

Recent Trends in the California Wine Grape Industry

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This article takes an in-depth look at the changes in the California wine grape industry over the last 30 years. In response to rising consumer demand for California wines, the wine grape industry has expanded rapidly in acreage and production. The growth, as we show, has not been uniform across grape varieties or the state's major growing regions.

Wine grapes were responsible for 8.7 percent of the state's total agricultural receipts in 2004, ranking third among agricultural products behind dairy and greenhouse products. Furthermore, California accounts for 92 percent of the wine grape production in the entire United States. The wine grape industry is therefore of great significance to both the state and the nation. The article by Goodhue et al. in this issue details several of the changes being observed within the California wine industry. These are mirrored, by and large, by trends within the wine grape industry. This article tracks the growth and changes of the California wine grape industry across the major

varieties and growing regions over the last 30 years. Special emphasis is paid to the changing face of grower returns.

California's Growing Regions

The California Department of Food and Agriculture divides the state into 17 pricing districts for the purposes of data collection and presentation. We organized the most significant pricing districts into four major growing regions: 1) The North Coast, which extends northeasterly from the San Francisco Bay Area and includes the Napa and Sonoma Valleys, 2) The Central Coast, which extends from San Mateo County in the north to Santa Barbara in the south, 3) The Central Valley, which includes the Sacramento and San Joaquin Valleys, and 4) The Southern Valley, the most vast of the four regions including Kern and San Bernardino Counties and all points south. Figure 1 shows the locations of the four major grape growing regions in California.

Figure 2 reports the total grape crush in tons for the four growing regions over the last 30 years. All four regions experienced sharp drops in total grape production in 2006 due to droughts and below-average temperatures throughout late 2005 and early 2006. The most severe impact was felt in the Central Valley, where the drought resulted in strict water cuts for grape growers and, thus, reduced irrigation. Overall, we see that production has increased steadily in the four growing regions. Total production in the Southern Valley has been relatively steady since the early 1980s, and in 2002 the Central Valley became the region producing the most grape crush in California.

Figure 1. The Major Wine Grape Growing Regions of California

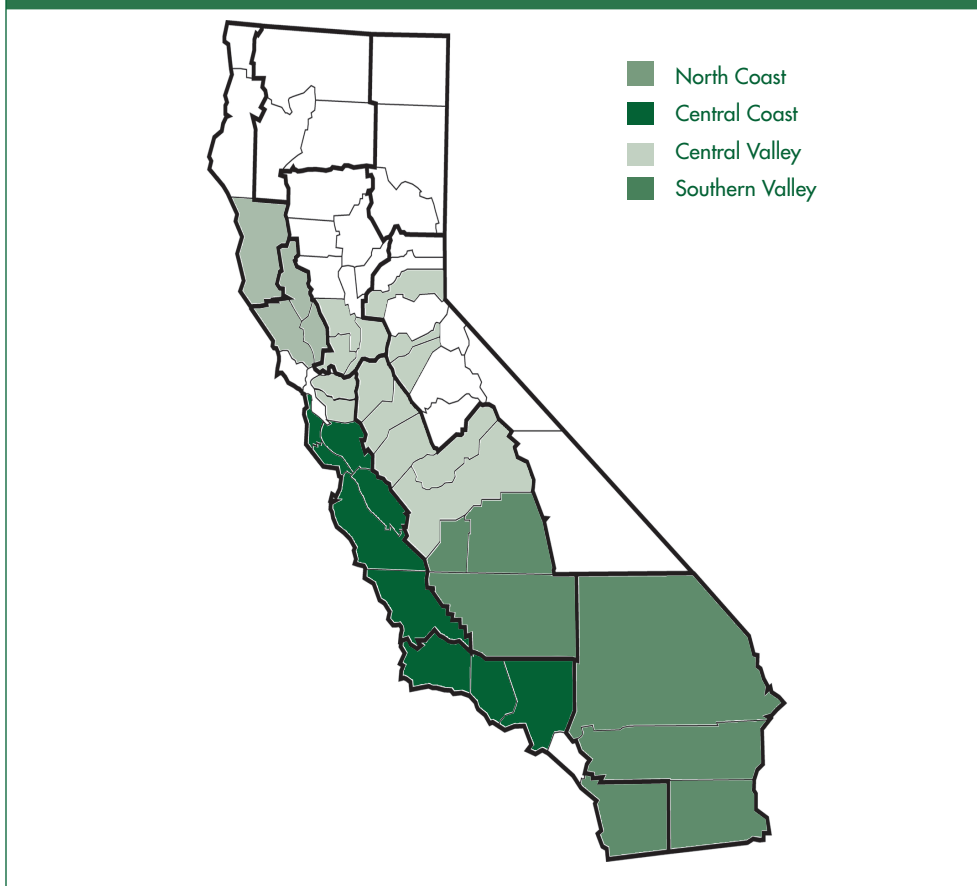


Figure 2. Wine Grape Production in California's Growing Regions, 1976–2006

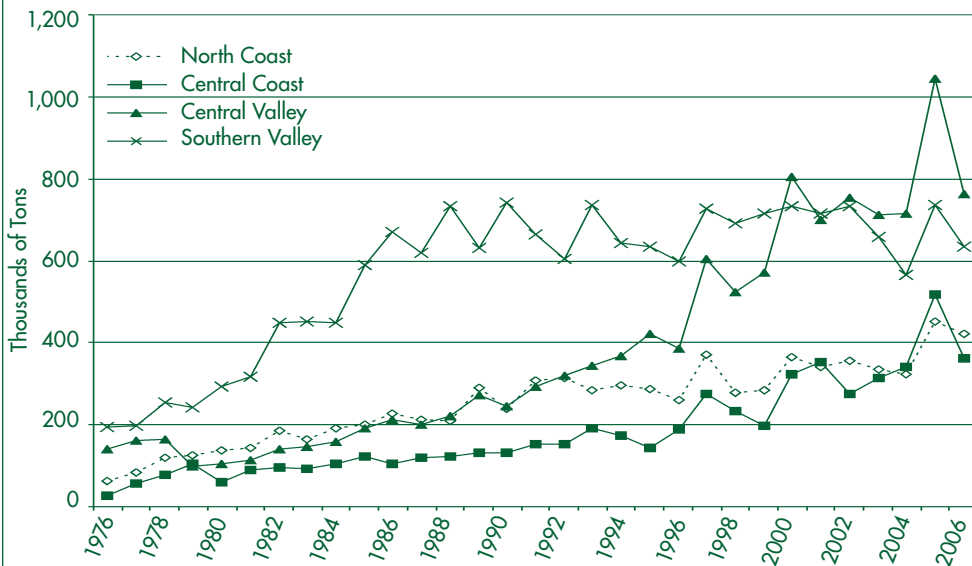


Figure 3. Average Prices Received by Growing Region, 1976–2006

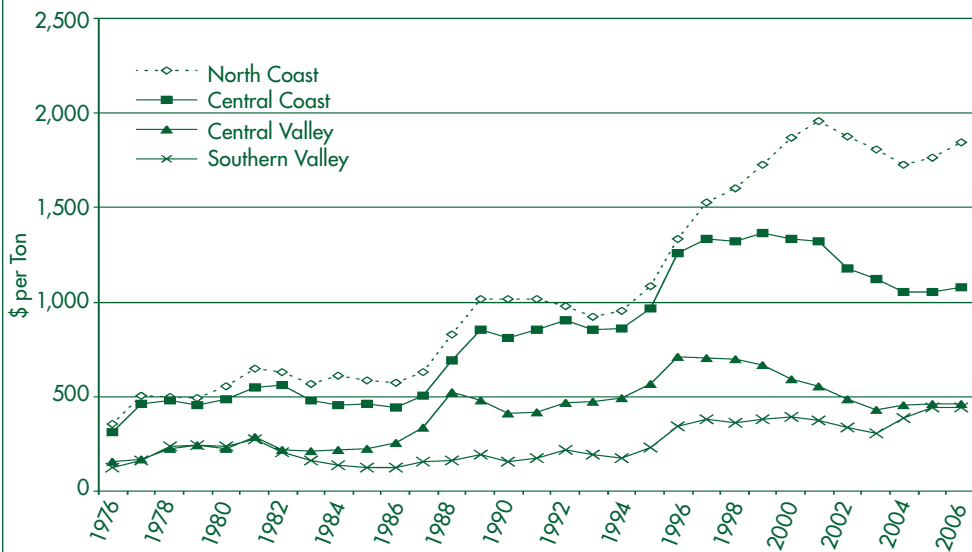
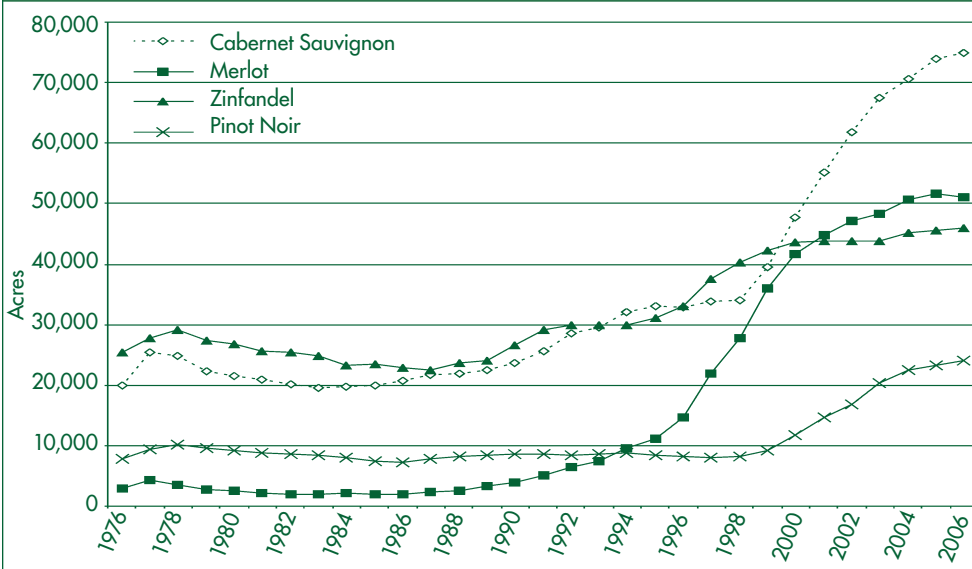


Figure 4. California Red Wine Grape Acreage, 1976–2006



The total production in the high-quality coastal regions has grown relative to that in the inland areas. In 1976 the North Coast and Central Coast combined for 22 percent of California's total grape crush. In 2006 their share was 36 percent. This growth is attributed mainly to the expansion of the Santa Barbara and San Luis Obispo American Viticultural Areas (AVAs). The U.S. Department of the Treasury divides the U.S. wine grape industry into AVAs according to distinctive climate, soil, and elevation conditions. The Paso Robles AVA, in San Luis Obispo County, alone grew from fewer than 20 wineries in 1990 to more than 170 at the turn of the century.

Figure 3 reports the average prices received in the four growing regions. The prices are weighted by the crush counts of the major varieties. There has nearly always been a significant difference between the prices received in the coastal regions and those of the inland regions. Starting in the late 1980s, this gap began to grow wider to reflect the increasing preference among American consumers for high-quality table wine. In the late 1990s, a significant margin developed between the North Coast and Central Coast prices. The average prices received for grape crush in the North Coast, which is home to the most famous AVAs in the United States, are now significantly higher than those received anywhere else in the state. Average North Coast prices, driven in part by the surging prices of Pinot Noir grapes, are flirting with the \$2,000/ton benchmark while even those of the Central Coast remain closer to \$1,000 per ton.

For several years the grapes of the Central Valley yielded higher returns than those of the Southern Valley. Average prices received in the Central Valley have fallen in recent years, however, as much of the production boom in that region has been associated with low-priced Chardonnay

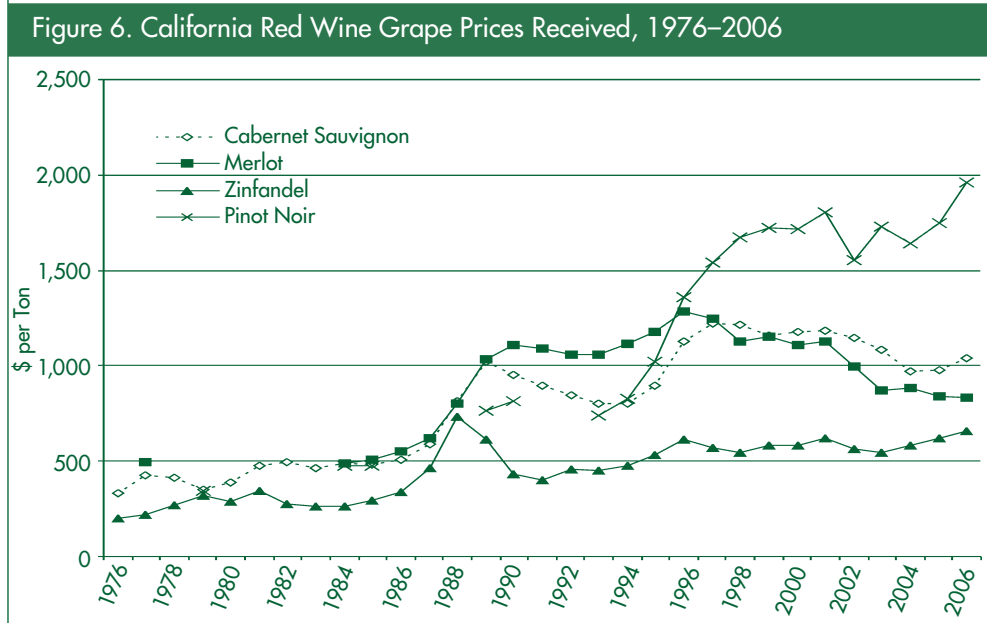
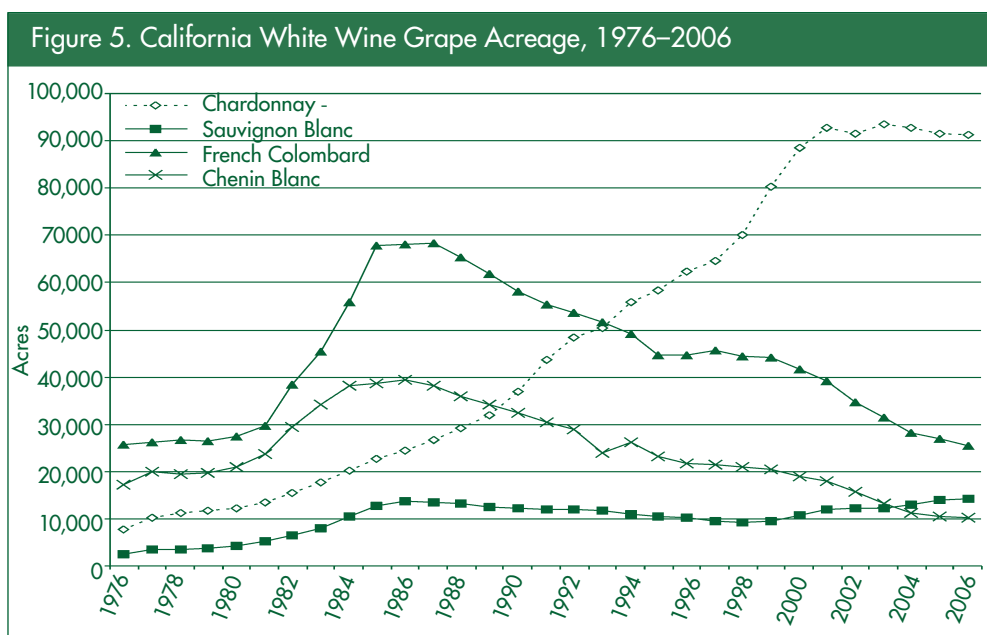
grapes. As of 2006, Chardonnay grapes accounted for 75 percent of the total white grape production in the Central Valley, which are in turn crushed and processed into cheap wines with wide-scale distribution. Among the growing regions, average prices for Chardonnay grapes are the lowest in the Central Valley by a significant margin.

Major Wine Grape Varieties -

The analysis covers eight of the largest wine grape crops in California as of 2006. These include four reds—Cabernet Sauvignon, Merlot, Zinfandel, and Pinot Noir, and four whites—Chardonnay, Sauvignon Blanc, French Colombard, and Chenin Blanc. The total crush for these eight varieties statewide grew from 422,000 tons in 1976 to 2.2 million tons in 2006. Over the same time span, the average prices per ton received by growers grew from a statewide average of \$235 to \$916 in nominal dollars. Both of these trends reflect a major expansion, both domestic and international, in demand for California wines. However, the growth in production and revenues has not been uniform across growing regions or varieties.

Figures 4 and 5 show how the acreage for the eight major California winegrapes has changed over the years. Acreage tells a clearer story than does crush, as acreage is less affected by weather shocks such as droughts or the ebbs and flows of the international wine market. Acreage for the four major red varieties was very stable until the mid-1990s, at which point acreage began to expand rapidly for both Cabernet Sauvignon and Merlot. Cabernet acreage has experienced the most growth of all of California's major winegrapes in the last 15 years. The crop reached 75,000 acres and 430,000 tons crushed in 2006, making it easily the largest red grape crop in the state.

Among white grapes, the acreage and production of Chenin Blanc and



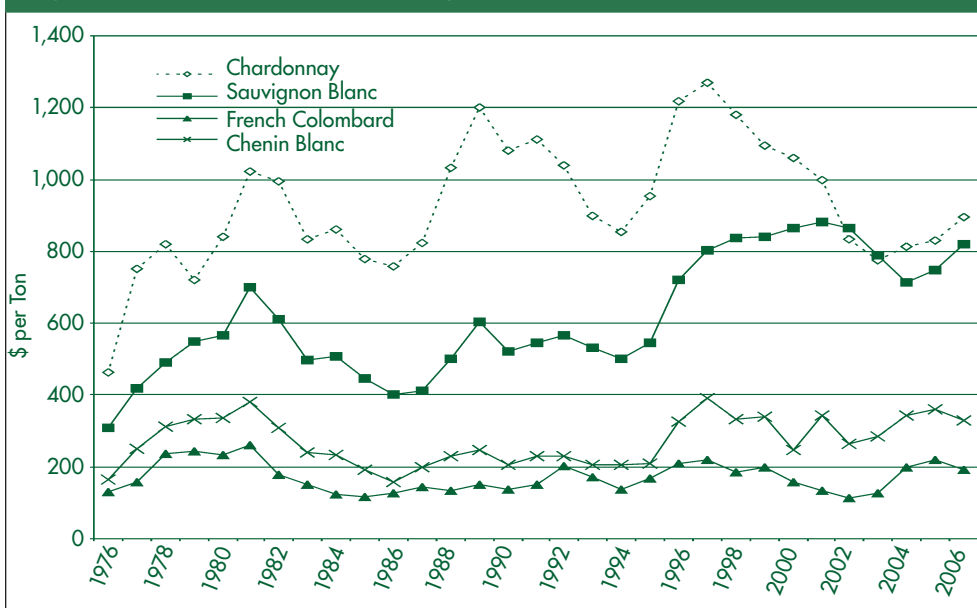
French Colombard have fallen steadily since the mid-1980s. Both of these varieties were once grown extensively throughout the state but, over time, production has fallen dramatically in the North Coast and Central Coast. The production of these two grapes, among the more easily grown in California, is now concentrated in the inland regions. With the exception of Colombard grapes grown in the San Joaquin Valley, these grapes are typically not used in blends and today they are used primarily to produce low-priced jug wines.

The versatile Chardonnay grape has continued to expand over the years, only beginning to plateau at the turn of

the century. At 91,000 acres and over a half-million tons of crush in 2006, it remains the largest grape crop in the state. The overarching trend of increasing red grape production and decreasing white grape production is due in part to the breadth of studies that have demonstrated the health benefits of moderate red wine consumption.

Figures 6 and 7 report the prices received for the eight major wine varieties. The returns are statewide averages, weighted by growing regions. Since the mid-1990s, Pinot Noir prices have pulled significantly ahead of those of the other major red varieties, corresponding with the growing reputation

Figure 7. California White Wine Grape Prices Received, 1976–2006



of the wine varietal as a high-quality table wine. In the North Coast, Pinot Noir grapes now earn over \$2,200 per ton on average. Certain AVAs in Napa and Sonoma Counties receive much more than that. It is worth noting, however, that Pinot Noir production is concentrated in the coastal regions, where returns are significantly higher than in inland areas. Outside of the North Coast, Cabernet Sauvignon grapes yield the highest average returns throughout the state by a significant margin. Zinfandel grapes have consistently earned the lowest average returns of the major red grapes.

Throughout most of the last 30 years, Chardonnay grapes yielded the highest average prices among the major white varieties by a wide margin. In the last five years the gap has narrowed between Chardonnay prices and those of Sauvignon Blanc. This is due primarily to the aforementioned explosion of Chardonnay production in the inland growing regions where prices are lower. In 1976 the Central Valley and Southern Valley combined for a total share of 12 percent of total California Chardonnay production, whereas in 2006, their share was 52 percent. Chardonnay grape prices in the North Coast remain high, surpassing

\$1,500/ton in 2006, but in the Central Valley where the grapes are destined for use in low-priced, high-distribution wines, prices average one-third of that.

The returns for the Chenin Blanc and Colombard grapes have remained fairly consistent over the years, hovering today at \$300 and \$200 per ton, respectively. The production of these grapes shifted away from the coastal regions before the coastal grape returns began to rapidly outpace those of the inland growing regions, in the mid-to-late 1990s.

Looking Toward the Future

The major trends in the production of grapes have been driven by changes in consumer demand for wine. As demand continues to grow for premium and super-premium wines, grape growers will continue to see an overall increase in the prices they receive. Statewide production of winegrapes typically used for high-priced table wines will increase, and thus we can expect the growth in Pinot Noir, Cabernet, and Merlot production to continue.

Certain AVAs of the Central Valley, particularly in the San Joaquin and Sierra foothills regions, are making concerted efforts to produce wines of sufficiently high quality to compete

with the coastal regions. The production of Colombard and Chenin Blanc continues to shift away from this region and into the Southern Valley so, over time, we may see the average prices received for Central Valley winegrapes increase relative to all other regions of the state. The Central Valley will likely continue to increase its production of red grapes, with the exception of Pinot Noir which requires a cooler climate to flourish. The increase in production of Cabernet, Merlot, and Zinfandel in the Central Valley, while dwarfed by the expansion of Chardonnay, has still been substantial and indicative of the direction in which the region is headed.

The North Coast, and in particular the Napa and Sonoma Valleys, shows no sign of relinquishing its status as the premier grape-growing region in California and, in fact, all of the United States. As tourism in the area continues to boom and Americans increasingly demand super-premium wines, the prices growers receive for grapes in the region will likely continue to distance themselves from those seen anywhere else in California. The production of Cabernet Sauvignon, driven by increasing demands for the wine varietal at high prices, is poised to fully overtake that of Chardonnay in this region. Chenin Blanc and French Colombard, alternatively, are nearing the point at which they are grown in coastal regions in trivial amounts.

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