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
WIneries of the North

A STATUS REPORT

March 2013

Authored by: Brigid Tuck and William Gartner

Partners/Sponsors:
Northern Grapes Project, which is funded by USDA’s Specialty Crops Research Initiative Program of the National Institute of Food and Agriculture, project number 2011-51181-30850

Special Thanks To:
Tim Martinson, Senior Extension Associate, Cornell University
Chrislyn Particka, Extension Support Specialist, Cornell University
Participating Industry Associations
Northern Grapes Project Advisory Committee

Photo Credit:
David L. Hansen, University of Minnesota

© 2013 Regents of the University of Minnesota. All rights reserved. University of Minnesota Extension is an equal opportunity educator and employer. In accordance with the Americans with Disabilities Act, this material is available in alternative formats upon request. Direct requests to the Extension Store at 800-876-8636. Printed on recycled and recyclable paper with at least 10 percent postconsumer waste material.
# Table of Contents

1. NORTHERN GRAPES PROJECT ........................................ 1
2. WINERIES OF THE NORTH: A SUMMARY .................. 2
3. WINERIES: BASELINE STUDY RESULTS ..................... 3
   Survey Methodology and Response Rates .................. 3
   Winery Characteristics .................................. 5
   Tasting Rooms and Events ................................ 9
   Grape Procurement ..................................... 11
   Winery Sales ........................................ 13
   Winery Employment and Volunteer Labor ................. 16
   Marketing and Collaboration ............................. 17
   Product Development ................................... 21
   Future Plans .......................................... 23
4. CONCLUSIONS AND IMPLICATIONS ............................ 25
5. APPENDIX ONE: PARTICIPATING INDUSTRY ASSOCIATIONS ................................................................ 26
6. APPENDIX TWO: DEFINITION OF COLD-HARDY GRAPES ................................................................. 27
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](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.¹ South Dakota had the highest response rate.

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

¹ 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.
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.

<table>
<thead>
<tr>
<th>Total Responses</th>
<th>611</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Growers or Non-Winery Owners</td>
<td>38</td>
</tr>
<tr>
<td>Not Currently Growing Grapes</td>
<td>23</td>
</tr>
<tr>
<td>Non-Commercial Growers</td>
<td>73</td>
</tr>
<tr>
<td>Incomplete Responses</td>
<td>35</td>
</tr>
<tr>
<td>Useable Responses</td>
<td>442</td>
</tr>
</tbody>
</table>

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.
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.
Table 1-3: In What State Is Your Winery Located?

<table>
<thead>
<tr>
<th>State</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>3</td>
</tr>
<tr>
<td>Illinois</td>
<td>20</td>
</tr>
<tr>
<td>Iowa</td>
<td>30</td>
</tr>
<tr>
<td>Maine</td>
<td>2</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>8</td>
</tr>
<tr>
<td>Michigan</td>
<td>20</td>
</tr>
<tr>
<td>Minnesota</td>
<td>35</td>
</tr>
<tr>
<td>Nebraska</td>
<td>15</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>11</td>
</tr>
<tr>
<td>New York</td>
<td>16</td>
</tr>
<tr>
<td>North Dakota</td>
<td>3</td>
</tr>
<tr>
<td>South Dakota</td>
<td>7</td>
</tr>
<tr>
<td>Vermont</td>
<td>6</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>21</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>199</strong></td>
</tr>
</tbody>
</table>

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.
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.

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
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.
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.
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.
Grape Procurement

Winery 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.

Winery survey respondents 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.
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 $284.6 million in 2011, an average of $358,000 per winery. 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.
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.
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.
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.).

**Chart 1-13: Distribution of Wine Produced n=120**

<table>
<thead>
<tr>
<th>Distribution</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sold</td>
<td>72%</td>
</tr>
<tr>
<td>Inventory</td>
<td>25%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
</tbody>
</table>

**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.
Winery collaboration efforts were also assessed. Participants 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.
Wineries were then asked how various marketing arrangements influenced their sales. Wineries overwhelming 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 1-17: If Collaborating with Wineries, What Extent Collaborate on Following Issues?](image)

(1=None, 5=Great Deal)

n=118
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.
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.
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% 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

- Expand significantly: 46%
- Expand slightly: 36%
- Stay about the same: 8%
- Sell the winery: 6%
- Transfer the winery to a family member: 3%
- Downsize slightly: 1%
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