

**Economic Impact Estimation of Perennial Crops in
Temecula Valley**

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The perennial crops industry in Temecula Valley has a stable acreage of about 5,000 in the 1990s of which 35% has been in vines and the other 65% in fruits mainly of citrus and avocados. In addition there are about 13 wineries that contribute to the economy of the Valley. At the request of growers, we estimated the economic impact of crops and wine production for the Valley.

Methods of Estimation

This analysis involves estimation of direct and indirect dollar value contribution from fruits and grapes production and winery activities in the Temecula Valley in most current years. The direct dollar value of fruits and grapes production was obtained from San Jacinto/Temecula Valley Agricultural Crop Report for the County of Riverside.

Direct dollar values of winery activities included wine sales and income from visitors. We gathered sales from the local wineries through mail and telephone surveys. Sales data for wineries that did not respond to our surveys were approximated using their sizes and location. We used the size of the wineries to estimate possible cases of wine production. Wine sales were calculated taking both whole and retail sales into consideration.

Income from visitors was estimated using the total number of visitors and estimated per capita expenditure. We surveyed the wineries for their number of annual visitors. Number of visitors for wineries that did not respond to our survey was estimated using their sizes and their distances in relation to other wineries.

Indirect and induced dollar value contributions as well as employment were estimated using economic impact multipliers that were developed for fruits/grapes and wine production for San Diego County (Goldman and Pradhan, 1966). These multipliers are considered good approximations for Temecula area because of the closeness and similarity of production practices of crops and wineries in the two areas.

Results

Economic Impact Multipliers

Our purpose in this analysis is to provide an overall approximation of economic impacts attributed by the production of fruits, grapes and wine in the area. Therefore we used the two multipliers that estimate output/sales and employment. We used 1.72 as output/sales multiplier for fruits and grapes production and 1.98 for wine production. That means every dollar obtained from fruits and grapes production would provide an additional

\$0.72 in economic activities. In the same way, every dollar in wine sales would provide an additional \$0.98 in economic activities. Employment multipliers indicated 30.7 jobs per million dollar sales of fruit and grapes and 19.3 jobs per million dollar sales of wine.

Commodity Values and Economic Impacts

While crop value (production and prices) vary from year to year, we used three years (1996 to 1998) average to normalize the fluctuations in most current years. The crop value included about \$9.3 million for wine grapes and \$13 million for fruits.

Using the multiplier given for output/sales, the economic impact of these crops would be \$16 million in wine grapes and \$22.4 million in fruits, a total of about \$38 million a year. In employment, production of these crops would generate 286 jobs through wine grape production and 400 jobs through fruit production.

Winery Economic Activity

We approximated \$43 million in wine sales. This was based on an average production level of about 500,000 cases of wine per year, about 86% of which sold whole sale at prices ranging from \$55-\$100 per case, and the remaining 14% sold retail at an average price of about \$ 120/case.

Using the multiplier given for output/sales, the economic impact of wine production would be \$85 million ($\43×1.98). In employment, the multipliers indicate that the given level of wine production would generate approximately 830 jobs.

Our estimate of income from visitors was \$10.8 million annually. It was calculated using number of visitors each year and expected per capita expenditure. We determined the area would have approximately 270,000 visitors annually. This was calculated as the total number of annual visitors for all wineries divided by 3. We were informed that on average each person would visit three wineries per visit.

Per capita expenditure of visitors in the area other than the wineries was estimated at \$40. This expenditure would be for items such as fuel, food and miscellaneous items. Discussions with the local people have indicated that several events held by wineries have attracted overnight guests for hotels and restaurants in the area. Therefore an expenditure of \$40 on average was considered acceptable.

Total Impact

The total economic impact (direct as well as indirect and induced) calculated for fruits, wine grapes and wine production in the Temecula Valley would be \$134 million of which 83% or \$112 million is generated by activities related to wine grapes and wine production. Further, there would be roughly 1,500 jobs generated of which 74% (1115 jobs) would be related to the production of wine grapes and wine.

References:

1986-1997 Agricultural Production Report, Riverside County, Agricultural Commissioner and weights and Measures.
Temecula Valley Perennial Crops, an economic impact study done previously.

Goldman George and Vjay Pradhan, 1996. San Diego County Multipliers for Wine Grape Production and Wineries, Department of Ag. Economics, Berkley.

Appendix Table. Evaluating Economic Impact of Values of Fruits, Wine Grapes and Wine Production Temecula Valley, California, 1998

Type	Direct Value (million \$)	Output (sales) Multiplier	Total Output (sales) Impact (million \$)	Employment Multiplier (jobs/million \$)	Total Employment Generated
Tree Crops	13.03	1.72	22.41	30.7	400
Wine Grapes	9.27	1.72	15.94	30.7	286
Wine Sales	43	1.98	85.14	19.3	829
Visitors Expenditure	10.8		10.8		
Total	76.1		130.34		1515