

**Minnesota Grape Growers Profile
2007**

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The following report is the result of collaboration between the University of Minnesota and the Minnesota Grape Growers Association with funding from the University of Minnesota Regional Sustainable Development Partnerships. Primary researchers include Dr. William Gartner, professor, and Brigid Tuck, research fellow, from the University of Minnesota's Department of Applied Economics. The research was guided by a Technical Advisory Panel consisting of members of the Minnesota Grape Growers Association (both grape growers and winery owners) and University of Minnesota professionals (specialists in grape production, wine-making, and tourism).

INTRODUCTION

Anecdotal evidence suggests the grape growing industry in Minnesota is experiencing fairly substantial change. The Minnesota Grape Growers Association has noticed an increase in individuals expressing an interest in growing grapes. Wineries are being approached by more growers interested in selling their grapes. New varieties of cold-hardy grapes being developed by the University of Minnesota appear to be changing the mix of grapes being grown. In an effort to establish some sound baseline data this report details findings from a research study undertaken to quantify the current status of the grape growing industry in Minnesota.

To measure the current status of grape growing in Minnesota, a team from the University of Minnesota conducted a survey of in-state growers. Using a list of 752 names provided by the Minnesota Grape Growers Association, an invitation to complete a web-based survey was emailed to all available and working email addresses. This resulted in a total survey population of 609 grape growers.

The web-based survey was available online for a period of six weeks. During this time, 306 individuals provided usable responses, yielding a response rate of 50 percent. Of these, 84 percent indicated that they currently are growing grapes in Minnesota. The remaining respondents gave various responses for why they are not growing in Minnesota but are on the MGGA mailing list they: grow in other states, are planning to start a vineyard in the future, are just learning about grape growing, grew grapes in the past, or are a stakeholder in the grape growing process. Using calculated averages, the total universe (number of current growers in Minnesota) is 632.

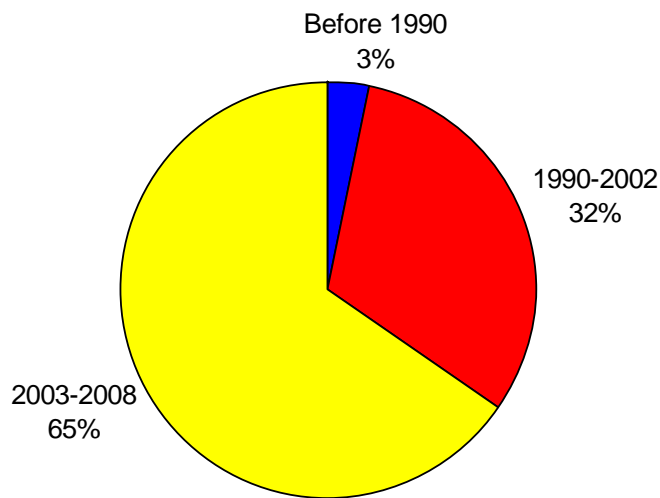
RESULTS

The results of the grape grower survey support anecdotal evidence noted by those in the industry. The grape industry in Minnesota is changing rapidly. Growth has occurred in the number of vineyards, vineyard acreage, and the number of vines. New varieties are being planted in large quantities. The majority of this growth has happened in the last five years. Further, this survey indicates this growth will continue, at least in the short term.

Vineyards

There are a total of 632 vineyards in Minnesota. Chart 1 shows the age of these vineyards. Of those, only three percent were established prior to 1990. Another one-third of vineyards were started between 1990 and 2002. Strikingly, almost two-thirds of vineyards in the state were planted in the last five years. This means the industry doubled in a five year time period. This is tremendous growth for any industry.

Chart 1: Year of Vineyard Establishment



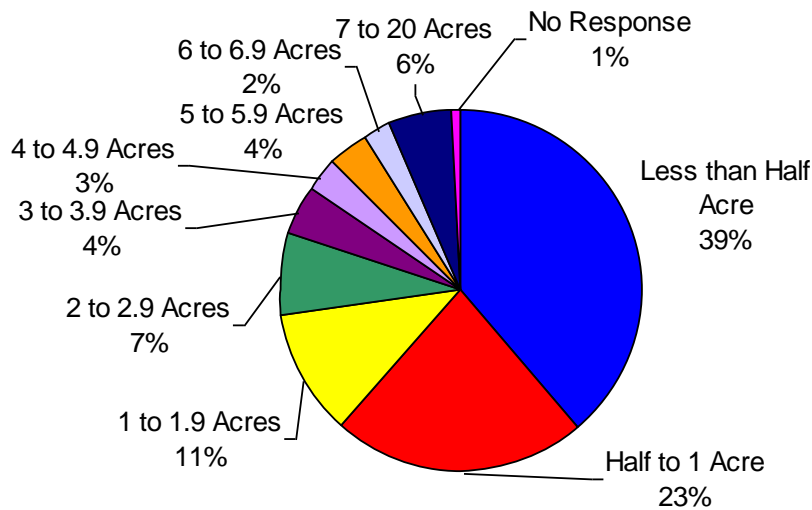
Acreage

On average, a Minnesota grape grower has 1.67 acres of vines. The largest vineyard to respond had 19.5 acres. There were several respondents who indicated they had only backyard vineyards. Both the mode and median of grape growers is half an acre. This means the most frequently reported response was half an acre and the middle of the data is half an acre. To more accurately determine the total and average number of acres in Minnesota under cultivation we used a figure of 529 vines per acre as full utilization (The Minnesota Grape Growers Association). If an individual reported 16 vines under cultivation it equaled 0.03 acres under cultivation. Based on an average number of acres, per grower, of 1.67, the estimated total number of acres in Minnesota is 1,056.

Chart 2 illustrates the number of growers by acreage. As indicated by the summary statistics, over half the growers have one acre or fewer of planted grapes. Of these, the majority (39%) are growing on less than half an acre.

Those growing on less than half an acre are most likely growing for non-commercial purposes. Therefore, this survey indicates that about 60 percent of Minnesota’s grape growers are commercial.

Chart 2: Number of Growers by Acreage



Interesting trends in grape growing can also be seen by examining the total reported acreage of the vineyard by the year the vineyard was established. In the survey, the question was worded to obtain total acreage under cultivation presently (April 2008), not the year the vineyard was established. Older vineyards (before 1990) tend to be bigger. This may be a reflection that over time, a grower simply added more vines and thereby increased total cultivated acreage. Interestingly, this same observation does not appear to apply to vineyards planted from 1990-1999. These vineyards tend to be smaller in size. The vast majority of vineyards established in the 2000’s are of smaller acreage (less than one acre). However, some larger vineyards have been established in that time period. What appears most likely is that the larger vineyards are most commonly owned by a winery or nursery.

Vines

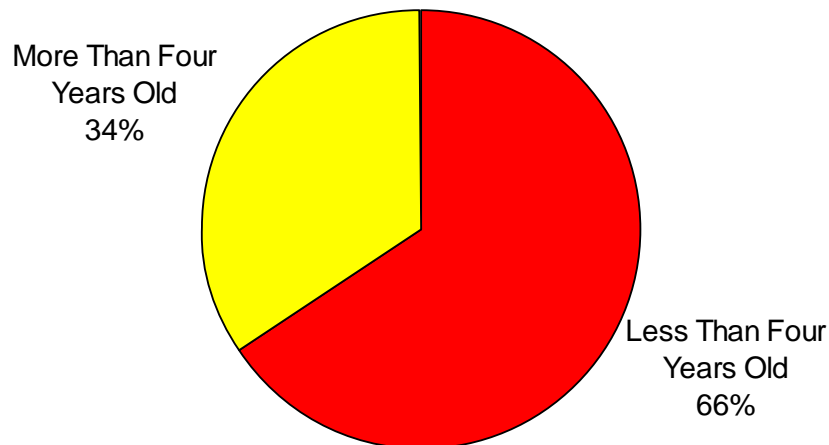
The total acreage of a vineyard is one method for measuring the size of a grape growing operation. Planted vines are another such measure. In addition to the total number of vines, the type of vines being grown is of interest to the grape industry. New releases of varieties appear to be changing the industry.

According to survey respondents, the average size of a vineyard in Minnesota is 921 vines per grower. The largest vineyard to respond had 10,000 vines. The

smallest vineyard to respond had only 2 vines. The mode (most frequent response) was 500. Using an average of 921, it is estimated there are 582,072 vines in Minnesota.

As noted earlier, the grape growing industry is growing quickly. The number of vineyards in Minnesota has doubled in the last five years and the number of vines planted appears to be keeping pace. Survey participants were asked about the age of their vines. The majority (66%) of vines were planted less than four years ago as shown in Chart 3. The remaining (34%) were planted more than four years ago. This has many implications for the grape growing industry. First, it validates earlier evidence of growth in the industry. Second, it raises concerns about the utilization of the grapes produced. Vines that are less than four years of age are not yet at full size or full cropping potential.

Chart 3: Age of Vines



In addition to the total number of vines by age, the survey also asked about the variety of vine planted. As the next two charts show, there has been a substantial shift in the types of vines being planted. Chart 4 shows the variety of vines that are less than four years old. Chart 5 shows the vines by type that are more than four years old. The list of varieties has been consolidated for illustration in this graph. The Marquette grape, which is a relatively new release from the University of Minnesota, is very popular with grape growers. Over 25% of plantings in the past four years have been of the Marquette variety. Marquette is thought to be an excellent grape for wine production, which may contribute to its popularity. Frontenac gris is also a popular choice for new plantings. LaCrescent and Frontenac continue to be planted in large numbers. Brianna and Kay Gray, although still a relatively few number of vines, were also planted in higher rates in the previous four years than in the time period before.

Chart 4: Vines by Type, Less Than Four Years Old

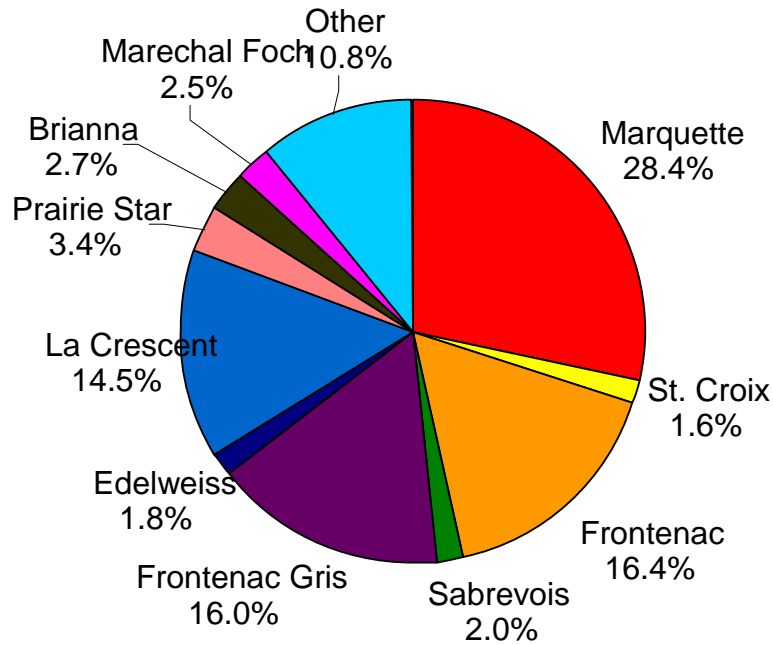


Chart 5: Vines by Type, More Than Four Years Old

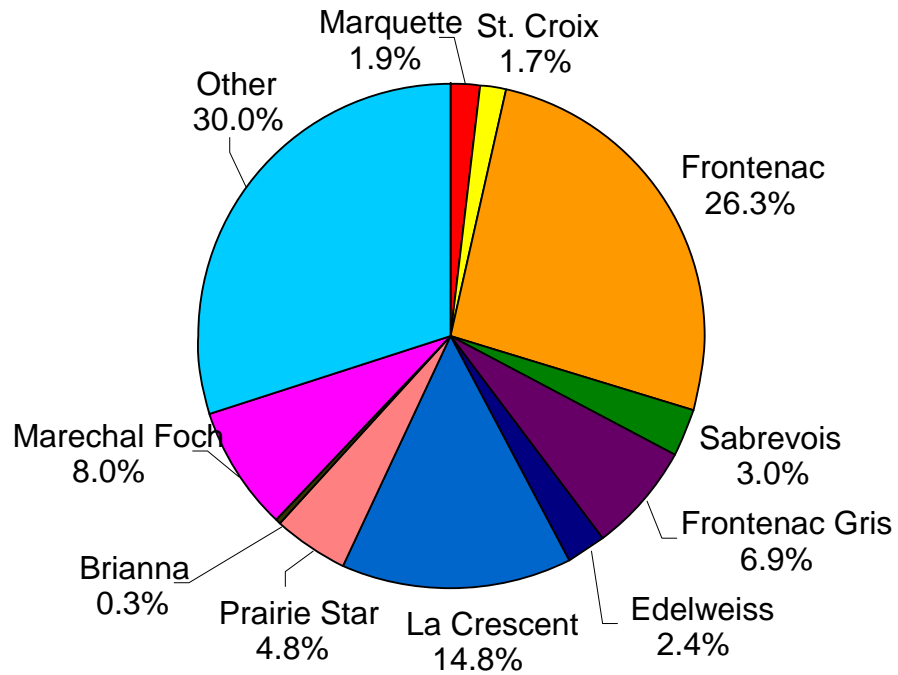


Table 1 lists the number of vines by age for each variety asked about in the survey. This is a numerical representation of the information contained in charts 4 and 5. The figures presented in table 1 have been adjusted for the entire grape growing population. Currently, there are 385,526 vines that are less than four years old. There are another 201,462 vines that are older than four years. All together, growers reported a total of 586,988 vines. This is slightly different than the total number of vines reported earlier in this report due to the wording of the questions. Survey respondents were first asked to provide the total number of vines in their vineyard. Responses from this question indicate there are a total of 582,072 vines in Minnesota. Survey participants were then asked to list the number of vines by variety and age. Responses to the two questions did not have to be equal. Therefore, in some cases, participants listed more vines by age and variety than they did for the total number of vines question. This leads to slight variability in the data but the variation accounts for less than 0.01 percent. We can therefore conclude, with a high degree of accuracy, that the total number of vines growing in Minnesota is in the range of 582,000 to 587,000.

Some varieties are losing popularity. Marechal Foch, Valiant, Bluebell, Lacrosse and Swenson Red were among those that were planted in lower numbers in the most recent time period than in years past.

Table 1: Total Vines by Age and Variety

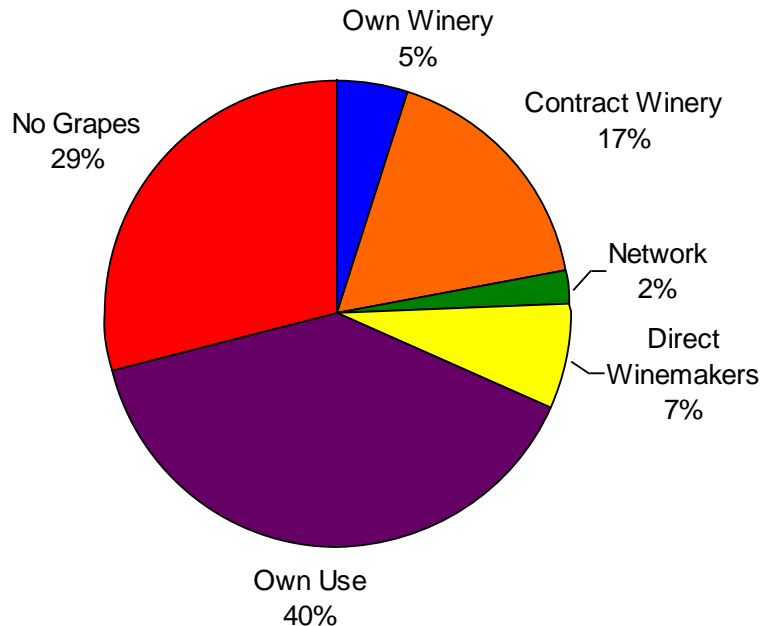
Variety	Less than 4 Years Old	More than 4 Years Old
Marquette	109,500	3,779
St. Croix	6,110	3,326
Frontenac	63,338	53,044
Sabrevois	7,592	6,003
Frontenac gris	61,577	13,887
Edelweiss	6,890	4,762
La_Crescent	55,951	29,790
Prairie Star	12,954	9,703
Brianna	10,500	562
Marechal Foch	9,574	16,174
St. Pepin	4,274	4,462
Louise Swenson	2,823	1,203
Valiant	2,718	11,849
King of the North	2,700	1,331
Lacrosse	2,582	5,664
Bluebell	2,056	7,185
Swenson Red	1,874	10,826
Kay Gray	1,241	477
Other	21,269	17,438
Total	385,526	201,462

Use of Grapes

The future destination of grapes grown in Minnesota is an important issue. New grapes coming onto the market must have a final use or there will be a surplus in the grape market. In the survey, growers were asked how they marketed their grapes in 2007. The question was multiple choice with the following choices: used in own winery, sold via a contract with a winery, sold via network connections, sold directly to individual winemakers, used by themselves, or there was no production in 2007. As shown in Chart 6, the vast majority of growers (40%) reported that they used the grapes for their own purposes. This is consistent with small, non-commercial growers and does appear to support the earlier argument that those growing on less than half an acre are “non-commercial” and account for 40 percent of all grape growers in Minnesota. They may grow for their own winemaking or for jellies or jams or just for the enjoyment of a few vines.

Nearly one-third of respondents indicated they did not produce a crop in 2007. This was the outcome due to a variety of factors as described by survey respondents. Reasons for a lack of crop included but were not limited to: immature vines, crop destroyed by weather, and crop destroyed by animals, birds or insects. Of those who reported no harvest, approximately two-thirds indicated the lack of a harvest was due to immature vines. Therefore, almost 20 percent of all respondents did not market grapes due to the age of the vine.

Chart 6: Method for Marketing Grapes



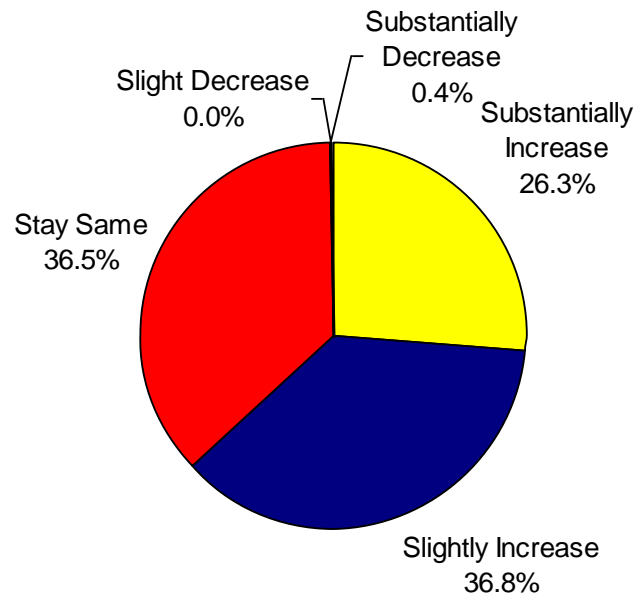
Other market outlets for grapes in 2007 included: contract sales to wineries, direct sales to individual winemakers, sales to one's own winery, and sales via a network. The majority of these sales (17%) went through a contract with a winery. Seven percent were direct sales to individual winemakers. The remainder of grapes were sold to one's own winery (5%) or through a network (2%).

Future Plans

The final question of the grape growers' survey asked respondents to indicate their future plans for their vineyard. They were asked if, in the next two years, they planned to substantially increase, slightly increase, stay the same, slightly decrease or substantially decrease. This question is one attempt to quantify where the industry is headed. To this point, our research has indicated the industry is in a high growth period. This section will help address whether that growth is expected to continue.

It appears the industry will continue to grow. Chart 7 illustrates growers' responses about their future plans. The overwhelming majority of growers intend to increase in the next two years, either substantially or slightly. Just over a third of growers plan to keep their vineyards the same size. Virtually no grower has plans to decrease the size of their vineyard.

Chart 7: Future Plans for Grape Growers



Growth in the industry and a potential oversupply of grapes in the market were concerns raised when this study was being initially discussed with an advisory group. A question on marketing strategy was added to the survey to help understand the situation more fully. Of growers that plan on substantially

increasing in the next two years, about 35 percent had no crop for sale in 2007. This indicates that they are expecting to have to increase their marketing effort to move a future crop. It is entirely possible that their marketing effort has been non-existent while the grape vines mature. There are a number of home use growers identified in this study. The majority of grape growers planning to slightly increase their marketing efforts used their grapes for their own purposes. This may indicate a desire to move some grapes onto the market should yields increase beyond the ability of the hobby grower to use the entire yield. The majority of growers that plan on staying the same with respect to marketing activity use their grapes for their own purposes. The winery owners, who own vineyards, appear to be more cautious in their marketing expansion plans with a majority planning to increase slightly.

Survey results suggest the industry will continue to grow, particularly in the near term. However, the results only account for growth that will come from current growers. Individuals that were not members of MGGA at the time of the survey were not counted in the results. Therefore, more growth could come from new growers and those not identified as part of the sample population.

CONCLUSIONS

Results from a survey of Minnesota grape growers support the anecdotal evidence that those in the industry had observed. There has been a significant increase in the number of vineyards, planted acreage, and planted vines. In addition, the types of vines being planted have shifted substantially as new varieties are released.

The grape industry is one of potential. Obviously, there is an interest in grape growing in Minnesota. As the industry continues to grow, it must work through its growing pains. One concern raised by this survey is utilization of the grapes grown. Survey results indicate that supply on the market may increase significantly. This supply will need to be absorbed by the market to prevent an oversupply situation. There is some indication that an oversupply situation can occur in the short run as acres of newly planted grapes begin to mature,

It was also apparent that growers are thinking of increasing their marketing efforts. Very few currently rely on networks or contracts at the present time. If supply continues to rise, vineyards without a marketing plan may have more trouble selling their grapes. Given the projected growth of the industry, it may be in their best interest to firm up networks and establish contracts sooner rather than later.

The research undertaken for this report did not attempt to answer questions about how an oversupply may be handled. A companion report, (The Economic Contribution of Grape Growers and Wineries to the State of Minnesota) reveals how capital intensive it is to establish a winery. Capital costs for an acre of

grapes are substantially lower. This indicates that it is easier (from a capital investment perspective) to grow grapes than it is to build and operate a winery. Wineries increasing demand would be one way to utilize more grapes.

This research has revealed a significant shift in the types of vines currently being planted. There is much more reliance on the University of Minnesota cultivars than in the past. These varieties have several advantages over other types of grapes previously grown in the state. Cold hardiness is their major advantage. Less emphasis has been placed on quality or other unique properties of the grapes. Export markets (i.e. outside the state) might be problematic as grape production continues to rise in many other states. Only through differentiation on desired attributes found in the Minnesota grapes can market share be established in export markets. This would tend to indicate more effort be directed at brand marketing, not for growing but, for final consumption.