

The Economic Contribution of Grape Growers and Wineries
to the State of Minnesota

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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. The goal of the partnership is to determine the contribution Minnesota's grape growers and wine producers made to the state's economy in 2007. Primary researchers include Dr. William Gartner, professor, and Brigid Tuck, research fellow, from the University of Minnesota's Department of Applied Economics. Dan Erkkila from the University's North Central Research and Outreach Center provided input into the development of the economic impact model. 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).

EXECUTIVE SUMMARY

The grape and wine industry in Minnesota is a young industry undergoing rapid change. This report serves as a measure of the industry in its current state. It quantifies the current size of the industry, its projected growth, and the total economic contribution of the industry to the state of Minnesota.

- The demand for wine is on the rise in America. Americans recently surpassed Italians in per capita consumption of wine. By 2015, Americans are projected to drink more wine on a per capita basis than the French.
- Wine production in the United States continues to grow, particularly outside of California. Domestic wine sales grew by 6 percent last year. The number of wineries in the U.S. has increased exponentially.
- Wine production is increasing rapidly in Minnesota. In 1975, there were 2 wineries in Minnesota. In 1995, there were only 7. By 2007, there were a total of 26 licensed wineries in the state. Wineries produced 61 percent more wine in 2007 than in 2006.
- Growing grapes in Minnesota is becoming increasingly popular. Statistics from the Minnesota Department of Agriculture show an increase in both the number of farms growing grapes and total grape acreage from 1992 to 2002. Results from the survey conducted in this report indicate that the number of grape growers has doubled since 2002.
- Research hints that production of grapes and wine in the state will continue to increase. The majority of grape growers and all the wineries indicated that they plan to expand in the next two years.
- Grape growers directly spent \$8,030,465 in Minnesota in 2007. The total effect on the Minnesota economy from this spending was \$13,611,160. A total of 101 jobs are attributable to the grape industry in Minnesota.
- Wineries directly purchased \$5,060,044 of inputs in 2007. In total, the Minnesota economy increased by \$8,502,775 because of this spending. Wineries increased state employment by a total of 68 jobs.
- Tourists attending events at Minnesota wineries also contributed to the economic impact of wineries. Tourists spent a total of \$8,408,223 in the state in 2007 while in the process of attending winery events. This increased to a total of \$14,051,008 when indirect effects were added into the calculations. Employment in Minnesota was increased by 155 jobs due to the total effects of tourism spending.

- The total economic impact of the grape and winery industry in Minnesota was \$36.2 million in 2007. This included grape growing, winery operation, and winery-related tourism.
- In total, the grape and wine industry contributed 324 jobs to the Minnesota economy. This included employment in the industry and employment created by industry-related spending.
- The grape and wine industry added a total of \$10.8 million to labor income in Minnesota in 2007. Labor income was increased both by direct payments to labor by the industry and payments to labor by industries that supplied the grape and wine industry.

BACKGROUND

As a result of synergies in national and regional wine trends along with changes in grape cultivation, Minnesota's wine and grape industry is currently a fledgling industry with potential. Wine consumption in the United States is on the rise. Domestic wine production outside of California is increasing. Overall, the wine industry in the United States and in the Midwest is on the upswing. As demand is growing for wine, so is the availability of wines made from Minnesota grown grapes. New grape varieties released by the University of Minnesota, along with a handful of trusty old varieties, has given Minnesota wine-makers more options than ever for creating new wines. New supplies combined with increasing demand provides Minnesota wineries with lots of potential.

Wine consumption in the United States has been increasing steadily for the past 15 years. This growth has led the U.S. to be one of the largest wine markets in the world. In 2007, the United States per capita consumption of wine exceeded that of Italy. At current growth rates, the U.S. is projected to have higher consumption rates than France by 2015¹. Americans are becoming wine lovers. This increased demand for wine is being felt by every part of the wine industry. While the majority of growth in wine sales comes from imported wine, sales of domestic wines also continue to increase. Between February 2007 and February 2008, domestic wine sales grew by 6 percent². More importantly, wine produced in states other than California grew.

Wine production and sales are on the increase in Minnesota too. In 2007, Minnesota wineries sold 296,795 liters of wine. This represents a 61 percent increase from the previous year.³ Revenue collections can also be used as a gauge of growth. In 2000, the Minnesota Department of Revenue collected \$3.7 million in sales taxes from wine sales. By 2006, this number increased to \$4.6 million.⁴

While wine production is growing, so is the number of wineries in the United States. In 1975, the U.S. was home to 579 wineries in only 34 states. By 2007, there were 4,712 U.S. wineries in all 50 states.⁵ Minnesota has not been unaffected by the growth in the wine industry. In 1975, Minnesota had 2 wineries. This grew to 26 by 2007. Several more wineries are currently under development in Minnesota.

Grapes are a vital input into the production of wine. The linkages between the grape industry and the wine industry are strong. Grape production also continues to expand in the United States. In the ten year period ending in 1997, the number of acres in grape production grew by 19 percent.⁶ Furthermore, the value of the grapes has also increased. In 1999, grapes for fresh use sold in September averaged \$555 per ton. In 2007, that value was \$790 per ton.

¹ Houston Chronicle online version Chron.com. Jan 2, 2008.

² Wine Business Insider. April 7, 2008.

³ Minnesota Department of Revenue

⁴ There was no significant change in the tax rate during this time period.

⁵ WineAmerica

⁶ National Agricultural Statistics Service. Noncitrus Fruits and Nuts Summary.

Minnesota also has experienced an increase in grape production statewide. While yearly statistics are not available, U.S. Census of Agriculture figures show that grape acreage has increased. In 1992, there were 103 acres of grapes planted on 62 farms. By 2002, there were almost twice as many acres planted in grapes, for a total of 222 acres. The number of farms growing grapes more than doubled to 134. Grape agriculture differs significantly from other forms. For example acreage needed is modest as large yields can be obtained per acre. Small land holders can grow commercially on less than 1 acre.

Wine production and grape growing are relatively new industries to Minnesota. New cold-hardy grape varieties developed by the University of Minnesota have allowed for the rapid expansion of grape production. A wider variety of cold-hardy grapes has also given Minnesota wine-makers more choices in creating and developing wines. As new grape varieties become available more wines are being crafted. Since these are young industries, the value of their economic contribution to the state of Minnesota has not yet been measured.

In an attempt to quantify the economic value of the grape and wine industries in Minnesota, a study was commissioned. The Minnesota Grape Growers Association and the University of Minnesota Regional Sustainable Development Partnerships provided funding to hire a team of researchers to do an economic impact analysis. The University of Minnesota's Department of Applied Economics was then hired to complete the analysis. The following report is the outcome of this six month study.

The research design consisted of a review of existing economic impact reports on grape growing and wineries in the United States. In addition a total of 11 winery visits were conducted where the owner/operator was personally interviewed. An additional 4 vineyards including one nursery were visited. From the personal interviews plus a review of questionnaires provided by Colorado State University, The Ohio State University, and the University of Georgia, researchers developed web-based survey instruments for both grape growers and wineries.

GRAPE GROWING IMPACT

To measure the economic impact of growing grapes in Minnesota, 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.

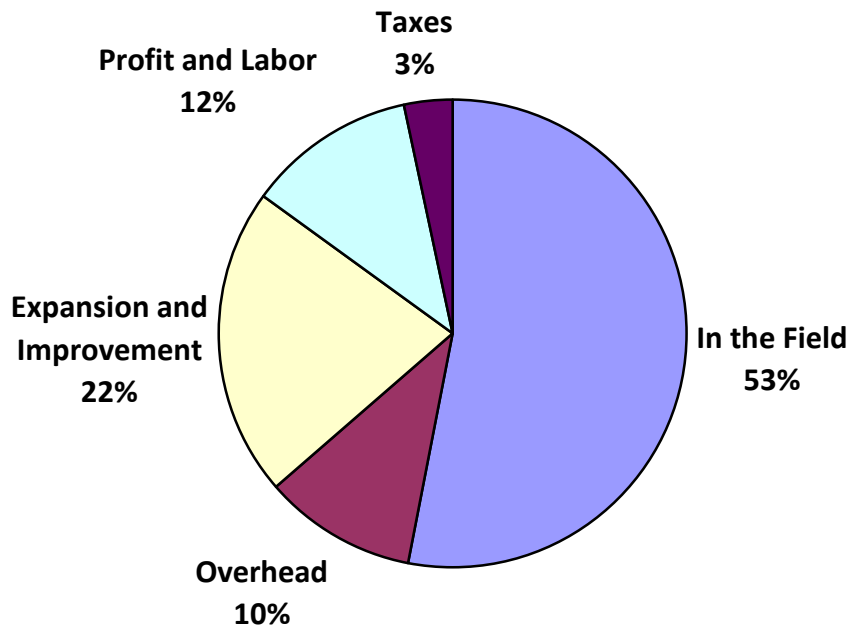
The web-based survey was available online for a period of six weeks. During this time, 306 individuals provided usable responses, yielding a response rate of 50 percent. Of these, 84 percent indicated that they currently are growing grapes in Minnesota. The remaining respondents gave various responses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

stakeholder in the grape growing process. Using calculated averages, the total universe (number of current growers in Minnesota) is 632.

The first step in determining economic impact is to calculate the direct effect. The direct effect is equal to the amount of money spent to create the product. In this case, the product is grapes. The direct effect then is the value of the expenditures grape growers made in 2007. The survey instrument asked grape growers to quantify their spending for a wide variety of inputs. For ease of study, the expenditures were classified into five main categories. These categories are: production or “in the field”, overhead, vineyard improvements and expansions, profit and labor payments, and taxes. Growers were also asked to indicate what percent of their spending occurred in the state of Minnesota. If inputs were purchased outside of Minnesota, they are considered leakages and their economic value to the state is near zero.

In total, Minnesota grape growers spent \$8,030,465 on inputs in Minnesota in the year 2007. Chart 1 provides a breakdown, by major category, of how those dollars were spent. Growers spent the largest portion of their money on production or in the field inputs. These inputs include: chemicals, fertilizers, fuel, electricity, supplies, maintenance, transportation and equipment leases and purchases. One-quarter of grower expenditures went to vineyard expansions and improvements. This includes any investments in the vineyard such as trellis systems, vines, fencing, and irrigation systems. This relatively high percentage is indicative of an industry in a growth pattern as new acreage requires substantial up front inputs before any production occurs. Growers also paid out money as labor and as profit. This accounted for about 14% of growers’ total expenditures. The smallest portion of grape growers total spending went to taxes and fees in 2007.

Chart 1: Grape Grower Expenditures by Category



Direct expenditures are the first component of an economic impact analysis. Direct expenditures by grape growers also generate additional spending in the state economy. There is a ripple effect that occurs when grape growers purchase the inputs necessary to produce their crop. When the grower purchases fertilizer, for example, this causes the fertilizer manufacturer to increase production. In order to increase production, the manufacturer must buy more of its inputs, including labor. When workers at the manufacturer receive more wages, they purchase more goods for their households. These “ripples” can be quantified with input-output analysis. An input-output model, called IMPLAN, was used to measure the total economic impact of growing grapes in Minnesota. This total impact includes both the direct impact (the amount spent by growers) and the indirect effect (ripple effects generated by suppliers). The direct, indirect, and total economic impact of growing grapes is shown in Table 1.

Table 1: Economic Impact of Grape Growing in Minnesota (2007)

	Direct	Indirect	Total
Output	\$8,030,465	\$5,580,695	\$13,611,160
Employment	57	44	101
Labor Income	\$2,610,592	\$1,782,669	\$4,393,261

Grape growers spent \$8 million on inputs in the state of Minnesota in 2007. This spending led to a total increase in the economy of \$13.6 million. IMPLAN can also estimate the amount of employment and labor income generated in the economy due to the grape growers. Grape growers directly helped to create 57 jobs in Minnesota. The ripple effects lead to a total of 101 jobs that are directly attributable to grape growers. Grape growers also contribute to the amount of income that workers earn in Minnesota. Directly, grape growers spent \$2.6 million for labor. This translates into an increase in labor income in Minnesota of \$4.4 million in 2007.

IMPLAN estimates the amount of direct employment based on the dollar value of output entered into the model. In this case, \$8 million of direct grower expenditures is associated with 57 jobs. This may be an underestimate according to data collected in the grower survey. Growers reported that they put thousands of hours of labor into the vineyard themselves. These hours, had they been worked by paid labor, would have created 90 jobs. Growers also indicated that they received thousands of hours of free volunteer labor. If those hours would have been used as paid labor it would have translated to another 35 jobs. It is important to keep this in mind when interpreting the employment figures.

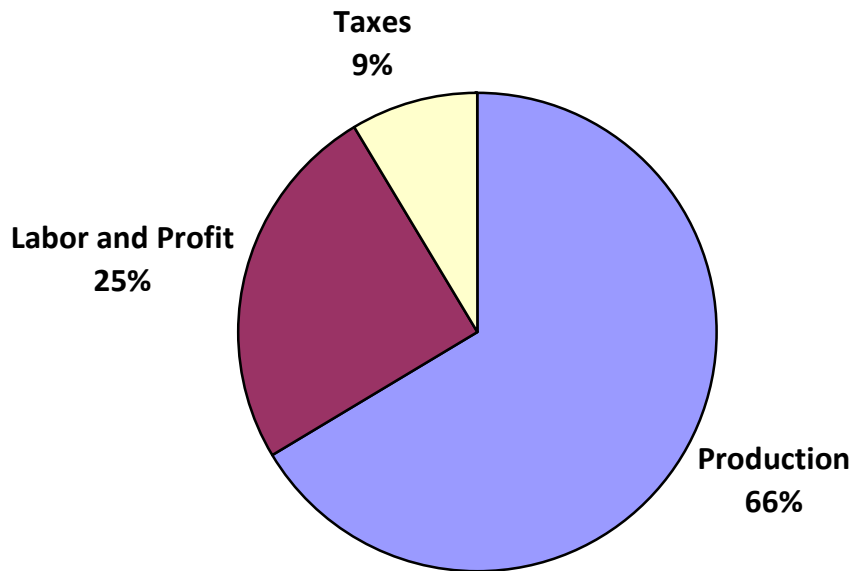
These impact figures are for the state of Minnesota only. Growers were asked in the survey to indicate the percent of their expenditures that were made in the state. Expenditures that occur out of state are not included in the above calculations. Growers actually spent a total of \$9,004,553 in 2007. However, some of this spending occurred in other states.

WINERY IMPACT

In order to quantify the economic impact of wineries in Minnesota, the University of Minnesota conducted a survey of the state's wineries. An invitation to participate in a web-based survey was sent to every known winery in Minnesota. Paper surveys were mailed to those who did not have a working email address. A total of 25 survey invitations were issued.

The web-based survey was available online for a period of six weeks. During this time, 11 responses were received, with a response rate of 44 percent. All responses were usable. The data was cleaned and any outliers were removed. The average 2007 expenditure in Minnesota per winery was calculated. This average expenditure was then multiplied by the total number of wineries to arrive at the total value of Minnesota expenditures by wineries. The total number of wineries in Minnesota was assumed to be 26. The Minnesota Department of Revenue reported 26 wineries as licensed under the Farm Winery Act in the state of Minnesota in 2007.

Chart 2: Winery Expenditures by Category



Wineries spent a total of \$5,107,920 in Minnesota in 2007. A breakdown of these expenditures is shown in Chart 2. The majority of these expenditures were for production. Production expenditures include grapes and other fruits, bottling supplies, fermentation supplies, capital equipment, utilities and so forth. Labor and profit accounted for almost 25 percent of winery expenditures. Taxes are a small portion of total winery expenditures in Minnesota.

As with the grape growers, direct expenditures by wineries are only a portion of the total economic impact. As the dollars that are spent by wineries move through the economy they generate additional spending. When wineries purchase boxes, for example, the box manufacturer has to produce more boxes. The manufacturer therefore has to increase the purchase of their supplies. This causes a ripple effect through out the economy. Input-output models, such as IMPLAN, can be used to quantify the value of these ripple effects. Direct spending by the winery is then added to the value of the ripple effects (called indirect effects) to arrive at the total economic impact.

The total economic impact of spending by Minnesota wineries in the state is shown in Table 2. Direct spending of just over \$5 million by the wineries created a total increase in the economy of \$8.5 million. Associated with this level of output were 68 jobs. Of these, 39 were due to the direct spending of the wineries and an additional 29 because of the ripples created in the economy. Wineries also increased the overall amount of income available to labor in 2007. Wineries were responsible for a total increase of \$2.9 million in labor income.

Table 2: Economic Impact of Wineries in Minnesota (2007)

	Direct	Indirect	Total
Output	\$5,060,044	\$3,442,731	\$8,502,775
Employment	39	29	68
Labor Income	\$1,772,847	\$1,109,410	\$2,882,257

The employment figures presented here are based on IMPLAN assumptions. These figures are calculated based on the total value of expenditures. Winery owners also reported the number of workers they employ. According to their responses, each winery employs one full time worker on average. They each employ an average of four part-time workers. Thus, there are approximately 26 full time and 125 part time winery workers in the state. Wineries also use a substantial amount of volunteer labor primarily in the bottling process. According to the survey, if wineries hired enough full time individuals to complete those tasks, another 13 jobs would be created.

The expenditures for wineries reported thus far are only those that occurred within Minnesota. Wineries were asked in the survey to list their total spending in each category and then how much of that spending was in Minnesota. Dollars that are spent in other states or countries contribute only slightly to the Minnesota economy. They are considered leakages and are automatically removed from the model. In 2007, wineries actually spent a total of \$7,112,506.

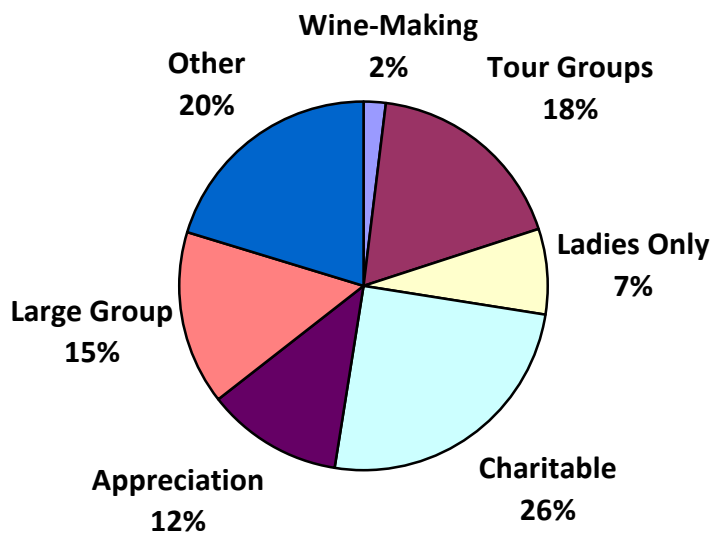
WINERY TOURISM IMPACT

Production of wine is only one method by which wineries stimulate economic activity in the state. Wineries are also drivers of a considerable amount of tourism in a region. Wineries produce wine that is then sold. However, only a portion of that wine is sold in a traditional retail liquor store. A large portion of wine sales occur directly at the winery. Wineries in Minnesota, being relatively new, are also actively engaged in trying to build brand awareness and loyalty. In order to do this, Minnesota wineries host a variety of events to draw visitors into the winery, taste the wines, and perhaps become loyal customers. While attending these events, visitors to the winery spend money in the local economy. They may purchase a tank of gas at the local station or they may stop at an antique store or they may play a round of golf at the local course. This spending is also an important component of the economic impact of wineries.

In order to capture the economic value of these tourists, a series of questions were asked on the winery survey. These questions asked specifically about: the type of event hosted, the number of visitors to the event and the length of the event. Events were categorized into seven major categories: wine-making classes, wine appreciation, charitable events, tour groups, large group events (such as weddings), ladies-only nights, and other events.

Events are highly popular at local wineries. According to the survey responses, the average event draws over 1,000 visitors. Charitable events were reported as drawing the most visitors, followed by tour groups and large group events. Using averages provided by survey respondents and a universe of 26 wineries, it was estimated that a total of 188,994 people attended a Minnesota winery event in 2007. A breakdown of these visits is shown in Chart 3.

Chart 3: Minnesota Winery Visitors by Event 2007



Visitors to wineries create economic activity by spending money in the region as they visit the winery. They may drive down and stop for lunch in a nearby town. They purchase gas for the drive. They stop at a local antique shop and do a little shopping. These dollars are attributable to the winery if the winery is the genesis for the trip. In this case, it is difficult to discern every visitor's intentions from the winery survey. The best method for determining economic impact of tourists is to survey the tourists themselves. A survey can determine the visitor's reason for the trip and also get an accurate measure of spending by the visitor. However, time and funding dictated that this was not possible for this study. Future studies could elaborate by surveying winery visitors.

While no survey results for this particular group are available, other studies have measured spending by tourists who are not local to the region and who are making a day-trip. Using expenditure patterns for day-trip visitors in Minnesota obtained by other researchers, one can

estimate the spending of winery visitors in Minnesota. Using a study by Erkkila⁷ as our guide we calculated that day-trip visitors to a winery spend an average of \$59 a day. This includes transportation (\$19.84), recreation and amusement (\$17.86), eating and drinking (\$16.56), miscellaneous retail (\$3.63) and groceries (\$1.22). This spending does not include purchases made at the winery. Purchases at the winery are equivalent to sales by the winery. Winery sales have already been accounted for in the economic impact of the wineries. Winery sales included here as tourism spending would amount to double counting. Therefore the value of \$59 per day in spending only applies to a wine event visit and should not be used as a proxy for the average spent by tourists on other types of day visits.

This tourism expenditure pattern can then be applied to the number of visitors obtained from the winery survey to determine total expenditures by winery visitors in Minnesota in 2007. It was assumed that 75 percent of the reported visitors are non-local, except in the case of tour groups. For tour groups, it was assumed that all the visitors were non-local. Total spending by non-local, day-trip visitors to winery events in 2007 was \$8,861,918.

This spending represents the direct impact of winery visitors. Winery visitors also create indirect and induced impacts as their spending circulates throughout the economy. A dollar spent at a local restaurant increases restaurant sales. As the restaurant purchases more supplies to meet the increased demand, its wholesaler must increase its production and so forth. These “ripple effects” are the indirect and induced effects and can be captured using input-output models. The tourism spending as calculated was entered into an input-output model called IMPLAN and the results are shown in Table 3.

Table 3: Economic Impact of Winery Tourism in Minnesota (2007)

	Direct	Indirect	Total
Output	\$8,408,223	\$5,642,785	\$14,051,008
Employment	113	42	155
Labor Income	\$1,923,092	\$1,611,476	\$3,534,568

Direct spending by tourists of over \$8 million leads to another \$5.6 million of economic activity in Minnesota. Therefore, the total value of winery tourism in 2007 was approximately \$14 million. In addition, winery tourism created a total of 155 jobs for Minnesotans. Finally, winery tourism generated labor income for Minnesotans. A total of \$3.5 million of labor income, derived from tourism, can be attributed to the presence of Minnesota wineries.

⁷ Erkkila, Daniel L., Economic Impacts from the Minnesota Zoo. North Central Research and Outreach Center. College of Food, Agricultural and Natural Resource Sciences, University of Minnesota Extension Service, The University of Minnesota. October 22, 2007,

CHALLENGES FACING THE INDUSTRY

In addition to expenditure data that was collected to determine the economic impact of the industry, the survey also gathered some basic background information on grape growing. The survey further asked about the future plans of grape growers and wineries. These background and future questions raised some concerns about the future of the industry. They uncovered some potential challenges that the industry will face as it continues to grow and mature.

First, the survey confirmed anecdotal evidence that the industry is growing rapidly. Of the 246 responses to the grape growers' survey, only 8 vineyards were established before 1990. Another 78 vineyards were started during the period of 1990-2002. The number of vineyards established in the last five years (2003-2007) was twice that figure. In this five year time period, another 160 vineyards were planted. This is extremely rapid growth for any industry. This raises the concern of how the grapes will be marketed and utilized. Since grape vines take three to five years to reach maturity, most of the newly established vineyards have yet to reach maturity. If a dramatic increase in grape utilization does not occur, there could be an oversupply of grapes on the market in the near future.

In addition to the number of grape growers already with vines in the ground, there is evidence that grape growers plan to continue to expand. When asked if they plan to substantially increase, slightly increase, stay the same, slightly decrease or substantially decrease, 64% of survey respondents indicated they were planning to increase. This could further contribute to oversupply in the market.

The tourism calculations in this study also point to some interesting trends. Wineries should be viewed as area attractions in addition to places of business. As calculated in this study tourism contributions as a result of day visits to wine events, conservatively estimated, exceeded the total economic contribution of the winery production operations. Even if a winery is not the main reason for a tourist visit the total area attraction package is enhanced by their presence. Those visitors who come specifically to visit a winery can also be induced to spend money at other area attractions and businesses. Given the growth in demand for wine occurring in the United States and in the Midwest, wineries would appear to be ideal attractions for tourist destinations.

However a note of caution is in order. The study indicates significant growth in vineyard operations in the state over the last few years. Many of the vines planted within the last two years have yet to produce a harvestable crop. Growing grapes is less capital intensive than building and operating a winery. There is some concern about the ability of the state's existing wineries to handle the increase in grape production. Markets outside Minnesota should be investigated for grape export. It is possible that with the new University of Minnesota grapes that they may be considered as blends for wines produced primarily from other types of grapes at wineries in other states. California and New York grapes, among others, are sold to wineries in Minnesota. The branding of Minnesota grapes may enhance their value for grape sales outside the state.

The issue of branding is also relevant for wineries. During the personal visit phase of this study we visited a number of wineries. On average, Minnesota produced wine is sold at a premium to wines found at the local liquor store. To allow for this price differential to be maintained the winery will need to enhance customer value. This can be done by using brand building techniques to establish uniqueness of the product. If the customer feels they have received enhanced value than a higher price can be charged and maintained. The use of wine events to introduce customers to the winery's products is one such strategy. Limited edition production of certain wines is another. Of course, any awards help reinforce uniqueness and value. The increasing interest in local foods and regional products not only adds value to a touristic experience it also provides more economic impact to areas where the attractions, in this case wineries and related vineyards, are located. Quality is an essential ingredient of a successful local foods approach. Wine, with all its intrinsic attributes, would complement and enhance the local foods movement. These are just a few of the brand building techniques that should be considered.

TOTAL ECONOMIC IMPACT

The wine and grape industry has three components that contribute to the Minnesota economy. The production of grapes is the first component of the economic impact. In 2007, this total impact was \$13.6 million in economic output, 101 jobs, and \$4.4 million in labor income. Operation and production of wineries is the second component of economic impact. In 2007, this total impact was \$8.5 million in economic output, 68 jobs, and \$2.9 million in labor income. The final component of the total economic impact is winery-related tourism. In 2007, this impact was \$14.1 million, 155 jobs, and \$3.5 million in labor income.

The three components, added together, amount to the total economic impact of the grape and wine industry in Minnesota, as shown in Table 4. When all the impacts are added together, the industry contributed \$36.2 million dollars to the economy in 2007. A total of 324 individuals were employed in Minnesota due to the industry. Finally, labor received \$10.8 million of income because of the grape and wine industry.

Table 4: Total Economic Impact of the Grape and Winery Industry in Minnesota (2007)

	Direct	Indirect	Total
Output	\$21,498,732	\$14,666,211	\$36,164,943
Employment	209	115	324
Labor Income	\$6,306,531	\$4,503,555	\$10,810,086

CONCLUSION

Anecdotal and empirical research has shown the Minnesota grape and wine industry to be relatively young and likely to face rapid change and future challenges. Change is coming from both outside and inside the industry. Demand among Americans for wine is on the rise. As Americans' interest in wine continues to increase, so does the number of American wineries and the production of wine. While wine production remains a staple of western states, particularly California, production in states not traditionally associated with wine continues to increase. Grape growing is also becoming more popular and appealing as new cold-hardy varieties are being released. With this rapid increase in demand and production comes growing pains for the grape and wine industry.

Minnesota grape growers and wineries are not immune to the changes and challenges that face the industry as a whole. Our research shows a substantial increase in the number of grape growers, planted acreage, and the number of vines in the state. Results from the survey indicate that the number of growers in Minnesota has doubled in the last five years. This growth is good for the industry but also could be problematic if demand does not increase equally as quickly. Wineries are also increasing in the state. The number of wineries more than tripled from 1995 to 2007. Wineries indicate that they plan to continue to grow and produce more wine.

Minnesota grape growers and wineries are also an economic engine in the state of Minnesota. Production of grapes, production of wine, operation of a winery, and tourism related to the wineries, all create economic activity. In 2007, the total value of this economic activity was \$36.2 million. In addition to economic output, the industry also contributed to the number of jobs in the state. As a result of the grape and wine industry, a total of 324 jobs were created in Minnesota. Finally, the industry contributed to the overall level of labor income. The wine and grape industry was responsible for the creation of \$10.8 million in labor income in Minnesota in 2007.