

### Articles on greek wines

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#### Massachusetts Beverage Business

*By Bill Nesto, MW*

While Santorini is well-known for its spectacular panoramas, its wine industry remains relatively undiscovered. Vines dot the slopes and plains that skirt down from the crater. The soil is a powdery gray volcanic ash peppered with chunks of pumice stone and black lava. The strong winds which are typical to the island whip up the dust. The resulting sand-blasting effect can so badly damage the grapes that farmers have developed a form of vine training that serves as protection. They wind and tie together several years' growth of canes into what appears to be a wreath. The wreath lies on the ground. The grape bunches form inside the leaf studded wreath where they are protected from the wind-blown sand. During the harvest, vineyard workers, as if collecting eggs in a henhouse, lift up the wreaths and collect the bunches.

The vines are sparsely planted, about 8 feet apart. Closer planting would create too much competition for available moisture of which there is little. Throughout the year, rainfall is a rare occurrence. Moist Mediterranean winds lay down a blanket of mist on the ashen soil. The absorbent soil delivers the water to the vine roots. The soil contains very little organic matter. The vines as a result are very small, with tiny yields (15 to 28 hectoliters per hectare). Farmers must enrich their soil with fertilizer in order for the vines to survive.

Phylloxera has never been found on the island. This may be because the ashen soil is inhospitable to the louse. The most dangerous vine disease is oidium, which can be warded off by the application of sulfur dust. The vine is normally quite resistant to botrytis. However, eudemis butterflies, under cover within the wreaths of canes, puncture the grapeskins creating a point of origination for botrytis. Growers, for the most part, deal with eudemis by placing traps around and within the wreaths.

The principal wine of Santorini is a dry, white wine which has some extraordinary characteristics. The wine is registered in the legal category OPAP (Onomasia Prolefsaos Anoteras Piotitos or Appellations of Origin of Superior Quality) which is more or less the equivalent of France's AOC. The principal grape variety must by law contain at least 75% of the Assyrtico grape variety which makes up about 70% of the vines on the island. Two other white varieties, Aidani and Athiri, play minor roles in the blend. Despite the hot growing season, the wine has a high total acidity of 7 to 8 grams per liter. Nearly all of the acidity is tartaric. The torrid heat of July and August burns up whatever malic acid has been generated earlier in the season. The total acidity is not only high, it is also strong, typically registering a pH of between 2.85 and 2.95. Alcohol is usually between 12.5 and 13.5 percent. Detectable amounts of salinity (NaCl or Sodium Chloride) usually appear in chemical analyses. The moist sea air of the night deposits salt in the soil and on the vines. The note of salinity on the palate is tasted simultaneously with the sizzling, refreshing acidity of the tartaric acid. The wine seems remarkably solid and dense in the mouth. Yiannos Paraskevopoulos, winemaker of Gaia Wines, tells me that "the solid impression of dry white Santorini wine is mainly the contribution of the very low yield of the vines and the rather high (for a dry white wine) dry extract (17.5 to 20 grams per liter)."

By comparison, the smell of the dry white wine is rather mute. One struggles to find descriptors. Most tasters inevitably apply the multi-use descriptor: minerality. More precisely defined descriptors that I encounter in these wines are limes, flint and wet rusty steel.

The dry white typically goes through a standard dry-white wine fermentation and is bottled in the spring or fall after the harvest. Some producers employ full or partial barrel fermentation and maturation. To my taste, the oak easily covers the subtle descriptors noted above. In the mouth, oak extracts add thickness and astringency. The acidity seems sourer. Despite its high acidity, Assyrtico wines have a reputation for oxidizing rapidly. At the Sigalis winery in Santorini in June, I tasted a vertical of dry unoaked and oaked Sigalis Santorini wines dating back from the 2006 to the 2000 vintage. The older wines were in fine shape and had shown some flavor improvement. Sigalis is one of the very best, if not the best, of the island's producers. Other fine producers that I sampled are Gaia, Boutari, Argyros, Gavalas, Hatzidakis, and Kousoyiannopoulos (Volcan Wines).

If I had visited the island 30 years ago, I would have found a very different wine industry. The principal wine would have been Brusco, an amber colored, high alcohol (16 or 17 percent), and tannic wine which came in white, rose and red versions. The red tints came from the most popular red variety on the island (20% of vines), Mandalaria, a variety widely diffused throughout Greece's isles. All types of Brusco, white, rose, and red were macerated under foot, fermented on the skins and then runoff into barrels where they matured for many years. A few producers make Brusco for local sale and family consumption. It is outside the legislation of Santorini OPAP and cannot have "Santorini" printed on the label. Roussos, a producer known for its fidelity to traditional wine production makes a rose Brusco for the local market called Rivari. It was dry, fairly tannic and tart, with slightly over-ripe grapeskin flavors. Hatzidakis, a small family winery, that makes both modern and traditional style, makes a sweet, red Brusco for family use.

Historically, the grapes for another wine, called Nykteri, were harvested during the day and then trodden at night. The free run juice was drained into barrels where fermentation completed. Maturation in barrel lasted for several years. Miles Lambert-Gocs, in *The Wines of Greece*, (Faber and Faber, 1990) wrote that the wines were pale in color and usually reached 15% alcohol. Today there are modern versions of Nykteri such as that of Haridomos Hatzidakis at Hatzidakis winery. His 2006 was one of the best white Santorini wines. Nykteri is accepted within the Santorini OPAP. Hatzidakis harvests the grape late and allows low-temperature skin contact with the grape juice for 6 hours. After pressing and clarification, he conducts a classic white wine fermentation. He then matures the Nikteri in 5-year-use barrels for 6 months. The wine is rounder and richer than the other dry white Santorini wines that I tasted. His restrained oak use enhances rather than covers fruit flavor.

Another wine, Vinsanto, not to be confused with Italian Vin Santo, used to be made in many styles: semi-sweet and sweet, white, rose, and red. While Italian Vin Santo grapes are dried over weeks in ventilated rooms, Santorini Vinsanto grapes are dried out in the sun for one or two weeks. Santorini vinsanto grapes traditionally were crushed underfoot and fermented on their skins in sealed barrels containing a soupy starter yeast, called mana or mother, selected from the lees of previous fermentations. The barrels were not fully filled allowing for the expansion of the juice during fermentation and for oxidation during the maturation phase. The wine matured in wood barrel for some ten years more before sale in bulk or bottle. Traditional Italian Vin Santo is matured under a roof where there is great temperature variation between summer and winter. Santorini Vinsanto is matured in an area with less temperature variation. Nowadays, only the white version is allowed to be bottled under the Santorini OPAP. Despite the limitations on the use of the name Santorini in conjunction with Vinsanto for rose and red versions, Roussos has continued to make these styles. At the Roussos winery, I passed by an old barrel filled with 1975 Vinsanto. Agape Roussou, marketing director of Roussos, told me that the winery would like to release its large stockpile of aged Vinsantos when the market is ready to understand and value them. I suggested that the winery prepare the market by inviting journalists to assess them. Legislation today requires a minimum of only two years of maturation. The best

Vinsanto I tasted was a 2003 Sigalas. A piercingly high volatile acidity, the smell of dried apricots and a tart finish balanced its viscous load. It was the equal of a top Tuscan Vin Santo.

The island has never been known for the quality of its red wines. Red wines produced on the island are not allowed to be labeled as Santorini. Mandalaria, a red grape of no great potential, usually dominates red blends. It occupies about 20% of vineyard land. A rarer variety, Mavrotragano, traditionally used as a "spice" in traditional Vinsanto blends is raising hopes that Santorini can be the source of a great red wine. Mavrotragano has been overlooked because it produces low yields. Its grapes are small-sized, leading to a high skin-to-juice ratio. Despite the fact that the soils of Santorini offer vines little nutrition for the maturation of red grapeskins, experimental Mavrotragano red wine issuing from the Sigalas winery has shown that superb red wines can be made. A 2005 was a deep red color with a red berry, minty and orange rim. In the mouth, it had long fine-textured tannins. Eighteen months in 85% new French oak barriques had balanced, not overwhelmed, its fruit and natural structure. A 2004, too, was impressive. Other wineries are doing their own experiments with the variety. It is hoped that a red wine based on Mavrotragano will become an official category with the Santorini OPAP.

Much of the change in the style of Santorini wines occurred during the 1980s when tourists on the island and markets beyond it began to demand fresher and lower alcohol or less sweet wines than Brusco, traditional Nykteri and Vinsanto had to offer. Winemakers began focusing on modeling dry white Santorini wine after the dry French white wine model. Increasingly they employed refrigeration, more delicate pressing of grapes, avoidance of skin contact during fermentation, anti-oxidative techniques, and reduced maturation periods. Prefermentation maceration and lees stirring have recently become commonplace. Konstantinos Lazarakis, MW, author of the book, *The Wines of Greece* (Mitchell Beazley, 2005) credits the Boutari Winery and Santo Wines as being the pioneers of modernization. In 1988, Boutari launched Kallisti, the first successful example of a modern barrel-fermented dry white Santorini wine. Boutari investments on the island, starting in 1977, have brought money and jobs into the local wine industry. Moreover, exports of Boutari's Santorini wines to foreign markets have helped promote the recognition of all Santorini wines. Santo Wines is Santorini's largest wine producer. As a cooperative winery, it has given the many small farmers on the island a stable means to sell their grapes. In doing so, Santo Wines has done much to keep vineyards in production. By renting cellar space and providing free advice to winemakers both young and old, the winery has had an essential role in developing the Santorini wine industry. The large facility has also been a magnet for wine tourists.

According to Paris Sigalas of Sigalas Winery, there is much work to be done to improve the wines of the island. There has not been any clonal selection research of the Assyrtico variety or any other native Santorini variety, nor has there been systematic large scale research on methods of vine training. Sigalas is conducting some small scale experiments on training Assyrtico in rows on wires at a higher density, 5000 vines per hectare instead of the traditional 1800. It costs too much for him to do larger scale research. He would enthusiastically participate with any university that would conduct such research.

The inhabitants refer to the many privately owned vineyards simply as "the vineyard", as if the many vines were everyone's patrimony. Tourism, however, has made the land so valuable for development that every year 5% of the vineyards are ripped up. In 1874 at the zenith of the wine industry, the vineyards occupied 4800 hectares of land. By 1920, this had dwindled to 3500 hectares; by 1990, 1400 hectares; by 2007, 1000 hectares. Many owners of vineyards prefer to rent the vineyards to the dozen or so wine producers of the island, while they attend to the more profitable and less back-breaking tourist trade. Those who work the land are older, usually about 70 to 75 years of age. Even though most of them are likely to be wealthy landowners or have substantial investments in the tourist trade, they continue tending the vines because they

have done it all their lives.

This situation makes Santorini vulnerable in two ways. First, if vineyards were to continue to be uprooted and turned into sites for hotels and swimming pools, the genetic diversity of the vine population would diminish and further expansion of the Santorini wine industry would be stifled. Second, if the older generation tending the vines were to die without bestowing their knowledge of the land and the vines to a younger generation, the cumulative knowledge of generations would be lost forever. Their experience is invaluable for any delineation of terroir-based subzones or crus.

Paris Sigalas complains that the local population doesn't care about the vineyards. The government, he says, has not tried to protect vineyards for their scientific and historic value. Nor does the price of the wines in the marketplace allow producers enough profit margin to buy vineyard land, invest in equipment and conduct their own research. Due to the fact that all equipment has to be shipped to the island, the costs of making Santorini wine are high. A bottle of Sigalas Santorini can be found for \$14 retail in some US wine shops. This is too little given its cost of production.

Constantina Hatzidakis proudly described how the Hatzidakis winery and eight other Santorini wineries joined forces a month earlier, in May of 2007, to promote the name of Santorini in the 12th annual world sommelier competition held in Rhodes. The first time that this collaboration occurred was at the Vinoble wine fair in Jerez, Spain. Six of the some 12 wineries on the island banded together to show their Vinsantos. This kind of cooperation about wineries was unheard of before these events. She believes that wineries must work together to establish the "brand" of Santorini in the world. She mentioned how the wineries have worked with the largest town on the island, Thera, to publish a brochure describing all the wineries. The next step, she said, will be to erect signs indicating the location of the wineries along an island wine route.

The volcano that destroyed the island in 1600 BC created a unique environment for the production of wine. Sometime after the eruption, colonists brought a vine called Assyrtico. Luckily, that variety has the capacity to make unique white wines out of cinders and pumice kissed by Mediterranean mist. Mavrotragano may have the capacity to make great red wines. However, most of all, it will be the individual and collective efforts of the producers that will unleash the power of the volcano within the vines.

DEDICATION: I dedicate this article to Kostas Vosikas, who encouraged me to learn more about the wines of Greece and to visit his homeland. He was instrumental in setting in motion the planning that led to my visit to Greece in June of 2007. Kostas died in November 2006 after a 6 month battle with lung cancer. He was 52 years old. When he learned of his disease in June of 2006, he was forced to suspend his efforts to become a Master of Wine. Kostas had attended Boston University's Wine Studies Program. What a fine person!

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