



BW 166 LLC
WINE INDUSTRY ADVISORS

Strategic Matters September 2009

Vineyard Supply

Over the past few years the global wine industry has been moving closer to a balance of supply and demand. The recent global economic turmoil has disrupted the possible balance and there are many issues that the industry needs to consider for supply going forward. Due to the fragmentation of the wine industry if total supply and demand were in perfect balance there would still be individual geographies that may be out of balance that will cause fluctuations in global wine trade. Also, as the world recovers from the economic downturn it appears that consumers have not modified their overall consumption. There is the risk though, that consumers may slow down their purchases of wines at the high end which could create certain supply imbalances.

Due to the nature of vineyard development any decision regarding vineyards is a very long term decision. Following are a few of the supply issues the industry is facing.

On a comparative basis, Australia has the largest problem with Vineyard supply. In 1996 the industry was producing 850,000 tonnes of grapes for wine and they set a strategy for 2025 which would require 1.65 Million tonnes. Due to a mix of industry exuberance, fast growing exports and government tax incentives for agriculture, within ten years the industry was crushing almost 2 million tonnes. The mix of this supply is roughly 1.3 million tonnes from warm climate regions and 700,000 tonnes from cool climate regions. Existing demand is about 1.5 million tonnes and currently the industry is going through a painful adjustment. Some of the problems they must deal with are:

- Current demand calls for about 350,000 tonnes of cool climate fruit and 1.15 million tonnes of warm climate fruit. This implies that yields need to be moderated by about 10% in the warm climate areas and by 50% in the cool climate areas. A very difficult task
- In the rapid vineyard expansion in the late 90's many vineyards were planted either in poor locations or with the wrong varieties in certain cool climate areas. These have the effect of reducing the overall industry quality and depressing pricing. Grubbing up of these vineyards would go a long way to balancing supply and demand. Not an easy decision given the sunk investment and the added complexity of the number of vineyards that were planted by investors to take advantage of tax benefits.
- The Australian dollar has generally strengthened against those currencies where they export the majority of their wines. Given their surplus and the general price positioning of Australian wines they have not been able to generate commensurate price increases to offset the currency impact on margins.

- Australia has been impacted by drought over the past several years. The industry has made many adjustments to adjust to lower water availability and continues to produce sizable crops. Ultimately the industry could lose sizable acreage in the warm climate areas that could transition to a greater requirement for cool climate fruit. This would create a mismatch between fruit costs and wine prices though.

These are not quick issues to address so it will be some time before the problems are solved. These issues will continue to impact other regions of the world as well since they tend to depress price points in certain markets.

The EU has instituted their wine reforms which includes plans to grub up 175,000 hectares and move more funding to promotion of their wines outside the EU. The EU still faces declining consumption in the traditional wine consuming countries of France, Italy and Spain which may generate ongoing surpluses if their exports do not improve. In conjunction with the plans to grub up vineyards they are significantly reducing any funds for crisis distillation. It is too soon to state how effective these reforms will be. Some of their challenges are:

- Some wines have been consistently distilled for many years. Unfortunately these are often wines that are not of commercially acceptable quality. If these wines go back on the world market they may hurt the perception of European quality. Complicating the situation is that some of the areas that might be best to grub up do not have good alternative uses for the land. Solving these issues, have the potential to create either societal or political problems.
- The ongoing declines in domestic consumption will continue to generate more wines on the world market. Will the various wine companies be able to generate this incremental business or will they be saddled with ongoing excess inventories?
- In 2008 the Euro had strengthened significantly versus some of their key trading partners. This has moderated during the downturn. Going forward, if the Euro strengthens on a long term basis, how does the industry increase prices and maintain needed growth?

In California, conventional wisdom prior to the economic downturn was that the state would be moving into a period of shortage. While this may still be true there may be some mismatch of supply by appellation. The largest issue that the California industry may have is the slowdown in sales of higher priced wines. If the slowdown is a short term anomaly the industry will need to deal with excess inventories in the short term but in this scenario the long term impact is limited. However, if there is a structural change in the price points in the marketplace the industry is facing some major issues. For example these issues in the Napa Valley will include:

- Over the past 15 to 20 years the industry has focused on lower yields with bigger, more highly extracted, wines. Economically it is difficult to pursue this production methodology at lower price points. An old rule of thumb in the industry is that the price of grapes divided by 100 gives you a rough approximation of the bottle price on shelf (In reality this probably understates the needed shelf price). The attachment to this paper calculates the theoretical bottle price based on various vineyard values, vineyard operating costs and yields. This assumes a fairly low pre-tax

return on vineyard investment of 6%. It is fairly straightforward that if wine prices drop by 50% vineyard yields need to double to maintain a somewhat viable vineyard investment.

- A need to increase vineyard yields is generally assumed to hurt quality. This does not always have to be the case but a lot of work needs to be done on rootstocks, clones, soil types, trellising etc. In the late 80's and early 90's many vineyards were replanted due to phylloxera. At the time there was not a broad knowledge of alternative rootstocks and their appropriateness with different varieties, clones and soil types. The wine industry shares information fairly openly on an ad-hoc basis. How does the industry more formally collect the information that has been generated over the past 20 years to better make future planting decisions?
- The industry is also facing some issues which are depressing yields such as grapevine mealybug and leafroll virus. In addition these can shorten vine life. How does the industry accelerate research to resolve these issues both to increase yields, while maintaining or enhancing quality, as well as to extend vine life?
- If the industry, or individual producers, are successful in increasing yields while maintaining and enhancing quality there is the additional challenge of selling these higher volumes at the new price points. How does the industry expand the demand for these wines?

Solving vineyard supply issues takes time and needs to be looked at on an ongoing basis. Given current economic conditions individual companies need to focus on managing their cash flow and maintaining a viable business. They also need to be assessing their view of the future market and make adjustments to assure their continued economic sustainability.

Hypothetical Bottle Price based on Vineyard Costs

| | | Vineyard Value per Acre | | | | |
|--|---------------|-------------------------|-----------|-----------|-----------|-----------|
| Operating Costs per Acre | Tons per Acre | \$100,000 | \$150,000 | \$200,000 | \$250,000 | \$300,000 |
| \$6,000 | 3.00 | 40.00 | 50.00 | 60.00 | 70.00 | 80.00 |
| | 3.50 | 34.29 | 42.86 | 51.43 | 60.00 | 68.57 |
| | 4.00 | 30.00 | 37.50 | 45.00 | 52.50 | 60.00 |
| | 4.50 | 26.67 | 33.33 | 40.00 | 46.67 | 53.33 |
| | 5.00 | 24.00 | 30.00 | 36.00 | 42.00 | 48.00 |
| | 5.50 | 21.82 | 27.27 | 32.73 | 38.18 | 43.64 |
| | 6.00 | 20.00 | 25.00 | 30.00 | 35.00 | 40.00 |
| \$8,000 | 3.00 | 46.67 | 56.67 | 66.67 | 76.67 | 86.67 |
| | 3.50 | 40.00 | 48.57 | 57.14 | 65.71 | 74.29 |
| | 4.00 | 35.00 | 42.50 | 50.00 | 57.50 | 65.00 |
| | 4.50 | 31.11 | 37.78 | 44.44 | 51.11 | 57.78 |
| | 5.00 | 28.00 | 34.00 | 40.00 | 46.00 | 52.00 |
| | 5.50 | 25.45 | 30.91 | 36.36 | 41.82 | 47.27 |
| | 6.00 | 23.33 | 28.33 | 33.33 | 38.33 | 43.33 |
| \$10,000 | 3.00 | 53.33 | 63.33 | 73.33 | 83.33 | 93.33 |
| | 3.50 | 45.71 | 54.29 | 62.86 | 71.43 | 80.00 |
| | 4.00 | 40.00 | 47.50 | 55.00 | 62.50 | 70.00 |
| | 4.50 | 35.56 | 42.22 | 48.89 | 55.56 | 62.22 |
| | 5.00 | 32.00 | 38.00 | 44.00 | 50.00 | 56.00 |
| | 5.50 | 29.09 | 34.55 | 40.00 | 45.45 | 50.91 |
| | 6.00 | 26.67 | 31.67 | 36.67 | 41.67 | 46.67 |
| \$12,000 | 3.00 | 60.00 | 70.00 | 80.00 | 90.00 | 100.00 |
| | 3.50 | 51.43 | 60.00 | 68.57 | 77.14 | 85.71 |
| | 4.00 | 45.00 | 52.50 | 60.00 | 67.50 | 75.00 |
| | 4.50 | 40.00 | 46.67 | 53.33 | 60.00 | 66.67 |
| | 5.00 | 36.00 | 42.00 | 48.00 | 54.00 | 60.00 |
| | 5.50 | 32.73 | 38.18 | 43.64 | 49.09 | 54.55 |
| | 6.00 | 30.00 | 35.00 | 40.00 | 45.00 | 50.00 |
| \$14,000 | 3.00 | 66.67 | 76.67 | 86.67 | 96.67 | 106.67 |
| | 3.50 | 57.14 | 65.71 | 74.29 | 82.86 | 91.43 |
| | 4.00 | 50.00 | 57.50 | 65.00 | 72.50 | 80.00 |
| | 4.50 | 44.44 | 51.11 | 57.78 | 64.44 | 71.11 |
| | 5.00 | 40.00 | 46.00 | 52.00 | 58.00 | 64.00 |
| | 5.50 | 36.36 | 41.82 | 47.27 | 52.73 | 58.18 |
| | 6.00 | 33.33 | 38.33 | 43.33 | 48.33 | 53.33 |
| Assumes 6% pre tax return on vineyard investment for grower | | | | | | |
| Assumes price for grapes covers operating costs plus 6% return | | | | | | |
| Bottle price based on historical estimate that cost per ton divided by 100 equals bottle price | | | | | | |
| Hypothetical grape value is 100 times the hypothetical bottle price. | | | | | | |