

GRAPES CONQUER PRUNES: VINEYARD AND WINERY  
EXPANSION IN SONOMA COUNTY, CALIFORNIA

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In the late 1960's the people of the United States began to sharply augment their intake of wine.<sup>1</sup> From 1969 to 1972 per capita wine consumption in this country increased by an average of 12 percent per year.<sup>2</sup> Increased consumption obviously meant that more wine had to be produced somewhere. The bulk of the new American demand was filled by the United States, rather than foreign sources, and within the United States the demand was met, to an overwhelming extent, by California producers. Three-fourths of the wine drunk in the United States is made in California and the Golden State's response to the widening national market was immediate and spectacular. In the seven-year period from 1968 to 1975 California wineries nearly doubled their sales. During the same period acreage in winegrapes in California increased by 132 percent.<sup>3</sup> America's new wine thirst created "boom" conditions in the California wine industry.

The impact of the wine boom has had varied effects amongst the different winegrape growing regions of California, since each wine region has its own unique set of characteristics. Some areas have emphasized large vineyards and large wineries, others have focused on smaller operations. In all regions, however, the latest emphasis has been on table wines. Nearly every wine district has seen table wine varieties invade valleys and hillsides never before planted to vines. Dozens of new wineries have been constructed and old ones have been generously expanded to process the added tonnage.

To illustrate the stimulus of the wine boom on a particular locale, Sonoma County has been selected as a case

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study area. This county is one of California's most vinous areas, and one where table wines were first emphasized well over 100 years ago. While possessing the usual claim to a certain degree of uniqueness, many of the trends present in Sonoma mirror state-wide operations. The purpose of the study is to demonstrate how both the vineyard and the winery have responded to recent developments.

### *Location and Historical Development*

Sonoma County is situated north of San Francisco Bay, just west of the more widely famed Napa County (Figure 1). In contrast to Napa, where one valley and its adjacent hillsides represent the bulk of the plantings, Sonoma County has four major winegrowing districts: The Sonoma Valley, the Alexander Valley, the Dry Creek Valley, and the North Santa Rosa Plain-Russian River Valley. Each of these districts is physically distinct, but not by any means are the districts necessarily internally uniform climatically. Parts of different districts may be more similar than two ends of the same district (e.g., the southern part of the Sonoma Valley is more like the western end of the Russian River Valley growing area, than the northern end of the Sonoma Valley).

Sonoma County is deep in wine history. Viticulture in the area dates to the establishment of the San Francisco Solano Mission in the town of Sonoma in 1823. By the 1850's vineyards were being widely planted. One of the principal individuals responsible for winegrape development during the mid-nineteenth century was the so-called "Father of California Viticulture," Agoston Harazsthy. He gained his fame while in Sonoma where he imported large numbers of European vines for dispersal around the state. Both verbally and in print Harazsthy expounded upon the worthiness of the Sonoma area as a wine producer, and attracted many growers and a good deal of investment into the county.

In the 1860's Sonoma became the leading wine producing county in California, and two decades later local wines began to

receive international acclaim as gold medals were won at wine tastings in Europe and in the United States. Vineyard acreage and winery numbers showed a general increase in these years (with certain significant setbacks at times). This trend continued into the twentieth century, and by 1920 the number of registered wineries in Sonoma County was 256.<sup>4</sup>

The Depression arrived, however, and a mammoth slump in the wine business ensued. Sonoma County vintners lapsed into a prolonged somnolency. Vineyards were pulled out and wineries were closed. By 1933 there were only 160 wineries in all of California, compared to the figure of 700 in 1920.<sup>5</sup> The glum conditions endured until the late 1960's. Prices for grapes were low (\$112 per acreage ton in 1967 in Sonoma County) and in Sonoma the number of wineries had dwindled to less than 25.<sup>6</sup> Then came a drastic, almost overnight change. Between 1968 and 1975 the county witnessed a resounding revival of vineyard development, and winemakers new and old began an attempt to regain Sonoma County's pre-Prohibition wine reputation.

### *The Vineyard*

In 1967 Sonoma County had but 12,800 acres of winegrapes. In 1975 the total had climbed to 24,600 acres, a 92 percent increase in a mere eight years.<sup>7</sup> One wonders where 12,000 acres are suddenly discovered that are suitable for vineyard production. The availability of such a large amount of land was made possible in Sonoma County because the prune industry was in a tight squeeze at about the same time that winegrapes became popular. Prune orchards were ripped out and vineyards were planted. The county lost over 11,000 acres of prunes between 1965 and 1975.<sup>8</sup> This land use conversion suggests that the world is not all bad if humans have begun to substitute wine for prune juice. But not all vineyards occupied prune orchards. Apple and pear orchards, and also pasturelands gave way to the advance of the grape.

In Sonoma County the planters of these thousands of acres of grapes have varied backgrounds and own widely varying

amounts of land. There are many small and medium-sized holdings (10 acres to 200 acres) in vineyards in contrast to trends toward large holdings, many over 1,000 acres, in places like Monterey County on California's central coast, and in several Central Valley counties.

The largest single landholder in Sonoma County is Sonoma Vineyards with about 2,000 acres, part of which is in Mendocino County to the north. Italian Swiss Colony has 2,000 acres (only 800 of which are in vineyards). There are several other large holders with greater than 500 acres, the most famous of which include Gallo with approximately 700 Sonoma County acres, and Widmer Vineyards, a large upstate New York winery with 500 acres. Companies such as Prudential Insurance are also involved in Sonoma vineyard ownership.

In addition to these relative giants there are a myriad of lesser holdings, in the hands of retired executives, retired airline pilots, former aerospace engineers, city folk who have retreated to a hoped-for utopia in Sonoma wineland, and long-time farmers, especially of Italian heritage, who have been on the scene through boom and bust.

With such a variety of vineyardists and sizes of holdings, one might suspect great variation in the kinds of grapes they have planted. Surprisingly, although many grape varieties are involved, the response has been uniform in terms of the "class" of grapes cultivated: premium wine grapes for premium table wines. This trend represents a change for Sonoma County, and a reversion to nineteenth century conditions. The truth is that Sonoma County had become a bulk wine producer prior to the recent boom. Most wine made in the county was sold by the barrel to other wineries who then bottled the wine under their own labels. In 1967, 85 percent of the value of the grape crop was represented by commons, and only 15 percent by premiums. Contrast this figure with that of 1974, a short seven years later, when premium grapes accounted for 65 percent of the harvest value, and commons only 35 percent.<sup>9</sup> The premium

portion will increase even more in the next few years as newly planted vineyards begin to produce.

Further evidence of the increased importance of premium grapes is supplied by noting which varieties are the most widely planted (Table 1). In 1969 the bearing acreage (i.e., those vineyards producing a crop) was dominated by commons. Zinfandel and Carignane accounted for nearly one-half of the total, while the two most premium reds, Cabernet Sauvignon and Pinot Noir, accounted for only 5 percent of the acreage.<sup>10</sup> In 1974, Cabernet Sauvignon and Pinot Noir comprised more than half the total in non-bearing vines, while the two leaders in 1969 made up less than 7 percent of the new plantings.<sup>11</sup> By 1974, one acre in five that was planted to vineyard, both bearing and non-bearing, was planted to Cabernet Sauvignon, which became the single most important variety in Sonoma County, finally surpassing Zinfandel. This is proof positive that Sonoma once again seeks a name in the world of premium wines.

TABLE 1. Percent of Total Wine Grape Acreage in Selected Grape Varieties in Sonoma County

Variety	1969 Bearing	1974 Non-bearing	1974 Total
Zinfandel	32	6	13
Carignane	16	1	8
Cabernet Sauvignon	3	31	20
Pinot Noir	2	23	12
French Colombard	6	1	5
Chardonnay	1	17	11

Source: Sonoma County Department of Agriculture, *Agricultural Crop Report 1969* (Santa Rosa, California: County of Sonoma, 1970), pp. 10-11, and California Crop and Livestock Reporting Service, *California Grape Acreage 1974* (Sacramento: United States Department of Agriculture and California Department of Food and Agriculture, 1975), pp. 19, 20, 22, 27, 32, 35.

Although Sonoma County has gone the premium route for wine production, it has not changed the color of its wine. Nearly three-fourths of the grapes planted now, as before, are used for producing red wines. Among the whites, however, the same trend of switching from commons to premiums can be seen. Chardonnay, the supreme white wine grape, occupies more acres today than any other white grape in Sonoma County.

The rush of new plantings has brought along a new era in viticultural techniques, and an altered look to the rural landscape of the county. Some of the ideas are not necessarily new, but they have seen widespread use in Sonoma land only with the recent boom. Among the changes seen in the vineyard are wider spacing of plants, greater variability in pruning techniques, new methods of frost protection, and a greater willingness to irrigate.

Grape vines are now generally, but not universally, planted in 12 x 8 fashion, meaning a given vine is 8 feet from its neighbors in the same row and 12 feet from its neighbors in adjacent rows. Previously, closer spacings, such as 10 x 6 or 7 x 7 were used. It has been shown that more plants per acre do not necessarily yield greater production, since more plants produce greater competition. With the wider spacing presently used vineyard care, including cultivation, is made easier.

Sonoma County's vineyards were previously owned largely by Italian surnamed families who clung to head pruning as the only legitimate way to train a vine, despite suggestions from agricultural advisors that other forms of pruning were better for some grape varieties. With the influx of new blood into Sonoma County vineyards, cordon pruning and cane pruning (both of which involve trellising) are now employed, and one can differentiate old vineyards from new vineyards, not only by the thickness of vine trunks, but also by the method of pruning.

Frost protection has become one of the most costly additions to the modern vineyard in Sonoma County. Some vineyardists still have no frost protection, some still use the

older, less protective wind machine-orchard heater combination, but the most popular technique presently in use in Sonoma County is the *permanent set* system. This is a system of buried pipes connecting stems with overhead rainbird sprinklers attached. When freezing temperatures approach, the sprinkler system is turned on, and as the water freezes on newly formed buds and leaves, the heat of fusion, released by water going from the liquid to the solid state, maintains the temperature at a steady 32°F (0°C).

The permanent set system has several plusses, in addition to the fact that it is very simple to use, once implanted. It protects to lower temperatures than a wind machine-orchard heater combination; it can be used for cooling the vineyard if summer heat becomes excessive; it can be employed for spreading herbicides; and finally, it can be used for what many might have assumed was its main purpose anyway, irrigation.

Irrigation of vineyards was virtually unheard of in Sonoma County before 1960. Harazsthy had long ago pronounced irrigation as unnecessary and undesirable in this area and for 100 years everyone believed him. There is much lore about, suggesting that the best wines are made from unirrigated vineyards. However, someone finally figured out that grapevine roots cannot really tell the difference between rainwater and irrigation water, and so farmers have begun to irrigate their vines in the Sonoma area, thereby increasing their production totals.

A permanent set system is costly not only because of all the pipe and sprinkler heads, and the laying of the pipe. Water development costs are also high. A reservoir must be built, a large pump purchased, and in most cases, a well has to be dug. Total costs for a permanent set system may be upward of \$1,500 per acre.

In summing up the vineyard changes in Sonoma County, the most perceptible alterations are the greatly increased expanse occupied by grapes, the switch from common to premium

varieties, and the employment of new technology. The county has not yet been purchased and consolidated by a few large corporate enterprises.

### *The Winery*

All the changes during the boom have not been in the vineyard. Sonoma County, in November 1976, claimed 47 operating wineries (with several others in the planning stages), double the total in 1970. The heaviest concentrations of wineries occur within a few miles of the towns of Healdsburg and Sonoma. Of Sonoma County's wine growing regions, the Alexander Valley has the largest number (18), followed by the Santa Rosa Plain-Russian River Valley (14), the Sonoma Valley (10), and Dry Creek Valley (6).

The majority of the new wineries are small, family-sized operations. Production in one-third of them is less than 25,000 gallons of wine per year, which puts them in the tiny (the popular term is "boutique") category. The new wineries are predominantly family-owned or owned by a small group of friendly shareholders. For the first time a large number of wineries are operated by people without Italian surnames. That is a major change.

In addition, Sonoma County has been subject to large corporate invasions much the same as have been occurring in other wine regions of California. Heublein, Schlitz, Scottish and Newcastle, and Pillsbury have entered the arena. Some have built large, new wineries. Others have taken over old small ones. It is notable that since 1970 the wineries with the greatest announced financial difficulty have been those with large corporate influence. For example, Sonoma Vineyards, the county's second largest winery, with a capacity exceeding three million gallons, was completely reorganized financially in 1976. The winery lost nearly nine million dollars in 1975, and owed so much money to Bank of America and Wells Fargo Bank that the banks decided that they had to step in to keep the vats from

vanishing. The banks, along with a national liquor distributor, Renfield, ended up owning a percentage of the winery and a new management team was brought in to straighten out the operation.

So many new wineries has meant the purchase of new equipment. New technology is even more rampant in the winery than in the vineyard. Stainless steel tanks, inflatable bladder presses, and centrifuges are all the rage now. To detail the latest equipment and explain its operation would require a technical treatise. The general impact is that the new technology has greatly increased the financial ante for those interested in the winery end of the grape scene. The reward is that the wine-maker is better able to control his processing, and in the end, to more consistently produce what he or she hopes is a high quality product.

The fierce competition resulting from so many new entries into the winemaking world has led to a greater breadth of types of wine being made available to the consumer. Two Sonoma County wineries (Grand Cru and Sebastiani) have recently produced a Nouveau wine, a red wine which is drinkable one month after harvest, and a type which is very popular in France.

A second addition to the usual lot of wines has been the production of vintages from grapes infected with *Botrytis cinerea*, known as the "noble mold." These wines are very sweet but low in alcohol and are not usually drunk with dinner. If successfully made they may command astronomical prices. At least five Sonoma County wineries (Grand Cru, Chateau St. Jean, Trentadue, Gundlach-Bundschu, and Sonoma Vineyards) have produced wines from *Botrytis*-infected grapes.

A third example of the kind of pioneering that all this competition produces is a recent announcement by the barely opened Mill Creek Vineyards that it has made a Cabernet Sauvignon Blanc!

The great number of new wineries, in addition to the new kinds of wine, has produced bafflement for the consumer. How can anyone organize, in his head, the varied products of so many

wineries? Given a list of the wineries, one might ask, "What are they all doing? How can there be so many?"

I have decided that some order might be brought to this situation, if at least the wineries are categorized (Table 2). The reader will have to sort out the numbing list of wines on his own. My classification is not a standard one, nor are the criteria separating classes consistent, but the classification does summarize some important facts about Sonoma County wineries: the recency of so many, the longtime role of the Italian community, and the arrival of the conglomerate.

The categories have little to do with size, although the new family wineries clearly tend to be the smallest. Caution must be exercised in accepting without reservation a given year for the start of a winery. In many instances an old winery is taken over by a new group, or a new winery may be built on an old winery site. In some cases a winery may be closed for several years and then reopened. Generally, wineries seek as early a founding date as is legally possible, since earlier seems to equal better (psychologically) when it comes to wine production.

The bulk category includes wineries which do not retail any of their wine, but sell it to other wineries, mainly those in the Central Valley region such as the Gallo Co. Some of the middle-sized wineries that do retail their wine also sell a good amount in bulk to Gallo. Much of this bulk action is still a hangover from pre-Boom days.

The total number of wines produced by the establishments classified is in the hundreds. Some wineries produce 20 different wines. At the other extreme, one winery, as yet unopened, has advertised that it will produce only Cabernet Sauvignon. Some wineries market their products nationwide; others (obviously very small ones) sell their entire production through mailing lists. The consumer who wishes a wine from every winery in Sonoma County faces an impossible task. Sonoma County wineries, even the largest, may be midgets compared to their Central

TABLE 2. Classification of Sonoma County Wineries

	Storage Capacity in Thousands of Gallons	Year Established
<i>OLD FAMILY STYLE WINERIES</i> (Founded before 1965)		
Korbel	1,000	1862
Martini and Prati	2,500	1880's
Valley of the Moon	200	1883
Foppinao	940	1896
Pedroncelli	425	1904
Sebastiani	3,000	1904
Kenwood	120	1906
Mazzoni	80	1912
Bandiera	75	1937
		(reopened 1975)
Rege	150	1939
Hanzell	11	1956
<i>NEW FAMILY STYLE WINERIES</i> (or small corporations)		
Z-D	5	1969
Trentadue	50	1969
Swan	3	1969
Dry Creek	20	1972
Davis Bynum	90	1973
Pastori	45	1973
Grand Cru	20	1973
Vina Vista	7	1973
Sausal	125	1973
Chateau St. Jean	130	1973
Sotoyome	30	1974
Hacienda	30	1974
A. Rafanelli	10	1974
Alexander Valley	17	1975
Johnson's	12	1975
Beliz-De Loach	5	1975
Jade Mountain	4	1975
Lambert Bridge	40	1975
Preston	5	1975
Old Hop Kiln	5	1975
Gundlach-Bundschu	11	1975
Mill Creek Vineyards	?	1976
Landmark	?	1976

TABLE 2 (continued)

	Storage Capacity in Thousands of Gallons	Year Established
<i>BULK WINERIES</i>		
Frei Brothers	780	1880
Chris Fredson	285	1890
Seghesio	1,500	1902
Sonoma County Co-Op	750	1935
Sonoma County Cellars	300	?
		Corporation
<i>GIANT CORPORATE INFLUENCE</i>		
Italian Swiss Colony	9,000	Heublein
Sonoma Vineyards	3,000	Bank of America & Renfield
Geysler Peak	2,000	Schlitz
Souverain	1,400	Formerly Pillsbury, now grower owned
Simi	500	Schieffelin & So.
Cambiaso	650	Four Seas Investment
Buena Vista	75	Young Bros. Markets
Nervo	?	Schlitz

Source: Field Work, and "Directory of the Wine Industry in North America," *Wines and Vines*, Vol. 56, No. 12-A (December 1975).

Valley cousins (Gallo has three wineries with a storage capacity of 165,000,000 gallons of wine), but they do offer variety--in types of wine, in levels of technology, and in backgrounds of the owners.

#### *Conclusion*

The early 1970's boom is over from the growers' standpoint. A glut of grapes hit the market beginning in 1974. There will probably be a "surplus" until 1980, as thousands of new acres come into bearing.<sup>12</sup> Some vineyards are even being pulled out, with just under 1,000 acres of vineyard disappearing

in 1974-75 in Sonoma County.<sup>13</sup> Prices for grapes in 1976 did revive somewhat in Sonoma County, but this was a result of climatic influences rather than any diminution in vineyard acreage.

The number of new wineries, in contrast to grape acreages, keeps increasing. In part this is a response to the present grape glut. Farmers, unable to sell their grapes, have built their own wineries. In the future, one suspects that there will have to be a "shakeout" of so many new wineries, but the number recently built does suggest that there is still room for the proverbial "little guy" in one part of the business world.

Although Sonoma County has undergone phenomenal vineyard and winery expansion in the last eight years, winegrapes as a crop still take a seat far to the rear in Sonoma County's agricultural picture. Also, although wine has displaced prune juice it is still not the county's leading beverage. Milk remains the leading source of Sonoma County agricultural income.

Finally, what has been happening in Sonoma County in terms of vineyard planting and winery foundation, has been paralleled in Napa County, where total grape acreage is nearly the same, and recent plantings are equally abundant. Monterey County, and other central coast locations, as well as Central Valley plantings, make Sonoma County's surge look like one small pebble (I might say a golden pebble) in a pile of gravel. Certainly, the ultimate outcome for Sonoma County, as a result of the expansion of the 1970's, will depend on what happens to the rest of California's vineyards, and also on how much we underwined Americans decide that we want to increase our consumption.

#### NOTES

<sup>1</sup>Portions of this paper were presented in "The Revitalization of the Wine Industry in Sonoma County," read at the 1976 Meetings of the California Council for Geographic Education.

<sup>2</sup>"Is Consumer Scarcity the Industry's Main Woe?" an interview with Louis Roos Gomberg, *Wines and Vines*, Vol. 57 (September 1976), p. 30.

<sup>3</sup>"California Grape Acreage," *Wines and Vines*, Vol. 57 (May 1976), p. 42.

<sup>4</sup>W. F. Heintz, "Prohibition Took Toll of California Wineries in 1920-33," *Wines and Vines*, Vol. 57 (September 1976), p. 76.

<sup>5</sup>Personal interview with W. F. Heintz, October 1, 1976.

<sup>6</sup>Sonoma County Department of Agriculture, *Agricultural Crop Report 1968* (Santa Rosa, California: County of Sonoma, 1969), p. 5.

<sup>7</sup>*Ibid.*, p. 10, and California Crop and Livestock Reporting Service, *California Grape Acreage 1975* (Sacramento: United States Department of Agriculture and California Department of Food and Agriculture, 1976), p. 33.

<sup>8</sup>Sonoma County Department of Agriculture, *Agricultural Crop Report 1965* (Santa Rosa, California: County of Sonoma, 1966), p. 10 and Sonoma County Department of Agriculture, *Agricultural Crop Report 1975* (Santa Rosa, California: County of Sonoma, 1976), p. 4.

<sup>9</sup>Sonoma County Department of Agriculture, *Agricultural Crop Report 1968* (Santa Rosa, California: County of Sonoma, 1969), p. 5 and Sonoma County Department of Agriculture, *Agricultural Crop Report 1974* (Santa Rosa, California: County of Sonoma, 1975), p. 5.

<sup>10</sup>Sonoma County Department of Agriculture, *Agricultural Crop Report 1969* (Santa Rosa, California: County of Sonoma, 1970), p. 10.

<sup>11</sup>California Crop and Livestock Reporting Service, *op. cit.*, pp. 19, 27, and 32. The reason for using non-bearing acreage is that this category is primarily composed of vines less than four years of age and thus indicates which varieties are dominant among recent plantings.

<sup>12</sup>"Kirby Moulton Reviews California's Outlook," *Wines and Vines*, Vol. 57 (August 1975), pp. 27-29.

<sup>13</sup>California Crop and Livestock Reporting Service, *op. cit.*, p. 37.