

BRIEF HISTORY OF WINE

Wine is the fermented juice of grapes. Only one species of grape, *Vitis vinifera*, is used for nearly all the wine made in the world. From this species as many as 4,000 varieties of grape have been developed. These varieties differ from each other, though sometimes only slightly, in size, color, shape of the berry, juice composition, ripening time, and resistance to disease. Of the 4,000 or more varieties, only about a dozen are commonly used for winemaking around the world. The chief varieties are: Riesling, Chardonnay, Cabernet Sauvignon, Pinot Noir, Gewurztraminer, Sauvignon Blanc, and Muscat.

Grape varieties of *V. vinifera* have a great range of composition. Skin pigment colors vary from greenish yellow to russet, pink, red, reddish violet, or blue-black. The color of red wines comes from the skin, not the juice. The juice is normally colorless, though some varieties have a pink to red color. Juice flavors vary from bland to strong.

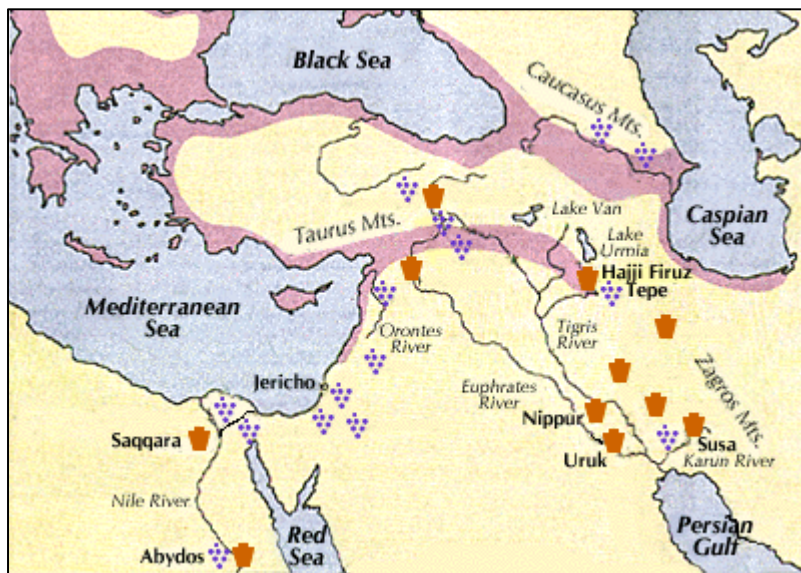
Vitis vinifera probably originated in the Near East and winemaking using this grape began in the Neolithic period (8500-4000 B.C.).

Neolithic communities of the ancient Near East and Egypt were permanent, year-round settlements made possible by domesticated plants and animals. With a more secure food supply than nomadic groups and with a more stable base of operations, a Neolithic “cuisine” emerged. Using a variety of food processing techniques—fermentation, soaking, heating, spicing—Neolithic peoples are credited with first producing bread, beer, wine and an array of meat and grain entrées we continue to enjoy today.

Conjecture leads us to a Stone Age man who placed ripe grapes in a vessel clay pot, wooden bowl or skin bag and, perhaps forgetting them, left them to ferment. In warm conditions this will happen in hours rather than days, and in days there will be wine of a sort. Who was the first to drink this intoxicating and delightful juice We can never know.

Crafts important in food preparation, storage, and serving advanced in tandem with the new cuisine. Of special significance is the appearance of pottery vessels around 6000 B.C. The plasticity of clay made it an ideal material for forming shapes such as narrow-mouthed vats and storage jars for producing and keeping wine.

A major step forward in our understanding of Neolithic winemaking came from the



analysis of a yellowish residue inside a jar excavated by Mary M. Voigt at the site of Hajji Firuz Tepe in the northern Zagros Mountains of Iran. The jar, with a volume of about 9 liters (2.5 gallons) was found together with five similar jars embedded in the earthen floor along one wall of a “kitchen” of a Neolithic mudbrick building, dated to ca. 5400-5000 B.C. The structure, consisting of a large living room that may have doubled as a bedroom, the “kitchen,” and two storage rooms, might have

accommodated an extended family. That the room in which the jars were found functioned as a kitchen was supported by the finding of numerous pottery vessels, which were probably used to prepare.

Cultivation of the vine thus began several thousand years before the present era and is mentioned many times in the Old Testament. The Babylonians laid down laws to regulate the running of a wine shop, and wrote vivid descriptions of a magical, jewel bearing vineyard in the Epic of Gilgamesh, the earliest imaginative writing there is: it appears to have been written in the 18th century BC. The ancient Egyptians made wine; the early Greeks exported it on a considerable scale. Vines were widely cultivated in Egypt around 3000BC and further evidence that wine was used as a commodity in trade has been revealed through other pottery finds and subsequent chemical analysis.

Grape growing and winemaking spread throughout Europe in the Greek and Roman times. The arrival of winemaking in ancient Greece is undocumented. Many believe it was brought to Crete by Phoenician traders. It is also likely that it arrived from the north as well, via the land route from Asia Minor. The earliest evidence of winemaking in Greece is a stone foot press at Vathipetro, a Minoan villa on Crete, dated to 1600 BC. The sophistication of the site suggests that Minoan production of wine had been underway for some time. Decoded Linear B tablets from the Minoan site at Knossos in Crete revealed an advanced economy fueled by trade with Eastern cultures, including Egypt. Archaeological finds on the Greek mainland indicate a close connection with the Mycenaean culture. By the sudden end of the Minoan civilization shortly after 1500 BC, winemaking was probably common throughout mainland Greece and the Aegean.

The Romans carried winemaking into much of Western Europe, especially the Moselle and Rhine valley sections of France and Germany and the Danube River valley of Austria. During the Roman Empire vine cultivation was extended to such a degree that a surplus ensued, and in AD 92 the emperor Domitian decreed that half the vines outside Italy be uprooted. When replanting was later permitted, vineyards extended into northern France and Germany and even into southern England.

The Middle Ages, AD c.400-1200, saw little progress in viticulture. Interestingly Mohammed, 620AD, was reported to have made wine which, as you may be aware, is in opposition to the Muslim faith which bans the consumption of alcohol. Wine further spread throughout the world through religious orders.

From about 1200, monasteries kept alive the art of wine making. One of the more famous was a monk named Dom Pèrignon, 1670 - 1715AD, who was a competent viticulturist/winemaker and is credited with the discovery of Champagne.

Later the nobility also owned extensive vineyards. The French Revolution and the secularization of the German vineyards by Napoleon, however, removed many vineyards from ecclesiastical hands.

From the beginning of the 13th century, the wines of Bordeaux (an area under the English crown from 1152 to 1435) were commonly shipped to England, the Hanseatic ports, and the Low Countries. By the 14th century wines from Spain and Portugal were also widely exported. Drinking habits were largely governed by changing fashions at court, political relations with producing countries, and changing rates of excise duty. During the 18th century heavy duties on French wines and an English alliance with Portugal led to a sharp rise in English consumption of Portuguese wines.

Other important developments in the 17th century were the use of glass bottles, the invention of the cork, the cork screw and other accessories. Also, improved production techniques created more palatable wines.

In the 18th century, England wasn't getting along with France, so they couldn't get any of that good French wine. Since the British Empire was growing, they turned to their colonies for their supply. At the turn of the century, they took over South Africa, which turned out to be a wonderful source of wine. In fact, Lord Nelson, a British commander, referred to the new British colony as an "immense tavern".

With the discovery of the New World, Europeans immigrating to America brought their winemaking know-how with them. The industry was welcomed by Thomas Jefferson, who thought Americans drank too much hard liquor. Ideal conditions for vineyards were found first in Ohio, but soon after, California took over as the premier wine-growing region in the country. In fact, California wines were so good that, in 1889, they won 20 of the 34 medals awarded in an international wine-tasting competition in Paris.

Around this time, Australia made their first mark on the wine industry when James Busby, an immigrant, began growing grapes in the Hunter Valley.

For convenience in commerce, the Bordeaux merchants classified their finest red wines as early as 1725, but it was not until 1855 that such a classification, based on the market price for each wine, received official recognition. The wines of the Médoc district were divided into five classes, or crus. The 1855 classification stands today with only one recent significant change.

During the middle and second half of the 19th century the European vineyards suffered from a series of disastrous diseases and pests, particularly mildew, or Oidium, and the plant louse, Phylloxera. First discovered in 1863, Phylloxera spread across Europe, destroying the vines by attacking their roots. Not until about 1880 was the grafting of European vine species onto immune American rootstock accepted as the only viable solution. Selective replanting also led to improved grapes.

Simultaneously, a movement began to ensure the authenticity of wine, culminating (1936) in France when the appellation controlée (quality control) law, now the model for similar legislation in other countries, came into effect. The law allows only wine made from grapes grown in the Champagne region, for example, to be called champagne.

As early as 1812, Russian colonists planted and cultivated grapes at Fort Ross on the coast of California. But it was the Spanish Franciscan Fathers who laid the foundation for the California wine industry in 1824 when Padre Jose Altimira planted several thousand grape vines at their northernmost mission, San Francisco Solano in Sonoma. In 1834, political upheaval brought an appropriation of all missions by the Mexican government. During this period of disarray, cuttings from the mission vineyards were carried throughout the northern California area to start new vineyards. By the time of the "Bear Flag Revolt" and the subsequent annexation of California by the United States in 1854, the vineyards of General Mariano Vallejo, the military Governor of Mexican California, were producing an annual income of \$20,000.

Other areas in the state were developing at this time: The widowed Senora Maria de Carrillo carried 2,000 Sonoma cuttings to Santa Rosa in the 1840s and became, perhaps, California's first woman winemaker, certainly its first woman grape grower. Rocky Mountain trapper Cyrus Alexander in northern Sonoma first planted grapes in what would be Alexander Valley. Captain Nicholas Carriger, probably the first American settler, had vineyards in the Valley of the Moon (Sonoma Valley). His neighbor William Hill planted the first non-mission

grapes in the county near Glen Ellen in 1852. About the same time, Davenport Cozzens cut into the rich earth in Dry Creek Valley and planted vines.

All of this viticultural activity took place prior to the arrival in 1855 of the man considered “The Father of California Wine Industry,” Agoston Haraszthy. The spectacular and mysterious Hungarian who claimed to be a count purchased the Salvador Vallejo vineyard in Sonoma Valley, renamed it Buena Vista, and soon was producing fine wines from the vineyard. In 1861 he was commissioned by the California legislature to study viticulture in Europe. He returned to California the following year with over 100,000 cuttings of prized grape varieties from France, Germany, Italy and Spain. For some reason or another, the legislature refused to pay Haraszthy for his work, perhaps because he was a Rebel sympathizer during the Civil War. Haraszthy is credited with first promoting the concept that fine table wines could be produced in California as well as Europe. But it was General Vallejo with the aid of a winemaker he employed from France who usually won more medals for his wines at the California State Fair.

But vines were not the only resources that Europe provided the California wine industry. Between the end of the Civil War and the beginning of Prohibition, European immigrants brought winemaking knowledge and techniques to the fertile soils of California. Bundschu, Foppiano, Korbel, Simi, Gundlach, Quitzow and Sebastiani established wineries that exist and flourish a century later.

A worldwide outbreak of phylloxera, American root louse, occurred in 1873 and nearly destroyed the young vineyards. Finally, vines disease-resistant to the soil parasite were found and varietal shoots grafted to these hardy stocks. The wine industry then continued its expansion to such a magnitude that in 1998 there were 194 wineries and 44,700 acres of grapes in Sonoma County alone.

The year 1919 also marked the year that the United States government accomplished what nature could not - it shut down the commercial wine industry with the 18th Amendment and passage of “The Volstead Act.” An interesting sidelight to this is that there was some ambiguity about the application of the Volstead Act to the wine industry. As a result, San Francisco Judge Van Fleet was asked to rule on exempting wineries. He did not. However, the vineyard owners, many of whom helped raise what was to become the California state flag in the “Bear Flag Revolt,” voted to go ahead with the crush and make wine anyway. Eventually the wineries not making “sacramental” or “medicinal” wine were closed but grape growers actually flourished. The demand for grapes from home winemakers was so great in the early years of Prohibition that grape prices reached highs not equaled until the last years of the 1960s. Thanks to a loophole allowing 200 gallons of wine yearly for home production, more than 150 million gallons were produced in hundreds of thousands of households in 1930.

The year 1933 brought the election of Franklin Roosevelt and the repeal of Prohibition, but not in time for many wineries. Only 160 of California's 700 wineries remained. These wineries endured by producing sacramental wine and grape juice or by planting other crops. Some pulled out their vines; others planted other fruit crops between the wine rows. The wine industry in California underwent a slow revival in the late 1930s. Many of the wineries that began producing wine immediately produced bulk wines that went to bottlers.

The '40s were tumultuous years for the California wine industry. Post-war years were characterized by severe overproduction of grapes and wine bringing government mandated programs of pro-rations and set-asides to cope with the overproduction. Adversity brought a new group of winegrowers from business, commerce and industry to work beside second-generation Sonoma County wine industry pioneers. They were still in the rebuilding process when the

nationwide wine boom hit in the 1960s. Orchards were pulled out and grazing land plowed under for vineyards and, for the first time, white grapes were predominant. The winemakers were heeding the tastes of the American consumer.

Technical changes were also taking place within wineries as stainless steel fermenters and crusher-stemmers appeared. Viticulturists were retiring to labs and appearing with exciting new varietals. The Treasury Department's Bureau of Alcohol, Tobacco and Firearms set about to clarify and more strictly define wine labels in 1975, and by 1978 “appellations” were beginning to be an important part of the marketing of Sonoma County wines.

WORLDWIDE PRODUCTION & CONSUMPTION

This table lists world wine production in 2002. The top 20 countries are ranked by number, and their production is given in metric tons. This table lists per-capita wine consumption in 2001 for the top 30 countries. The countries are ranked by number, and their per-capita consumption is given in liters.

WORLD WINE PRODUCTION (ranked by country, 2002)

Country	Rank	Production(metric tons)
France	1	5,199,930
Italy	2	4,460,413
Spain	3	3,444,310
United States	4	2,540,000
Australia	5	1,220,372
Argentina	6	1,215,000
China	7	1,080,000
Germany	8	1,017,595
South Africa	9	761,000
Portugal	10	626,500
Chile	11	575,220
Greece	12	500,000
Romania	13	500,000
Hungary	14	380,000
Russian Federation	15	343,000
Brazil	16	320,000
Austria	17	260,000
Croatia	18	220,000
Moldova	19	210,000
Uzbekistan	20	188,400

SOURCE: Food and Agriculture Organization of the United Nations.

NOTE: Per Capita consumption below is based on the Total Population of each country. Figures would be higher if based on drinking age population, which can vary by country.
Conversion: liters x .26418 = gallons.

PER-CAPITA WINE CONSUMPTION - 2001

Country	Rank	Per-Capita Consumption (liters)
Luxembourg	1	59.22
France	2	57.17
Italy	3	52.92
Portugal	4	46.74
Croatia	5	43.20
Switzerland	6	42.37
Spain	7	34.57
Argentina	8	32.57
Georgia	9	31.88
Hungary	10	31.56
Slovenia	11	31.13
Austria	12	30.46
Uruguay	13	29.51
Denmark	14	28.86
Greece	15	27.75
Germany	16	24.21
Belgium	17	24.12
Macedonia	18	23.81
Romania	19	20.99
Netherlands	20	20.95
Australia	21	20.54
Bulgaria	22	19.66
United Kingdom	23	16.97
New Zealand	24	15.86
Sweden	25	15.86
Cyprus	26	15.16
Chile	27	14.68
Moldova	28	13.62
Yugoslavia	29	13.11
Ireland	30	12.38

SOURCE: Economic Services Department, Wine Institute; Office International de la Vigne et du Vin, Paris.