour with lively and refreshing aromas and flavours of red fruits (strawberries and raspberries) over an intense core of minerals and pepper. On the palate, the tannins are soft, light-bodied and dry, ending with a pleasant and moderately persistent finish. In crianza wines (very reductive), ageing in oak wood or concrete suits them very well as it neutralises the tannins and gives the wine aromas and flavours of spices, vanilla, dried fig leaf and liquorice, as well as a creamy sensation in the mouth with a long, elegant finish of red fruit and spices perfectly integrated with each other and on that essential base of spicy volcanic minerality.



→ WHAT YOU NEED TO KNOW

The Listán Prieto variety, of Castilian-Manchego origin, is one of the oldest known in the Iberian Peninsula. It is a very widespread variety in the New World, and is known by the names Mission, Criolla, Criolla Chica and País (it has 39 synonyms in addition to those mentioned here). It has been described as being involved in more than 20 crosses with other varieties in Argentina and Chile. It is used for both table grapes and wine making. Not to be confused with the local variety Listán Negro. It is much more established in the western islands.



→ DESCRIPTION OF THE PLANT

Its 7-lobed leaf is large and cuneiform. The cluster is very long and wide, funnel-shaped, has one or two wings and is compact. The berry is medium-sized, spherical, blue-black, with no special taste and well-formed seeds.



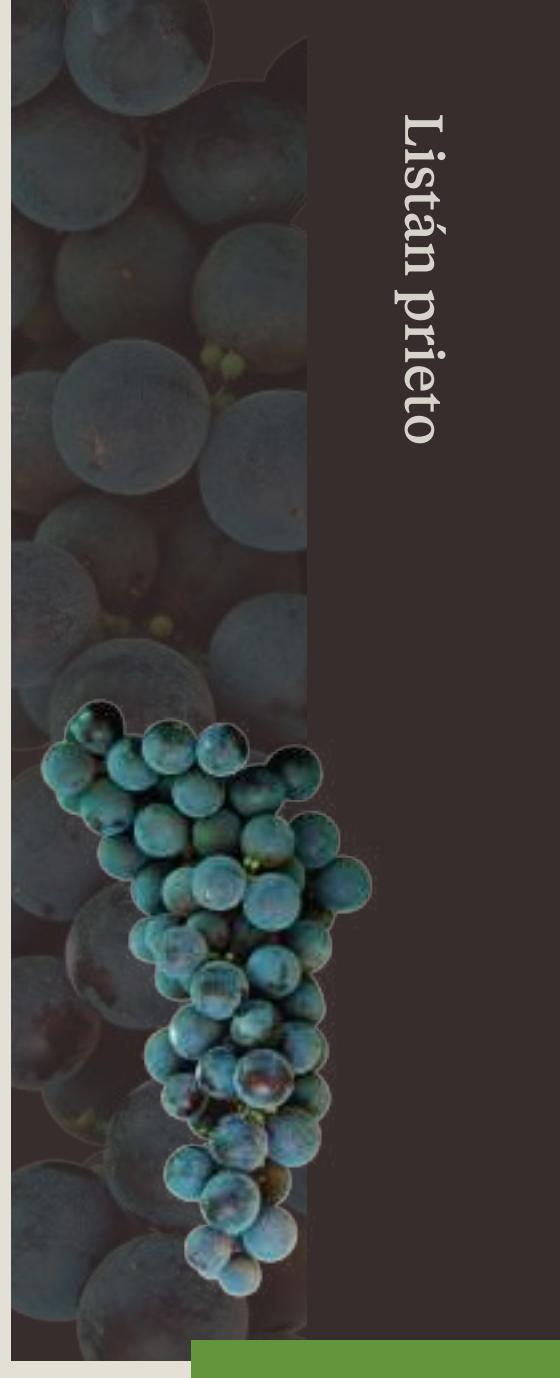
→ BEHAVIOUR IN THE FIELD

It has a long cycle, with late budding and ripening. Low yielding, its traditional management is in gobelet and requires spur and cane pruning. The cane is necessary to leave higher-ranking buds and thus increase the yield. Very high vigour, up to four times higher than that of the medium development varieties. Due to this excessive vigour one of its limitations is its alternate bearing. It provides acidity but is slow to pick up colour. It is recommended in high areas, due to its colour and ripening problems and its sensitivity to grey rot (*Botrytis cinerea*).



→ CHARACTERISTICS OF MUSTS AND WINES

This variety is used for both young wines and crianza wines. The single varietals are very enveloping on the palate with polished tannins. Generally speaking, and if well cultivated, they have a good degree of alcohol and balanced acidity; their colour intensity is usually high and their aromas of black and red fruits, toffee caramel and coffee are outstanding. Like the Listán Negro variety (very different from this one), it has the capacity to preserve and enhance the minerality conferred by the volcanic terroir in the wine.



Malvasía aromática

PN: Malvasía Dubrovacka



→ WHAT YOU NEED TO KNOW

Malvasía Dubrovacka, with 71 synonyms, like Malvasía Aromática, de Sitges or de La Palma, does not include the name Malvasía di Candia as it is another variety. Of unknown origin, it seems to be located east of the Mediterranean Sea. Together with the variety Marmajuelo (PN: Bermejuela), they are the progenitors of the local Canarian variety Malvasía Volcánica. Winemaking is its most widespread use.



→ DESCRIPTION OF THE PLANT

Its leaf has more than 7 medium-sized, pentagonal lobes. The cluster is long and medium wide, cylindrical, has three or four wings and is of medium compactness. The berry is short elliptical, yellow-green, with an aromatic taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

Short cycle, with early-medium budding and ripening. Low vigour and yield, needs long pruning (first buds are not fertile). Sensitive to spring frost, with good drought resistance. Susceptible to grey rot and powdery mildew, and vulnerable to red spider mite. It can be cultivated in low areas suitable for sweet wines, or in high areas for dry wines. At high altitudes, it only works on slopes not exposed to the trade winds (with direct impact of the trade winds and high humidity, it is greatly affected by coulure).



→ CHARACTERISTICS OF MUSTS AND WINES

Its wines have intense colours, high aromatic potential and good acidity. Young wines tend to be round, full-bodied and smooth in texture, but always balanced by a sharp, refreshing acidity. Light green to yellow in colour, with strong aromas of stone fruits, white currants and an intense floral aroma. In wines from overripe grapes, the balance between freshness (high acidity) and intensity of aroma (with notes of quince, candied apricots and wildflower honey) continues. A certain bitterness is noticeable, which gives a very attractive dimension balancing the sweetness. In crianzas, amber colouring appears, with aromas of candied stone fruits, fresh flowers and notes of coffee, chocolate and figs.

Malvasía rosada

PN: Malvasía Dubrovacka rosada



→ WHAT YOU NEED TO KNOW

Malvasía Dudrovacka Rosada, in addition to Malvasía Rosada, has 2 other synonyms. Malvasía Aromática (PN: Malvasía Dubrovacka) could have its origin in the mutation of one of the genes of the anthocyanin synthesis pathway (the compounds that give colour to the skin) of the Malvasía Rosada, as the ancestral *Vitis* (the wild ones) seem to have been red. The Malvasía de Sitges Rosada, which has disappeared in Catalonia, is now being cultivated again using donations of wood from the Canary Islands. Variety intended for winemaking.



→ DESCRIPTION OF THE PLANT

Its leaf has more than 7 lobes, is medium-sized and pentagonal. The cluster is long and of medium width, cylindrical, with three or four wings and of medium compactness. The berry is short elliptical, pink, aromatic, with well-formed seeds.



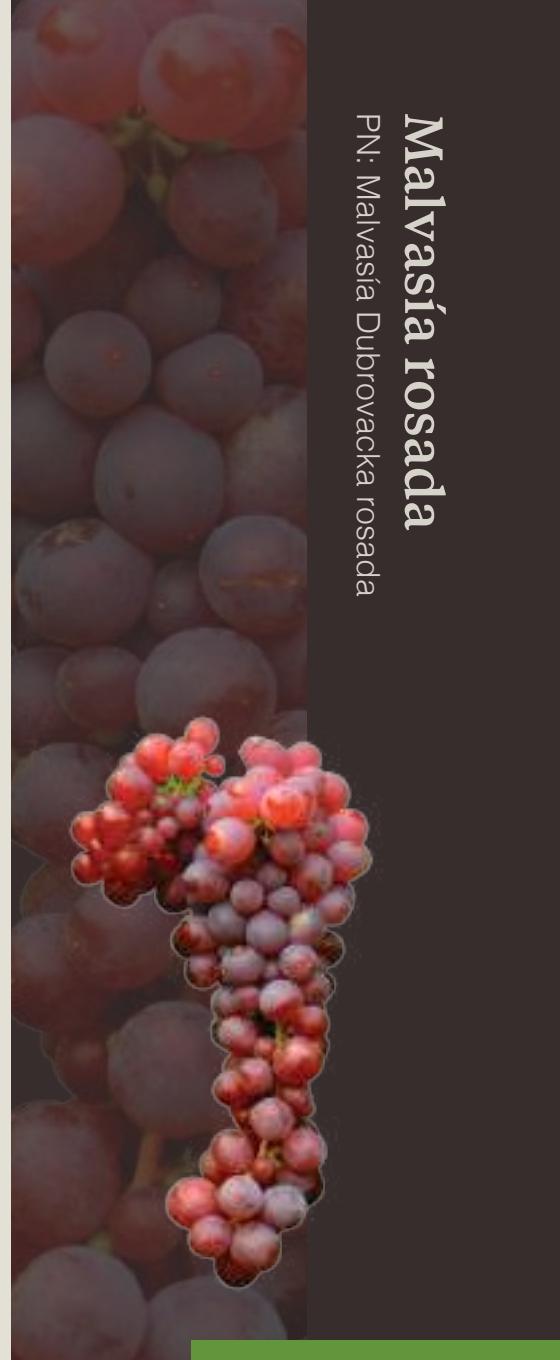
→ BEHAVIOUR IN THE FIELD

The Malvasía Aromática has a short cycle, with early-medium budding and ripening. Low vigour and yield, needs long pruning, as the first buds are not fertile. Sensitive to spring frosts, but has good drought resistance. Particularly susceptible to grey rot (*Botrytis*) and powdery mildew, and vulnerable to red spider mite. It can be cultivated in low areas suitable for sweet wines, or in high areas for dry wines.



→ CHARACTERISTICS OF MUSTS AND WINES

Pale pink colour, medium aromatic intensity, red fruits, with marked floral tones that give it elegance and finesse. Voluminous in the mouth, very good acidity, long and persistent. Undoubtedly, a rosé wine with great singularity and personality that makes it very attractive.



Malvasía volcánica



→ WHAT YOU NEED TO KNOW

Malvasía Volcánica, also known as Malvasía de Lanzarote, whose PN is Malvasía Volcánica, has 6 other names that describe it (synonyms). Among them is the term Málaga, as it is known in Tenerife. This local Canarian variety is the result of a cross between the Malvasía Aromática (PN: Malvasia Dubrovacka) and Marmajuelo (PN: Bermejuela). It is used exclusively for winemaking. It is the flagship vineyard of the island of Lanzarote.



→ DESCRIPTION OF THE PLANT

Its leaf is 7-lobed, medium-sized and pentagonal. The cluster is long and wide, funnel-shaped, has more than 6 wings and is of medium compactness. The berry is short elliptical, yellow-green, with a specific taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

Medium cycle variety, with a medium sprouting and ripening period, it is a low vigour strain with high production. It can grow in any type of soil, adapts to poor soils and prefers low altitudes. The Malvasía Volcánica can be pruned short (3 or 4 buds visible) as it has fertile basal buds. Less affected by spring frosts than Malvasía Aromática. Particularly vulnerable to powdery mildew, with medium sensitivity to *Botrytis* and downy mildew. It is also sensitive to moths.



→ CHARACTERISTICS OF MUSTS AND WINES

This variety produces straw yellow wines, with golden reflections as the wines become sweeter. Aroma of great finesse, high aromatic intensity of white flowers, citrus and stone fruits, white currants, herbal nuances, honeyed and tropical tones. On the palate, they are balanced wines with intense fruity aromas, medium acidity that brings freshness; ample, elegant (glycerine mouthfeel, which gives it an opulent body). It is very important in sweet and semi-sweet wines. Single-varietal wines are highly appreciated for their aroma.



→ **WHAT YOU NEED TO KNOW**

Bermejuela is the official name given to this local Canary Island variety in VIVC. The Marmajuelo variety is one of the mothers of the Malvasía Volcánica together with the Malvasía Aromática (PN: Malvasia Dubrovacka). Marmajuelo (PN: Bermejuela) is a variety intended for winemaking; it has 7 other synonyms apart from the most widespread in the Canary Islands, which is the term Marmajuelo. Vidueño is becoming more and more widespread throughout the archipelago.



→ **DESCRIPTION OF THE PLANT**

Its leaf is 7-lobed, medium-sized and pentagonal. The cluster is short and medium wide, funnel-shaped, has 3 or 4 wings and is of medium compactness. The berry is spherical, medium-sized, yellow-green, with no particular taste and well-formed seeds.



→ **BEHAVIOUR IN THE FIELD**

It has a rather drooping habit, which makes it difficult to handle on espaliers. Variety of medium vigour and low production (it presents alternate bearing). It has a short cycle (early budding and ripening) and can be managed with short pruning. When cultivation is attempted at high altitudes (over 600 m), there is a serious problem of coulure, especially in areas exposed to the trade winds and with high humidity. It is therefore recommended for cultivation in areas below 300 m altitude. It is very sensitive to *Botrytis*, sensitive to powdery mildew and has medium sensitivity to downy mildew.



→ **CHARACTERISTICS OF MUSTS AND WINES**

The musts are characterised by tropical aromas of passion fruit, pineapple, banana leaf and an opulent mouthfeel. The young single varietals are characterised by being exuberant and very exotic. The wines with a touch of ageing on their own lees are characterised by being complex, full-bodied, but now creamier and with very subtle fruity aromas on a base of salinity and minerality due to the volcanic terroir, all enhanced with notes of brioche and toffee. All these wines are also very well balanced by a surprisingly vigorous acidity.



Moscatel de Alejandría

PN: Muscat of Alexandria



→ WHAT YOU NEED TO KNOW

Variety originating in Greece. Apart from the synonyms Moscatel de Alejandría or Moscatel, there are 285 other terms to name this variety. Muscat of Alexandria is the result of the natural crossbreeding of two Greek varieties, the Heptaliko and the Moscatel de Grano Menudo (PN: Muscat à Petits Grains Blancs). This variety, one of the oldest in existence, has three uses: winemaking, table grapes and sultanas. It is present on all islands.



→ DESCRIPTION OF THE PLANT

Its leaf is 7-lobed, medium-sized and pentagonal. The cluster is very long, broad, cylindrical, has 1 or 2 wings and is compact. Its berry is ovoid, very long, wide, yellow-green, with a muscatel flavour and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

This low vigour, high yielding variety has a long cycle with late budding and ripening. Allows short pruning. It tolerates acid soils and is well adapted to heavy soils. It requires high temperatures and high levels of solar irradiation. Sensitive to zinc deficiency and heat stress (bunch burn). Susceptibility to fungal diseases: very susceptible to powdery mildew and *Botrytis*; susceptible to *Peronospora* and Excoriosis (*Phomopsis viticola* Sacc.). In terms of pests, it is susceptible to red spider mite.



→ CHARACTERISTICS OF MUSTS AND WINES

Variety mainly used for dessert wines, sweet wines and quality wines. It is also suitable as a cold fermented semi-sweet table wine. Generically, we can say that the wines are yellowish to straw-coloured, with an intense and persistent muscatel aroma (terpenic, with aromas of rose water, orange blossom and lychee). In more complex wines these can be complemented with more subtle notes of elderflower and honeysuckle. Over time, aromas of figs, currants, coffee, plum, molasses, nuts and chocolate notes evolve. As a fortified wine, it can produce one of the noblest wines of its kind and has great longevity.



→ WHAT YOU NEED TO KNOW

The Mollar Cano, originally from Andalusia, is known in the Canary Islands under the name of Negramoll or Mulata, two of the 35 synonyms registered in the VIVC. Together with the also Andalusian Palomino Fino (Listán Blanco de Canarias or Listán Blanco), they are the parents of the local red variety, Listán Negro. It has a dual use: vinification and table grapes. Mainly cultivated on the island of La Palma, as well as in the rest of the westernmost islands, with bunches that may have berries of different colours depending on the harvesting load and other factors of the external environment.



→ DESCRIPTION OF THE PLANT

Its leaf is 5-lobed, medium-sized and cuneiform. The cluster is very long, wide, funnel-shaped, has 3 or 4 wings and is of medium compactness. The berry is short, long, elliptical and medium wide, bluish-black, with no specific taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

Long cycle (late budding and ripening), with moderate vigour and medium-low production. Admits short pruning. Hot and dry weather, especially in the final stage of ripening. Prefers dry clay-limestone soils. It is characterised by its good acidity, but it struggles to pick up colour. For its cultivation, it prefers medium-low areas, due to its colour and ripening problems, especially on medium slopes. It has a medium sensitivity to the most common diseases.



→ CHARACTERISTICS OF MUSTS AND WINES

It has generally been used in cupages, where it adds alcohol and aromatic complexity. The new single-varietal wines of Negramoll (PN: Mollar Cano) are cherry or raspberry red in colour, predominantly red berry aromas with occasional hints of blueberry, and on the palate, soft, sweet tannins combine with moderate alcohol to provide a smooth mouthfeel. The crianza wines show an original and polished style, with slightly less sweet tannins, but fully integrated. Orange and golden hues flow, secondary and tertiary aromas of ground coffee, toffee caramel and an evolution of primary fruit to include savoury nuances of leather and forest floor. More prepared for ageing than Listán Negro.



Pedro Ximénez



→ WHAT YOU NEED TO KNOW

Of uncertain origin, one of the many legends tells that, in 1661, the German ampelographer F. J. Sachs suggested that the grape may have originated in the Canary Islands or Madeira, and that it was subsequently brought to the German wine-growing regions. Later, a Spanish soldier of the Tercios or a Catholic cardinal called Pedro Ximénez would have taken the grape to the Sierras de Málaga. Unfortunately, genetic analysis indicates that one of its parents is the peninsular ancestral (female-flowered) variety, Hebé. Vine for winemaking, has 33 synonyms.



→ DESCRIPTION OF THE PLANT

Its leaf is 5-lobed, medium-sized and cuneiform. The cluster is very large, conical, winged and of medium compactness. The berry is spherical-circular, medium-sized, yellow-green, with no specific taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

The vigorous and productive plant tolerates heat well and appreciates high sunshine (high sugar and therefore alcohol content is usually 14.5°). Medium cycle (medium sprouting and ripening), it prefers aerated and deep soils. Adapts well to short spur pruning. It has high phosphorus and potassium requirements. Relatively resistant to cold and wind, it is very sensitive to *Botrytis* and mildew, and quite sensitive to powdery mildew. It is also sensitive to tinder and termites.



→ CHARACTERISTICS OF MUSTS AND WINES

This variety produces top quality dessert wines and medium quality table wines. They are usually very alcoholic and low in acidity. It accepts organic breeding very well. From the raisined berries, very sugary musts of 30 to 32° Baumé are obtained. These are wines with a high dry extract. It has a strong, dark mahogany colour with deep aromas (sultana and preserved fruit). Sweet and smooth, with a balanced richness and a long finish.



→ WHAT YOU NEED TO KNOW

Local variety grown almost exclusively on the island of La Palma. Endangered, it has only one synonym, Sabra. From DNA analysis, it is known that the peninsular ancestral variety Hebén is one of its progenitors. The Hebén variety, with a female flower, resembles the wild ancestral forms, as cultivated vine flowers are normally hermaphrodite. The Sabro variety is intended for a single use, i.e., winemaking.



→ DESCRIPTION OF THE PLANT

Its leaf is 5-lobed, large and pentagonal in shape. The cluster is long and wide, funnel-shaped, has 1 or 2 wings and is of medium compactness. The berry is short elliptical, medium-sized, yellow-green, with no specific taste and well-formed seeds.



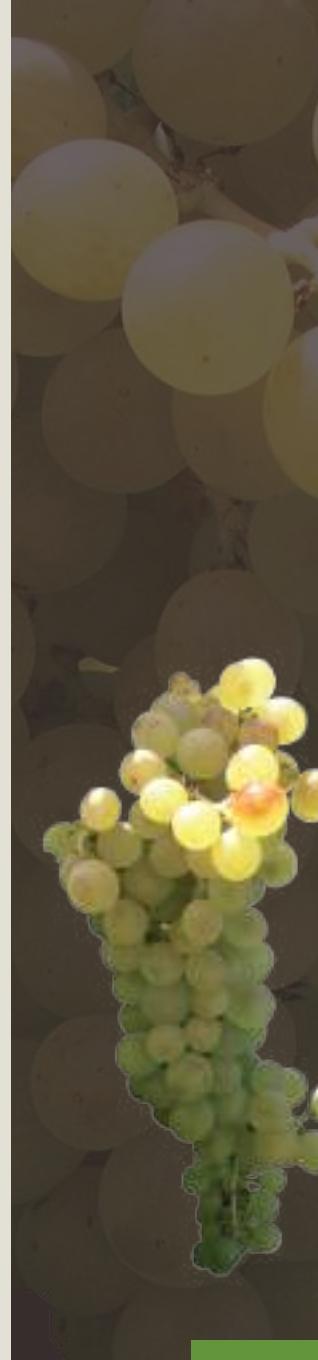
→ BEHAVIOUR IN THE FIELD

Short cycle, early maturing vine. Vigorous and low yielding. It is mainly found in lowland areas between 300 and 500 metres above sea level. It needs stable temperatures as it is very sensitive to coulure. It grows well on sandy and stony soils, that is, loose, undeveloped soil (on a layer of *picón* or on cobbles). Almost all vines have a double internode, which is why many vine growers prune the vine at the height of the double internode, i.e., between the third and fifth bud. Medium-low sensitivity to diseases and pests, nothing that cannot be corrected with good management.



→ CHARACTERISTICS OF MUSTS AND WINES

It produces wines with good alcoholic strength. Abundant acidity. It is ideal for making natural sweet wines, since it provides glycerine in the mouth, leaving a great unctuousness. Lately it has been used in cupages with Malvasía Aromática (PN: Malvasia Dubrovacka) and Gual (PN: Malvasía Fina), as it adds body and subtle floral notes. When the berries are tasted, the flesh is juicy and tender, with sweet citrus and floral notes of acacia and jasmine on the palate. These flavours are present in the young wines, but can mature in bottle to provide aromas of acacia honey, white peach and carrot cake that are smooth and elegant.



Tintilla castellana / Castellana negra

PN: Tinta cao



→ WHAT YOU NEED TO KNOW

The Portuguese variety Tinta Cao is known in the Canary Islands as Tintilla Castellana or Castellana Negra; apart from these two synonyms in the VIVC, there are 6 other names for this variety. The vineyard is used exclusively for winemaking.



→ DESCRIPTION OF THE PLANT

Its leaf has 7 lobes, is large and pentagonal in shape. The cluster is short and medium wide, conical, has 1 or 2 wings and is compact. It has a short, medium-sized, elliptical, bluish-black berry with no specific taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

Medium-long cycle variety, as it has a medium sprouting period and medium-long ripening. High vigour, low yields and fertility in the basal buds, which is why it allows short pruning. Soils of medium fertility, with some humidity, prefers high altitudes and sunny sites (south-west orientation). It requires high and warm solar irradiation, but without drought stress, to which it is very sensitive thus losing leaves. It has a low must yield due to the presence of 3-4 large seeds in the fruit. Medium susceptibility to *Peronospora* and powdery mildew, and low susceptibility to *Botrytis* and *Excoriosis* (*Phomopsis viticola* Sacc.).



→ CHARACTERISTICS OF MUSTS AND WINES

It is a rather controversial variety with great ageing potential. In areas where ripening difficulties are experienced, the wines have less colour, less aroma, with cabbage tones and are very thin on the palate. On the other hand, when the grapes have ripened well, 13% - 14% vol. alcohol content is obtained and inspiring wines are produced. They are rich in colour, somewhat penetrating, with an aromatic mix of berries and red fruits, dominated by notes of blackcurrant and strawberry, as well as cocoa. Followed on the palate by strong, rounded and even more impressive tannins, which give a perfect balance between acid and aroma. These wines have a sustained elegance and great ageing capacity.



→ WHAT YOU NEED TO KNOW

The term Verdello is a homonym, i.e., this name is used to designate 5 varieties: the Beba from Extremadura, the Italian Verdone Bianco and Verdicchio Bianco, and the Portuguese Gouveio and Verdelho Branco. In the Canary Islands, the term Verdello is used to designate the Portuguese Verdelho Branco. This variety, together with Listán Blanco (PN: Palomino Fino), are the parents of two local Canarian varieties, the Albillo Criollo and the Forastera Blanca (PN: Albillo Forastero). Verdelho Branco also has 15 synonyms, including Verdello, and is used exclusively for winemaking.



→ DESCRIPTION OF THE PLANT

Its leaf is 5-lobed, medium-sized and orbicular in shape. The cluster is of medium length and width, conical, has 1 or 2 wings and is compact. It has a long, medium-sized, narrow, elliptical, yellow-green berry with a particular taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

Very short cycle variety (early-medium sprouting and early ripening), medium vigour and very low yield. It tolerates short pruning. Robust variety, low susceptibility to excessive moisture. It requires deep soils and medium humidity. Climatic flexibility, it adapts to coastal and inland climates. Not recommended for cultivation at high altitudes. Low susceptibility to *Peronospora*, medium susceptibility to *Botrytis* and high sensitivity to powdery mildew.



→ CHARACTERISTICS OF MUSTS AND WINES

High quality variety. Good acidity and high alcohol. Citrine (yellow) in colour, with an aroma evoking exotic (tropical) fruits, it is well-structured and balanced. Sustained mouthfeel and good characteristics when well matured. Suitable as a light table wine or dessert wine, but also as a dry table wine. Interesting for single varietal wines.



Verijadiego



→ WHAT YOU NEED TO KNOW

Local variety from the island of El Hierro. No synonyms. Together with the Portuguese variety Alfrocheiro (Baboso Negro), they are the parents of the Verdello de El Hierro. It is intended exclusively for winemaking. Also very common in Tenerife, especially in the north-eastern areas, where it keeps the same name, and in the north-western area, where it is called Vijariego or Vijiriega. The Vijariego Blanco variety is also known in the Canary Islands by the synonymous names of Diego or Bujariego, among others. Vijariego Blanco is a different variety from the Herreña variety Verijadiego. They should not be mixed.



→ DESCRIPTION OF THE PLANT

Its leaf is 5-lobed, large and orbicular in shape. The cluster is very long and wide, cylindrical, with 1 or 2 wings and medium compactness. It has a short, long, medium-sized, elliptical, yellow-green berry with no specific taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

Medium cycle (medium sprouting and ripening). Vigorous variety with good production. Short pruning. Very sensitive to excessive sun exposure and heat stress. Prefers high areas below the sea of clouds (northeast). Sandy-stony soil. It has high acidity and very good alcohol content. Good oenological potential. Very sensitive to powdery mildew and *Botrytis*.



→ CHARACTERISTICS OF MUSTS AND WINES

The single varieties are clean, bright, straw yellow with greenish tones. Very good aromatic intensity with fruity notes (water pear, apple and also green lime), with spicy and balsamic touches. On the palate they are structured and balanced, with that touch of freshness. Its high alcohol and acidity make it ideal for naturally sweet wines, with a coppery-yellow colour, very bright, with freshness, balance, intensity and great aromatic complexity (essences of flowers and hints of ripe peaches and plums). Moreover, they are wines with complex flavours reminiscent of honey, quince jelly, caramel and nuts. Suitable for barrel fermentation.



→ WHAT YOU NEED TO KNOW

The black Vijariego corresponds to the Catalan Sumoll variety. Apart from the synonym Vijariego Negro, other synonyms are used in the Canary Islands (Vijariego Tinto, Vijiriega Negra, Vijiriego Negro, Verijadiego Negro...). There are 11 synonyms in the VIVC. This variety for winemaking is also the offspring of the ancestral Hebén variety. It is very important to know that the Vijariego Blanca is not a mutation of the Vijariego Negra, but rather two different varieties. They may share a parent (Hebén) but are distinct.



→ DESCRIPTION OF THE PLANT

Its leaf is 5-lobed, large and pentagonal in shape. The cluster is very long and of medium width, funnel-shaped, with 5 or 6 wings and medium compactness. It has a long, elliptical, medium wide, bluish-black berry with no specific taste and well-formed seeds.



→ BEHAVIOUR IN THE FIELD

It is an early sprouting variety with a long ripening period (long cycle). Good fertility (short pruning allowed), high vigour and good yields. Does not need much water (resistant to water stress). It works best in poor soils and old vines to limit vigour and optimise production, obtaining very balanced musts. Highly susceptible to powdery mildew and downy mildew.



→ CHARACTERISTICS OF MUSTS AND WINES

The wines have high acidity, good tannicity, a reddish colour and are fresh. Aromas of red fruits, undergrowth, hints of cassis liqueur, with a marked mineral expression. Very good young wines are obtained, although with a great aptitude for ageing due to the acidity and characteristics of its tannins. It blends very well with other varieties.





→ **WHAT YOU NEED TO KNOW**

In the Canary Islands, the term Tintilla is used to designate any red grape variety with similar morphological characteristics (size and shape of the bunch, blue-black berry...). Thus, under this name, the different scientific groups that have worked with Canary Island varieties have found a great diversity of varieties, such as Baboso Negro (PN: Alfocheiro), Bastardo Negro or its other synonym, Maturana Tinta (PN: Trousseau Noir), Garnacha Tinta, Castellana Tinta or Tintilla Castellana (PN: Tinta Cao).

In *Vitis* International Variety Catalogue (VIVC), the scientific community defines the name Tintilla as a homonymy or homonymous name used to refer to 4 different varieties, three Spanish and one Portuguese. These are: the Aragonese Garnacha Tinta, the Rioja Graciano, the Catalan-Valencian Monastrell and the Portuguese Vinaho.

Under these conditions, it becomes very complicated to create a fact sheet for the term Tintilla. Interestingly, despite all that has been explained, this name is included either on the website or in the specifications of the 11 PDOs that exist in the Canary Islands.



→ WHAT YOU NEED TO KNOW

Torrontés is the other term with similar behaviour to the name Tintilla. In this case, the problem of knowing which variety is hidden under this name does not only arise in the Canary Islands, but also extends to the Iberian Peninsula (Spain and Portugal). A scientific article published in the *American Journal of Enology and Vitiviniculture* in 2002, entitled “Genetic study of Malvasía and Torrontés Groups through molecular markers”, already showed that there were different varieties of *Vitis vinifera* L. under the name Torrontés.

Having compiled all this information in the VIVC, it can be concluded that the scientific community considers that the term Torrontés can be attributed to 5 different varieties, so it is a case of homonymy. These varieties are a Spanish red variety called Torrontés, for which we have no further information, the Extremadura variety Alarije, and three Portuguese varieties, Bical, Malvasía Fina (Gual in the Canary Islands) and Fernao Pires. Under these conditions, it becomes very complicated to create a fact sheet for the Torrontés. Interestingly, despite all that has been explained, this name is included either on the website or in the specifications of the 11 PDOs that exist in the Canary Islands.





5.0

The Canary Islands, a paradise of oenological diversity

Por Agustín García Farráis

Son and grandson of winemakers, founders of the family winery Bodega Tajinaste. Specialist Technician in Vitiviniculture and Oenology (1999) from the School of Vitiviniculture and Oenology of Requena in Valencia. He has furthered his training at Lycée Agro-Viticole de Libourne-Montagne (Bordeaux), at Mas Martinet DQP Prioret, at Bodegas Mauro (Ribera del Duero) and at Château Plaisance (Montagne-Saint Émilion). He is co-founder of *Vinófilos, Más Que Vinos*, a company dedicated to training, consulting and distribution of local, national and international wines.



Canary Wine stands out mainly for its diversity, as there are many factors involved in its production. Never has such a small territory given rise to such a wide range of possibilities waiting to be discovered.

Introduction

If we had to define wine and vitiviniculture in the Canary Islands in just one word, it would undoubtedly be diversity. The set of factors that define a territory as unique takes on even more meaning in the archipelago of Las Afortunadas, islands with their own characteristics that are clearly reflected in their wines.

As we have seen in this publication, this diversity begins in its geography, due to our volcanic origin, which generates very diverse and abrupt profiles, characterised by high mountains in relation to their surface extension. With the exception of Lanzarote and Fuerteventura, all the islands have important central peaks, from which steep slopes descend, with deep ravines leading down to the sea. This layout of its relief and its location in the subtropical zone in the middle of the Atlantic Ocean, under the influence of the trade winds, gives it a wide variety of microclimates, which is another factor to be taken into account in the development of vitiviniculture.

The Canary Islanders have also been able to adapt to their limited territory, in many cases colonising the small terraces and steep slopes, generating a truly peculiar smallholding landscape. **The vineyards of the Canary Islands are arguably the oldest in Europe, as they were never affected by the phylloxera plague.** Hence, in places such as California, Argentina or Chile, the origin of one of its best-known varieties, the Mission, Criolla or País, is sought in the only existing redoubt for its original counterpart, the Listán Prieto variety, still present in the vineyards of the islands.

These mission grapes were introduced by the Franciscan missionaries in the New World as a fundamental part of the catholic liturgy, spreading rapidly across the continent. Considered the first vine planted in America, it represents the entirety of Californian vitiviniculture until about 1850.

Francisco López de Caravantes (c. 1575-c. 1635), Accountant of the Court of Auditors of Lima (Peru), according to the writer Inca Garcilaso de la Vega, «sent someone to Spain for a plant; and the one who came for it, in order to bring it fresher, took it from the Canary Islands, of the prieta grape, and from there almost all the red grape came».

All of this is evidence of the extraordinary relevance and character of Canary Island wine at an international level, as it continues to be produced with varieties that are extinct in other parts of the world. On the other hand, we must point out that the historical prestige of our wines precedes Sherry, Port and even Madeira, being highly appreciated for centuries in different markets and ports of all the oceans. Canary Wine has always had this extraordinary character, combined with a historical landscape in which techniques and ways of working the vineyards have been developed that are also unique in the world wine context.

Nowadays, Canary Wine has recovered much of that ancestral prestige in major national and international competitions such as the Concours Mondial de Bruxelles, the Bacchus International Competition or the Decanter World Wine Awards, where different Canary Island wineries have won distinguished prizes and awards.

Defining Canary Wine

The Canary Islands have a wide diversity of grape varieties, many of them local, as we have seen in this publication, and a wide range of cultivation methods, many of them unique and of great beauty. Some of these varieties are present on several islands, while in other cases they are only found on one island or in one region of the island. Therefore, when defining the typology of Canary Wine, it is essential to take these varieties into account: Albillo Criollo, Baboso Blanco, Baboso Negro, Bastardo Negro, Breval, Burrablanca, Diego/Bujariego/Vijariego, Forastera Blanca, Gual, Listán Blanco de Canarias, Listán Negro, Listán Prieto, Malvasías Aromática, Rosada and Volcánica, Marmajuelo, Moscatel de Alejandría, Negramoll, Pedro Ximénez, Sabro, Tintilla Castellana, Verdello, Verjadiego, Vijariego Negro... each one of them with its own particularity and style from the organoleptic point of view, very well defined in the chapter dedicated to the varieties.

The characteristics of all these grapes are highly conditioned by their origin in terms of soil, micro-climate, altitude, orientation, training system and, of course, the winemaker's interpretation under a concept of traditional, organic or biodynamic vitiviniculture. Thus, we can find single-varietal references or the most original combinations. Likewise, the aforementioned diversity, characteristic of Canary Island vitiviniculture, means that these varieties are produced differently on each island and with equally different results, or that they do not appear in other enclaves. To this must be added the characteristics of the Canary Islands wine sector itself, made up of almost three hundred wineries, which in itself amplifies the characteristic diversification we have described. Reducing Canary Wine to a classic categorisation is highly complicated, as almost every production involves a unique process that depends on the many factors already mentioned: varieties, climate, orography, training system, area and island where the vines are grown, etc.

In this sense, the influence of the **trade winds** means that the climatic conditions on the northern slopes of the islands of greater relief are completely different from those on the southern slopes and, in turn, from those on the islands of lesser relief. This contribution of freshness and humidity from the trade winds is perfectly traceable in the characteristics of the wines, which is why **orientation** is a determining factor in the cultivation of vines in the Canary Islands. To this we must add the **temperature**, which generally does not exceed 25 °C, which means that the ripening cycles of the grapes are long and interesting for a good quality harvest. The **microclimatic** phenomenon thus acquires a transcendental relevance in the Archipelago and its winegrowers know it. Harvests can start at the beginning of July and, in many cases, finish in the first week of November in the higher and cooler areas of the northern slopes, which is unusual compared to other regions of the world.

Another aspect to take into account is the **altitude**, as we will find vineyards in a range that goes from sea level to 1700 metres, an altitude that makes our **vineyards the highest in Europe**. This also has an enormous influence, as the same grape variety changes radically in register depending on the altitude at which it is planted. The volcanic soils are also involved in the growing and winemaking process. For example, the **minerality** of the soil must be taken into account. Eruptions, magma, lava or *picón* undoubtedly add a unique character to our vinifications. Depth and identity are even more accentuated by the fact that these are **free-standing vineyards**, with no rootstock, still unaffected by the devastating phylloxera plague, which is unknown in the archipelago. **Salinity** is another main component in winemaking. It provides a refreshing sensation, with a complex depth that gives the wines a lot of flavour and an elegant persistence in the taste phase.

As for the types produced in the Canary Islands, there are red, white and rosé wines. Also sweet wines, such as

liqueur wines and wines made from overripe grapes, as well as sparkling wines, which are becoming more and more widespread. Some of these products take on a unique character, as they are produced in specific environments or under specific conditions. An example of this can be found in the northern sub-zone of the island of La Palma, where the so-called “Tea wines” are produced for those white, rosé or red wines that have been aged in wooden casks made from the heart of the *Pinus canariensis*, which gives them their own traditional organoleptic characteristics.



Red wines



Volcanic character

The island's reds stand out for their volcanic character and for the imprint of their varieties, which allows us to vinify very different styles. On the one hand, we can distinguish the young and carbonic maceration wines, which remind us of redcurrants, blackberries and blueberries. On the other hand, we have the reds aged in barrels, *crianzas*, *reservas* and *grandes reservas*, wines that seek maturity, and which invite us to enjoy aromas of red fruit preserves and spicy notes. On the palate, they are fresh, with the ideal acidity and structure for ageing wines and very agile for those made to be enjoyed in their youth.

White wines



Aromatic elegance

Canary Islands white wines are characterised by their freshness, aromatic elegance and good balance of flavour. Depending on their varietal composition, the aromas can be very diverse: camomile, dry grass, tropical and stone fruits, citrus or white flowers. On the palate, they are silky, with a certain salinity and a slight bitterness, accompanied by good acidity, volume and a smooth and persistent finish.

With all their variants in terms of residual sugar, we find dry, semi-dry, semi-sweet and sweet wines, including a version of our own that ranges between the second and third ones, which we call *afrutados* (fruity) in local jargon. Also noteworthy are those fermented or aged in barrels, casks or foudres; those macerated with skins and those aged in clay, concrete or demijohns.

Rosé wines



Wild aromas and spicy hints

Rosés in the Fortunate Islands can come in a wide range of shades, ranging from a very soft pale pink to very bright raspberry hues. The aromas suggest wild berries, floral notes and some spicy remembrances. The taste texture is usually elegant, with a well-integrated acidity and a very pleasant finish. Just like the whites, we find dry, semi-dry, semi-sweet, sweet and even barrel-fermented wines.

Sparkling wines



Fine, well-integrated bubbles

We can also find white and rosé sparkling wines. The origin of the grapes determines the character of each of the vinifications. Fresh, floral and fruity aromas of apple, pear, lemon, strawberry and raspberry, jasmine, peach, melon, almond blossom and mint mingle with notes of breads, pastries and brioches from its ageing in contact with yeasts. In the taste phase they show good effervescence, with a fine and very well-integrated bubble. In the retronasal phase, aromas of dried fruits appear; almonds, walnuts, hazelnuts...

Among the different production methods, we have the quality sparkling wines, made by the traditional method, those that follow the ancestral method and the sparkling wines that are carbonated.

Sweet wines



Aromatic sweetness

In the case of sweet wines, there are two main categories: liqueur wines and wines made from overripe grapes.

The first ones are fortified with wine alcohol, which stops their natural fermentation, preserves the sweetness of the grapes and guarantees their eternal life. The whites, with yellow tones and golden reflections, emit complex and exotic aromas, which allow us to perceive ripe stewed fruit, quince, orange peel, wood and toast. The palate is full-bodied, unctuous and persistent. As for the reds, the visual phase is presented with dark garnet notes, of great intensity and aromas of prunes, red fruit jams and great structure in the taste phase.

Wines made from overripe grapes are characterised by the fact that the grapes are left to ripen on the vine until they begin to raisin, which increases the presence of sugars and the alcohol content of the final product. In the case of white varieties, the result is amber, noble and extremely aromatic wines. The most historic and prestigious variety is the Malvasía Aromática, with notes of honey, dried apricots, citrus and an unequalled magic in the mouth, maintaining a very precise balance between sweetness and acidity.

Types of Canary Wine

Red



- Young
- Carbonic maceration
- *Crianzas*
- *Reservas*
- *Grandes reservas*
- Fermented and/or aged in barrels
- Matured in clay, concrete or demijohns



White



- Dry
- Semi-dry (fruity)
- Semi-sweet (fruity)
- Macerated with skins
- Fermented and/or aged in barrels
- Matured in clay, concrete or demijohns



Sweet



- Liqueur sweets
- Overripe grape sweets



Sparkling



- Aerated semi-sparkling
- Ancestral method
- Quality sparkling wine (traditional method)



Rosé



- Dry
- Semi-dry
- Semi-sweet



How to identify a Canary Wine

The Islas Canarias Protected Designation of Origin has sought to highlight the uniqueness of the archipelago and, in order to add value to each of the islands, the peculiarities of their regions and the expression of their most specific terroir, four main classifications can be found in the new specifications drawn up: *Vino de Parcela* (Parcel Wine), *Vino de Municipio* (Local Wine), *Vino de Isla* (Island Wine) and *Vino de Region* (Regional Wine).

PW - Parcel Wine

Wine made with grapes from plots located in a rural area or site with soil and microclimate characteristics that differentiate it from its surroundings.

LW - Local Wine

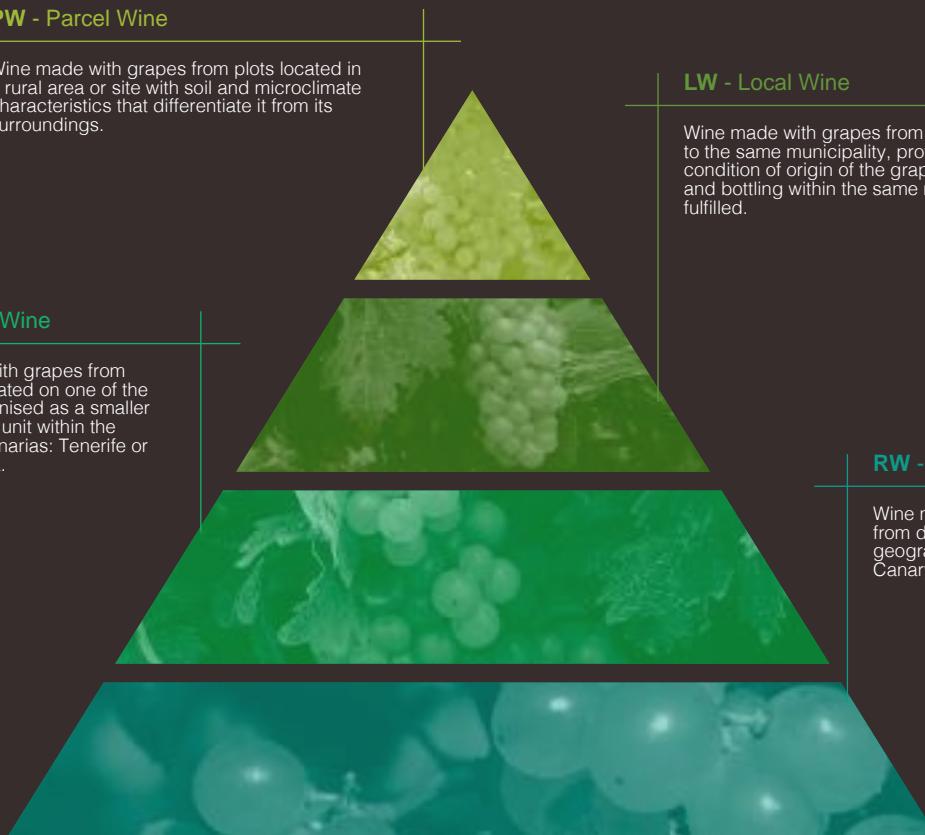
Wine made with grapes from plots belonging to the same municipality, provided that the condition of origin of the grapes, production and bottling within the same municipality is fulfilled.

IW - Island Wine

Wine made with grapes from vineyards located on one of the islands recognised as a smaller geographical unit within the PDO Islas Canarias: Tenerife or Fuerteventura.

RW - Regional Wine

Wine made with grapes from different plots in the geographical region of the Canary Islands.





Fixed back labels (non-editable format) Regional generics and Island Wine



Variable back labels Local Wine and Parcel Wine







6.0

The current situation of Canary Islands vineyards and wines

Miguel Febles Ramírez

Mr Febles is the administrator and technical director of GEODOS, Planificación y Servicios S.L.U., a consultancy firm dedicated to territorial and environmental analysis in the Canary Islands. He is also a partner at BIDUEÑO, a business initiative dedicated to the design of enogastronomic experiences and training on Canary Wine.



Vine is one of the most important crops in the Canary Islands, with almost seven thousand hectares planted, which produce more than ten million litres of wine every year on seven of the eight islands that make up the Canary Islands archipelago.

Extent of cultivation by islands

The total cultivated area is approximately 49,000 hectares, which represents 6.8% of the total area of the archipelago. Within this area, vineyards occupy 6,757 hectares, representing 14% of the regional area devoted to agriculture. As a monoculture, it is second only to bananas, which account for 8,924 hectares, 18% of the cultivated area.

Important to note is the **wide altitudinal variation of this crop**: it can be found from a height of 5 metres above sea level, in plots of La Gomera such as Agulo, Alajeró or Valle Gran Rey, to 1,689 metres above sea level in a plot of Granadilla de Abona (Tenerife), a mere 5 linear kilometres from the edge of the caldera of Las Cañadas del Teide.

These regional data already tell us about one of the most important crops for the Canary Islands at present. If we

analyse this reality by islands, we find some interesting differences between them. The first thing to know is that vines are grown on all the islands of the archipelago except La Graciosa. Tenerife, with 3,193 hectares, has the largest number of vineyards in operation, representing 47.3% of the total area of the archipelago. It is followed by Lanzarote with 2,055 hectares (30% of the regional surface area). **Tenerife and Lanzarote thus cover 77% of the area under vine in the Canary Islands.**

The remaining 23% is divided as follows: La Palma has 931 hectares under vine (14%), followed by Gran Canaria with 208 hectares (3.1%), El Hierro with 203 hectares (3%), La Gomera with 140 hectares (2.1%) and, lastly, Fuerteventura has joined in recent years, with an area of 26 hectares of vines, representing only 0.4% of the vineyard area of the archipelago.



El Hierro

Of the 203 hectares of vineyards on El Hierro, 50% are in the municipality of Frontera, occupying the north-facing slopes of the Valle del Golfo, and the rest are equally distributed between the municipalities of Valverde (47.5 hectares) and El Pinar (51.5 hectares). 86% of the vineyard area is located between 200 and 400 metres above sea level.



La Gomera

Vines in La Gomera account for 21.4% of the cultivated area. Almost 90% is located in the north-northwest of the island. In Vallehermoso we find 81 hectares of the island's 140 hectares, which is almost 60% of the island's surface area. It is followed at some distance by Valle Gran Rey, with 26 hectares cultivated, and Agulo. In the rest of the municipalities, much less vines are cultivated.

Vine cultivation is evenly distributed in altitude, with the range from 900 metres to 1,200 metres above sea level standing out slightly above the rest, accounting for 45% of the crop area.

La Palma

On La Palma, one of the banana-growing islands, vines occupy 12% of the cultivated area. This is distributed between the altitude range between 300 and 600 metres, with 34% of the surface area, and between 1,100 and 1,400 metres, where 26% of the island's vineyards are located.

Cultivation is distributed between three geographical centres: in the north-northwest in the municipalities of Garafía (105 hectares) and Puntagorda (120 hectares); in the west there is an important concentration in the municipality of Tazacorte (143 hectares); and in the south-southeast we find a concentration between the south of the municipality of El Paso (130 hectares), Fuencaliente (158 hectares), with the area of Los Llanos Negros standing out, and Mazo, specifically in El Hoyo (135 hectares).

Tenerife

The island with the largest extension of vineyards, with 3,195 hectares. A large part of the cultivated area is distributed in the midlands (17.6%), between 100 and 800 metres above sea level. There is a second band of 12% between 1,100 and 1,400 metres. All of the island's municipalities have vineyards.

On the northern slope of the island there are 1,715 hectares, the most important municipalities being Tacoronte (281), La Orotava (275) and Santa Úrsula (253).

On the southern slopes, around 1,025 hectares are concentrated, mainly in the municipalities of Vilaflor (350), Güímar (162) and Granadilla de Abona (134). The metropolitan area (Santa Cruz de Tenerife, San Cristóbal de La Laguna, Tegueste and El Rosario) contributes 455 hectares to the island's surface area, with the municipalities of Tegueste (192) and La Laguna (154) standing out.

Gran Canaria

The 209 hectares of vineyards in Gran Canaria account for barely 1.9% of the area recognised as cultivated by the crop map. These hectares are mostly located in the territorial corridor of the municipalities of Las Palmas de Gran Canaria (26.5 hectares), Telde (20), Santa Brígida (45) and Vega de San Mateo (37.6). This corridor accounts for 62% of the island's surface area.

The rest of the municipalities have considerably smaller areas under vines than those mentioned above. Only the high midlands of San Bartolomé de Tirajana stand out, where 20 hectares are cultivated.

Sixty percent of the island's vineyards are located between 200 and 700 metres above sea level.

Lanzarote

Vineyards are the most important crop on the island, accounting for 29% of the island's cultivated area and concentrated in the La Geria-Masdache area, largely within the Protected Landscape of La Geria, at an altitude of between 200 and 400 metres above sea level. This area is mainly distributed among the 4 of the island's 7 municipalities: Yaiza (562 hectares), Tías (470), Tinajo (397) and San Bartolomé (312). Only Arrecife does not

have a significant extension of vineyards, with only 0.7 hectares under cultivation.

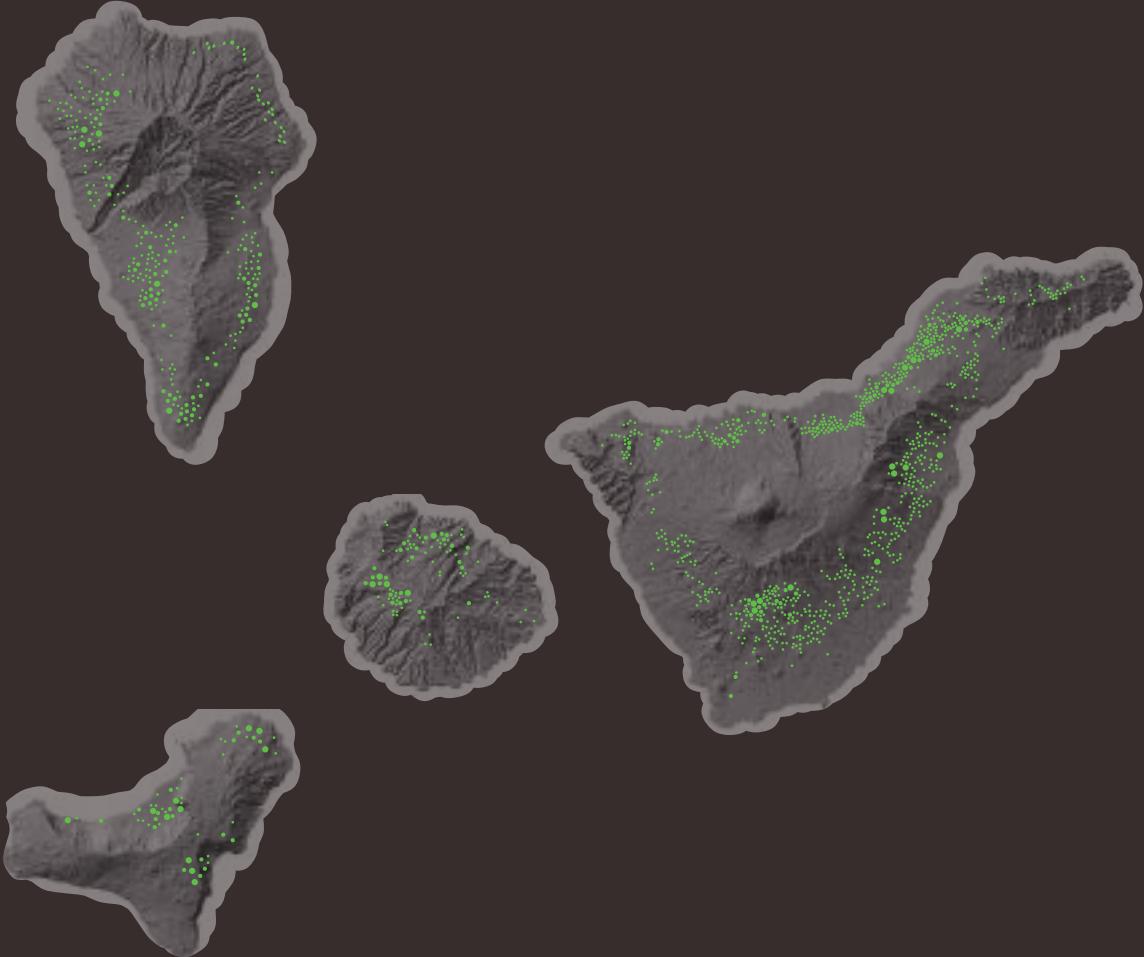
Fuerteventura

Vine cultivation on Fuerteventura accounts for only 2.4% of the cultivated area. Of the 26 hectares on the island, almost half (12.8 hectares) are located in Puerto del Rosario. The rest of the surface area is distributed throughout the other municipalities: La Oliva (4.4 hectares), Antigua (2.9), Betancuria (2.6), Pájara (2.2) and Tuineje with only one hectare.

Seventy-eight per cent of this vineyard crop is located between 100 and 300 metres above sea level.



Extension of vine cultivation in the Canary Islands





 Vineyards

Source: Department of Agriculture, Livestock and Fisheries. Government of the Canary Islands.

Wine production

According to data from the Instituto Canario de Calidad Agroalimentaria (Canary Islands Institute of Agro-Food Quality), which in turn compiles information from the 11 Regulatory Councils of Protected Designations of Origin of Wine in the Canary Islands and the Agricultural Extension Agencies, the average production obtained in the period from 2016 to 2020 is 7,467,081 litres of wine, of which 3,974,644 litres are white wine and 3,492,437 are red wine. The following table shows the data broken down by island.

Tenerife is practically the sole producer of red wine, while white wine also stands out on this island (45.2%), followed by Lanzarote (38.1%). White wine production is predominant on all the islands, except for Tenerife and Gran Canaria, where more red wine is produced than white. On La Palma, red and white wine production is balanced.

Of this declared production, approximately 82% is marketed under the Protected Designations of Origin, compared to 18% of the litres marketed without them. This production is processed in a total of 319 wineries, of which 242 are bottlers.

With regard to the set of data analysed, it is necessary to specify that they refer exclusively to the declared data and that they do not take into account household consumption. If we look at the data on hectares dedicated to vine cultivation from the SIGPAC1, which place the Canary Islands at around 6,800 hectares, the estimated production could be 43% higher than that currently declared. In this case, if the official data corresponding to the declarations speak of 9,266,563 kg, with this criterion explained, the real figure could be around 13,620,000 kg, or 10,261,000 litres at 75% yield.

Island	Red			White			TOTAL
	Litres	% of total reds	% of Island	Litres	% of total whites	% of Island	
El Hierro	41,758.1	1.2	32.6	86,334.8	2.2	66.7	128,092.8
La Gomera	19,265.2	0.6	23.4	63,112.6	1.6	69.9	82,377.9
La Palma	312,382.7	8.9	47.1	351,423.2	8.8	49.5	6,663,805.8
Tenerife	2,559,502.8	73.3	58.8	1,794,885.2	45.2	39.3	4,354,338.1
Gran Canaria	201,193.1	5.8	55.3	162,797.4	4.1	42.2	363,990.5
Lanzarote	350,335.5	10.3	19.1	1,516,090.8	38.1	84.2	1,874,426.4
TOTAL	3,492,437.4	100.00	46.8	3,974,644	100.00	48.7	7,467,081.4
<i>No data for Fuerteventura</i>							

Table 1. Average production per island. Period 2016-2020. Source: Instituto Canario de Calidad Agroalimentaria. Years: 2016, 2017, 2018, 2019 and 2020.

1 Geographical Information System of agricultural plots of the Government of the Canary Islands, which is updated through information on subsidies and, in the case of the Canary Islands, through field campaigns of the Canary Islands Crop Map.







7.0

Cultivation techniques and wine heritage

By Juan Enrique De Luis Bravo

As an oenologist, he has been teaching oenology, vitiviniculture and sensory analysis for more than 20 years. Promoter of the Valle de La Orotava Designation of Origin. Partner of BIDUEÑO for the design of enogastronomic experiences. Member of the Tenerife oil tasting panel.



The diversity and originality of Canary Wine is reflected in all aspects of its cultivation and production. Training systems, harvesting, vintage, types of wine... A variability derived from the specificities of each region and island, but also the result of the ingenuity and creativity of the winegrowers over more than five centuries.

Cultivation techniques and training systems

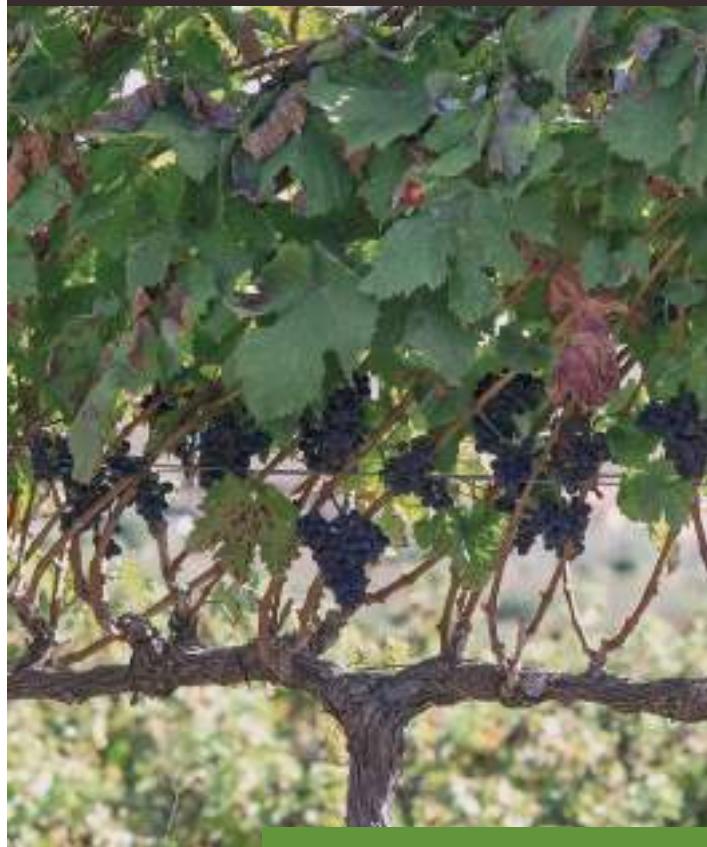
The Canary Islands can be considered one of the world's wine-growing regions with the greatest wealth of cultivation and vineyard training systems. From the holes of La Geria, on the island of Lanzarote, to the braided cord (*cordón trenzado*) of the Valle de La Orotava, there is a wide range throughout the archipelago.

To understand this wealth, we must go back to the time of the conquest of the Canary Islands and the establishment of the first settlers and crops. The conquistadors, who came from wine-growing areas, also brought their vine-growing techniques with them. Since then, this crop has always been conditioned, or rather adapted, to the climate and orography of each specific area. Hence, we can see the difference between the high vineyards of the Ycoden Daute Isora region or the gobelet vineyards of the Altos de Vilaflor.

This is also very evident on the plots of La Gomera, where "heroic vitiviniculture" is developed, as in Gran Canaria, or on the terraces of the island of La Palma. These were solutions adapted to the sharp orography of these islands.

This set of variables: climate, orography, soil, together with the cultivation techniques of the new inhabitants of the islands, as well as the particularities of each one of them, has made the development of vitiviniculture unique, which makes us an archipelago rich and peculiar in terms of winegrowing systems. Thus, each of the islands and the different regions have developed their own systems for establishing vineyards.

The vineyard training system can be defined as the set of techniques aimed at the vegetative development of the vine in accordance with its environment: climate, soil, variety, planting frame, tutors or support systems and pruning.





Tenerife

Tenerife is the island of the archipelago with the largest surface area devoted to vine cultivation and also the one with the largest number of wine-growing regions, with six designations of origin, five local and one regional, with Tenerife recognised as a sub-region. It is also the island with the highest number of vineyard management systems and some of them are truly unique. Vines are always on ungrafted rootstock. The vast majority are old or very old vines, centenary, adapted to the orography and climate of the area, usually small plots with little mechanisation.

Region of Ycoden-Daute-Isora

In the north-western region of the island, Ycoden-Daute-Isora, where humidity is high, traditional vineyards were established on the edges of the plots in order to use the central area for other crops, such as potatoes or cereals. These vines have a certain inclination in order to obtain a good light incidence and good aeration. The aim is to avoid mildew and powdery mildew, as well as seeking good sunlight to achieve optimum ripening. This system is known as the ***parral alto* (high arbours) of Icod, which has its origins in the Portuguese presence in the region.**

The structure of the vineyard is based on poles, either of heather, holly or beech. They are sometimes made from reeds and are called *latas*. The measurements, which vary, can be put at an average of four metres long by two metres wide. However, this high trellis system is now in decline. The new or reconverted plantations use more modern systems such as espalier and low trellising, which are more in line with current production. In the valley of Santiago del Teide, at an altitude of 1,000 metres above sea level, the grapes are grown in gobelet vines, which is characteristic of this area.

Region of Tacoronte-Acentejo

In this other region of the island, the traditional system is known as ***rastras***. The vines are planted in a row, forming what are known as *marjas*, and create a horizontal vineyard parallel to the ground and raised about fifty centimetres above it. The work of raising the vineyard is usually carried out in July and consists of placing small forks (wooden sticks, heather, *faya*, etc.) with a hook at one end in the shape of a “v”, where the trunk and the arms of the vine are attached. After the harvest, the vineyard is dismantled and the forks are placed in rectangular piles, scattered around the plot. As we go up in altitude in the region, the vineyard also rises, reaching almost a metre in height. These higher vineyards can also be seen in the area of La Victoria and Santa Úrsula.

Region of Abona

This region, located in the south of the island of Tenerife, also has its own peculiar system for establishing vineyards, although it is probably the least striking: ***gobelet-trained vitiviniculture, which has its origins in the Castilian presence after the conquest.*** What is happening in this area? On the one hand, altitude. We are above 1,200 metres above sea level and some plots are even above 1,600 metres. On the other hand, the lack of water and the low rainfall mean that the vegetative development of the vines is less vigorous than in the northern regions, reducing the humidity around the vine and the possibility of diseases caused by mildew and powdery mildew. Thus, this training system is possible and feasible, with almost no need for manual labour.

Region of Valle de Güímar

In this other region, also on the southern slopes of the island, the training system has a certain similarity with that of Ycoden-Daute-Isora. This is because the plantation



was established on the edges of the plot, surrounding it. On the other hand, the main difference is that in the Valle de Güímar it is much lower. This is logical, since on the southern slope both rainfall and plant vigour are lower. The orography is also important in this region, with vineyards at very low altitudes and others above 1,000 metres, in the areas known as Los Pelados and Las Dehesas. Furthermore, as in other areas, the trellis system has been introduced and is gradually gaining popularity.

Region of the Valle de La Orotava

In this region in the north of the island you will find a vineyard training system that is unique in the world. It is called **cordón trenzado (braided cord) or cordón**

tradicional (traditional cord). The vines are arranged in rows, called *machos*, and generally grow in a southerly direction following the upward slope of the land. These vines form long cords with the shoots intertwined with each other. The old wood arms together with the vine shoots of the last few years make up this long trunk in the form of a braided cord. The vines are planted approximately 0.9 metres apart and the length of the cordon can reach up to about twenty metres, although the average is about eight.

These cords can be single or double, v-shaped, with one branch facing north and the other south, starting from the same trunk. The vines are raised from the ground by 0.7 m with stakes called forks, formerly made of wood (heather, holly, etc.) and since the 1980s with iron rods. These forks are spaced about 1.25 metres apart. This kind of cord is tied (*amarrado*, in local jargon) with vegetable fibres. The formed cord is then completely straight, aligned and taut. The agricultural landscape they form is truly unique and spectacular, especially in winter when the absence of leaves allows us to see the intertwined vine shoots and branches.

For centuries, this form of cultivation has allowed the farmer to put the soil to a dual use. After the harvest, the cords were dismantled by turning them 90 degrees so that the ground was free. Potatoes were then sown, harvested in February and the vineyard was re-established on these plots. At present, this practice is testimonial. The origin of this peculiar system is not clear, and there are several theories about it. One of them tells us that, in the past, the variety cultivated was the Malvasía Aromática, with very long pruning. Given that the Valle de La Orotava has very fertile soils, the vigour of the plant was excessive and the way the winegrower found to control it was to tie the shoots together and form the braided cord that has survived to the present day.



The Valle de La Orotava region is currently promoting this vineyard training system as an agricultural heritage to be preserved, while at the same time adding value to the region's wines.

Lanzarote

Lanzarote boasts a spectacular vineyard for its visual and scenic splendour, as well as a unique form of cultivation. We are referring to the **vineyards of La Geria**. In this area, due to the layer of *lapilli* or *picón*, holes are dug to find fertile soil and plant the vines there. In some cases, this

layer of *picón* can be up to three metres thick. Because of this, the planting frame is 4 metres and the planting density is low. The vines that develop inside this hole have no trellising system, so the plant grows freely. At the upper edge of this pit, stone walls are built to protect the crop from the wind.

In other parts of the island, such as Tinajo and Haría, the thickness of the *picón* is much less than in La Geria and the vines are planted in trenches around the perimeter of the plot, in other cases covering its entire surface.

Fuerteventura

Although the island of Fuerteventura was one of the first to be conquered and therefore one of the first to be planted with vines, it is currently the island with the least cultivated area and the **last to acquire a designation of origin**. These few plantations nowadays opt for a training system that is in keeping with the times: the espalier.



Traditionally, however, **ditches** were used for vine cultivation. Although this is not a vineyard training system, it is a cultivation method. It consists of making large ditches from the base of the volcano to the sea, allowing as much rainwater as possible to be collected and channelled, slowly irrigating so that the water filters into the soil of the different plots. The water retained in the soil together with the minerals carried away make cultivation possible on such a dry island.

Gran Canaria

Although Gran Canaria, like the rest of the islands, has a long wine-growing tradition, it has not developed a vineyard management system that could be defined as its own. In contrast, we do have another example of heroic vitiviniculture. Some of it is grown on small plots on steep slopes or terraces, often at altitudes of over 1,000 masl.

Strains without a defined shape adapt to the climate and soil to survive, and are known as **rastras**. On the northern side of the island, we can find some gobelet-trained vineyards, but only to a small extent. Anecdotally, some small winegrowers are now also planting in high gobelet.

Over the last decade, vitiviniculture in Gran Canaria has undergone a significant expansion. The training used in these new plantations is the espalier system, which covers up to ninety percent of the Gran Canaria vineyards.

La Gomera

Vitiviniculture on the island of La Gomera is a very difficult task due to its rugged terrain. This has led the farmers to create small stone-walled terraces on steep slopes for their crops. The vines generally grow “creeping” on the

ground, with forks being used to “lift” those shoots that have clusters, as on the island of El Hierro.

In the Hermigua area we can find some of the traditional vineyards of the area. They are somewhat higher than those of Icod, generally located on the edges of the plot adjacent to the hillside, the so-called *arruños*. There are also some scattered plots with gobelet vines. The trellis, as in the rest of the islands, has been installed on those plots of land where it is possible due to their orographic conditions.

La Palma

The island of La Palma has its own peculiarities in terms of vineyard management systems. We must never forget that it is the most steeply sloping island on the planet, which obviously has a clear influence on vitiviniculture. Over the last quarter of a century, in the northern districts of Tijarafe and Garafía, winegrowers have devised a hybrid system (espalier and lyre-trained). This system is mobile, dismantled in winter and reassembled when the vines are in full vegetation. It is widely used for Albillo Criollo plantations.

In the north, in places such as Barlovento and San Andrés y Sauces, we find tall vineyards similar to those of Icod, in Tenerife. Here, the higher rainfall and humidity mean that the vine growers raise the vines to avoid possible diseases. These vines, located on the perimeter of the plot, rise approximately 1.50 metres above the ground. In the southern areas, such as Fuencaliente, El Paso or Los Llanos, the vineyards are creeping on the steep slopes covered with *picón*. In the areas where the wind blows the strongest, small stone walls are usually built to protect the vines. There are also plots with more common training systems such as gobelet and espalier.

El Hierro

In El Hierro there is also no vineyard management system that can be described as representative. The vines are raised with wooden forks, which are placed right on the vine shoot that has grapes, the *alzada*. After harvesting, the forks are removed to prevent them from rotting.

Another system of high ethnographic value is the so-called ***sancaño***. It consists of burying a long shoot, leaving a hole in the ground every two or three knots so that the bud can sprout and come to the surface, generating a new plant. In this way, 5 or 6 new vines can be produced





in one year from a single shoot. Also, as on other islands, *margullido* is used, which consists of burying a complete vine, leaving shoots outside the soil where the new vine is to be obtained. Here this technique is also called *echar parras*.

Grape harvest

Canary Island vitiviniculture also has a series of peculiarities, seven of which can be identified. First of all, given our latitude, the Canary Islands is the area in the northern hemisphere where the **first grape harvest** takes place, a milestone that happens year after year.

The second aspect is the **time lag**, with several months elapsing from the first to the last grape harvest. Although it may seem unheard of, the first cuts are made at the end of July at the lowest altitudes or on the westernmost islands. By contrast, in the highest or northernmost areas, the grape harvest begins in November. There are probably few wine-growing areas where the grape harvesting period is so long.

The third characteristic is the **manual harvest**. While it may seem trivial, as we have internalised it here, in other wine-growing areas this is not the case, as the harvests are mechanised and when done by hand, their value is enhanced.

A fourth aspect that influences the time of harvesting is the **great variety richness** of the Canary Islands. As we have a range of varieties with different ripening cycles, long and short, and adapted to different microclimates, our harvests are spaced out over time. This is not the case in other regions that have half a dozen varieties and their grape harvest is finished in a short period of time.

The **type of wine** to be produced would be a fifth value to bear in mind. Leaving the grapes to raisin in the vineyard to make a sweet Malvasía is not the same as harvesting with a relatively low alcohol content to make a sparkling wine. This also means that the harvest season is extended.

The **double grape selection** carried out by the winegrower would be the sixth aspect of the harvest in the Canary Islands. When the grapes are cut, the harvester takes the bunch in his hands, turns it upside down and cleans it, that is to say, he removes all the bad parts, to finally place it in the basket. The second selection is made in the cellar. It is carried out on a conveyor belt type table and the winery technicians select the types of grapes according to the wine to be made and their degree of maturity and healthiness.

Finally, the grape harvest in the Canary Islands is a **gathering of family and friends** where everyone participates and collaborates in the different tasks, thus creating a collective awareness of vine cultivation.

Tangible and intangible heritage associated with wine

Centuries of winemaking tradition have given us an extensive, rich and varied tangible and intangible heritage. As far as the former is concerned, the **wine presses** (*lagares*) are probably one of its most iconic elements. The best known is the classic wine press, with a beam and spindle, made from Tea wood, the heart of Canary Island pine, which many wineries and other facilities preserve as an ethnographic luxury. In Taganana (Anaga, Tenerife) we find *lagares* sculpted in the rocks, an interesting local feature. More recent are the **prensas**, more modern wine presses built during the 19th and 20th centuries with lime and concrete structures. They consisted of a main tank

where the pomace was pressed and other auxiliary tanks to macerate the different qualities of grapes or to collect the must obtained from the press, called *lagareta*. Part of our winemaking heritage is preserved in the names of the pieces used in these wine presses: *mollares*, *marranos*, *jueces*, *vica*, *concha*... without forgetting the different winemaking techniques, each with their own specificities.

In the landscape of the Canary Islands, we will find numerous estates and manor houses that were used for the production of grapes and wine. A significant number of them are located near the ports where Malvasías were exported in the golden age of Canary Islands trade, such as the port of Garachico or the port of La Orotava (now Puerto de la Cruz), and even Las Bodegas beach in Taganana, where wine left the island in the 19th century. There are other important examples in places such as the Casa de Carta in Valle Guerra, which today is the Museum of Anthropology of Tenerife, or the Casa de la Baranda, better known as Casa del Vino, located in El Sauzal.

If we look at the intangible heritage, the repertoire is much more extensive and diverse. By definition, this is a living heritage, which is why its value lies in the fact it has managed to be safeguarded to this day by the people linked to the wine world. In terms of lexicon, it is interesting to highlight some specific words associated with cultivation and traditional techniques: *margullido*, *sancaño*, *gavias*, *amarrado* or *echar pa` tras la viña*. Another noteworthy element is the units of measurement used in the past: *pipa* (480 litres) and its submultiples, *acuenta* (40 litres), *barril de a 7* (33 litres) and *barril de a 5* (22 litres) barrels.

We have already mentioned a key aspect of this intangible heritage, namely the knowledge linked to training systems, which has given us highly original ways of handling vines, adapted to the needs and fruit of the creativity of the farmers. In this respect, mention should also be made of the different cultivation systems and traditions that

have had to be developed to adapt to the difficult island orography and the use of water: terraces, *gavias*, *nateros* (crop land), etc., which on some islands bear witness to a truly heroic form of agriculture.

Celebrations associated with wine are another essential component. Every year, when autumn comes, the wineries open their doors around San Andrés day, when the new wines are unveiled. In some areas of the Canary Islands this celebration is accompanied by their own traditions, such as the Bajada de las Tablas (descent on planks) in Icod de los Vinos or the Correr de los Cacharros (dragging of pots and metal objects) in the Valle de La Orotava. Events that reappear to recall the past of the export of our wines and the slime of barrels and *pipas* around the ports through which they were shipped. On other islands, such as El Hierro and La Palma, the festivity and the unveiling of the new wine takes place on the feast day of San Martín, the eleventh of November.

All this heritage linked to vitiviculture in the Canary Islands, together with the rich and exciting history in which it has developed, makes our territory tremendously attractive for any wine lover.







Epilogue

The cultural landscape of the vineyard in the Canary Islands. A heritage to be protected. An opportunity for sustainable tourism.

Josué Ramos Martín

Graduate in History, university specialist in the management of intangible cultural heritage. He works as a cultural heritage consultant for Cultania, of which he is co-director. Member of ICOMOS-Spain.



After many generations, the Canary Islands are fortunate to have inherited an extraordinary wine-growing heritage. A legacy that unfolds over unique cultural landscapes that offer opportunities for sustainable environmental, economic and social development.

The landscape heritage status

The interesting chapters that make up this publication have perfectly examined the components that make the Canary Islands' vitiviniculture one of the most unique and extraordinary on the planet. Specific environmental conditions, such as its geological and volcanic origin, its specific climatic features, together with the influence of the ocean currents and the trade winds, are mixed with the vicissitudes of history, when more than five centuries ago, European settlers arrived on the islands with grape vines, thus beginning a wine-growing adventure in the middle of the Atlantic Ocean.

In recent years, our society has become much more sensitive to the integrity of our landscapes, something which has not been an exception in the Canary Islands, even more so if we take into account the insular and fragmented nature of our territory. Population growth, tourist pressure, urban management or the influence of climate change are, among many others, some of the factors that seriously threaten the different types of landscapes we have in the archipelago.

The European Commission's European Landscape Convention (Florence, 2000) defines landscapes as "an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity". The text also highlights the multiple dimensions they acquire: ecological, environmental, social, historical and identity-related, as well as their importance in the sustainable development of human communities.

UNESCO has also shown its concern, especially since 1992, when it included cultural landscapes in the World Heritage Convention. The categories of cultural, natural and mixed landscape are part of the properties inscription process on the World Heritage List and many have been added since its creation.

The brief but classic definition holds that cultural landscapes are the "combined works of nature and of man" and "they are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal" (UNESCO, 2019). Landscapes have thus been the subject of a very important process of heritage status and protection in recent decades. In the Canary Islands, the 2019 Cultural Heritage Law of the Canary Islands recognises cultural landscapes as part of the Canary Islands' heritage, thus including them in its protection regime.

Cultural landscapes, vineyards and wine culture

Following the aforementioned definition of cultural landscape, we can thus speak of a "wine-growing cultural landscape", a concept in which the natural conditions of the territory and the environment converge and are transformed by human communities, in this case, for the cultivation of vines and wine production, generating a specific culture around them. The wine-growing landscapes are classified by UNESCO as "organically evolved landscapes" and, within them, as "living landscapes". ICOMOS, moreover, in its 2006 thematic study defines them according to six principles:

- A. Vineyards are the product of human action.
- B. They are located in territories with a prolonged human presence, taking advantage of natural conditions such as relief, soil or (micro)climates.
- C. They illustrate considerable inventiveness with the creation of terraces and other training and drainage systems.
- D. They show the human response to disaster management (such as phylloxera) and long-term research

for the best production results.

E. They are linked to material and immaterial elements associated, in turn, with rituals and cultural traditions.

F. Wine production is subject to globalisation and the development of the global market economy, as well as consumer demands.

The global sensitivity and interest in this type of landscape has been growing exponentially, with a number of different factors coming together in this case. On the one hand, the inclusion of various wine-growing landscapes on the World Heritage List. Some of them are exclusively dedicated to wine, while others are complemented by outstanding architectural, natural, ethnographic or other elements. This prestigious list includes wine regions such as the Upper Rhine Valley (Germany), the Loire Valley, the jurisdiction of Saint-Émilion, the vineyards of Burgundy or the vineyards, houses and cellars of Champagne (France), the Upper Douro Valley (Portugal), the Tokaj region (Hungary) or, closer to us, the island of Pico, in the archipelago of the Azores (Portugal).

On the other hand, as a result of this new way of understanding wine landscapes, networks, projects, organisations and international cooperation and management frameworks have emerged, which have made progress in the creation of a public-private governance model. Examples include the international ViTOUR network, the international cultural route *Iter Vitis* of the Council of Europe, the Spanish ACEVIN network, the Spanish Wine Tourism Association, the recently created World Organisation of Wine Tourism, as well as interesting reference documents for the management of these landscapes such as *European Guidelines for Wine Cultural Landscape Preservation and Enhancement* (2012, INTERREG) or the *Atlas del Cultivo tradicional del viñedo y de sus paisajes singulares (Atlas of Traditional Vineyard Cultivation and its Unique Landscapes)* (2016, Ministry of Education, Culture and Sport) which, in turn, is part of

Protected wine-growing cultural landscapes are an obvious tourist attraction, which makes it necessary to implement development strategies that are inseparable from sustainability in all its aspects.

the Plan Nacional de Paisaje Cultural (National Cultural Landscape Plan) (2012, Ministry of Education, Culture and Sport). Mention should also be made of the GIAHS network (FAO's Globally Important Agricultural Heritage Systems), which includes wine-growing landscapes, such as the traditional vineyards of Soave (Italy).

A peripheral view of this whole panorama, which has been briefly summarised here, shows that the cultural wine-growing landscapes of the Canary Islands require a process of enhancement and protection on such a scale, as they are home to heritage values that stand out in a worldwide comparative framework. The Canary Islands thus shine with their own light because of extraordinary circumstances: the absence of phylloxera, with its ensuing conservation of varieties, techniques and vineyards, among the oldest in Europe and the Atlantic; adaptability to the environment through diverse cultivation systems, unique training systems, local varieties that are globally exclusive... The aforementioned ICOMOS thematic study highlighted the Canary Islands and, more specifically, La Geria in Lanzarote, as a "significant" example of a landscape devoted to the cultivation and production of wine, thus being an obvious candidate for inclusion in the prestigious UNESCO lists, a fact that is also highlighted

by other authors (Martínez Arraiz et al., 2019). In this sense, the Canary Islands' wine-growing landscapes have “Outstanding Universal Value”, a concept that underpins the dossiers that are submitted for inclusion on the prestigious World Heritage List, and which is also favourably related to two other key concepts: authenticity and integrity.

Along with this series of common components, throughout the pages of this publication, special emphasis has been placed on diversity as one of the words that best define Canarian vitiviniculture. **The Canary Islands do not therefore have a single wine-growing landscape, but rather a constellation of them**, each with its own characteristics, although, if we were to stick to the astronomical simile, they are part of the same galaxy that does not extend beyond the limits of the archipelago. In this sense, we must understand this wine-growing landscape as the sum of elements, components and values, both tangible and intangible. The landscape is also an expression of identity and, in this case, of Canarian identity, which is revealed in the practices developed for centuries to produce and enjoy wine. The landscape also speaks to us of inherited knowledge, family traditions, ways of working the land, land ownership, beliefs and festivities, and of the diverse ingenuities that are the result of centuries of relationships and historical processes that, on each island, have evolved independently but within a common framework.

But, above all, the cultural landscapes of Canary Wine, like the intangible heritage, are alive. These are not archaeological remains or fossils, but an environment that beats every day, nurtured by communities of people struggling to keep their crops thriving and their cellars full. This also implies a constant interaction with the environment, with protected areas of high rural value that nourish the vineyards, which makes it necessary to guarantee a sustainable balance, vital for our future.





Our wine culture: An opportunity for sustainable tourism

According to the European Wine Tourism Chart (2006), wine tourism is defined as “the development of all tourist and spare time activities, dedicated to the discovery and to the cultural and wine knowledge pleasure of the vine, the wine and its soil”. This interdependence between territory, tourism and wine culture is also highlighted by the Vademecum of European Wine Tourism (2006), which points out other values such as competitiveness and authenticity, which are very important in order to guarantee the satisfaction of the wine tourism experience.

This conceptualisation of wine tourism is also framed within the principles of sustainable development: environmental, economic and social. According to the World Tourism Organisation, sustainable tourism relies

on natural and cultural resources, committing to development that does not compromise the future of these resources, guaranteeing environmental quality, visitor satisfaction and benefits for the host societies. Likewise, wine tourism, and the wine sector in general, can make a positive contribution to meeting the objectives of the United Nations 2030 Agenda, as they are directly related to some of them, such as No. 8, *Decent work and economic growth*, No. 11, *Sustainable cities and communities* or No. 15, *Life on land*, among others.

States such as Spain are making a firm commitment to a strategy that positions it as the world’s leading wine tourism destination, as are other areas with similar potential, aware that vineyards and wine offer opportunities both for diversifying the traditional tourist offer and for local development.

Undoubtedly, one of the main challenges of these strategies is that they should be implemented alongside sustainability, especially given the fragility of the natural and rural environments where the wine-growing areas and the communities linked to them are located. In this context, **the Canary Islands are an ideal territory for the development of an enotourism project in line with the principles of sustainability**. Canary Island wine, as a differential and quality product in itself, together with the landscapes that bring it to life and the culture that gives it meaning, are thus very powerful attractions for a type of visitor interested in transcending the usual tourist circuits existing in the Canary Islands. Given the state of the sector in the aftermath of the Covid-19 pandemic, this could also be an opportunity to attract visitors who want to get to know our traditional culture and who are committed to responsible tourism.

The Canary Islands' wine tourism offer must also be integrated into a story that guides and adds value to the experience of enjoying our wine-growing landscapes. One of the main objectives of *About Canary Wine* has been, quite precisely, to contribute to the consolidation of a narrative that highlights our singularities, as well as the differences with other wine-producing territories in the world. Enjoying a glass of wine in the Canary Islands thus acquires an added value that lies in our landscapes, in the local varieties, in a unique history, in centuries-old traditions and in all the environmental, agricultural and cultural components that identify us. This Wine Culture -with capital letters- becomes the core of our offer, providing a differential value that has nothing to envy to that of other worldwide destinations such as Tuscany, Burgundy or Rioja Alavesa.

There are many experts who affirm how the wine culture of a territory can contribute decisively to its sustainable development through its environmental, economic and social aspects. It is therefore imperative to establish

a constant dialogue with the environment, with the landscape and with local communities, ensuring a balance at all levels on which collaborative networks are woven to help generate an ecosystem capable of achieving these objectives. In this sense, wine tourism must go beyond its epicentre - the winery and the vineyard - and relate directly to other agents and initiatives that can be undertaken in the rural environment: accommodation, restaurants, experiences, crafts, creative industries, etc.

Some agents, both public and private, many of them associated with the PDO *Islas Canarias*, have already taken important steps in this direction: visits to and musealisation of wineries, complementary gastronomic offers; product clubs, workshops, routes, tastings, samplings and other experiences; training, management of complementary products and services (accommodation, transport, signposting, accessibility, etc.). This has also been in step with a profound professionalisation of the sector, which has a greater number of qualified specialists in various fields such as agronomy, oenology, sommellerie, management and tourism promotion...

All in all, the Canary Islands have an extraordinary potential for the creation of a differential and attractive wine tourism offer based on an exceptional wine culture. This challenge is an opportunity for the archipelago to consolidate its commitment to sustainable tourism that is compatible with the prosperity of the sector, with the safeguarding of the territory and with the well-being of the local communities directly and indirectly linked to our wine-growing cultural landscapes.





Directory

Wineries belonging to the PDO Islas
Canarias

Bodegas Tajinaste

Bodegas Tajinaste S.L.L.

Island: Tenerife

Telephone: 922 308 720

Address: El Ratiño, 5, 38315, La Orotava,
Santa Cruz de Tenerife, Canary Islands

 www.bodegastajinaste.com

 bodega@tajinaste.net

 Bodegas Tajinaste

 @bodegas_tajinaste

Bodegas Tajinaste was created in 1977, although it originated much earlier with the acquisition of Finca El Ratiño by Domingo Farráis. The winery is working on a project that consists of caring for and improving our environment, preserving our traditional vitiviculture, rescuing abandoned plots of land for replanting and collaborating with around 100 winegrowers to enhance the value of our landscape with an environmentally friendly activity and with future generations in mind. We see wine as a vehicle for communicating our culture and our environment, highlighting our complex singularity on the world wine scene.

Bodegas Viñátigo

Bodegas Viñátigo C.B.

Island: Tenerife

Telephone: 922 828 768

Address: Travesía Juandana, s/n, 38440,
La Guancha, Santa Cruz de Tenerife, Canary Islands

 www.bodegasvinatigo.com

 vinatigo@vinatigo.com

 Bodegas Viñátigo

 @bodegasvinatigo

 Bodegas Viñátigo

Bodegas Viñátigo is committed to showing the true essence of the Canary Islands. From recovering indigenous grapes on the verge of extinction and carefully mapping our soil types, to ensuring integrity in the winemaking process, our goal remains the same. Proud to transmit the genuine character of the Canary Islands through our wines; a direct translation from our vineyards to your glass.

Bodega Viña Zanata

Viña La Guancha S.L.

Island: Tenerife

Telephone: 922 828 166

Address: Calle El Sol, 3, 38440, La Guancha,
Santa Cruz de Tenerife, Canary Islands

 zanata@zanata.net
 Bodega Viña Zanata

A third-generation family winery founded in 1893, it combines tradition, research and technology in the production of its wines. With a rich heritage, the bodega is based in an old house of La Guancha, in the northwest of Tenerife. Their wines, which are marketed under the Zanata brand, are made from single varietals (Zanata Marmajuelo, Zanata Tintilla...), as well as traditional whites and reds with a *coupage* of varieties.

Bodegas Arautava

Bodegas Arautava S.L.

Island: Tenerife

Telephone: 922 309 024

Address: Camino La Habanera, 286, 38315,
La Orotava, Santa Cruz de Tenerife, Canary Islands

 www.bodegasarautava.com
 info@bodegasarautava.com
 Arautava Wines
 @arautavawines

Bodegas Arautava is a third-generation family winery, whose vision focuses on working the vineyards solely by hand, using a unique cultivation system in the world, the *cordón trenzado* (braided cord). We have an exclusive commitment to native varieties, all of them properly planted on ungrafted rootstock on volcanic soils, which give a unique minerality to these wines from Tenerife. Winemaking is carried out with the minimum possible intervention. This enhances the varietal personality of grapes such as Listán Negro, Listán Blanco, Albillo Criollo and the historic Malvasía Aromática. Our extraordinarily diverse vineyards dominate the Valle de La Orotava next to the foothills of the Teide volcano. The trade winds give a distinctive Atlantic character to our wines.

Bodega Viña Engracia

C.B. Balja

Island: Tenerife

Telephone: 922 810 857

Address: Prol. Centinela, 53, 38430, Icod de los Vinos, Santa Cruz de Tenerife, Canary Islands



vinosengracia@hotmail.com



Bodega Viña Engracia



@vinos_engracia

A family winery located in Icod de los Vinos, in the northwest of the island of Tenerife, which began making wines in 1965 and has been doing so with a Designation of Origin since 1994.

Bodegas Monje

Bodegas Monje S.L.

Island: Tenerife

Telephone: 922 585 027

Address: Calle Cruz de Leandro, 36, 38360, El Sauzal, Santa Cruz de Tenerife, Canary Islands



www.bodegasmonje.com



monje@bodegasmonje.com



Bodegas Monje - el Páter



@bodegasmonje

Bodegas Monje is located in an exceptional enclave known as "La Hollera". It follows a long tradition of winemaking since 1750. Oak barrels and modern maceration systems coexist to give red, white and rosé wines a special character and flavour, which are perfectly adapted to the best gastronomy of the Canary Islands. This winery also hosts cultural, gastronomic and leisure initiatives that go beyond the boundaries of wine and bring it back to the social environment from which it historically comes, a true commitment to wine tourism.

Bodega El Lomo

Afecan S.A.

Island: Tenerife

Telephone: 922 54 52 54 / 617 80 44 99

Address: Ctra. El Lomo, 18, 38280, Tegueste,
Santa Cruz de Tenerife, Canary Islands



www.bodegaellomo.com



administracion@bodegaellomo.com



Bodega El Lomo



Bodega El Lomo

Founded more than 30 years ago, it is the fruit of the immense love of Mr. Félix Rodríguez for his land and Canarian vitiviculture. The winery is found in the middle of a 30,000 m vineyard, in the area known as El Lomo (Tegueste), a terroir blessed by its privileged location for vitiviculture and with a great wine-growing tradition. The facilities of Bodegas El Lomo are built in the Canarian architectural style and today are a reference in terms of equipment, characteristics and uniqueness, fully accessible for your visit. It has a main winemaking hall located under the central courtyard, where an innovative gravity system is used, with a capacity of approximately 250,000 litres; an area designed for bottling and ageing wines in barrels; a shop where you can buy the more than 10 references that are currently produced and more than 2,000 m2 for holding corporate and private events.

Bodegas El Sitio

Ranilla Trading S.L.

Island: Tenerife

Telephone: 922 373 491 / 626 993 772

Winery address: Barranco San Juan 47, 38356,
Tacoronte, Santa Cruz de Tenerife, Canary Islands

Office address: Retama, 6, Local 15, 38400 Puerto de
la Cruz, Santa Cruz de Tenerife, Canary Islands



www.bodegaselsitio.es



administracion@bodegaselsitio.com



pilarcomercial@bodegaselsitio.com



Bodegas El Sitio Canary Wines



@bodegaselsitio

Bodegas El Sitio began to take shape in 2012 with the winemaking project of producing wines that would highlight those native grape varieties with the greatest oenological potential. Strictly respecting the oenological potential of each variety, we vinify each one separately, harvesting at the right moment of ripeness, without using aggressive production methods or synthetic or genetically modified oenological adjuvants.

Bodega Cumbres de Abona

S.C. Cumbres de Abona

Island: Tenerife

Telephone: 922 768 604

Address: Soc. Coop. Cumbres de Camino del Viso,
s/n, 38580, Teguedite, Arico, Santa Cruz de Tenerife,
Canary Islands



www.cumbresdeabona.es



bodega@cumbresdeabona.es



Bodega Cumbres de Abona

The Sociedad Cooperativa Cumbres de Abona was founded in 1989, becoming one of the first wineries in the Abona region and one of the pioneers on the island of Tenerife. It is located in the municipality of Arico, where it has modern and spacious facilities for producing its wines and oils. Its vineyards are influenced by a dry Mediterranean climate in the coastal areas, cooled by the trade winds in the midlands and in the highlands, where the vines undergo very accentuated thermal changes resulting in unique characteristics.

Bodegas Ferrera

Bodega Ferrera S.L.

Island: Tenerife

Telephone: 687 828 726

Address: Calle Norte, 38550, Arafo, Santa Cruz
de Tenerife, Canary Islands



www.bodegasferrera.es



info@bodegasferrera.com



Bodegas Ferrera



@bodegasferrera

Bodegas Ferrera has a family winemaking tradition that dates back to the middle of the last century, when the Ferrera family acquired Finca Las Vigas, located in a unique enclave, 1,000 metres above sea level, in the middle of a large tongue of volcanic lava in the Valle de Güímar. In 2008 we bottled our first wine with designation of origin. Listán Blanco de Canarias, Malvasía Aromática, Albillo Criollo and Vijariego Blanco are our main white varieties. Malvasía Rosada, Moscatel Negro and Listán Negro are the mainstays of our rosé wines. As for reds, we work well with our native Vijariego Negro variety, as well as the well-known Tempranillo and Syrah. All our vitiviniculture is organic.

Mataznos 33

Natan Afonso Pacheco

Island: Tenerife

Telephone: 669 709 499

Address: Ctra. Palo Blanco, Camino La Ferruja, 12,
38413, Los Realejos, Santa Cruz de Tenerife,
Canary Islands

 mataznos33@gmail.com

Mataznos 33 is a young winery that has been able to develop a solid project of very high quality, managing to get some of its wines into the Peñín guide in a short period of time. The main varieties used for its production are Listán Blanco and Listán Negro.

Bodega Piedra Fluida

Bodegón Las Vistas Tamaide S.L.

Island: Tenerife

Telephone: 922 301 520

Address: Calle Bencomo, 58, 38390, Santa Úrsula,
Santa Cruz de Tenerife, Canary Islands

 www.piedrafluida.com

 info@piedrafluida.es

The history of Piedra Fluida begins with the 2018 harvest, when the winery - currently located in the municipality of La Orotava - is fitted out to process grapes from its own vineyards, which it has been acquiring since 2016 in Santa Úrsula. It currently has around 7 hectares of vineyards. In the upper area of La Corujera, the vines are grown on traditional dry-farmed vines; the pre-phylloxera vineyards are grown on ungrafted vines and are more than 60 years old. In the Tamaide area, vines are grown on trellises, on stone terraces, also dry-farmed. The average age of the vineyard is about 20 years old, although new plantings of white varieties have been made in recent years.

Bodega CONATVS

Pedro Antonio Martín Hernández

Island: Fuerteventura

Telephone: 618 023 975



www.conatvs.com



Bodega Conatvs

Conatvs is a small winery founded in 2016 in Fuerteventura, specifically in the town of Lajares, in the municipality of La Oliva, and is the only and first on the island with a PDO. A part of its vines, dating back over a hundred years, was collected from what was scattered around the island, leaving very few specimens; they are currently being studied to find out exactly which varieties they belong to. Another part was brought from the other islands. With this raw material, at Conatvs we create very special and high-quality wines. We currently have three wines on the market: CONATVS Tinto, CONATVS Airam Blanco and CONATVS Pink. In these five years of existence, we have already won two very important awards: silver Bacchus with CONATVS Tinto and gold with CONATVS Pink in Brussels. Our oenologist is Alberto González Plasencia.

Bodega Hoyos de Bandama

Viña & Vinos Hoyos de Bandama S.L.

Island: Gran Canaria

Telephone: 928 353 893

Address: Camino a La Caldera, 38, 35307,
Santa Brígida, Las Palmas, Canary Islands



www.bodegahoyosdebandama.com



maria@bodegahoyosdebandama.com



Viñas & Vino Hoyos de Bandama

Bodega Hoyos de Bandama has its origins in one of the wineries of the De la Coba family. It is now facing a new stage in its long history, where everything is new - as winemaking technology is totally different from the past - and where the old means only have an archaeological, ethnographic or historical value. The winery is based on three pillars for its success: wine production, marketing and training in the knowledge and culture of wine, as well as country tourism in a privileged spot.

Bodega Llano El Pino

Pedro Jonay Santana Hernández

Island: Tenerife

Telephone: 615 330 051

Address: Callejón la Hoyilla, 1, 38280, Tegueste,
Santa Cruz de Tenerife, Canary Islands



info@tasat.es



Bodega Llano el Pino



@bodega_llano_el_pino

Bodega Llano El Pino is a family winery started in the 1970s, set in the vineyards of Tegueste. It is in the aforementioned municipality where the vineyards are located, including its own and leased properties. Their wines are marketed under the brand names TASAT and El Jardín de Abril.

Bodega La Casmi

Sociedad Cooperativa Agrícola San Miguel

Island: Tenerife

Telephone: 922 700 300

Address: Carretera General del Sur, 5, 38620,
San Miguel de Abona, Santa Cruz de Tenerife,
Canary Islands



www.lacasm.com



bodega@casanmiguel.com



LaCasmi Bodega

Bodega La Casmi, located in the south of the island of Tenerife, was founded in the 1980s as the first local winery in the Canary Islands. At present, it works mainly with white varieties, where almost half of the grapes that are introduced into the winery are certified organic thanks to the optimal environmental conditions of the wine-growing areas in which the partners work.

Bodega Comarcal Valle de Güímar

SAT. Viticultores de la Comarca de Güímar

Island: Tenerife

Telephone: 922 51 30 55 / 922 51 04 37

Address: Carretera Arafo La Cumbre, km 4, 38550, Arafo, Santa Cruz de Tenerife, Canary Islands

-  www.bodegavalledeguimar.com
-  info@bodegacomarcalguimar.com
-  Brumas de Ayosa
-  @brumasdeayosa
-  Bodega Valle de Güímar

In 1989, 15 winegrowers from the Valle de Güímar formed the S.A.T. Viticultores Comarca de Güímar, bottling wine for the first time in the region and producing some 15,000 bottles of white wine a year under the brand name Pico Cho Marcial. In 1996, work was completed on the current winery in a privileged area overlooking the whole valley. The production was increased to 70,000 bottles and a leap in quality was made, allowing the Pico Cho Marcial and Brumas de Ayosa wines to enter the Valle de Güímar Denomination of Origin. Today, the winery is owned by 152 families who grow their own vineyards, full of enthusiasm and commitment to the quality of our product. At present, we produce 150,000 bottles and have won numerous regional, national and international awards, thus becoming a benchmark in this sector.

Bodega Frontón de Oro

Hoya Camaretas S.

Island: Gran Canaria

Telephone: 670 634 863 / 928 660 661

Address: Cmno. La Lechuza, s/n, 35329, La Lechuza, Vega de San Mateo, Las Palmas, Canary Islands

-  www.frontondeoro.com
-  frontondeoro@hotmail.com
-  Frontón de Oro

This winery was founded in the seventies when Mr. Antonio Ramírez (father) bought a small piece of land in the mountains surrounding La Lechuza, an area of the island of Gran Canaria known as El Frontón. There, he planted some vines for the family, as well as other crops; it was in 1996 when his two sons Pedro and Antonio, supported by the rest of the family, decided to start making wine and bottling part of it to sell it in the area.

Finca Escudero

Sanbrig 2005 S.L.U.

Island: Gran Canaria

Telephone: 670 634 863 / 928 660 661

Address: Camino Palma Romero, 1, 35300,
Santa Brígida, Las Palmas, Canary Islands

 www.fincaescudero.com
 info@fincaescudero.com
 Finca Escudero
 @fincaescudero

Nestled in a spectacular landscape in the heart of Santa Brígida is Finca Escudero, an estate covering an area of more than 50,000 m2. Almost two decades ago its owner began to pursue his great passion: wine growing. In this unique landscape setting, Juan Escudero wine is produced in its own winery, with Joven and Selección editions. The estate also boasts other crops such as olive groves (with their exceptional olive oil) and other important elements such as the spectacular house with its well-tended gardens.

Bodega Marqués de Tamargada

Arcano Natura S.L.

Island: La Gomera

 tania@garajonay.com

Located in Vallehermoso, to the north of the island of La Gomera, set in a landscape of junipers and palm trees, the Marqués de Tamargada winery produces the only organic wines of La Gomera under Islas Canarias Protected Designation of Origin. Its wines are made according to its founding principles: great respect for the environment, conservation of native varieties, responsibility and commitment to the environment.

Bodega Linaje del Pago

SAT. Bodega Linaje del Pago - Productos importados de alimentación

Island: Tenerife

Telephone: 640 37 95 64

Address: Calle La Herrera, 83, 38360, El Sauzal, Santa Cruz de Tenerife, Canary Islands



www.linajedelpago.com



linajedelpago@gmail.com



Bodega Linaje del Pago



@linajedelpago

Bodega Ricardo Gutiérrez de Salamanca Pérez

Ricardo Gutiérrez de Salamanca Pérez

Island: Tenerife

Telephone: 658 893 860



www.vinos1861.com/vino.html



info@vinos1861.com



Vinos1861.com

We combine tradition with modern oenology, extracting the maximum expressiveness from our grapes. Our wine is characterised by its typicity, which avoids prefixed formulas and seeks authenticity based on the variety, the volcanic soils and the benign Atlantic climate with its trade winds.

Alejandro Gallo & Quiquere Wines

Grinfeld Mir, Sociedad Limitada

Island: Tenerife

Address: Salto del Gato, 61, 38280, El Sauzal, Santa Cruz de Tenerife, Canary Islands



Alejandro Gallo & Quiquere Wines



@alejandrogallowines

Bodega Viña El Drago

Juan José Fuentes Tabares

Island: Tenerife

Telephone: 922 541 500

Address: Camino El Boquerón, s/n, 38270, Valle de Guerra | Camino la Biromba, 10, 38270, Valle de Guerra, Santa Cruz de Tenerife, Canary Islands

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Camino los Laureles

Explotaciones y Servicios Herzam S.L.

Island: Tenerife

Finca Parque de Los Olivos

Transformaciones y servicios S.L.

Island: Tenerife

Pago de los Cercados

Emilio Tomás Palmero García

Island: Tenerife



80

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Bibliography

Álvarez Santos, J. L. (2012): «Los «otros» campesinos: Los portugueses y el cultivo de la vid en Canarias durante el siglo XVII», in María José Pérez Álvarez, Laureano M. Rubio Pérez, Alfredo Martín García (eds.): *Campo y campesinos en la España Moderna. Culturas políticas en el mundo hispano*. Madrid, Fundación Española de Historia Moderna: 933 – 943.

Álvarez Santos, J. L. (2021): «Identidad insular y sociedad atlántica: La aportación portuguesa al cultivo y a la explotación de la vid en Canarias», in Duarte Nuno Chaves (coord.): *Viagens à volta da mesa nas ilhas da Macaronésia: Itinerários turísticos do património gas-tronómico e vinícola*. Ponta Delgada, Letras Lavadas edições: 245-254.

Ancochea, E. (2004a): «Canarias y el vulcanismo neógeno peninsular», in Vera, J.A. (ed.). *Geología de España*. Madrid, SGE-IGME: 635-682.

Ancochea, E. et al. (2004b): *Geología de España*. Sociedad de Geología de España. Madrid.

Ancochea, E., Brändle, J.L., Cubas, C.R., Hernán, F. y Huertas, M.J. (1996): «Volcanic complexes in the Eastern ridge of the Canary Islands: the Miocene activity of the island of Fuerteventura», *J. Volcanol. Geotherm. Res.*, 70: 183-204.

Ancochea, E., Cubas, C.R., Hernan, F. & Brändle, J.L. (1991): «Edificios volcánicos en la Serie I de Fuerteventura: rasgos generales del edificio central», *Geogaceta*, 9: 60-62.

Anguita, F. and Hernán, F. (1975): «A propagating fracture model versus a hot spot origin for the Canary Islands», *Earth and Planet*, 27(1): 11-19.

Aznar Vallejo, E. (2021): «La vid y el vino en los nuevos espacios atlánticos. La evolución del mercado canario», *Bajo Guadalquivir y mundos atlánticos*, 3: 28-51.

Bains, S. (2020): *The Epic Wines of the Canary Islands*. Santa Cruz de Tenerife, GMR Canarias.

Balcells, R., Barrera, J.L., Gómez, J.A., Cueto, L.A., Ancochea, E., Huertas, Ma.J. & Snelling, N. (1994): «Volcanoestratigrafía y edad de la Serie I de Fuerteventura, Islas Canarias», *Bol. Geol. Min.*, 105(1): 50-56.

Béthencourt Massieu, Antonio de (1956): «Canarias e Inglaterra: el comercio de vinos (1650-1800)», *Anuario de Estudios Atlánticos*, 2: 195-308.

Béthencourt Massieu, Antonio de (1977): «Canarias y el comercio de vinos (siglo XVII)», *Historia General de las Islas Canarias*. Las Palmas de Gran Canaria, Edirca, Vol. III: 266-273.

Biagioli, G., Prats, M. y Bender, J. (eds.) (2013): *The European Guidelines for Wine Cultural Landscape Preservation and Enhancement*. INTERREG IVC-Unión Europea, ViTour.

Blij, H.J. (1983) «Geography of Viticulture: Rationale and Resource», *Journal of Geography*, 82: 112-121.

Borrego, J.; De Andrés, M.T.; Gómez, J.L.; Ibáñez, J. (2002): «Genetic study of Malvasia and Torrontes groups through molecular markers», *American Journal of Enology and Viticulture*, 53(2): 125-130.

Carracedo, J.C., et al. (2002). «Cenozoic volcanism II: The Canary Islands», en W. Gibbons y T. Moreno (eds.): *The Geology of Spain*. The Geological Society of London, Londres: 439-472.

Carracedo, J.C. (2008): *Volcanes de las Islas Canarias IV: La Palma, La Gomera y El Hierro*. Madrid, Editorial Rueda.

Carracedo, J.C. and Troll, V.R. (2016): *La Geología de las Islas Canarias*. Amsterdam, Elsevier.

Consejería de Agricultura Ganadería y Pesca del Gobierno de Canarias: *Mapa de Cultivos de Canarias*. Available at: https://www.gobiernodecanarias.org/agricultura/temas/mapa_cultivos/

Coudé-Gaussen, G. & Rognon, P. (1988): «Origine éolienne de certains encroûtements calcaires sur l'île de Fuerteventura (Canaries Orientales)», *Geoderma*, 42(3-4): 271- 293.

Cubas, C.R., Hernan, F., Ancochea, E. & Brädle, J.L. (1992): «El edificio sur (Jandía) de la Serie I de Fuerteventura: rasgos generales», *Geogaceta*, 11: 79-81.

Cólogan, C. (2017): *Tenerife Wine. Historias del comercio de vinos. Siglo XVIII [1760-1797]*. Santa Cruz de Tenerife, Cabildo de Tenerife-Cajasiete-Mutua Tinerfeña.

Custodio, E. (1974a): «Flujo de agua subterránea y existencia de un nivel de saturación en las formaciones volcánicas de la Isla de Lanzarote (Islas Canarias, España)», in *Simposio Internacional Sobre Hidrología de Terrenos Volcánicos*. Arrecife. Vol 1: 185-215.

Custodio, E. (1974b): «Contribución al conocimiento geohidroquímico de la Isla de Lanzarote (Islas Canarias, España)», in *Simposio Internacional Sobre Hidrología de Terrenos Volcánicos*. Arrecife. Vol. 2: 463-509.

Custodio, E. (1978): *Geohidrología de terrenos e islas volcánicas*. Madrid, Instituto de Hidrología/ Centro de estudios hidrográficos: 1-303.

Damnati, B. (1997): «Mineralogical and sedimentological characterization of Quaternary eolian formations and palaeosols in Fuerteventura and Lanzarote (Canary Islands, Spain)», in *Climates of the Past* (eds.: Meco, J. y Petit-Maire, N.). Universidad de Las Palmas de Gran Canaria.

De Luis Bravo, E. y Febles Ramírez, M.F. (ed.) (2013): *La viña y el vino en el Valle de La Orotava*. Santa Cruz de Tenerife. Published by the Sociedad Liceo de Taoro and financed by La Orotava Town Council, the Cabildo de Tenerife, the University of La Laguna and the Consejo Regulador de la Denominación de Origen de Vinos Valle de La Orotava.

Delgado Díaz, S. (2011): *Aportaciones al conocimiento del vino canario*. Santa Cruz de Tenerife, Instituto de Estudios Canarios.

Demény, A., Ahijado, A., Casillas, & Vennemann, T.W. (1998): «Crustal contamination and fluid/rock interaction in the carbonatites of Fuerteventura (Canary Islands, Spain): a C, O, H isotope study», *Lithos* 44: 101-115.

Elías Pastor, L. V., & Contreras Villaseñor, M. (2013). *El paisaje del viñedo en las Islas Canarias*. PASOS, nº. 11, Available at: <http://www.pasosonline.org/Publicados/pasosedita/PSEdita11.pdf>

Elías Pastor, L.V. (coord.) (2016): *Atlas del cultivo tradicional del viñedo y de sus paisajes singulares*. Madrid. Ministerio de Cultura y Deporte.

Febles Ramírez, M.F. (2013): «La geografía del viñedo insular», *Vinalettras. 4º Cuaderno de Cultura y Vino Tacoronete-Acentejo*. Published by el Consejo Regulador de la Denominación de Origen de Vinos Tacoronete-Acentejo: 33-41. Available at <http://tacovin.com/saber/publicaciones/>

Febles Ramírez, M.F. (2018): «Paisaje del vino: el cordón trenzado del Valle de La Orotava, patrimonio cultural», in *BIC Revista de Patrimonio de Tenerife*, nº 1: 12-15.

Fernández Salinas, V., & Silva Pérez, R. (2015). «Criterios para la identificación y selección de paisajes españoles susceptibles de ser incluidos en la Lista del Patrimonio Mundial de UNESCO», *Boletín de la Asociación de Geógrafos Españoles*, 68: 253–278.

Forni, G. (2012): «The origin of “Old World” viticulture», en Maghradze, D., Rustioni, L., Turok, J., Scienza, A., Failla, O. (eds.) *Caucasus and northern Black Sea region ampelography*. Vitis, Special Issue, JKI - Julius Kuhn-Institut: 27–38.

Fuster, J.M., Cendrero, A., Gastesi, P., Ibarrola, E. & Lopez Ruiz, J. (1968): *Geología y volcanología de las Islas Canarias: Fuerteventura*. Madrid, Inst. Lucas Mallada, CSIC: 1-239.

Gasparini, A., Custodio, E., Fontes, J.C., Jiménez, J. & Nuñez, J.A. (1990): «Exemple d'étude géochimique et isotopique d'aquifères en terrain volcanique sous climat semi-aride (Amurga, Gran canaria, Îles Canaries)», *Journal of Hydrology*, 114: 61-91.

García Rodríguez, J.L. (1984): «El espacio agrario», en *Geografía de Canarias*. Vol. 3. Prensa Ibérica. Las Palmas de Gran Canaria.

García Rodríguez, J.L. y Pestana Pérez, G. (2010): *Las Medianías. Agricultura, paisaje y desarrollo rural en Canarias*. Ed. Asociación de Geógrafos Españoles.

García Verdugo, D.L. (2020): *Diagnóstico de la viticultura en Canarias, 2020*. Consejería de Agricultura, Ganadería y Pesca. Gobierno de Canarias.

Godenau, D. (2019): «El cambio climático en Canarias. Implicaciones para los vinos», en *Vinaletras*. Santa Cruz de Tenerife, Cabildo Insular de Tenerife- Consejo Regulador D.O. Tacoronte-Acentejo: 28-35.

Holmes, A. and Holmes, D.L. (1987): *Geología Física*. Barcelona, Ediciones Omega.

Lobo Cabrera, M. (1993): *El comercio del vino entre Gran canaria y las indias en el siglo XVI*, Las Palmas de Gran Canaria, Cabildo Insular de Gran Canaria.

Lobo Cabrera, M. (2014): «La vid y el vino como patrimonio cultural de Canarias», *RdM. Revista de Museología: Publicación científica al servicio de la comunidad museológica*, 60: 62-70.

Macías Hernández, A.M. (2000): «La viticultura canaria. Orto y ocaso, 1500-1850», in Maldonado Rosso, J. and Ramos Santana, A. (eds.). *Actas del I encuentro de historiadores de la vitivinicultura española*, Puerto de Santa María, Ayuntamiento del Puerto de Santa María: 319-343.

Macías Hernández, A.M. (2005). «El paisaje vitícola de Canarias. Cinco siglos de historia», *Ería*, 68: 351–364.

Macías Hernández, A.M. (2015): «La economía vinícola de Tenerife. Los precios del vino en bodegas, 1505-1650», *Anuario de Estudios Atlánticos*, 61: 061-010, 1-27.

Machín, N., Hontoria, M., Luis, J. y Gonzalo, C. (2019): *Variedades de vid en la isla de Tenerife*. Cabildo Insular de Tenerife.

Marín Ramos, M. et al. (1995): *Geografía de España*. Vol. 3, Geografía física. Barcelona, Océano Grupo Editorial. Instituto Gallach de Librería y Ediciones.

Marsal, G., Méndez, J.J., Mateo-Sanz, J.M., Ferrer, S., Canals, J.M., Zamora, F., Fort, F. (2019): «Molecular characterization of Vitis vinifera L. local cultivars from volcanic areas (Canary Islands and Madeira) using SSR markers», *Oeno One*, 4: 667-680.

Martínez Arnáiz, M., Baraja Rodríguez, E. y Molinero Hernando, F. (2019): «Criterios de la UNESCO para la declaración de regiones vitícolas como paisaje cultural: su aplicación al caso español», *BAGE*, 80.

Martínez Galindo, P. (1998): *La vid y el vino en Tenerife en la primera mitad del siglo XVI*, La Laguna, Instituto de Estudios Canarios.

- MECD (2015): *Plan Nacional de Paisaje Cultural*. Madrid.
- Molina Ibáñez, M. et al. (1995): *Geografía de España*. Vol. 4, El Medio Natural. Barcelona, Océano Grupo Editorial. Instituto Gallach de Librería y Ediciones.
- Pérez González, R. et al. (1995): *Geografía de España*. Vol. 14, Canarias. Barcelona, Océano Grupo Editorial. Instituto Gallach de Librería y Ediciones.
- Pérez González, R. y Morales Matos, G. [dirs. y coords.] (2000): *Gran Atlas Temático de Canarias*. Santa Cruz de Tenerife, Ed. Interinsular Canaria.
- Pestana, G; Febles, M. y De la Rosa, B. (ed.) (2016): *La agricultura canaria a principios del siglo XXI. Análisis de los Mapas de Cultivos de Canarias*. Ed. Ministerio de Agricultura, Alimentación y Medio Ambiente del Gobierno de España.
- Rodríguez-González, F., J. Pérez-Torrado, J.L. Fernández-Turiel, M. Aulinas, R. Paris y C. Moreno-Medina (2018). «The Holocene volcanism of Gran Canaria (Canary Islands, Spain)», *Journal of Maps*, 14: 620-629.
- Rodríguez Rodríguez, J. (1973): *La Vid y los Vinos de Canarias*. Artes Gráficas Santa Cruz de Tenerife.
- Rodríguez-Torres, I. (2018): *Varietades de vid cultivadas en Canarias. Descriptores Morfológicos. Caracterización morfológica, molecular, agronómica y enológica*. Santa Cruz de Tenerife. Ed., Instituto Canario de Investigaciones Agrarias. Gobierno de Canarias.
- Romero, C. (1991). *Las manifestaciones volcánicas históricas del Archipiélago Canario*. Tomo I. Santa Cruz de Tenerife, Gobierno de Canarias (Consejería de Política Territorial), 695 pp.
- Stillman, C.J. (1999): «Giant Miocene landslides and the evolution of Fuerteventura, Canary Islands», *Journal of Volcanology and Geothermal Research*, 94: 89-104.
- This, P., Lacombe, T., Thomas, M.R. (2006): «Historical origins and genetic diversity of wine grapes», *Trends Genet*, 22: 511-519.
- Úbeda Palenque, J. et al. (2002): *Geografía de las Islas Canarias*. Madrid, Facultad de Geografía UCM.
- UNESCO (2019): *Operational Guidelines for the Implementation of the World Heritage Convention*. Paris.
- Vaquero Morales, D. (2013): «Rutas del Vino de España, o el arte de conocer y experimentar el patrimonio de la vid y el vino», Celestino Pérez, S. y Blánquez Pérez, J. (eds). *Patrimonio cultural de la vid y el vino*. Madrid, UAM Ediciones: 293-305.
- VV.AA. (2006): *La viña y el vino en El Hierro*. Santa Cruz de Tenerife. Ed. Consejo Regulador de la Denominación de Origen de El Hierro.
- VV.AA. (2005): *Étude thématique sur les paysages culturels viticoles dans le cadre de la Convention du Patrimoine Mondial de l'Unesco*. Paris, ICOMOS.
- Viera y Clavijo, J. de (1770-84): *Noticias de la historia general de las Islas Canarias*. Madrid, Imprenta de Blas Román.
- Zerolo, J., Cabello, F., Espino A, Borrego, J., Ibáñez, J., Rodríguez-Torres, I., et al., (2006): *Varietades de Vid de Cultivo Tradicional en Canarias*. Santa Cruz de Tenerife. Ed., Instituto Canario de Calidad Agroalimentaria.

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