BARBERA IN CALIFORNIA

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Barbera is grown in most of California's major wine grape production regions, and is valued as a productive cultivar producing fruit with good color and acidity. In 2004, there was a total area of 3340 hectares planted to Barbera in the state.

Barbera was brought to California by Italian immigrants from Piemonte who settled in our state during the late 19th Century. Many Italian immigrants came to work in the forests and saw mills of California, as well as in the fishing and agricultural industries (hops, pears, dairy and other crops). At first, many vineyards were planted by Italian immigrants for their own consumption-- and wine was also traded or sold to local customers. Often, grape vine buds of desired cultivars were stored in potatoes and carried from Italy to California, arriving in good condition for propagation. Barbera was probably introduced initially to our state in this manner.

The first documented introduction of Barbera to California was by the Italian Swiss Colony, a cooperative farming and wine making organization located 110 kilometers north of San Francisco in Sonoma County. Dr. Giuseppe Ollino was hired by Italian Swiss Colony to import Italian wine grape cultivars including Sangiovese, Nebbiolo, Barbera, and Gringolino (Florence, 1999).

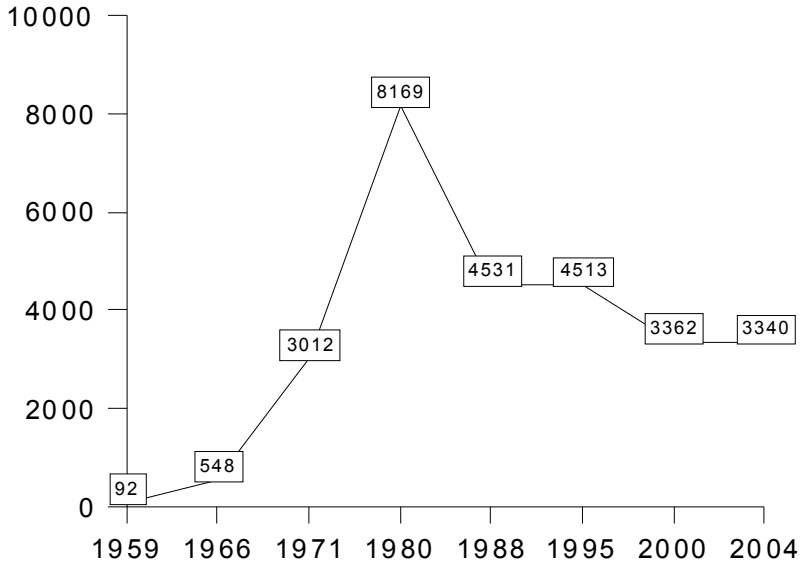
Barbera was always a favorite of many immigrant wine making families, and has been made as a varietal wine in the North Coast by the Martini, Seghesio, Mondavi and Sebastiani Wineries. Despite this, the area planted to Barbera and wine production in the North Coast Region was never very large. In many cases, Barbera was blended with other cultivars to make jug wines.

In 1944, Amerine and Winkler published "Composition and Quality of Musts and Wines" in *Hilgardia*, a UC agricultural science publication. They evaluated samples of wine grape musts made from numerous wine grape cultivars from around the state, and also described the wines. Of Barbera, which they sampled from three regions for multiple years, they wrote:

"The Barbera is well above average in vigor and produces moderately well…The musts have consistently shown a relatively high acidity...As in their native country, the Barbera wines of California have been robust and somewhat heavy. ..As a rule the wines have been distinctive in aroma and flavor, fruity, medium to high in acidity, average to good in character, full bodied, and usually good in color and finish...Because of their general character of heavy body, high acidity and at least average tannin content the wines of Barbera require aging and greatly profit by it. After reaching full development they maintain their characteristics and quality under favorable storage conditions...It is among the best varieties tested for the production of average and above average quality dry table wines for (Winkler) region V (warmest region) but its planting is less well indicated for that region than for III and IV. "

In the 1970's, Gallo Winery began offering planting contracts to growers in the San Joaquin Valley for Barbera, which they were planning to use in blended red wines. The area planted to this cultivar increased dramatically, reaching a peak in 1980 at around 8100 hectares.

Figure 1: Area planted to Barbera in hectares, 1959 – 2004 (source: California Agricultural Statistical Service, 2005)



The Gallo organization had hoped that these plantings would provide grapes with good acidity and color, high yields and good flavor under the warm conditions of the San Joaquin Valley region. Unfortunately, many of the vineyards were propagated from virused infected scion material. Poor color, lower yields, and delayed maturity plagued many of the plantings. Also, optimistic projections for wine consumption and production were not met, and an oversupply of fruit occurred by the early 1980's (P. Christensen, personal communications). Many Barbera plantings were removed, and today, the area planted to this cultivar is around 3300 hectares.

Smaller plantings of Barbera were made in other regions around the state. A summary of vine area and crop value is shown in Table 1:

Table 1: Barbera Plantings by Region, California

Region	North Coast	Central Coast	San Joaquin Valley	Sierra Foot hills
Hectares	75	30	3344	93
% of State Total	2.5%	1%	92%	5.1%
Ave. price/ton	$2204	$1289	$196	$1153
Total Value	$604,000	$382,000	$13,360,000	$1,267,000
% of Cal. Value	3.9%	2.5%	85.5%	8.1%

Source: California Agricultural Statistics Service, 2004

Most of the vineyards planted to Barbera in San Joaquin Valley are in Fresno County. Typically, the terrain is flat, the vines are planted approximately 2.5 by 3.7 meters, trained on a three wire "California sprawl" trellis system with spur cordon pruning, drip irrigated, and mechanically harvested. Vines are vigorous. Growers use little canopy management other than mechanical hedging. Typical yields range from 20 to 30 tons/hectare. Most of the wine made from these vineyards is blended into other varietals, and little wine is bottled from this region identified as Barbera. Wine quality from this region ranges from fair to average.

In the Coastal and Sierra Foothills Regions, Barbera is grown more carefully and the fruit and wine are of higher quality than those grown in the San Joaquin Valley. Older vineyards are planted similar to those of the San Joaquin Valley, but newer plantings are made with vines spaced closer together (1.8 m x 2.5 m) usually trained on vertical shoot positioned trellises with spur cordon pruning. In these regions, soils are less fertile, and the climate is cooler, but Barbera tends to be a vigorous cultivar regardless. Yields range from 9 to 12 tons/ hectare. Wines made from Barbera in these regions range from average to excellent, and are usually bottled as varietal wine, rather than blended into other wines.

In a trial conducted by the author, Barbera performed quite well under North Coast conditions. Data was collected from 60 vines planted 2.15 meters by 3.1 meters on 5 C rootstock in the Roumiguire Vineyard in the Red Hills area in Lake County near Kelseyville, California. The vineyard is planted on volcanic soils. The climate is described as a high Winkler Region III. The vines were trained with a spur cordon pruning system on a vertical shoot positioned trellis system. The following data were obtained:

Table 2: Barbera vine performance, Red Hills Trial, 1998-2000, Kelseyville, California

Year	**Harvest Date**	**Av.yield/ 1 m of cordon (kilograms)**	**Clusters/ 1m of cordon**	**Average Cluster Weight (grams)**	**Fruit/prun-ings ratio**
1998	October 11	3.4	3.1	89	8.3
1999	Sept. 27	1.8	22	82	2.9
2000	Sept. 15	4.5	45	102	8.4
3 year average		3.2	33	89	6.5

The lower yields of 1999 were due to a change in the pruning in which spurs were limited to a maximum of 2 buds. Previous to that, some vines had a short cane to boost production and help devigorate the vines. These were removed in winter of 1999.

Following are the fruit chemistry data:

Table 3: Fruit chemistry, Red Hills Trial, 1998-2000, Kelseyville, California

Year	Average berry weight in grams	% brix sugar	pH	Titratable acidity, g/l
1998	1.68	25.9	2.98	9.4
1999	1.63	26.3	3.15	11.9
2000	1.82	25.6	3.26	9.6
3 year average	1.71	25.9	3.13	10.3

There are over 60 producers of Barbera in California, but as a market segment, it is quite small. Most producers are in the Coastal and Sierra Foothill areas. Wine typically is sold directly in winery tasting rooms, at restaurants and wine shops, and a small amount is also sold in supermarkets. In 2004, Nielsen Scan Data revealed supermarket and wine shop sales of 76,000 bottles of Barbera that were produced in the US at an average price of $10.13. In the same period, 39,336 bottles of Barbera produced in Italy were sold in the US at an average price of $10.76.

Barbera is appreciated by many American wine makers and consumers as a wine with good color, acidity, and fruit flavors. It is also considered a wine that pairs well with food. There continues to be a strong following for this cultivar in California.

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