

## 14. Greece

Greece has been producing wine for at least 5,000 years, some claim even longer. It was not the first wine-producing country but it greatly advanced grape-growing and wine production techniques. Wine was an integral part of everyday life in Ancient Greece and a central feature of the *symposium*, which brought together art, philosophy, food and wine.

The height of Greek wine culture was during the 'Golden Age' (around 500–300 BCE). The Greek empire spread around much of the Mediterranean, taking its wines, considered the best in the world at the time, and wine culture along with it.

Some of the earliest-known wine writing comes from this period and shows an understanding of how and why wines from different locations can vary in quality. The Greeks also introduced some of the first wine laws to protect certain wines from particular locations, prevent fraud and raise taxes.

The wine being produced was not as we now know it today. A wide variety of substances, including herbs, spices, flowers, honey and oils, was added to protect the wine from oxidation and to mask off-flavours. One common additive was pine resin and, although the use of other substances has long disappeared, it continues to be used to this day in the production of Retsina (see [Winemaking](#)).

Greece became a part of the Roman Empire in the 2nd century BCE. This introduced wines from elsewhere in the Empire and effectively prevented Greece from exporting its own produce. The decline in the Greek wine industry continued under, first, the Byzantine Empire and then the Ottoman Empire to the point that wine was only produced for consumption in and around the village where the grapes were grown.

The Modern Greek state was established in 1830, following the revolution of 1821. The retreating Ottomans destroyed most of Greece's agricultural land and then two Balkan wars, the two World Wars and a civil war prevented the recovery of the Greek wine industry. In addition, many of the vineyards that survived at the end of the 19th century were destroyed by phylloxera, which appeared in Macedonia in 1898.

Despite efforts to revitalise the industry, for most of the 20th century, Greece was seen as a source of cheap, often poorly made wine, in particular Retsina, produced mainly by co-operatives and the handful of large companies which began to emerge.

By the 1970s, some smaller producers were bottling their wines and even selling them outside their local area. The 1980s, however, saw a rapid rise in the number of small quality-minded producers: some had previously worked for the larger companies but many were people who had benefited from the growth of the Greek economy and now wanted to make wine. This led to the creation of a modern Greek wine culture of estate-produced, higher-quality wines.

Initially, these wines only made a small impression on export markets. Most Greek wine is still consumed domestically but the financial crisis of 2008 led to a significant drop in consumption and forced producers to look to the export market. Wine exports have increased significantly in the last decade, although from a very low base, as foreign consumers begin to discover Greece's wide assortment of indigenous grape varieties.

## 14.1. The Growing Environment and Grape Growing

### CLIMATE

Greece's vineyards are located at latitudes between 34° and 42°N. Its climate is generally Mediterranean with long, hot summers (with temperatures usually over 30°C/86°F) and reaching 45°C/113°F in some years) and short, mild winters. Inland, the climate turns increasingly continental: summer temperatures are even hotter and winter temperatures can drop below freezing. Spring frost can be a problem in areas of northern Greece, such as Amyndeon.

However, there is a much wider variety of conditions than might at first appear. Greece is a very mountainous country and many of its best vineyards are planted at altitude to moderate temperatures. In some places, such as Amyndeon and Mantinia, it can be cool enough that grapes do not always reach full ripeness, depending on the grape variety. There are a few flatter areas, most notably the plains of eastern Macedonia and central Greece; these areas are hotter, although, towards the coast, the sea is another moderating factor.

Vineyards are a common sight on many Greek islands, where strong, onshore winds especially on the Cyclades islands, such as Santorini, are a constant threat. These can stop photosynthesis, interrupting flowering and berry-set and delaying ripening, and can be strong enough to destroy unprotected vines. They are also very dry and so increase water stress.

Rainfall levels vary: Santorini is exceptionally dry but the averages in most other wine-producing regions range from 400 to 700 mm. Generally speaking, there is little or no rain during the growing season, except in the mountainous areas to the north and west. Water stress is therefore a common issue and irrigation often essential, where water resources are available.

### SOIL

Greece has a wide range of soils with vineyards planted on everything from limestone to volcanic soils: even within small areas, numerous soil types can be found.

Apart from on the fertile plains, the soils tend to be low in fertility. Greek farmers usually kept their fertile soils for more lucrative or demanding crops, leaving the less fertile land for olives and vines. Whilst this means that yields have traditionally been low, many Greek vineyards have ended up on soils that are now considered ideal for the production of high-quality and characterful wines.

### VINEYARD MANAGEMENT

In 2021, there were 109,000 ha of vineyards in Greece.<sup>1</sup> Only 64,900 ha of those vineyards produce grapes for wine, the remainder growing table and drying grapes.<sup>2</sup>

Vineyards tend to be very small, the average being just over 0.5 ha.<sup>3</sup> Many growers sell their grapes to larger producers or co-operatives or simply produce small volumes to sell locally. The size of the vineyards, along with the often tricky terrain, means that many are still worked by hand.

Greek viticulture is a mixture of the traditional and the modern. The larger companies began modernising in the 1960s and 1970s, passing on their expertise to the smaller growers and producers who supplied them. However, the industry really began to move forward when Greece joined the EU in 1981 and gained access to funding. Many of the new breed of producers had studied viticulture and gained experience in other parts of the world; however,



**Vineyard size and terrain mean that many vineyards are managed and harvested by hand.**

they still recognise how retaining some of the more traditional methods can allow them to create distinctive wines.

The hot, dry conditions make Greece suitable for organic and biodynamic viticulture. Many growers have been using organic practices for centuries; the use of chemicals is a relatively recent occurrence. At the same time there is a growing number of producers that have sought organic certification and that are experimenting with biodynamic techniques.

The majority of vineyards are trellised; usually vines are cordon-trained with VSP. In some places, specific trellis and pruning systems have been developed over the centuries to suit local conditions, in particular in Santorini to cope with the high winds and very low rainfall.

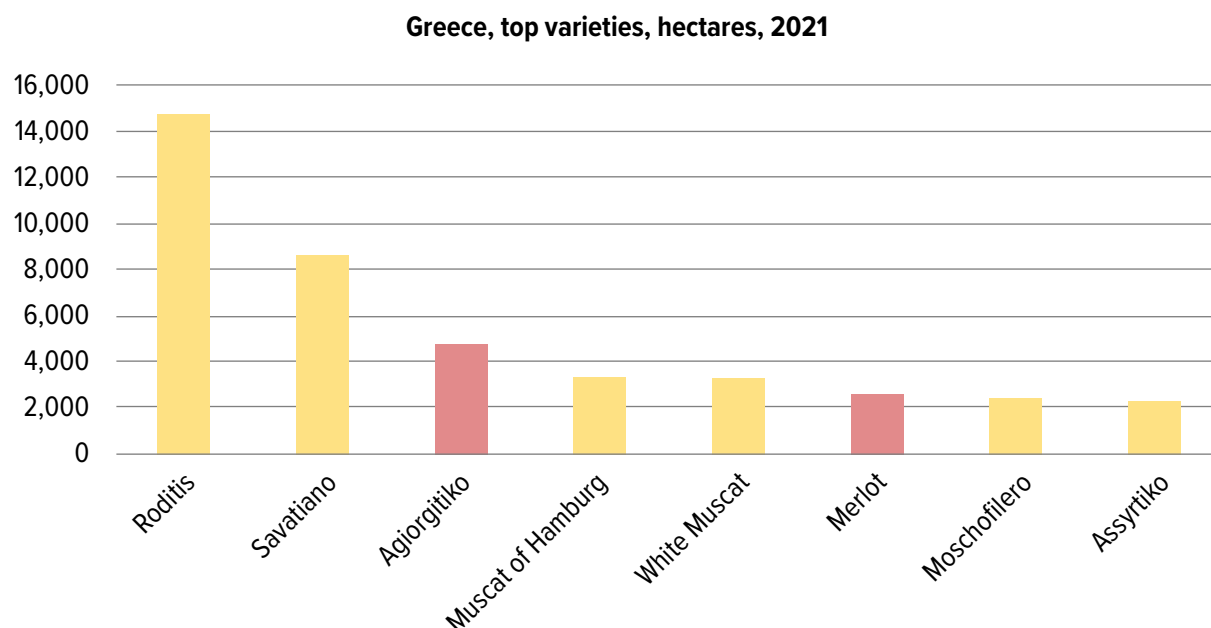
Irrigation is permitted, and is mostly used for international varieties such as Cabernet Sauvignon and Merlot, as a number of the local varieties have developed higher tolerances of drought. However, the water-holding capacity of the soil in an area is also a key influence. The system used is always drip irrigation.

## **GRAPE VARIETIES**

One of the most distinctive aspects of Greek viticulture is the large number of indigenous grape varieties, which account for around 90 per cent of all plantings.<sup>4</sup> The precise number of these varieties is unknown as new ones are being discovered all the time: estimates suggest around 300. Many of these are found on a very small scale in very limited areas but around 60 are currently grown in significant amounts. Producers have recognised that these indigenous varieties offer an important point of difference for Greek wines on the export markets.

International varieties only began to make their mark in the late 1980s. This was prompted by a demand for these wines in the domestic market and also by a concern, on the part of producers looking to export, that foreign consumers would be unwilling to buy wines made from grapes they had not heard of and struggled to pronounce. Whilst some producers have made successful single-varietal wines from the likes of Chardonnay, Sauvignon Blanc,

Cabernet Sauvignon, Merlot, and Syrah, these varieties were often used in blends with local varieties to give consumers something they could recognise on the label. A number of these blends have been particularly successful: for example, Sauvignon Blanc with Assyrtiko and Merlot with Xinomavro.



Source: Wines of Greece<sup>5</sup>

### White Grape Varieties

White wine makes up over 70 per cent of annual production.<sup>6</sup>

**Roditis** – This is the most planted grape variety and is widely grown throughout Greece. Similar to Moschofilero (see below), Roditis is pink skinned (though this rarely has any effect on the colour of the wine unless it is macerated for a few hours). Its ability to produce high yields has made it popular and, like Savatiano, is mainly used for inexpensive wine and as a blending ingredient for Retsina. However, its reputation is also improving thanks to higher-quality wines being made at altitude and from old vines, for example in some areas of the Peloponnese. The best examples are medium bodied with high acidity and flavours of ripe fruit, such as melon.

**Savatiano** – This is the second most planted grape variety in Greece. It has long been considered the workhorse grape of central Greece, largely due to its drought resistance. Savatiano is mainly used to produce large volumes of inexpensive wine and is also the most common ingredient in Retsina (see [Winemaking](#)). However, its reputation is starting to rise with some very good quality examples from low- yielding, dry-farmed bush vines. These wines have subtle aromas of citrus, pear and stone fruit as well as a nutty character with age.





**Roditis vines in high altitude vineyards**

**Assyrtiko** – This is Greece’s best-known and most prized indigenous white grape (although plantings are around one third of those of Roditis). Originally from Santorini, Assyrtiko is now widely planted on the mainland as it has proven to be highly adaptable to different conditions. It also retains high levels of acidity when ripe, even in the hottest conditions. This high acidity balances the typically high alcohol levels and also means the wines can age well; it also makes Assyrtiko ideal for producing lusciously sweet wines, such as Vinsanto from Santorini. Dry Assyrtiko typically has citrus, stone and tropical fruit, often with a strong smoky or flint characteristic. Some producers make wines where at least part of the blend has been aged in oak, often leading to a fuller body and different profile of flavours (less intense primary, more secondary characteristics).

**Moschofilero** – Another variety prized for its quality potential, Moschofilero produces aromatic wines with notes of citrus, flowers (particularly rose petals) and spices, not dissimilar to Muscat. The wines are high in acid, light-bodied and relatively low in alcohol (around 12% abv). It is pink-skinned and many wines have a pink tinge; some producers make a rosé using extended skin contact. It is mainly planted in Mantinia in the Peloponnese.



**Moschofilero has pink skins**

**Malagousia** – Twenty years or so ago, Malagousia was almost extinct. It has quickly established a reputation for producing high-quality wines and, although plantings are still very small, it is spreading rapidly throughout Greece. It produces wines with medium levels of acidity and medium body with complex and intense aromas of stone fruit and flowers. Grapes grown in cooler sites or picked early can have a herbal or herbaceous note. Wines may be fermented in stainless steel, in old oak or with a proportion of new oak. It is grown in most areas of Greece.

There are also significant plantings of various Muscat varieties which are used for everything from dry to lusciously sweet wines.

### **Black Grape Varieties**

**Agiorgitiko** – The most planted black variety (and third most planted of either colour) is Agiorgitiko, a versatile grape that can produce a wide range of wines from a lighter, fruity style for early drinking to a more complex, full-bodied age worthy style as well as high quality rosés and even sweet wines. The reds are deeply coloured with medium acidity, medium to high levels of soft tannins and medium alcohol.

Agiorgitiko typically has aromas of ripe red fruit (although it can become jammy if allowed to get extra ripe) and sweet spices. It is often aged in oak, usually a proportion of which is new. It is mainly found in the Peloponnese, and is particularly highly regarded from PDO Nemea.





**Agiorgitiko**

**Xinomavro** – This is probably Greece’s most prized indigenous black grape variety. It grown all over northern Greece but its most famous wines come from Naoussa in northern Macedonia. Xinomavro is often likened to Nebbiolo: in their youth, the wines can have unpleasantly high levels of acidity and grippy tannins with aromas that are more vegetal than fruity. The wines are pale-coloured and turn garnet rapidly. Xinomavro can often benefit from long bottle ageing: the best wines, produced from lower-yielding vines and aged in oak, can age for decades, developing highly complex aromas of flowers, herbs, spices, leather and earthiness. More recently, a number of producers have started producing wines that are more accessible in their youth (more fruity and softer tannins). Using riper grapes and less extraction, these wines are much fruitier, with lower levels of acidity, and are often aged in new oak. Some producers also blend Xinomavro with Merlot to soften out its rough edges.

## 14.2. Winemaking

Traditionally, grapes were crushed by foot and then fermented in old casks, made mainly from oak or chestnut, which were then simply stopped up and the wine left to mature for a few months before being drawn off and consumed.

As with viticulture, however, there has been significant modernisation, particularly since Greece’s accession to the EU in 1981. Virtually all wineries now use modern presses, temperature control and stainless-steel vessels for fermentation. From the late 1980s onwards,

there was a significant increase in the use of new oak barriques first for red wines and then also for whites. The barrels were mainly made from French oak, although American oak was used too. Although this approach is still common, many producers are now looking for more restrained oak characteristics.

Modern producers are also returning to some of the more traditional winemaking practices, such as using naturally-occurring yeast, shorter extraction and even maturing their wines in amphorae like the Ancient Greeks. Others are experimenting, for example with lees contact for Assyrtiko and Malagousia.

There is also a long tradition of sweet wines, often made using sun-dried grapes. Wines are made from both white and black grape varieties, with Muscat one of the most widely used.

### RETSINA

The use of pine resin to preserve wine dates back to Ancient Greece. It was originally used to seal amphorae and then used as an additive, probably for flavouring purposes.

Its modern-day popularity started in the late 19th century, but with increased tourism to Greece after the world wars, sales boomed in the 1960s. Unfortunately, many wines were made cheaply and badly. The resin was often used to try and mask poor quality or even faulty wines (rarely successfully). However, there have always been high-quality examples, produced from ripe grapes using good-quality resin.

Retsina is produced throughout Greece but most comes from the hot central plains. It is made from a number of varieties, although Savatiano and Roditis are the most commonly used. The amount of resin used has fallen over the centuries as winemaking techniques have improved. Resin is usually added to the must (in the past it was added to the wine) and the wine is then left on its lees for no more than a week after fermentation (in the past it was often left much longer), both leading to a more subtle, integrated pine resin character.

Retsina is now a legally-protected category with regulations to ensure quality standards. The amount of resin that can be added is controlled and parameters for the final product such as minimum acidity levels and permitted alcohol levels are specified. Retsina does not comply with the standard EU definition of wine as it is not made exclusively from grapes. However, it has been granted special status as a 'wine of appellation by tradition' (OKP in Greek). Premium bottlings, often made with Assyrtiko, are gradually helping to improve the reputation of this wine style.

## 14.3. Wine Law and Regulations

The appellation system of Greece is in line with the rest of the EU.

The Greek equivalent of PDO is POP (*Prostatevmeni Onomasia Proelefsis*). There are currently 33 located throughout Greece,<sup>7</sup> accounting for about 8 per cent of total annual production.<sup>8</sup> The individual PDOs lay down rules on grape growing and winemaking, such as yields and which varieties can be grown (PDO Naoussa is unusual in also having ageing requirements). With the notable exception of Muscat for sweet wines, PDO wines are usually restricted to native varieties.



PGE (*Prostatevmeni Geografiki Endiksi*) is the Greek equivalent of PGI. There are now over 120, with several being added every year, producing around 17 per cent of all Greek wine. Grape growing and winemaking rules are less strict and, in particular, international varieties may be used in PGI wines.<sup>9</sup>

Wines without a geographical indication are simply labelled 'Wines from Greece'. This is mainly used for high-volume brands, blended from grapes produced in more than one region and accounts for around 66 per cent of annual production.<sup>10</sup> In addition, Greece has a special category, OKP, for traditional products, most notably Retsina.

#### 14.4. Principal Wine Regions

Greece's PDOs that are the best known internationally are situated in Macedonia, the Peloponnese and on various islands in the Aegean Sea.

##### MACEDONIA

The Greek region of Macedonia is situated along the northern border of the country. It is a large region and, as a result, offers a wide range of conditions from the mountains in the north and west to the plains in the east.

In the mountains, the climate is continental: however, due to altitude, temperatures are relatively cool. Rain falls throughout the year (on average around 650–700 mm) making water supply less of an issue than elsewhere. Macedonia's two leading PDOs, Naoussa and Amynteo, are situated in this area.

On the plains, the climate is warm and Mediterranean. This area is in the rain shadow of the mountains and therefore drier. The fertile soils are ideal for the production of higher-volume wines but there are also some good and very good quality wines being produced in the PGIs of Drama and Kavala.

Macedonia is traditionally a red wine producing region. The PDOs of Naoussa and Amynteo can produce only 100 per cent Xinomavro. The warmer, drier Drama Valley to the



east has established a strong reputation for high quality, full-bodied, modern style Bordeaux blends. However, there are also some white wines of note: Chardonnay and Sauvignon Blanc at altitude and full-bodied ripe wines from popular Greek varieties such as Assyrtiko and Malagousia in Drama and Kavala.

### **Naoussa**

PDO Naoussa covers the south-eastern slopes of Mount Vermio and the vineyards are planted at between 150 and 400m. The best sites are sheltered from the strong, cold winds which can blow in from the north and west but temperatures are still relatively cool.

Wines must be made from 100 per cent Xinomavro. They tend to have high acidity and tannins, great complexity of aromas and the potential to age for decades. Most wines are mid-priced with a few premium examples, and range from good to outstanding in quality. Significant producers include Thymiopoulos Vineyards and Kir-Yianni.

Traditionally, the wines were aged in large old wooden vessels, giving wines with pronounced spicy and meaty, rather than fruity, aromas. In the 1990s, some producers started using new French oak *barriques*, giving even firmer tannins, more body and oaky aromas, although many have now reverted to a more restrained style. In recent years, a more modern style has emerged, using riper fruit and either cold soaking or whole-bunch fermentation to produce a deeper-coloured but less tannic wine.

Naoussa has a complex mixture of soils and microclimates based more on aspect and topography than altitude. A number of producers are now making village or single-vineyard wines, which can highlight the variations between different areas of the region.



**Xinomavro vines in Naoussa**

Outside the PDO system, a number of good quality rosés and red blends of Xinomavro with Merlot are being produced.

### **Amynteo**

PDO Amynteo is on the opposite, north-western side of Mount Vermio. The vineyards are higher than those in Naoussa, between 570 and 750m and the northerly aspect means that they are exposed to the cold northerly winds, leading to cool summers and cold winters. Site selection is therefore crucial. Unusually for Greece, the region is close to a number of lakes without which the temperatures would be more extreme. However, closer to the lakes, humidity is higher, increasing the risk of rot, and the soil is more fertile and care has to be taken to control yields otherwise the grapes can fail to ripen. In some years, spring frost can be a problem.

Again, PDO wines must be made from 100 per cent Xinomavro, although, unlike in Naoussa, rosé is permitted. Due to the cooler temperatures, Xinomavro from Amynteo is usually lighter in body and lower in tannins than from Naoussa, with the best having a distinctive floral quality. However, generalisations are difficult: areas that have sandy soils have remained phylloxera-free, meaning there are significant stocks of old vines giving more concentrated wines, and, as in Naoussa, some producers are now making a riper, more accessible style of wine. The wines tend to be mid-priced and good to very good in quality, though outstanding examples exist. Significant producers include Alpha Estate.

Again, some producers blend Xinomavro with Merlot and other varieties, but these wines cannot be labelled as PDO wines.



**Lakes help to moderate temperatures in Amynteo**



## PELOPONNESE

The Peloponnese is the peninsula which forms the southern part of the Greek mainland. It has the largest vineyard plantings in Greece, making up almost 30 per cent of the national total, despite the fact that many suitable vineyard sites are planted with grapes for drying.<sup>11</sup> It also has the largest number of PDOs in Greece, the most significant being Nemea and Mantinia.

It is a very mountainous region with mainly poor, rocky soils. Despite the southerly latitude, temperatures are moderated by altitude. There is only a small area of flatter land, including the plains around Patra, where conditions are hotter and the soil more fertile. The prevailing westerly winds bring rain from the sea but, due to the mountains, rainfall levels drop further east across the peninsula.

Apart from PDO Nemea, the Peloponnese is dominated by white grapes, in particular Moschofilero and Roditis. Outside the PDOs, large volumes of inexpensive wines are produced, especially from Roditis and Agiorgitiko. However, some good and very good wines are also produced (for example, those from high altitude sites within PGI Slopes of Aigialia). PGI wines are also made from international varieties, sometimes blended with local varieties.

### Nemea

Nemea is situated close to the Corinth Canal, which separates the peninsula from the rest of mainland Greece. The PDO is only for red wines made from 100 per cent Agiorgitiko. Both dry and sweet versions are permitted, although sweet wines are rare. In the 1990s, there was an increase in the use of new French barriques, although, as elsewhere, more subtle use of oak is now returning. Also, a new style wine has emerged, produced using semi-carbonic maceration to enhance fruity flavours and keep tannin levels relatively low. The wines range from acceptable and good quality inexpensive wines to very good and outstanding age worthy



High altitude vineyards in Nemea

wines that can command premium or even super-premium prices. Significant producers include Gaia Wines and Tselepos.

The climate is Mediterranean. The majority of rain falls in the autumn and winter but there can be significant differences on the amount year on year (as low as 400 mm and as high as 900 mm), which can have an impact on yields and quality of wines from certain areas from one year to the next (for example, in dry years vineyards on clay are better able to cope than those on more free-draining soils). Autumn rain can sometimes dictate harvest times.

Nemea is usually divided into three distinct zones by reference to altitude. The lowest zone on the valley floor between 230 and 400m is the hottest (summer temperatures can reach 40°C) and has the most fertile soil. Grapes ripen easily and are usually reserved for inexpensive wines but are also used for high-quality sweet wines.

The cooler middle zone, between 450 and 650 m, is currently considered to be the best for quality wines. Poor, free-draining soils naturally limit yields and the cooler days slow sugar accumulation while flavours and tannins ripen. However, the zone is far from homogeneous. There is a range of microclimates (caused by different altitudes and aspects) and specific soil types and there is talk of introducing a *cru* system to differentiate between the different sites.

In the highest zone (650–1,000 m), Agiorgitiko can struggle to ripen fully in the cooler temperatures and cool clay soils. The fresh red fruit flavours, high acidity and potentially harsh tannins have meant that grapes from here have mainly been used for rosé production (which is outside the PDO system). However, producers are starting to explore this zone's potential to produce fresher styles of red wine with higher acidity.

### **Mantinia**

To the south and west of Nemea, PDO Mantinia occupies a plateau with elevations starting at 600m. Despite its southerly latitude, the altitude makes this one of the coolest grape-growing areas in Greece. It also has one of the longest growing seasons with the harvest usually starting in October and sometimes even in November. In the coldest years, grapes do not reach full ripeness.

This is a PDO for white wines only. Moschofilero must make up at least 85 per cent of the blend, although many of the highest quality wines are made from 100 per cent Moschofilero. The relatively low temperatures give wines with high acidity, low to medium alcohol, medium (–) to medium body, floral and slightly spicy aromas. The wines are fermented in stainless steel to retain their freshness and tend to be drunk when young. The wines are usually mid-priced and good to very good in quality. Significant producers include Boutari and Seméli Estate.

### **THE ISLANDS**

Many of Greece's islands have a long-standing tradition of producing wine and are home to a wide variety of indigenous varieties. The best known of these lie in the Aegean Sea to the east of the mainland. However, the Aegean is known for its strong winds and many of the islands have very low rainfall and rocky soils with poor water retention. The difficult conditions make viticulture on the Greek islands relatively expensive and many growers have been unable to resist the lucrative opportunity to sell their land for tourist developments.

Despite the many difficulties, a number of islands have a reputation for producing high-quality wine. The most famous is Santorini, in the Cyclades island group in the southern part of the Aegean. Other islands of note include Paros, also in the Cyclades, which has a number of PDOs for still and sweet wines; Tinos, another island in the Cyclades, Samos and Lemnos in

the northern Aegean, which are famous for their sweet Muscats; and Crete, which is gaining a reputation for high-quality wines from both indigenous and international varieties.

### **Santorini**

In the 21st century, Santorini has become possibly the most celebrated wine-producing region in Greece, especially on the export market, with its dry and sweet PDO wines made primarily from Assyrtiko.

The island lies on a volcano: during its last major eruption, in 1500 BCE, much of the island collapsed leaving a central submerged crater (known as a caldera). The island today is only the eastern rim of the original volcano and there have been numerous smaller eruptions since, most recently in 1950.

The winds on Santorini are particularly strong. To provide shelter, vines have traditionally been trained low to the ground in a basket shape, usually in a hollow. Each year, the vines are woven around the previous year's growth; when a basket gets too bulky, every twenty years or so, it is cut off and a new basket is started from a shoot. This is specialised work and requires about four times the labour of conventional trellis systems. There have been therefore been some experiments with VSP in more sheltered areas, although these have been highly controversial amongst traditionalists.



**Assyrtiko trained into a basket on Santorini**

There is very little rainfall throughout the year and the growing season can be completely dry. Normally, the only moisture comes from the fog which rises from the caldera every morning and the traditional training system also helps to trap this moisture. To cope with the very limited amounts of water available, vine densities are very low: less than 2,500 vines per hectare.

Phylloxera has not been a problem on the island and it is estimated that some vines have roots and trunks that are over 400 years old.

The volcanic soil is very infertile and, along with low rainfall, contributes to low vigour and low yielding vines. PDO Santorini has the lowest permitted maximum yields in Greece: 60hl/ha, although, in practice, they are considerably lower than that, as low as 15hl/ha from the oldest vines. The PDO is for white wines only, both dry and sweet. The dry wines must contain at least 75 per cent Assyrtiko whereas the sweet wines must contain at least 51 per cent Assyrtiko; however many of the best are single varieties.



The dry wines usually have high levels of acidity, medium to high alcohol and a distinctive smoky characteristic, alongside Assyrtiko's fruit aromas. The highest quality wines can age for around a decade in bottle developing a honey, toasty character. Most Assyrtiko is fermented at low temperatures in stainless steel or other neutral vessels to retain fruit flavours. Producers are increasingly experimenting with oak ageing and lees contact to give more body and complexity. Santorini's dry Assyrtikos tend to be good to outstanding in quality and mid to premium priced.

Santorini is also famous for its sweet wine, Vinsanto (note the difference from the Tuscan Vin Santo), made from late-harvested grapes which are dried in the sun for up to two weeks. Vinsanto must be aged for at least two years in oak before release but many producers age it for longer, often in larger casks which are not fully filled in order to encourage oxidation. The wines often have flavours of raisins, coffee and chocolate. The high sugar levels (usually 200–300 g/L) are balanced by Assyrtiko's naturally high acidity, and the wines are often of very good or outstanding quality.

Due to the small amounts produced, Vinsanto can command super-premium prices. However, the prices for dry wines have increased noticeably in recent years, partly due to increasing demand but also because of the high production costs. Significant producers include Estate Argyros and Domaine Sigalas.

### 14.5. Wine Business

Production levels have fallen since the 1990s. On average in 2017–21, 2.4m hL<sup>12</sup> of wine were produced, compared to 3.5m hL in 1990.

There are around 7,000 grape growers many of whom own very small plots and sell their grapes to larger producers, the largest of which are Greek Wine Cellars and the Boutaris Group. There are currently more than 1,000 wineries in Greece, but most of them are very small, selling their wine only locally or in bulk to co-operatives or larger companies.<sup>13</sup> However, in the last ten years there has been a rise in small wineries marketing and selling their own wines.

In the 1920s, the Greek government established a number of co-operatives to try and revitalise the Greek wine industry. They were responsible for a significant proportion of production until the 1980s but in particular of the poorer quality wines for which Greece became infamous. Nevertheless, there were some more quality-minded co-ops, such as that on Samos which developed a reputation for high-quality sweet wines. Other co-ops have had to adapt and modernise to survive and many now produce higher quality wines and are an important means for smaller growers and producers to get to market.

In 2021, 11 per cent of Greek wine was exported.<sup>14</sup> The top export markets were Germany, USA and Canada.<sup>15</sup> The USA and Canada have emerged as leading markets for higher-quality wines since the 2010s. The weak economy has made Greek wines excellent value on export markets and very few of even the highest quality wines reach premium prices.

One of the key challenges for Greek producers is to introduce consumers to unfamiliar grape varieties. However, the indigenous varieties provide an important point of difference for Greek wines: Assyrtiko has proven a particular success on export markets and others are starting to make progress. The unfamiliar language and alphabet have also proved an obstacle and export-minded producers now use the Latin, rather than the Greek, alphabet on labels and use familiar terms such as PDO and PGI rather than their Greek equivalents.

The promotional body, [Wines of Greece](#), have been active on export markets to promote and educate trade and consumers about Greece's wines, regions and grape varieties.

Nevertheless, the domestic market is still by far the most significant. Many Greek wine drinkers still prefer wines made from international varieties, creating an awkward difference between domestic and export markets.

## References

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