



# Wineries of the North

## A STATUS REPORT

Authored by: Brigid Tuck, Extension Center for Community Vitality, and William Gartner, Department of Applied Economics



IN PARTNERSHIP WITH: NORTHERN GRAPES PROJECT  
USDA, SPECIALTY CROPS RESEARCH INITIATIVE PROGRAM  
NATIONAL INSTITUTE OF FOOD AND AGRICULTURE



Department of  
**APPLIED  
ECONOMICS**



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## NORTHERN GRAPES PROJECT

Successful viticulture research programs focused on the development of cold-hardy grapes have promoted the emergence of a new industry in states where grape growing and local wine making had previously been limited. Grape growers and wineries in these states, spanning from Nebraska in the west to New York in the east, have rapidly adapted the new grape cultivars. As the number of vineyards has significantly expanded, so has the number of wineries producing wines from these locally-grown grapes. The new industry faces challenges to production, marketing, and sales. These challenges are being addressed by the Northern Grapes Project. The Northern Grapes Project is funded by USDA's Specialty Crops Research Initiative Program of the National Institute of Food and Agriculture, project number 2011-51181-30850.

The Northern Grapes Project brings together researchers, Extension specialists, and industry professionals from 13 states to address viticulture, enological, business management, and marketing issues related to growing cold hardy grapes and producing wines made from these grapes. According to the grant application, after five years, the project teams intend to have accomplished the following goals: 1) production and sales of wines made from cold climate cultivars will have doubled, 2) improved quality resulting from better growing and winemaking practices will have improved customer retention and driven repeat sales, 3) enhanced breeding and cultivar evaluation will have resulted in an accelerated pace of cultivar release, 4) cold climate cultivars will establish unique regional marketing identities, 5) wineries will have understood and applied business and tasting room management practices that drive sales and profitability, and 6) wineries and vineyards will have successfully transitioned from "startup" to "sustainably profitable."

To measure progress on these goals, one of the first tasks of the project team was to conduct a baseline survey. This survey, sent to grape growers and wineries in the participating states, gathered data on the current status of the grape and wine industry in general and on cold-hardy grape and wine production, specifically. Questions were asked pertaining to sales and production (wineries and vineyards), growing practices (vineyards), and operating practices (wineries). This report deals with wineries. A report on vineyards can be found at: <http://www.extension.umn.edu/projects/community/EconomicImpact>.

## WINERIES OF THE NORTH: A SUMMARY

- The Northern Grapes Project brings together researchers, Extension specialists, and industry professionals from 13 states to address viticulture, enological, business management, and marketing issues related to growing cold hardy grapes and producing wines from these grapes.
- In spring 2012, grape growers and winery owners in 13 states were surveyed. Questions asked pertained to sales and production (wineries and vineyards), growing practices (vineyards), and operating practices (wineries). The goal was to establish an industry baseline. In total, 199 wineries provided full answers to the surveys.
- Winery establishment and development continues to show significant growth. Two of every five wineries have been established since 2007. Existing wineries plan to continue to expand their operations in the next two years.
- Seventy-nine percent of wineries operate a tasting room. On average, each tasting room served 8,000 guests in 2011. Wineries estimate 42 percent of tasting room visitors were repeat clients.
- On average, each winery spent \$51,000 to purchase grapes. In total, wineries in the participating states bought \$40.8 million of grapes in 2011. Cold-hardy grapes accounted for 52 percent of those sales.
- In 2011, sales at wineries in the participating states totaled \$284.6 million. Sales from wines made with cold-hardy grapes totaled \$149.9 million. Wine sales are the primary source of revenue for wineries, accounting for 73 percent of all sales.
- Wineries sold approximately three-fourths of the wine they produced in 2011. The remainder, 25 percent, went into inventory.
- Wineries in the participating states employ 5,800 individuals. On average, each winery employs 13 individuals. The majority are part-time, seasonal workers. Volunteers remain an important source of labor for wineries.
- Wineries paid \$56.0 million, or an average of \$71,000 per winery, for labor in 2011.
- Wineries view their own branding initiatives, special events, and state winery associations and/or councils as the most important contributors to their overall individual marketing strategy.
- Wineries collaborate most extensively with other wineries, tourism destination marketing organizations, and local, non-restaurant food organizations (e.g. Farmer's Markets).
- Wineries rated government policy, future wine sales, and cost of labor as the biggest challenges to the future growth and development of their businesses.



## WINERIES: BASELINE SURVEY RESULTS

An early task of the Northern Grapes Project was to establish a baseline for the grape growing and winery industry in the participating states. This baseline will be used to measure changes in the industry over the period of the project. This report will detail the results of the baseline survey for wineries in the participating Northern Grapes Project states.

### Survey Methodology and Response Rates

In early 2012, project researchers at the University of Minnesota sent a survey to grape growers and wineries in the participating states. Grower and winery lists were provided to the University of Minnesota by industry associations in each state (see appendix 1 for a list of participating associations). An email was sent to all members of these lists, resulting in 2,746 invitations to participate in the survey. Of these, 501 responded, for an overall response rate of 18 percent. In addition, links to the survey were available allowing individual growers and wineries not directly associated with an industry group, and thus not receiving a direct email invitation, to participate in the survey. These links were also announced during the Northern Grapes Project webinars. The survey links generated 110 responses. Therefore, in total, there were 611 total responses to the survey.

Table 1-1 lists the participating states, the number of wineries and growers invited based on the industry association lists, the number of respondents using the open links, and the response rate. Minnesota has the highest membership totals.<sup>1</sup> South Dakota had the highest response rate.

<b>State</b>	<b>Total Number of Contacts from Industry Associations</b>	<b>Number of Responses</b>	<b>Response Rates</b>
Connecticut	32	5	16%
Illinois	272	52	19%
Iowa	222	66	30%
Massachusetts	28	10	36%
Michigan	164	36	22%
Minnesota	1,012	167	17%
North Dakota	54	14	26%
Nebraska	172	46	27%
New Hampshire	51	14	27%
New York	202	32	16%
South Dakota	14	11	79%

<sup>1</sup> The Minnesota Grape Growers Association has a national reputation for its industry knowledge; therefore, many members of the association grow in neighboring states. Responses were categorized by state the grower or winery owner indicated as the state in which their operation is located.

Vermont	47	18	38%
Wisconsin	476	97	20%

Not all of the survey responses were applicable to the baseline survey. Association memberships are generally open to all interested parties and therefore membership lists include individuals who may be considering grape growing or producing wine, or individuals who previously grew grapes or produced wines. The lists may also contain people associated with the industry in other capacities than growing and wine-making. Knowing this, the survey was designed to capture basic information on these individuals, even if they did not complete the full survey.

The first survey question asked “Are you associated with...1) a vineyard (past, present, or future), 2) a winery, 3) both, or 4) other. Those responding “other” were directed to the end of the survey. Thirty-eight respondents selected the “other” response.

Those responding “vineyard (past, present, or future)” were asked a follow-up question. Survey takers who indicated they grew grapes in the past or planned to grow grapes in the future were directed to the end of the survey. Twenty-three respondents are not currently growing.

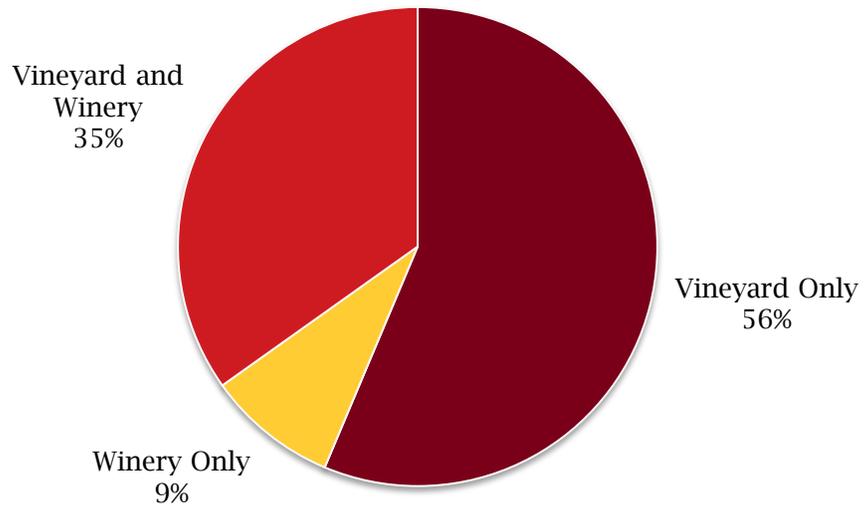
The focus of the Northern Grapes Project is on commercial scale grape growers and wineries. Thus, grape growers were asked “Do you grow grapes for commercial sale or use? If you grow grapes exclusively for use in your own winery, answer yes”. Those responding “no” were directed to answer a series of questions about the size of their vineyard and then directed to the end of the survey. Seventy-three respondents indicated they were not commercial growers.

Finally, thirty-five responses were dropped because they did not answer enough of the questions to provide useful information. Table 1-2 shows how the responses were divided by these categories.

<b>Table 1-2: Calculation of Total Useable Responses</b>	
Total Responses	611
Non-Growers or Non-Winery Owners	38
Not Currently Growing Grapes	23
Non-Commercial Growers	73
Incomplete Responses	35
Useable Responses	442

Survey participants could be vineyard operators, winery operators, or operators of a joint vineyard-winery business (see chart 1-1). Over half (56 percent) of survey respondents operate a vineyard only. Among winery owners, it is more common to operate a combination of a winery-vineyard operation, with over one-third (35 percent) of survey respondents reporting this arrangement. Only 9 percent of wineries are operated independently of a vineyard. In total, the survey includes 193 wineries and 403 vineyards. Our research indicates there are 794 wineries in the participating states, indicating responding wineries represent 24 percent of all wineries.

**Chart 1-1: Are You Associated With?**  
**n = 442**



### **Winery Characteristics**

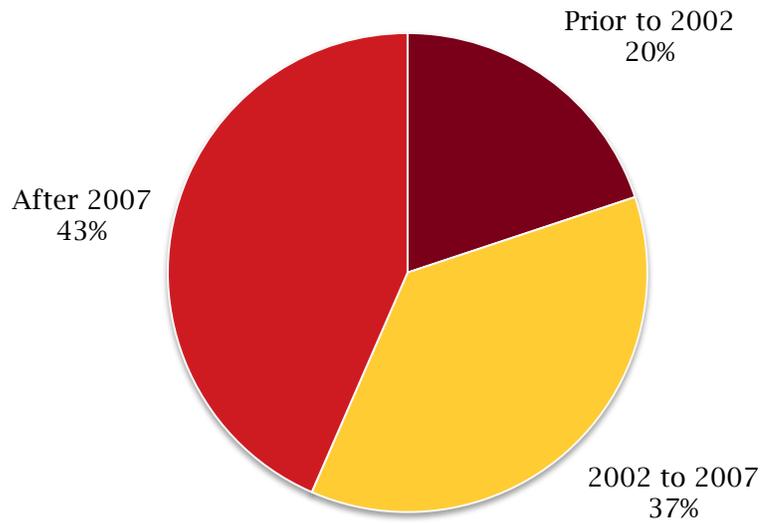
Of the 442 total useable survey responses, 199 indicated they owned and operated a winery. Thirty-nine respondents operated a stand-alone winery. The remainder operated a combination of winery and a vineyard.

Table 1-3 lists winery respondents by state. Minnesota and Iowa had the highest number of participating wineries with 35 and 30 responses respectively. Maine had the lowest number of respondents (2) while Connecticut and North Dakota each had 3 respondents.

<b>Table 1-3: In What State Is Your Winery Located?</b>	
Connecticut	3
Illinois	20
Iowa	30
Maine	2
Massachusetts	8
Michigan	20
Minnesota	35
Nebraska	15
New Hampshire	11
New York	16
North Dakota	3
South Dakota	7
Vermont	6
Wisconsin	21
Other (please specify)	2
Total	199

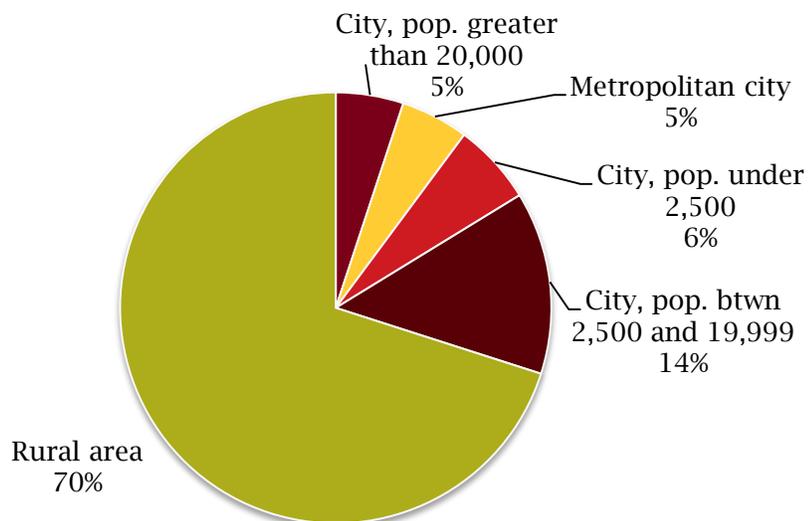
Winery establishment and development continues to show significant growth, as shown in chart 1-2. Only 20 percent of wineries were in existence ten years ago. The majority of responding wineries indicated they were established within the past five years. From these responses, it appears growth will continue in the industry.

**Chart 1-2: Year of Winery Establishment**  
n=191



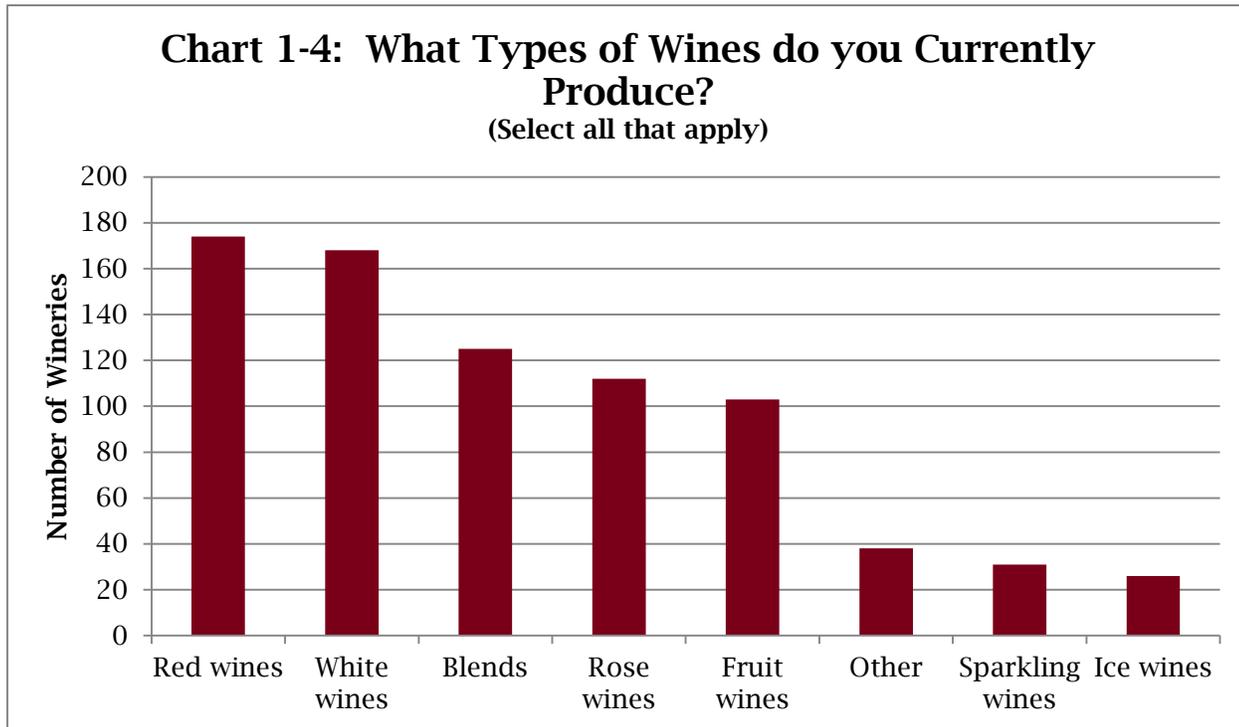
The majority (70 percent) of the responding wineries are located in rural communities. Small cities with populations between 2,500 and 19,999 are also common locations for wineries in the survey. See chart 1-3.

**Chart 1-3: Which Setting Most Describes your Winery Location?**  
n=197



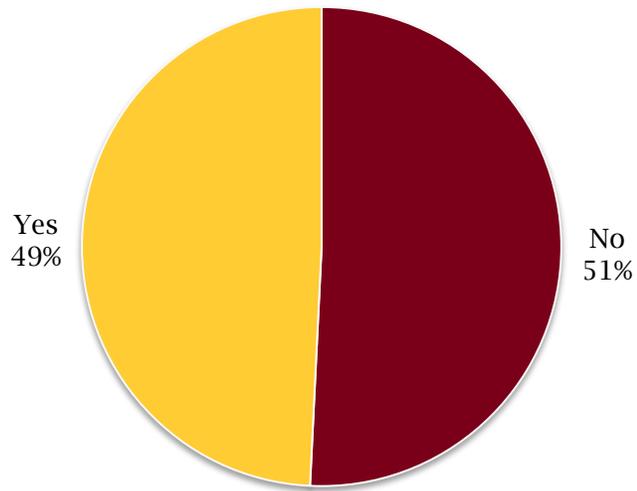
Not surprisingly, red and white wines are the most commonly produced types of wines by the responding wineries, as shown in chart 1-4. Sparkling and ice wines are the least commonly

produced. Results show wineries in the participating states produced 9.1 million gallons of wine in 2011 or an average of 11,400 gallons per winery.



Just over half (51 percent) of the responding wineries participate in a wine trail. See chart 1-5. Wine trails have grown in popularity in recent years and this chart indicates there is opportunity for further development.

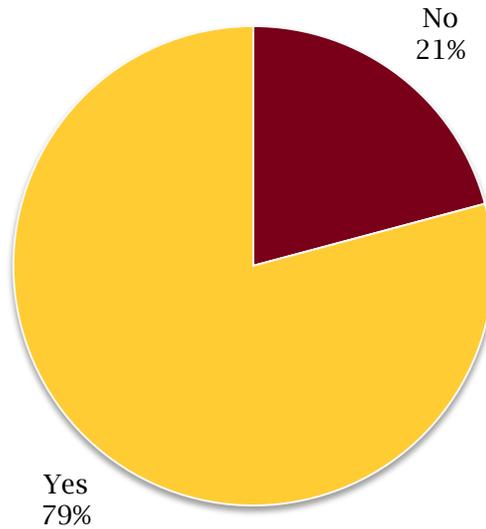
**Chart 1-5: Wine Trail Participation**  
**n=195**



### **Tasting Rooms and Events**

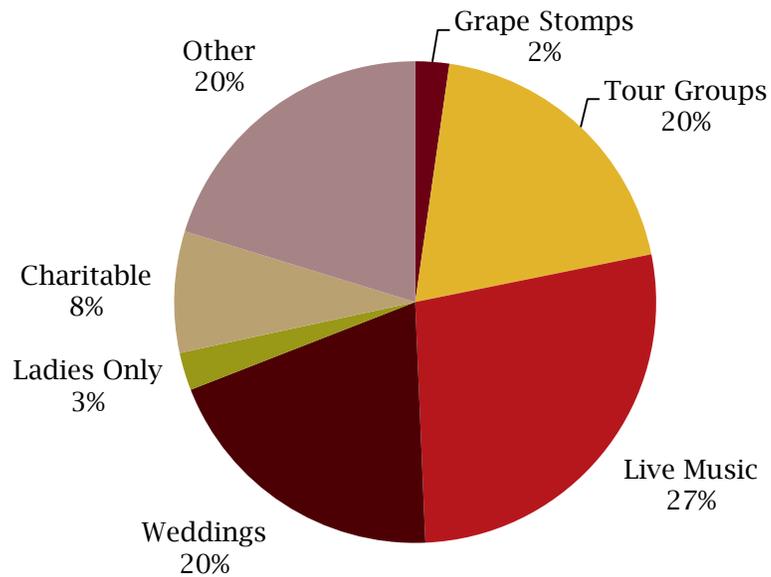
The majority (79 percent) of participating wineries operate a tasting room in conjunction with their winery (chart 1-6). Just under half of the wineries (49 percent) charge for the tasting. Thirty-seven percent offer food with the wine service. On average, each tasting room served 8,000 guests in 2011 within a range from 0 to 125,000. Wineries estimate that 42 percent of their tasting room customers in 2011 were repeat customers.

**Chart 1-6: Do You Operate a Tasting Room?  
n=192**



Wineries also reported on events held at their winery in 2011. Specifically, wineries were asked to report how many people attended the following types of events: grape stomps, wine-making classes, tour groups, live music, weddings, ladies-only events, charitable events, and other events. In total, the responding wineries (122) reported 403,000 guests at their winery events. The breakdown of which events these guests attended is shown in chart 1-7. Live music events drew the most people to the responding wineries in 2011. Tour groups and weddings were other top attractors for visitors to the wineries.

**Chart 1-7: Percent of Visitors Per Winery Event  
n=122**



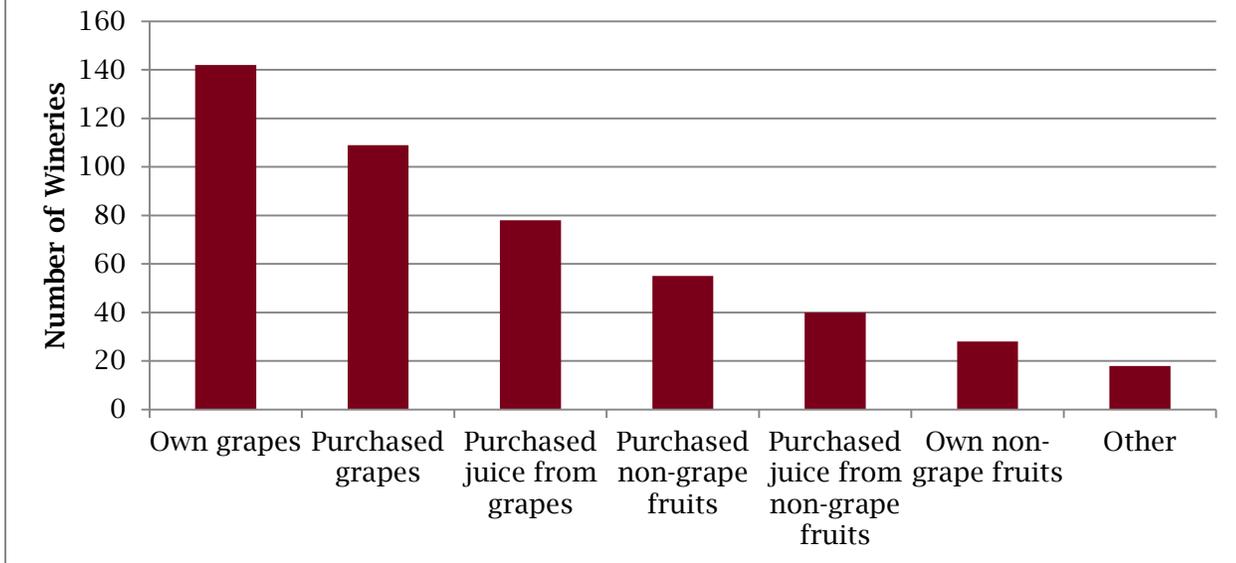
### **Grape Procurement**

Wineries in the participating states purchased \$40.8 million of grapes in 2011, from their own vineyards and from other vineyards. On average, each winery spent \$51,000 to buy grapes. Fifty-two percent of the grapes used by these wineries were cold-hardy varieties.

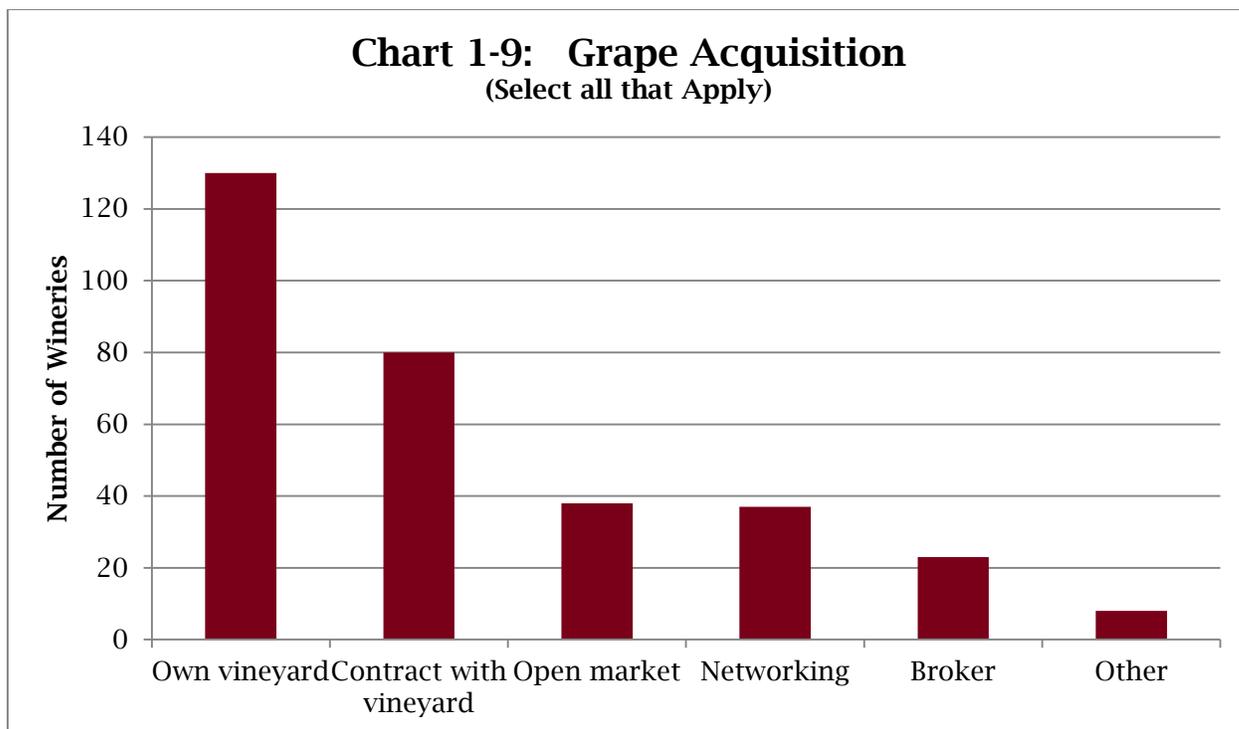
Wineries participating in the survey report the most common methods for acquiring grapes and fruits are by purchasing grapes from their own vineyard and purchasing whole grapes from another source. Use of non-grape fruits is rather limited among the surveyed wineries, as shown in chart 1-8.

## Chart 1-8: Grapes and Fruits Used in Wine

### Production (Select all that Apply)



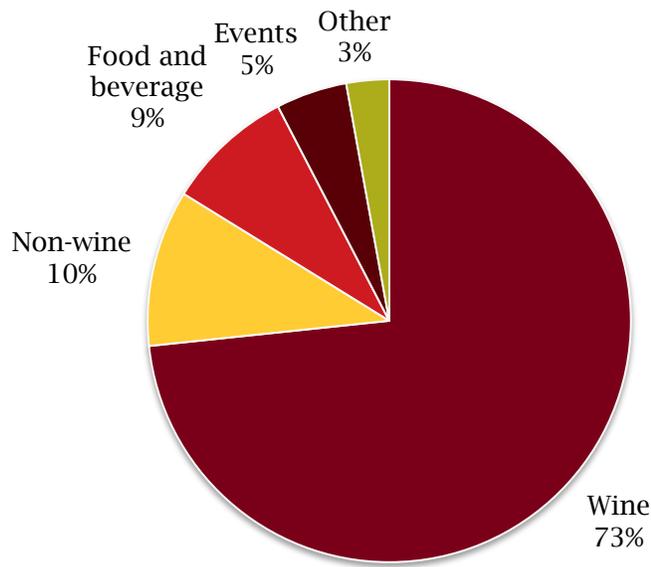
As depicted in chart 1-9, wineries primarily acquire their grapes from their own vineyards. Those who purchase grapes use a combination of contracts with vineyards, the open market, and networking. Purchasing grapes via a broker is not widely used as an acquisition tool with these wineries. Interestingly, several of the open-ended responses related to “other” referenced purchasing from other wineries.



### Winery Sales

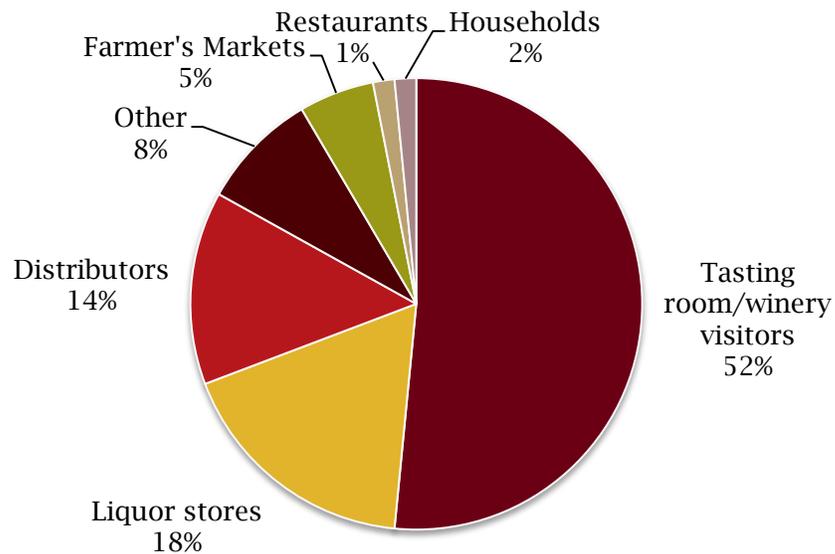
In total, wineries in the participating states had sales of \$442.9 million in 2011. Of total sales, \$149.9 million were generated from wines crafted from cold-hardy grapes. Wine sales, including bottles sold and tasting room fees, are the primary source of revenue for wineries, accounting for 73 percent of all sales (see chart 1-10). Wineries produced, on average, 11,400 gallons of wine. Sales on non-wine items and non-wine food and beverage each contributed approximately 10 percent of winery sales in 2011.

**Chart 1-10: Wine Sales by Category**



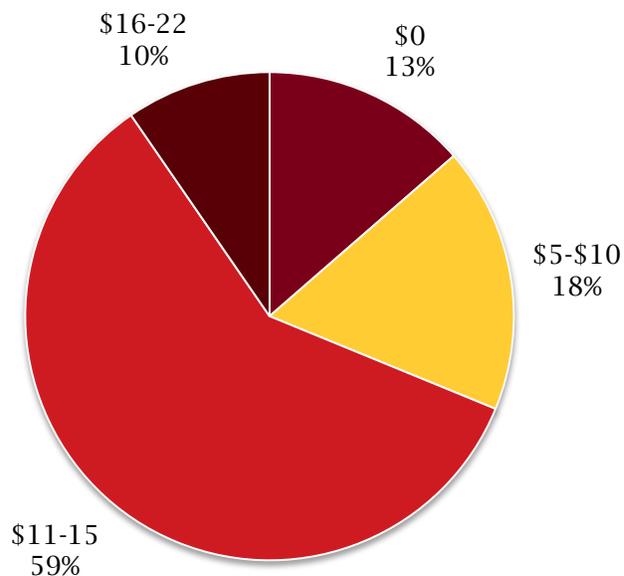
Wineries in the states sold an estimated 15.3 million bottles of wine in 2011 or an average of 19,300 bottles per winery. While nearly 80 percent of wineries operate a tasting room, just over half of an average winery's sales are through the tasting room or to winery visitors, as shown in chart 1-11. Approximately one-third of sales (32 percent) are via distributors and liquor stores. Sales to Farmer's Markets, restaurants, and direct-to-households are only a minor portion of sales.

**Chart 1-11: Percent of Wine Sales**  
n=130

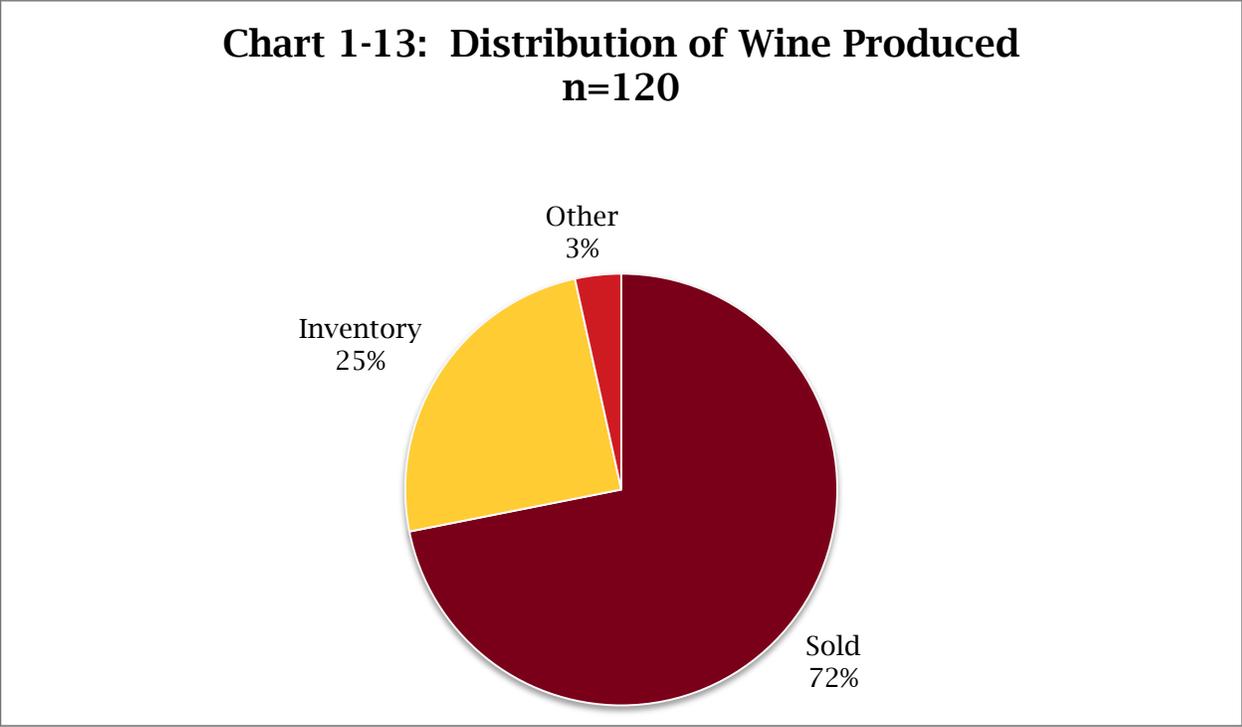


Wineries reported the average price per bottle of wine sold was \$11 in 2011. Chart 1-12 shows the distribution of average wine sale prices. Thirteen percent of wineries reported receiving \$0 for wine sold. These are likely wineries who produced wine but whose wine was not ready for sale in 2011. The majority of wineries, 59 percent, sold their wine for a price of \$11-\$15 per bottle.

**Chart 1-12: Average Price per Bottle of Wine**  
n=130



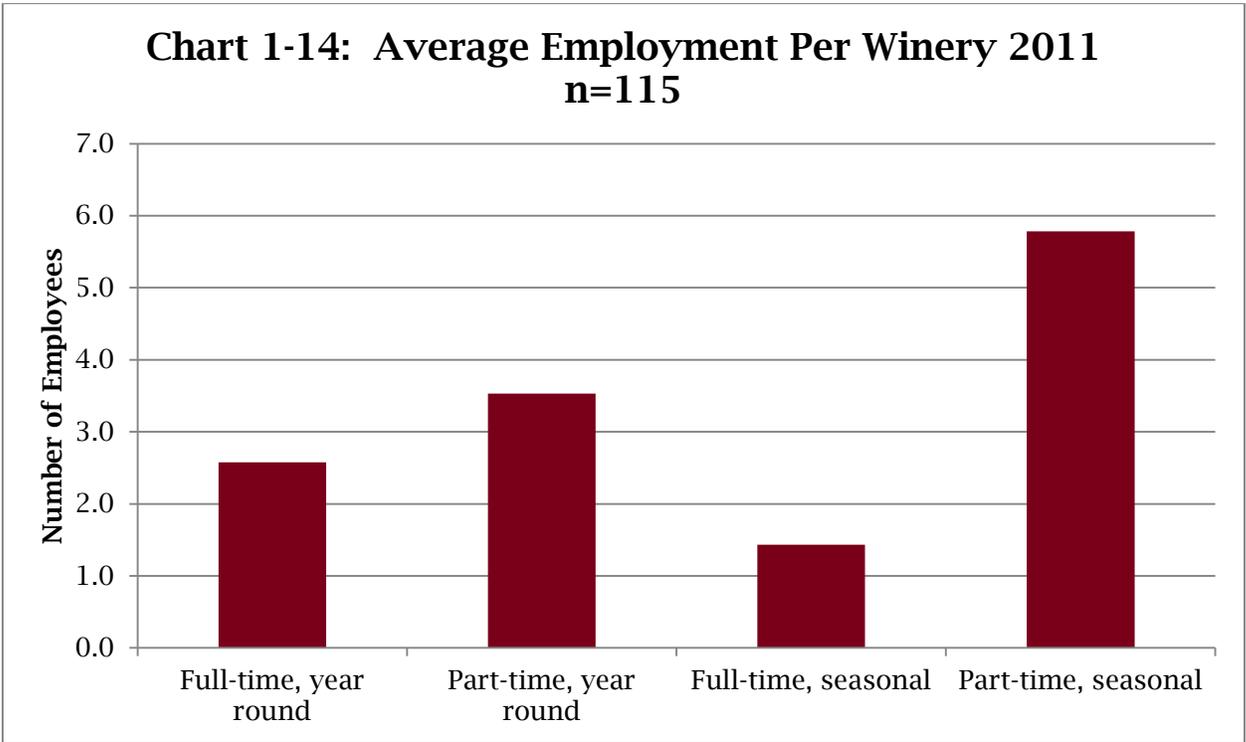
As mentioned, the average responding winery produced 11,400 gallons of wine. The majority of the wine (72 percent) produced was sold, see chart 1-13. Wineries put one-quarter of the gallons of wine produced into inventory. A small percent (3 percent) of wine produced was utilized in other ways (e.g. gifts, donations, shrinkage, etc.).



**Winery Employment and Volunteer Labor**

Wineries in the participating states employ 5,800 individuals. On average, each winery employs 13 individuals. The majority of these employees (6) are part-time seasonal employees. Each winery averages fewer than 3 employees on a full-time basis, see chart 1-14.

In 2011, wineries paid \$56.0 million in labor income, on average, \$71,000 per winery. Volunteer labor is an important component of winery operations. In 2011, wineries used 620 hours of volunteer labor per winery.

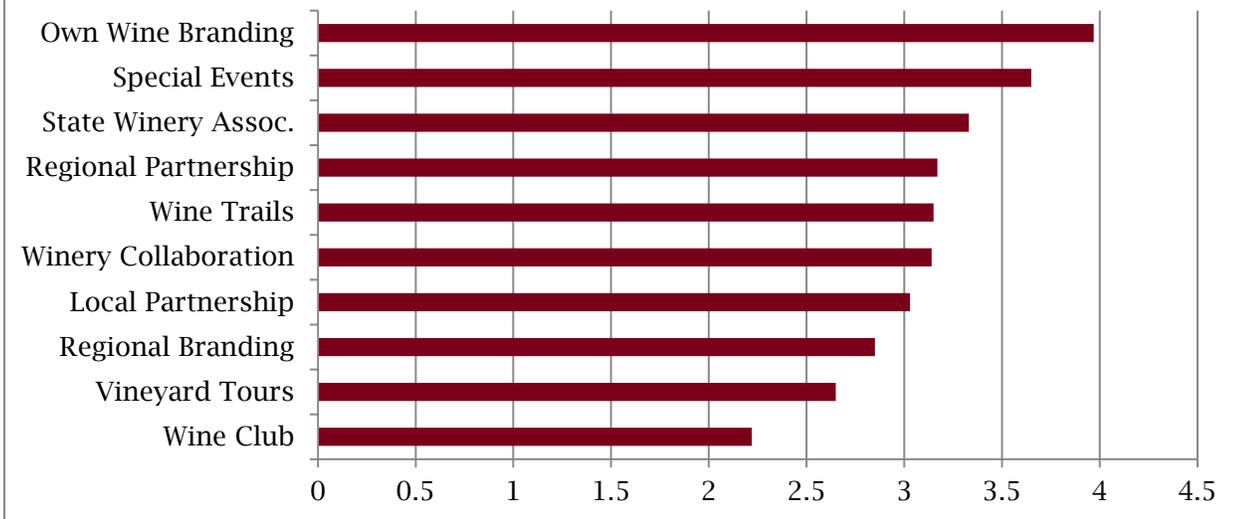


**Marketing and Collaboration**

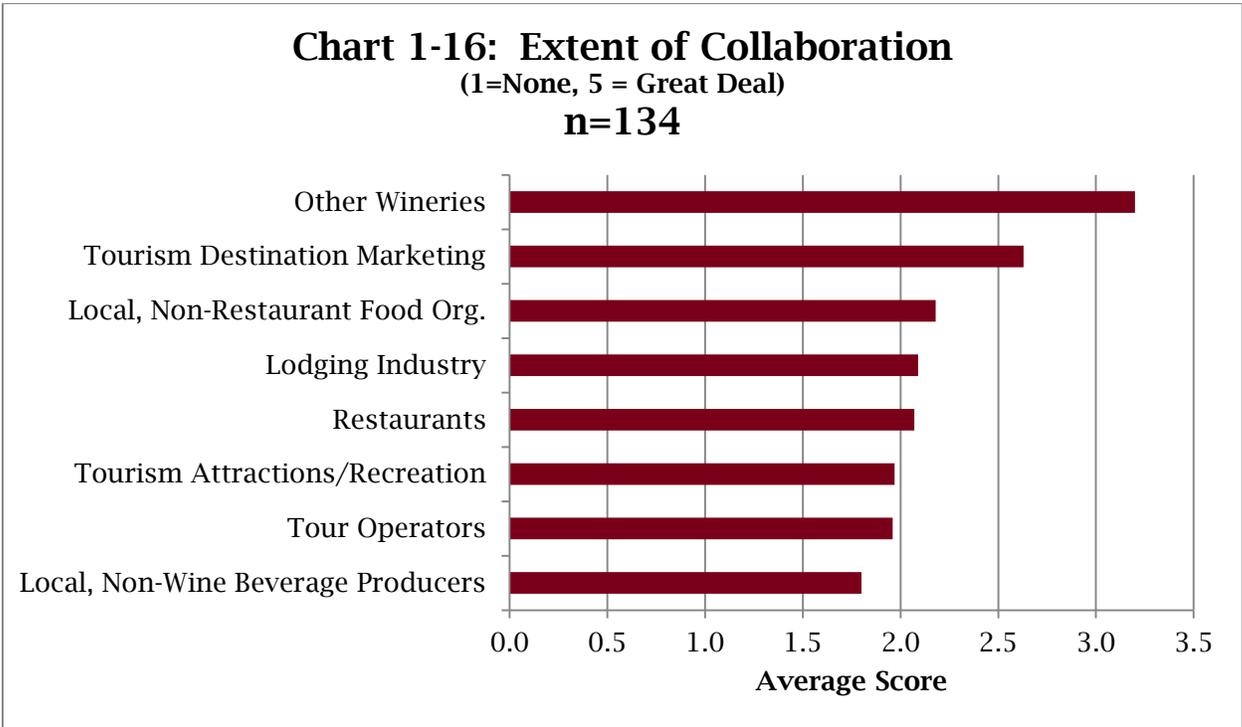
Wineries were asked to rate a list of marketing strategies on a scale where 1 indicated the strategy was “unimportant” for their marketing and 5 indicated it was “very important”. As shown in Chart 1-15, winery owners believe that branding their own wine is the most important marketing strategy they can employ, assigning it an average score of 3.97. Special events and state winery/vineyard associations or councils were also assigned relatively high scores. Winery owners assigned the lowest average scores to wine clubs, vineyard tours, and regional branding initiatives. Sixty-three percent of wineries offer vineyard tours.

### Chart 1-15: Importance in Overall Marketing Strategy

(1 = Unimportant, 5 = Very Important):  
n=135



Wineries were also asked about their current collaboration efforts. They were asked, on a scale where 1 equals “none” and 5 equals “a great deal”, “to what extent do you currently collaborate with the following entities?” Collaboration among wineries appears to be high, as shown in chart 1-16. Wineries also indicate collaborations with tourism destination marketing organizations (such as convention and visitors bureaus) and local, non-restaurant food organizations (such as cheese makers, bakeries, and farmer’s markets). Low levels of collaboration are seen with other local non-wine beverage producers and tour operators. These may be areas for further development for wineries.

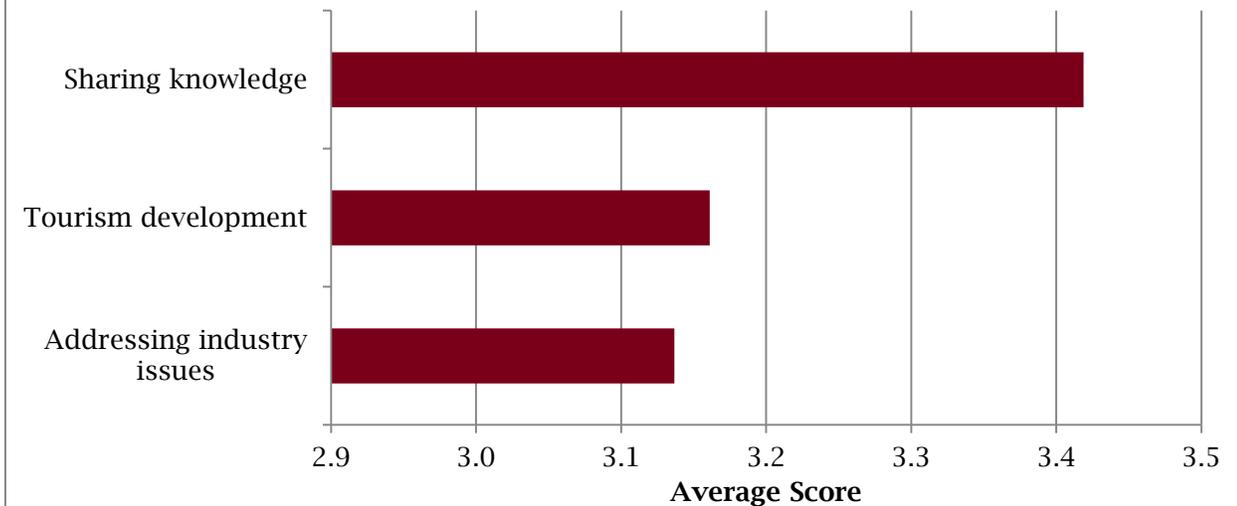


As a follow-up question, those wineries who indicated a high degree of collaboration with other wineries were asked about the extent of collaboration on certain issues. On a scale from 1 to 5, where 1 equaled “none” and 5 equaled “a great deal”, wineries rated their collaboration with each other in knowledge sharing, tourism development, and addressing industry issues. The highest degree of winery collaboration was reported in regards to knowledge sharing, as depicted in chart 1-17. Wineries indicated collaborating to a lesser extent to address industry issues.

### Chart 1-17: If Collaborating with Wineries, What Extent Collaborate on Following Issues?

(1=None, 5=Great Deal)

n=118



Wineries were then asked how various marketing arrangements influenced their sales. Wineries overwhelmingly indicated that their own wine branding efforts drove the majority (41 percent) of their sales. Special events drive an estimated 14 percent of sales and wine trails 9 percent. Chart 1-18 illustrates this point.

**Chart 1-18: What Percent of Current Sales are Attributable to the Following?**

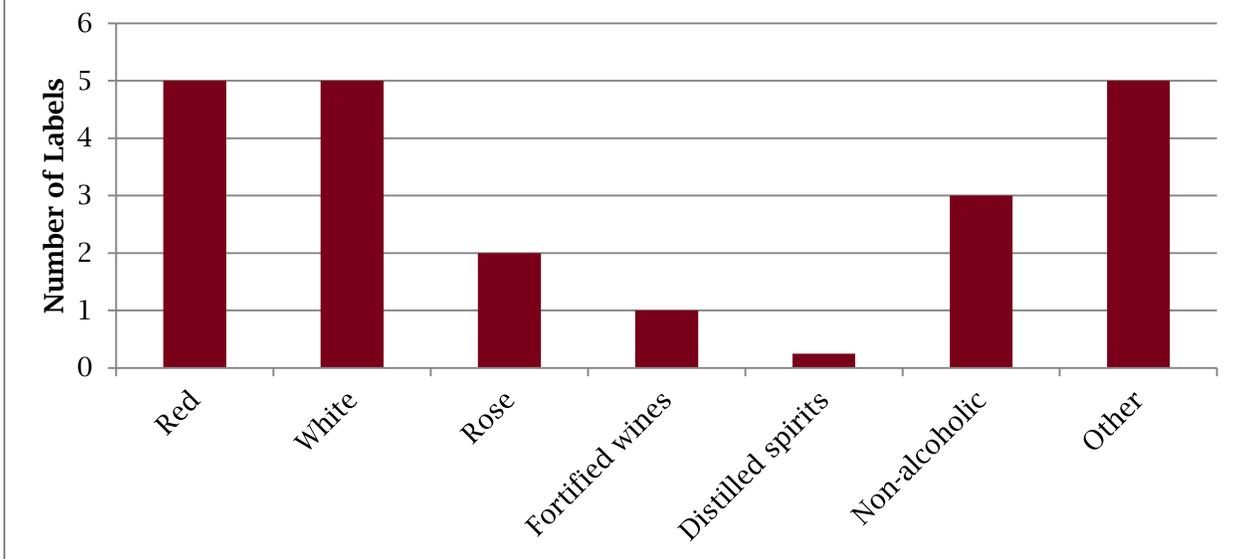
**n=98**



### Product Development

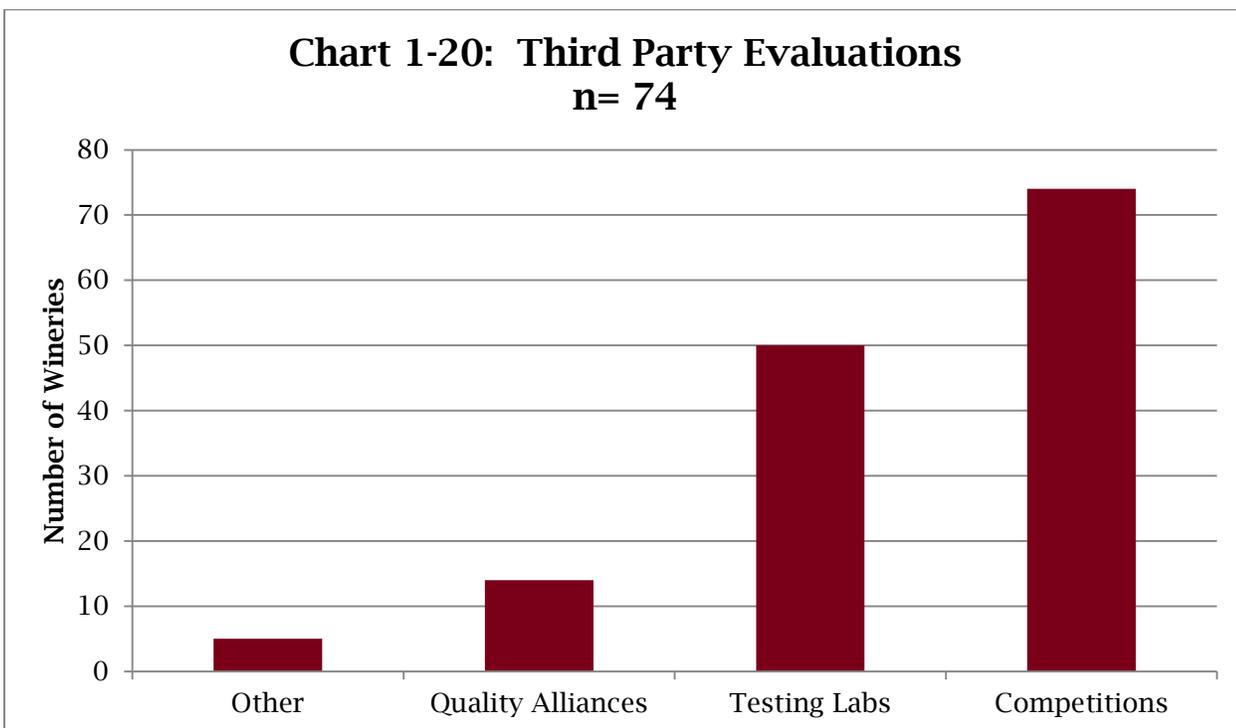
As mentioned earlier, the most commonly produced wines are red and white wines. On average, each winery is bottling 5 labels of each, as shown in chart 1-19. Wineries also report an average of 5 “other” labels. The survey instrument did not ask wineries to indicate the other types of labels are being produced.

**Chart 1-19: How Many Labels of the Following Products do you Produce?**  
n=125



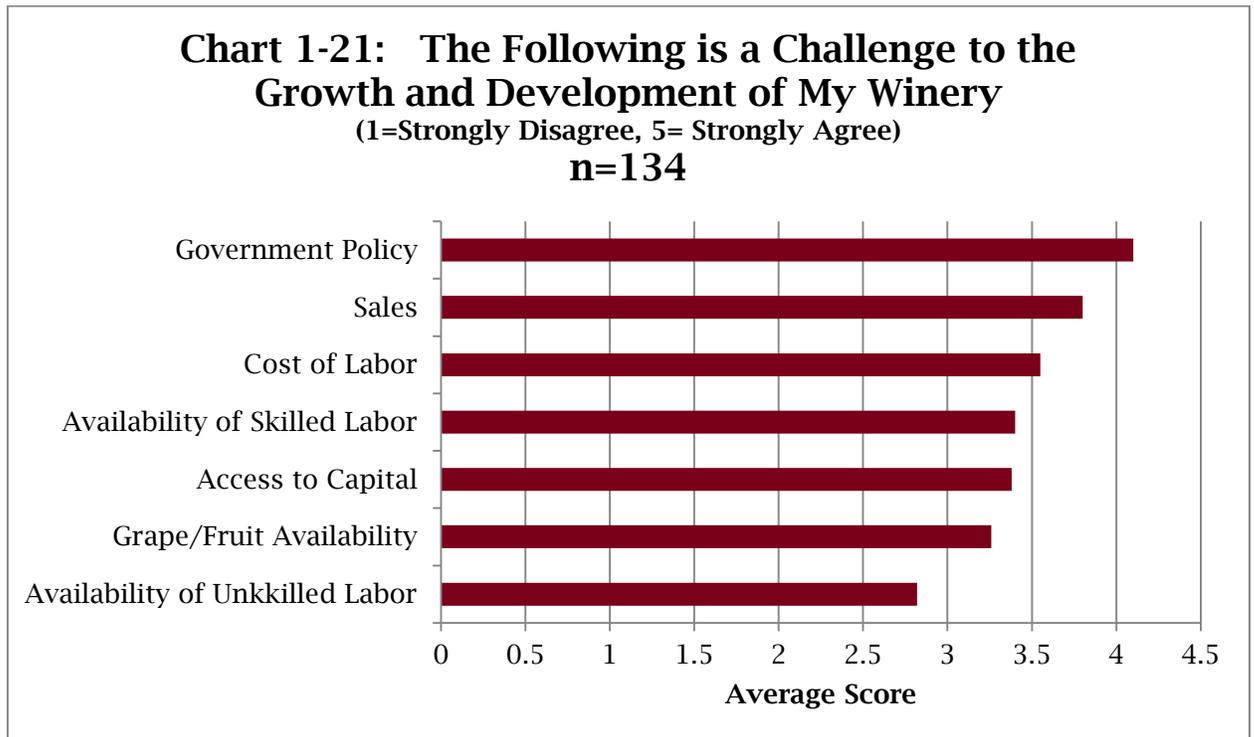
Competitions are the most commonly used type of third party evaluations, as reported by the responding wineries. Wineries are also using testing labs for third party evaluations. The use of quality alliances appears to be relatively limited at this time. See chart 1-20.

**Chart 1-20: Third Party Evaluations**  
n= 74



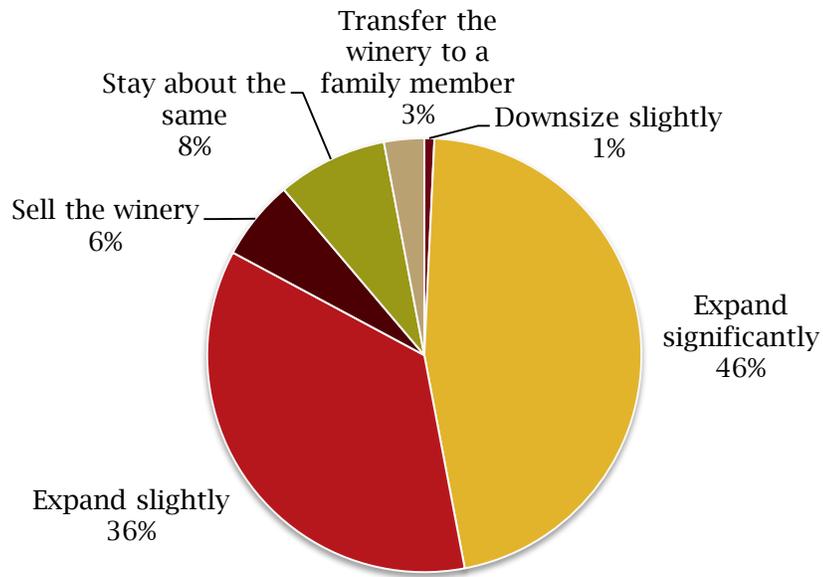
## Future Plans

Finally, wineries were asked about the future of the industry and their own winery. Chart 1-21 depicts winery owners' responses to a question about the challenges to the growth and development of their winery. On a scale where 1 equals "strongly disagree" and 5 equals "strongly agree", wineries were asked to rate a list of issues in relation to each as a challenge to the growth and development of their winery. Wineries rated government policy, sales, and cost of labor as the biggest threats to their wineries. Availability of unskilled labor and grapes/fruit received the lowest average ratings.



Winery owners were asked directly about future plans for their establishment. The results, shown in chart 1-22, show the potential for continued growth in the industry, as 82 percent of wineries plan to expand in the next five years. A few wineries are considering selling or transferring the winery to a family member. The industry, as the older wineries mature, may be in need of assistance in succession planning and transferring a business. Continued growth also indicates a continued need for successful business planning.

**Chart 1-22: In the Next Five Years, My Plan for My Winery is to...**  
**n=134**



## CONCLUSIONS AND IMPLICATIONS

The Northern Grapes Project brings together researchers, Extension specialists, and industry professionals from 13 states to address viticulture, enological, business management, and marketing issues related to growing cold hardy grapes and producing wines made from these grapes. A survey of vineyards and wineries in the participating states conducted by the University of Minnesota has established a baseline for the industry in 2011. This report detailed the results of the winery baseline study.

There are 794 wineries in the participating states. Those wineries recorded estimated sales of \$285 million in 2011. Wine sales are the primary source of revenue for wineries, accounting for 73 percent of all sales. Wineries employed 5,800 individuals and paid \$56.0 million in labor income.

Our results lead us to several conclusions and potential implications for the winery industry in the participating states, particularly in regards to the cold-hardy industry.

- **Growth in the number and size of wineries continues.** While the vineyard baseline study hints at a slowdown in the growth of the vineyard industry, the number of wineries continues to grow. Further, current winery owners are planning to expand the size of their business in the near future.
- **Wineries tend to integrate with vineyards.** The most common arrangement is for a winery to own its own vineyard. Vineyards are more likely to be stand-alone operations.
- **Wineries and vineyards are increasingly sophisticated in their interactions.** Use of contracts to purchase grapes is the most common marketing arrangement. Wineries that purchase grapes via contract are involved in management decisions in the vineyard.
- **Wineries have untapped market opportunities.** Wine sales comprise the majority of winery revenues indicating opportunity to diversify sales. The majority of wine sales are through the winery tasting room. There appears to be opportunity to market to restaurants especially as a local foods option.
- **Wineries view branding their own wines as critical.** Wineries continue to see branding their own wine as most critical to their marketing strategy. Special events and state grape and winery associations/councils are also important marketing strategies.
- **Wineries worry about government policies and future sales potential.** Wineries identify government policies and future sales as the issues posing the greatest challenge to the continued success of their business.

## **APPENDIX ONE: PARTICIPATING INDUSTRY ASSOCIATIONS**

The following industry associations/councils provided membership lists for the baseline and economic impact survey.

- Connecticut Vineyard and Winery Association
- Illinois Grape Growers and Vintners Association
- Iowa Wine Growers Association
- Lake Champlain Wines
- Massachusetts Farm Wineries and Growers Association
- Michigan Grape and Wine Industry Council
- Minnesota Grape Growers Association
- Nebraska Winery and Grape Growers Association
- New Hampshire Winery Association
- New York Wine and Grape Foundation
- Northern Illinois Wine Growers
- Scenic Rivers Grape and Wine Association
- South Dakota Specialty Producers Association
- South Dakota Winegrowers Association
- Upper Hudson Valley Wine and Grape Association
- Vermont Grape and Wine Council
- Western Iowa Grape Growers Association
- Wisconsin Grape Growers Association



## **APPENDIX TWO: DEFINITION OF COLD-HARDY GRAPES**

For purposes of this study, researchers classified the following cultivars as cold-hardy. This was done in consultation with the Northern Grapes project advisory team which is comprised of growers in each of the states.

### **Table A-1: Cold-Hardy Red Varieties**

Baltica  
Beta  
Frontenac  
GR-7  
King of the North  
Leon Millot  
Marechal Foch  
Marquette  
Petite Pearl  
Sabrevois  
St. Croix  
Valiant  
Other red Swenson

### **Table A-2: Cold-Hardy White Varieties**

Brianna  
Edelweiss  
Esprit  
Frontenac blanc  
Frontenac gris  
Kay Gray  
La Crescent  
La Crosse  
Louise Swenson  
Petite Amie  
Prairie Star  
St. Pepin  
Other white Swenson