

# **THE ECONOMIC IMPACT OF WINE AND WINE GRAPES ON THE STATE OF NORTH CAROLINA – 2009**

**A Frank, Rimerman + Co. LLP Report**

**Updated August 2011**

This study was commissioned by the

**North Carolina Wine and Grape Council**

and the

**North Carolina Division of  
Tourism, Film and Sports Development**

in conjunction with the

**North Carolina Department of Commerce**

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# **ECONOMIC IMPACT OF NORTH CAROLINA WINE AND WINE GRAPES**

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## ECONOMIC IMPACT OF NORTH CAROLINA WINE AND WINE GRAPES

### FULL ECONOMIC IMPACT OF WINE AND WINE GRAPES ON THE NORTH CAROLINA ECONOMY -- 2009

**\$1.28 Billion**

<b>NORTH CAROLINA WINE, WINE GRAPES AND VINEYARDS</b>	<b>2009 ECONOMIC IMPACT</b>	<b>2005 ECONOMIC IMPACT</b>
Full-time Equivalent Jobs	7,575	5,727
Wages Paid	\$237 million	\$158 million
Wine Produced (Cases)	529,000	470,000
Retail Value of North Carolina Wine Sold	\$79 million	\$72 million
Vineyard Revenue	\$6 million	\$4 million
Number of Wineries	89	55
Number of Grape Growers	400	350
Grape-Bearing Acres	1,800	1,300
Wine-Related Tourism Expenditures	\$156 million	\$122 million
Number of Wine-Related Tourists	1,255,000	800,000
Taxes Paid: Federal / State and Local	\$65 million / \$51 million	\$56 million / \$38 million

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**Table 1<sup>1</sup>**  
**Total Economic Impact of Wine and Grapes in North Carolina**

<b>Revenue:</b>	<b>2009</b>	<b>2005</b>
Winery Sales	\$44,508,900	\$48,174,000
Retail and Restaurant Sales of NC wine	\$25,764,400	\$18,685,000
Distributors Sales	\$8,579,600	\$5,480,000
Non-Wine Revenue (Weddings, Events, etc.)	\$9,319,100	--
Tourism	\$155,806,000	\$122,361,000
Wine Grape Sales	\$5,980,000	\$3,700,000
Federal Tax Revenue	\$64,756,000	\$56,249,000
State Tax Revenue	\$51,175,000	\$38,464,000
Vineyard Development (excluding vines)	\$1,650,000	\$0
Charitable Contributions	\$788,500	\$720,000
Allied Industries -- Glass, Closures, Chemicals	\$176,915,000	\$33,530,000
Wine Research/Education/Consulting	\$1,080,000	\$866,000
Indirect (IMPLAN)	\$268,492,500	\$219,859,000
Induced (IMPLAN)	\$232,551,400	\$106,867,000
<b>Total Revenue</b>	<b>\$1,047,366,400</b>	<b>\$654,955,000</b>
<hr/>		
<b>Wages:</b>		
Winery Employees	\$12,109,300	\$11,299,000
Vineyard Employees	\$10,928,100	\$9,890,000
Tourism	\$39,000,000	\$32,320,000
Vineyard Development and Materials - Labor	\$247,500	\$0
Distributors Employees	\$1,782,600	\$1,889,000
Retail/Liquor Stores - Wine Specific	\$425,900	\$745,000
Restaurant Sales of NC Wine	\$4,949,300	\$5,047,000
Allied Industries -- Glass, Closures, Chemicals	\$13,655,700	\$5,966,000
Wine Research/Education/Consulting	\$930,000	\$855,000
Indirect (IMPLAN)	\$78,987,800	\$55,425,000
Induced (IMPLAN)	\$74,228,000	\$34,889,000
<b>Total Wages</b>	<b>\$237,244,200</b>	<b>\$158,325,000</b>
<b>Total</b>	<b>\$1,284,610,600</b>	<b>\$813,280,000</b>

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<sup>1</sup> Based on 2009 data.

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## EXECUTIVE SUMMARY

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### IMPACT OF NORTH CAROLINA WINE ON THE NORTH CAROLINA ECONOMY

The North Carolina wine industry has experienced increased growth in the number of wineries and increased demand of North Carolina wine that is outpacing available wine grapes from within North Carolina. The number of bonded wineries in the state of North Carolina has grown from 55 in 2005 to 89 in 2009. The industry continues to expand at an assertive pace with almost all of the growth coming from the addition of small wineries – wineries producing less than 5,000 gallons per year. Wine production in North Carolina has grown by approximately 13% over 2005 to 529,000 gallons bottled in 2009, ranking North Carolina as ninth in the nation in wine production.

The wine and grape industry in North Carolina has contributed greatly to the economic strength of the state. North Carolina's wine, grape and related industries have increased the total economic value to the state of North Carolina from approximately \$813 million in 2005 to \$1.28 billion in 2009, or an increase of 58.0%. As the number of North Carolina wineries increase, so does the number of tourists visiting them (from 800,000 tourists in 2005 to 1.3 million tourists in 2009). Wine, grapes and related industries account for nearly 7,575 jobs in North Carolina, with an associated payroll in excess of \$237 million.

**Table 2**  
**Total North Carolina Employment: Wine, Grape and Related Industries**

<b>Employment:</b>	<b>2009</b>	<b>2005</b>
Winery	551	470
Vineyard	605	530
Distributors	42	46
Tourism	1,838	1,596
Vineyard Materials	8	0
Restaurants	356	324
Retail/Liquor Stores - Wine Specific	16	25
Allied Industries -- Glass, Closures, Chemicals	396	215
Research/Education/Consulting	18	11
Indirect (IMPLAN)	1,699	1,373
Induced (IMPLAN)	2,046	1,137
<b>Total Employment</b>	<b>7,575</b>	<b>5,727</b>

Sources: Frank, Rimerman + Co. Research, IMPLAN, NC State University, NC Department of Commerce, Bureau of Labor Statistics and various North Carolina wineries, consultants and suppliers surveyed.

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These 7,575 jobs compare with a total of 5,727 jobs in 2005, as reported in the previous report. This difference represents growth in the industry as well as continuing progress in collecting data, and more precise data, on suppliers to the industry. For example, we collected further data on packaging suppliers, label producers and associated ancillary industries. This has led us to increase the number of employees attributed to wine in some sectors while reducing employees in others. Considering the same industry categories included in the last report, wine industry related employment increased by 24% since 2005.

Growing grapes and making wine is a long-term commitment to a community, both financially and physically. New vineyard plantings require three to five years before yielding a full crop, with another one to three years of aging for wine to be ready for sale. Unlike many industries, once vineyards and wineries have been established they are effectively rooted and tied in place – a North Carolina vineyard cannot simply be relocated to another region or outsourced to another country. Wine and grapes are inextricably tied to the soil from which they are grown. Moreover, wine and their products and allied industries diversify local economies and create employment and new market opportunities.

### TOTAL TAXES COLLECTED

The wine and wine grape industry generates significant tax dollars, benefiting federal, state and local governments. Tax dollars are raised through sales taxes, excise taxes, income taxes, estate and gift taxes, payroll taxes, property taxes and other business taxes and fees. North Carolina's wine, grape and allied industries paid \$65 million in federal taxes and \$51 million in state and local taxes and in 2009, including approximately \$1 million in state excise taxes.

**Table 3**  
**Estimated Tax Revenues**

Type of Tax	Total
<b>Federal Tax Revenues</b>	
Excise	\$4,746,000
Payroll	\$27,741,000
Income	\$16,957,000
Other (corporate profits, etc.)	\$15,312,000
Total Federal Tax Revenues	\$64,756,000
<b>State Tax Revenues</b>	
Excise	\$1,000,000
Sales	\$17,692,000
Payroll	\$269,000
Property	\$19,863,000
Other (dividends, licenses, fines, fees, etc.)	\$12,351,000
Total State Tax Revenues	\$51,175,000
<b>Total Tax Revenues</b>	<b>\$115,931,000</b>

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## **TOURISM**

Tourism is becoming a major element in North Carolina wine's overall economic impact. Our survey of North Carolina wineries estimates that approximately 1.3 million tourists visited North Carolina wineries in 2009. Supporting these winery visitors is a diverse labor force of approximately 605 employees with total wages of \$11 million. The continued increase of tourist visits over the past several years can be attributed to the increase in the number of North Carolina wineries, providing more destinations and opportunities for visitors to experience North Carolina wine country.

Even though the state's overall wine sales and production are concentrated within a few large wineries that sell a significant amount of their wine through the traditional three-tier system, the majority of the state consists of smaller wineries with production under 5,000 cases. These wineries focus most of their efforts on selling the majority of their wine direct-to-consumer or self-distributing to retail stores. Additionally, these wineries have focused meaningful effort on enticing consumers to come and visit their facilities. Wine tasting tours are being widely promoted with positive sales results. There has also been an expansion of related-product offerings and events, private parties, weddings, and festivals held on winery properties and, thus, the winery's function has evolved past simple production. Some existing wineries have expanded their facilities to incorporate these additional revenue streams resulting in increased winery employment and support services, and increased rural economic development.

Many wineries in North Carolina incorporate these new functions with traditional facilities to take full advantage of these profitable ancillary activities. By our estimation, based on direct feedback from the wineries we surveyed, there was approximately \$9 million in revenue generated from these wine-related events. Our previous report in 2005 did not break this revenue out from all winery revenue.

## **WINE PRODUCTION AND SALES**

In 2009, there were 89 wineries in North Carolina, up 62% from 55 wineries in 2005. Duplin Winery in the eastern part of the state is the largest winery with a production of over 300,000 cases in 2009, approximately 57% of North Carolina's total wine production in 2009. Total wine bottled in North Carolina was approximately 1.26 million gallons, roughly 530,000 cases, an increase of 13% over 2005.

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Based on our research and interviews with winery owners, wineries in North Carolina provided employment for 551 full-time equivalent jobs in 2009, with a payroll totaling approximately \$12 million. Wineries employ full and part-time workers for bottling, storage, maintenance and winemaking needs in addition to the traditional hospitality (tasting room), finance, sales and marketing functions. Many wineries also employ seasonal workers, particularly during harvest season.

**Table 4.1**  
**Trend of Growth in North Carolina Wineries**

2009	89
2008	75
2007	67
2005	55
2004	45
2003	34
2000	25

Source: TTB

Approximately 90% of North Carolina wineries are small producers, producing less than 5,000 cases. Due to low yields in 2007, about 80% of the wine produced in North Carolina in 2009 was made from grapes grown in North Carolina. The growth of wineries in the state has so far kept pace with the growth of overall grape production (Vinfiera, Muscadine and hybrid varieties) as well as the increased demand for wine in state.

In 2009, North Carolina was the ninth largest wine producer in the United States. A marked increase in wine tourism has been a strong driver of this production increase. The number of new wineries producing in North Carolina has been increasing dramatically in the last four years.

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**Table 4.2**  
**Top Ten States' Annual Gallons Produced in 2009**

State	Production	Rank	Percentage of Total Production
California	499,992,493	1	85.90%
New York	34,923,377	2	6.00%
Washington	20,174,467	3	3.47%
Oregon	5,189,380	4	0.89%
Texas	2,488,547	5	0.43%
Indiana	1,534,212	6	0.26%
Florida	1,318,487	7	0.23%
Michigan	1,277,340	8	0.22%
<b>North Carolina</b>	<b>1,257,737</b>	<b>9</b>	<b>0.22%</b>
Pennsylvania	1,244,442	10	0.21%
All Others	12,653,833		2.17%
<b>Total</b>	<b>582,054,315</b>	---	<b>100.0%</b>

Source: TTB

Approximately 65% of the wine volume produced in North Carolina is distributed through the three-tier distribution system. This is primarily driven by North Carolina's largest wineries, which sell a significant share of their wines through this channel, specifically Duplin Winery and Biltmore Estate Winery. The vast majority of North Carolina wineries by number, however, sell their wine direct to consumers through winery tasting rooms, allowing them to potentially obtain higher margins on their product. These wineries generally have relatively small production, typically less than 5,000 cases annually.

The retail value of North Carolina wine sold in 2009 is estimated at \$79 million. Winery sales totaled \$45 million, including an estimated \$16 million (35%) in winery direct sales (sales by wineries direct to consumers or to retail). Winery direct sales include sales to consumers in the winery tasting rooms, wine clubs, winery mailing lists and e-commerce or Internet sales. Excluded from these figures is the additional \$9 million in non-wine revenue associated with wineries hosting special events/weddings and selling various merchandise on-site.

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## GRAPE PRODUCTION

In 2009, there were approximately 400 commercial growers operating in North Carolina with a combined acreage of 1,800 bearing acres, an increase of 100 acres over 2008. Over a seven year period since 2003, bearing acreage in North Carolina grew from 950 acres to 1,800 acres, an increase of 90%. While vineyard acreage in North Carolina has steadily increased over the past seven years, yields and crop value have varied dramatically. If North Carolina is to gain traction and produce enough wine in state to meet consumer demand, the industry will need to aggressively increase the available grape bearing acreage, assuming overall quality can be maintained.

**Table 5.1**  
**North Carolina Public Estimate for Grapes**  
**2003 – 2009**

<b>Harvest Year</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Acres</b>	950	1,100	1,300	1,500	1,700	1,700	1,800
<i>Increase over prior year</i>		15.8%	18.2%	15.4%	13.3%	0.0%	5.9%
<b>Yields/Acre</b>	3.0	3.2	3.0	3.3	2.2	3.3	2.7
<b>Ton Produced</b>	2,800	3,500	3,900	4,900	3,650	5,600	4,800
<i>Increase over prior year</i>		25.0%	11.4%	25.6%	-25.5%	53.4%	-14.3%
<b>Price</b>	1,180	962	937	1,030	1,270	1,170	1,250
<b>Crop Value</b>	2,989,000	3,366,000	3,653,000	4,900,000	4,630,000	6,560,000	5,980,000
<i>Increase over prior year</i>		12.6%	8.5%	34.1%	-5.5%	41.7%	-8.8%

Source: USDA, NASS

North Carolina vineyards produced an average of only 2.7 tons per acre in 2009 as compared to 3.0 tons per acre in 2005 and 3.3 tons per acre in 2008. Yields in 2009 were the lowest measured in the past seven years, with the exception of the 2.2 tons per acre estimated in 2007. North Carolina wine grapes received an average price-per-ton of \$1,250, up from \$937 per ton in 2005. When comparing the average prices received in 2009 versus 2005 and keeping in mind the economy was in a deep recession in 2009, this 33% increase in price is a strong indication of improved wine quality and consumer demand throughout the state of North Carolina. North Carolina was ranked tenth in the nation for total grape-bearing acreage in 2009, as you can see in the table below.

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**Table 5.2**  
**United States Grape Production, 2009**

Rank	State	2009	2009
		Bearing Acreage (all types of grapes)	Total Production (Tons)
1	California	789,000	6,544,000
2	Washington	60,000	381,000
3	New York	37,000	133,000
4	Michigan	14,200	96,500
5	Pennsylvania	13,600	64,000
6	Oregon	15,600	40,200
7	Virginia	2,900	8,600
8	Texas	3,300	6,200
9	Ohio	1,900	5,740
10	<b>North Carolina</b>	<b>1,800</b>	<b>4,800</b>
11	Georgia	1,300	4,500
12	Missouri	1,600	4,400
United States		942,800	7,294,840

Source: NASS (includes non-wine grapes)

Wineries in the State of North Carolina rely heavily on wine grapes grown in state, which can contribute to lower costs. By continuing to increase the grape quality and amount of North Carolina acreage available for grape production, the North Carolina wine industry can rely less on wine produced outside the state while in turn building more credibility and a stronger reputation for wine quality as well as potentially reducing costs.

### VINEYARD DEVELOPMENT

Vineyard development is the process of converting land into a developed vineyard. The land must be prepared to plant vines. Once the vine is planted it must be trellised and trained, and, from the time a vine is planted in the ground, it can take between three to four years before the vine bears fruit. During this time, pre-productive (non-fruit bearing) vines must be tended and cared for in accordance with sound viticultural practices to ensure healthy productive (fruit bearing) vines.

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The vineyard development process is very capital and labor intensive, with development costs for Vinifera grapes in North Carolina averaging \$10,000 to \$15,000 per acre, depending on the specific location of the vineyard and planting layout, excluding land acquisition costs. Development costs for Muscadine grapes average approximately \$5,000 per acre. This approximate cost includes all land preparation; vine layout, planting and trellising; vines; irrigation; materials and equipment; farming costs; direct and allocated overhead, utilities, property taxes, and financing costs during the pre-productive period).

The most important determinant of the cost of planting a vineyard is the vine spacing. Grape growing regions use various vine spacing based upon environmental site attributes, desired grape flavors, and development cost considerations. Regardless of the ultimate development plan selected, the investment in terms of capital and time required is significant. Vineyard owners and their employees do the majority of vineyard development in North Carolina, with the assistance of vineyard development consultants in some cases.

Based on surveys with wineries and vineyard owners, approximately eight full-time equivalent workers were employed in vineyard development for a total payroll of approximately \$247,500 in 2009. Additional contracted labor used for vineyard development is included in vineyard labor discussed below.

### **VINEYARD EMPLOYMENT**

Larger North Carolina wineries reported utilizing both full-time and seasonal vineyard employees. Often grape production uses seasonal labor for harvests and vineyard development and full-time positions for maintenance of currently-bearing acres and development of new vineyards yet to bear fruit, as well as both full and part-time staff for finance, sales and other business management functions.

However, many grape growers in North Carolina manage one to five acre vineyards and can do so without outside labor. Based on our research, the average vineyard size was approximately three to four acres. Vineyards in North Carolina employed a total of 605 full-time equivalent workers in 2009 with wages totaling approximately \$10.9 million.

### **COMMUNITY SUPPORT**

Based on our estimates, wineries and growers throughout the state of North Carolina have donated approximately \$788,500 to charities in 2009 (1% of total wine sales), including gifts of wine and gift certificates. This is an increase of \$275,000 (10%) over 2005. The amount of charitable contributions is likely underestimated as many wineries do not track in-kind contributions, which can be substantial.

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## WINEMAKING EQUIPMENT, SUPPLIES AND SERVICES

The number of in-state suppliers or distributors of winemaking equipment, supplies and services is relatively small. Many different types of small businesses exist in North Carolina that supply the wine and wine grape industry as a portion of their overall business. They include bottle suppliers, farming chemical providers, trucking services, label producers, tank manufactures, warehousing, and a wine lab. As the North Carolina wine industry continues to grow, so do the number of ancillary businesses that supply the industry.

**Table 6**  
**North Carolina Winemaking Suppliers for North Carolina Wine**

Direct Employment	396 employees
Total Wages	\$13,655,700
Total Revenue	\$176,915,000

Source: Frank, Rimerman + Co. LLP

The bulk of the state's allied supplier industry is due to the explosive growth of Nomacorc, the industry leader in wine closure manufacturing. The company is located in Zebulon, North Carolina and produces a synthetic co-extruded closure. They are the largest synthetic cork producer in the world with their products sold in over 50 countries. The company sold approximately 2.3 billion units worldwide in 2009 and they are targeting production of three billion units annually by 2012. In our prior 2005 report Nomacorc was producing only 800 million units annually, an increase of approximately 200% to 2009. Nomacorc has approximately 500 employees, with the overwhelming majority in North Carolina and the remainder at their overseas facilities in Belgium and China. Over 80 percent of their production is done at their Zebulon facility.

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## EDUCATION, CONSULTING AND WINE INDUSTRY RESEARCH

Approximately eighteen people were employed on a full time basis in North Carolina in wine-related education, consulting and research, with a payroll of approximately \$1 million.

**Table 7**  
**Impact of Wine-Related Education, Consulting and Research**

Direct Employment	18 employees
Total Wages	\$930,000
Total Funding	\$1,080,000

Source: Frank, Rimerman + Co. LLP, NC State University, Surry Community College and Appalachian State University.

## STRONG SUPPORT BY STATE AND REGIONAL ORGANIZATIONS

State and regional organization support is critical to the success of the renewed industry. North Carolina's state, regional and private organizations have been particularly effective and well-organized at supporting and promoting the local wine industry. These organizations include the North Carolina Wine & Grape Council (which is part of the North Carolina Department of Commerce), North Carolina Winegrower's Association, Yadkin Valley Winegrowers Association and the North Carolina Muscadine Grape Association.

That being said, recent economic turmoil across the country has impacted the overall state of North Carolina as well as its wine industry. Recent legislation was passed in North Carolina that effectively cut the North Carolina Wine & Grape Council's budget in half over the past few years. As a result, the availability of fewer funds creates another obstacle impeding the growth of the state's wine industry. While not impossible to continue growing in terms of production, acreage, tourism and consumption, smaller budgets equals smaller marketing programs, which in turn reduces the opportunity to reach new target consumer markets within and outside of the state of North Carolina.

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## A CONSERVATIVE MEASURE OF VALUE

Statistics alone do not adequately measure the intangible value the wine industry brings in terms of overall enhanced quality of life, limitation of urban sprawl and greater visibility for the state of North Carolina worldwide. Accordingly, the figures provided in this report should be viewed as a conservative baseline measure of the economic impact, as the true impact of the North Carolina wine industry, including intangible benefits is much greater. That measure of economic impact is approximately **\$1.28 billion** within the state of North Carolina, for an industry that is a unique partnership of nature, entrepreneurship, artistry and technology.

North Carolina wine and wine grape producers face sizable challenges to their continued growth and success. Working to support the North Carolina wine industry and to ensure its long-term success will protect the significant benefits the industry provides to the North Carolina economy.

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## METHODOLOGY

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### DATA COLLECTION

Data for this study was collected from a variety of public sources supplemented by primary research with wineries, suppliers, growers and other economic entities and supported by a variety of studies undertaken by industry and professional organizations. For several data items the numbers provided are only partial, given the limited availability of information, and therefore are considered conservative.

### DIRECT, INDIRECT AND INDUCED EFFECTS (IMPLAN)<sup>2</sup>

All economic activities have “ripple” effects: employment of one person creates economic activity for others, whether the salesman who sells the employee a car or the restaurant where she eats lunch. Economic impact studies endeavor to measure those “ripples” as well as the direct activity, to help assess the impact of the potential gain or loss of an industry.

Economic impact studies estimate the impact of an industry in a defined geographic region by identifying and measuring specific concrete and economic events, such as the number of jobs, the wages, taxes and output generated by each job.

IMPLAN<sup>2</sup> is the acronym for “IMpact analysis for PLANing.” IMPLAN is a well established and widely used economic model that uses input-output analyses and tables for over 500 industries to estimate these regional and industry-specific economic impacts of a specific industry.

The IMPLAN model and methodology classifies these effects into three categories, Direct Effects, Indirect Effects and Induced Effects.

Direct Effects are economic changes in industries *directly* associated with the product's final demand. Thus, direct effects consider the direct employment and spending of wineries, vineyards, distributors and immediately allied industries.

Indirect effects are economic changes – income created through job creation in industries that supply goods and services to the directly affected industries noted above. For example, the purchases of electricity and gasoline by wineries and of cash registers purchased for a tasting room.

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<sup>2</sup> IMPLAN is the standard economic model for economic impact studies, developed by the University of Minnesota and the US Forestry Service in the 1980s and currently used by over 1,500 organizations, including most federal, state and local organizations. For more information on IMPLAN, go to [www.implan.com](http://www.implan.com).

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Induced effects are the effects of these new workers spending their new incomes, creating a still further flow of income in their communities and a flow of new jobs and services. Examples are spending in grocery and retail stores, medical offices, insurance companies, and other non-wine and grape related industries.

Beginning in late 2009, the Minnesota IMPLAN Group released version 3.0 of its flagship IMPLAN software product, which makes it possible to include Trade Flows in an impact analysis. We have used this latest version with its increased functionality to produce this report.

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## **ABOUT FRANK, RIMERMAN + CO. LLP**

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Frank, Rimerman + Co. LLP is the leading research source on the U.S. wine industry. We continue to strive to raise the bar on the quality of information and analysis available to the wine industry.

Frank, Rimerman + Co. LLP conducts original research on the business of wine and wine market trends, publishes a number of industry studies and provides business advisory services and custom business research for individual companies and investors.

## **FRANK, RIMERMAN + CO. LLP PUBLICATIONS**

### ***Grape Trends***

By combining the annual crush and acreage reports into one easy-to-use quick reference guide, Grape Trends provides, in one source, all the information needed to make informed decisions about California's grape supply for production planning. Provided in electronic form, Grape Trends includes a complete summary of current, past (since 1997) and projected tons, prices, and bearing acres for all of California's major grape growing regions and counties for all varietals recorded, including: Chardonnay, Sauvignon Blanc, Cabernet Sauvignon, Merlot, Syrah, Zinfandel, and Pinot Noir.

### ***Grape Price Analysis Tool***

The Grape Price Analysis Tool enables users to take a deep dive into the California Grape Crush Report and analyze estimated bottle prices in relation to tonnage prices. The tool makes the data from the Crush Report easy to access and provides actionable results to help determine tonnage prices based on an estimated finished bottle price.

### ***Economic Impact Reports***

Frank, Rimerman + Co. LLP completed the first study of the Impact of Wine, Grapes and Grape Products on the American Economy for Wine America, the Wine Institute, Winegrape Growers of America and the National Grape and Wine Initiative, as well as economic impact studies for Illinois, Iowa, Michigan, Missouri, Ohio, New York, North Carolina, Pennsylvania, Tennessee, Texas, Virginia and Washington.

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Recent Economic Impact Studies and Updates published by Frank, Rimerman + Co. LLP include the following, all available for purchase from Frank, Rimerman + Co. LLP:

- Economic Impact of Texas Wine and Vineyards 2008
- Economic Impact of Wine and Wine Grapes in Ohio 2008
- Economic Impact of Wine and Wine Grapes in Illinois 2007
- Economic Impact of Pennsylvania Wine and Grapes 2007
- Economic Impact of Wine and Grapes on the State of Texas 2007
- Economic Impact of Wine and Grapes on the Missouri Economy 2007
- Economic Impact of Wine and Wine grapes in Tennessee 2007
- Impact of Wine, Grapes and Grape Products on the American Economy, 2007
- Economic Impact of California Wine 2006
- Economic Impact of Washington Grapes and Wine 2006
- Economic Impact of Wine and Wine Grapes in North Carolina 2005
- Economic Impact of Wine and Wine Grapes in Texas 2005
- Economic Impact of Michigan Grapes, Grape Juice and Wine 2005
- Economic Impact of New York Grapes, Grape Juice and Wine 2005

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