The Coming Grape Shortage

An analysis of California’s wine grape demand and supply.

by George Schofield

Editor’s Note: This article represents the conclusions from a presentation by the author at the 2008 Unified Wine and Grape Symposium on Jan. 29, 2008. The original presentation covered a lot of detailed methodology for analyzing and projecting grape demand and supply, which will be highlighted rather than repeated.

Like impressionistic art, one often has to take a distant view to gain perspective. Standing too close merely produces a fuzzy sense of the overall picture. Focusing on just the prior crush or current sales data produces the same result in the wine and grape business. A wider view often gamers a much deeper understanding of events and developments.

Demand

Historic and projected annual growth rates for U.S. wine demand are summarized in Table 1. Generic wines, which accounted for 24 percent of the volume in the U.S. wine market, as well as the White Zinfandel varietal, representing another 8 percent of the total, are quickly dismissed as having negative growth rates. These declining wines have no significance relative to restricted growth issues or capacity. Of the remaining 68 percent of the total U.S. wine market, three varietal wines—Chardonnay (21 percent), Merlot (11 percent) and Cabernet Sauvignon (10 percent)—dominate. The focus of the issue—meeting future growth opportunities and needs—thus centers on these three wines and grapes.

Overall, moderate growth is expected to continue in the U.S. market for top premium varietal wines. Chardonnay, suffering recently from competition from Pinot Grigio, should increase in the range of +4 percent annually, up from the disappointing +2 percent through +3 percent of 2007, but down slightly from the 2002 through 2006 period.

Merlot ought to continue to recover from the debacle following the release of the Sideways motion picture. This soft red wine, with flavor and structure, is expected to grow at a +5 percent to +6 percent annual rate.

Cabernet Sauvignon wine volume in the U.S. market may soon exceed Merlot. Cabernet wine sales have recently expanded at increasingly higher levels, +10 percent in 2006 and +12 percent in 2007. Such double digit compounded annual demand growth is not deemed to be sustainable into the future. Accordingly, annual growth is forecast to decline to +8 percent in 2008 and to be about +6 percent annually in 2010 and thereafter.

In short, overall the demand prognosis for the U.S. wine market is healthy, especially for the top premium sector. Moreover, such a picture is the envy of many mature industries. The issue relative to this prognosis is whether supply will limit the potential.

Supply

Shifting then to the supply side, Table 2 summarized a projection of expected “normal” grape production for the three main top varietal grapes. Without delving into all the details, the projections are based on trend analysis of acreage, maturity estimates, as well as
A cycle of record heavy planting of winegrapes in California began around the year 1996. For most wine grape varietals, significant plantings essentially ceased either in the year 2000 or 2001. However, the plantings over the six-year cycle (1996-2001) continued to mature and add significant new capacity through the years 2004 and 2005.

Fortunately, or unfortunately, the last major plantings of 2000 and 2001 are now fully mature. With basically no further plantings in recent years, there is essentially nothing to mature in the next four years, and little can change this. Just as the production years 2001 through 2005 benefited from the plantings of the 1990 decade, so too the years, at least through 2011, will suffer from the absence of significant plantings from 2002 through 2007.

Mother Nature, via climatic conditions, can and does vary annual grape production in a specific year, typically in a range of ±20 percent from "normal." Nevertheless, over a seven-year cycle, average production per acre has a remarkable tendency to average out. Over the past 30 years, for a specific grape variety in a specific appellation, average yields per acre tend to be fairly consistent over several cycles of seven years or longer. Using the most recent average yields per acre for the period 2000 through 2006 as "normal" and multiplying them by a refinement of total acres to reflect maturity, future annual grape production was projected.

### Demand vs. Supply

Having thus obtained a reasonable historic and future database for supply and demand, each variable can be correlated. The tricky step is to convert the annual demand growth rate percentages into demand in tons. Since annual past production in tons is a known factor, a starting point for demand in tons can be obtained by identifying a year in which annual production and annual demand appear to be roughly equal. As an example, for California Cabernet Sauvignon, based on grape prices as well as other general knowledge, the year 1999 was deemed to be a year of close balance of grape supply and demand.

With this starting point of demand in tons established for 1999, other years were estimated by applying the annual demand growth percentages (see Table 1) to each year forward, including future years. The final step, then, is matching and plotting of supply and demand for each of the three main varieties. A graph of the results is depicted in Exhibits 1, 2 and 3.

### Cabernet Sauvignon

Exhibit 1 illustrates that for Cabernet Sauvignon, starting in the year 2000, maturing new acres produced double digit increases in vineyard capacity that outpaced and overwhelmed demand increases. The result was the cumulative accumulation of about 600,000 tons of grapes or the equivalent of 100 million gallons of wine over the next six years.

Below normal crop levels in 2006 and 2007, in combination with the waning maturation process of the last plantings and strong annual demand growth, have turned the situation around. A small supply deficit on an annual basis occurred in 2007 but was not widely perceived because of the presence of the huge surplus of prior vintages. However, with no foreseeable supply increases and probably continued strong demand growth, the annual shortages will inevitably widen. The issue

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**Table 2.** Actual and Projected Annual Grape Production for Chardonnay, Merlot and Cabernet Sauvignon

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<th>Chardonnay</th>
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<td></td>
<td>Actual Yrs</td>
<td>% Change</td>
<td>Projected</td>
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<tr>
<td></td>
<td>Yrs</td>
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<td>Yrs</td>
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<tr>
<td>2000</td>
<td>611</td>
<td>+37%</td>
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<tr>
<td>2001</td>
<td>564</td>
<td>+6%</td>
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<td>2002</td>
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<td>-2%</td>
<td>327</td>
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<tr>
<td>2003</td>
<td>562</td>
<td>-3%</td>
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<tr>
<td>2004</td>
<td>559</td>
<td>-1%</td>
<td>302</td>
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<tr>
<td>2005</td>
<td>562</td>
<td>+21%</td>
<td>404</td>
</tr>
<tr>
<td>2006</td>
<td>584</td>
<td>-7%</td>
<td>516</td>
</tr>
<tr>
<td>2007</td>
<td>589</td>
<td>+1%</td>
<td>573</td>
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* Actual tons in thousands. ** Represents a minority from historical production from the 2002 harvest.
as primarily on how long will it take for the surpluses to be depleted. With quality issues in some of the orders of inventoried bulk and cased wines, the answer may well be not long or as long in coming as many may think.

**Chardonnay**. The Chardonnay picture is portrayed in Exhibit 2. Development is not all that different if events are viewed on a timeframe shifted a few years earlier. A surge in planting started and ended sooner. Related surpluses arose, were generally less in magnitude and crossed into a small annual deficit with the short grape crop of 2004. Followed by the above normal crush of 2005, the transition in 2004 was not immediately noticed much. However, with two additional relatively short crops following, some scrambling for grapes was apparent towards the end of the 2007 harvest. Projecting forward into the future, unless an above normal crop occurs in 2008, the long-term deficit of Chardonnay should be palpably conspicuous. Clearly, with no significant new planting indications yet evident, a meaningful long-term supply side remedy is some years away.

The lower current and projected annual demand growth for Chardonnay, relative to Cabernet Sauvignon or Merlot, should alleviate the magnitude of deficits. However, with less of a buffer of bulk wine surpluses, the arrival of shortages may be more immediate, at least for some quality and price brackets for Chardonnay grapes and wines.

**Merlot**. The Merlot scenario is depicted in Exhibit 3. Despite the historical evolutionary difference, the future prognosis is similar. Merlot, as a wine, was in the 1990 decade, the great paradigm of the industry. For the years 1991 through 1999, Merlot wine sales in the U.S. market grew annually at strong double digit rates ranging between 22 percent and 60 percent. Although annual growth declined from these lofty heights in the early 2000 years, demand was still sufficient to absorb a significant increase in maturing acres.

The eventual demise of Merlot was the huge 2005 California crop, +23 percent above normal, plus a drop to zero demand growth as the backlash from the movie *Sideways*. Recently Merlot has slowly regained sales momentum as the disparaging remarks of Miles, the lead character in *Sideways*, fade. The reality of Merlot as a fine soft red wine with a lot of flavor and structure is prevailing. Recovery may not be evident yet because of surplus wines from the 2005 vintage, but rising demand and flat capacity may likely cause a reality check.

**The Coming Shortage**

Mainly because of the short-term unpredictability of Mother Nature, the exact timing of the advent of shortages of premium varietal grapes and wines may not be specifically predictable. The magnitude and usability of the current surpluses of bulk and cased wines also contribute to the uncertainty of the timing. Nevertheless, flat "normal" supply will cause a capacity limitation and a restriction in growth, potentially sooner rather than later.

Perceptions often lag reality. When realizations occur suddenly, the reaction can be radical. Among the things likely to occur, some simultaneously, are:

1. Substitution of product, including, among other things, imports, blending and different beverages.
2. Allocation of wines to markets and customers.
3. Price increases for grapes, bulk wines and bottled wine.
4. The beginning of a new round of planting and grafting of vineyards.
5. Movement away from "spot" markets to longer term contract commitments.
6. Tie-in sales and purchasing.

The fur will really start to fly at the point when marketing "brand managers" are affected. Having fought to establish market share, brand price position, shelf space and wine lists, brand managers predictably can be expected to react aggressively and loudly. Top management will, undoubtedly, hear and respond protectively. As supply competition becomes aggressive, step functions in price may occur suddenly for grapes and bulk wines. Similarly, to secure supply, vertical integration in the form of acquisitions and mergers will become more strategically advantageous.

As the current period of surplus grapes and wines concludes and is replaced by an era of shortages, all concerned need to remember that the cycles will continue. Troughs or peaks are precipitous places from which to plan or determine policy. Neither of the extremes generally last very long and, certainly, not forever. Rather, long-term understanding of the economics of the complete cycle, as a whole, and midpoint averages are keys to competing and survival in a business as integrated and challenging as the grape and wine industry. **wbm**

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