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ESTIMATES FOR THE YIELD, PRODUCTION, AND PRICING DATA OF THE MINNESOTA GRAPE  
INDUSTRY

Authored by Matthew Clark and Brigid Tuck



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ESTIMATES FOR YIELD, PRODUCTION, AND PRICING DATA OF THE MINNESOTA GRAPE INDUSTRY

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## INTRODUCTION

Survey data are used to estimate the production of grapes in Minnesota each spring for the previous year's harvest. Commercial grape growers were invited to participate in the electronic survey to capture the production, sales, and pricing of the primarily wine-grape market in Minnesota. Data were collected for all grape varieties growing in the state. The results show the distribution of grape production across the state based on 30 complete responses to the survey. These production figures, including prices, are estimates of sales to wineries, home wine makers, and transfers from joint grower-wine producer enterprises. The data presented here represent commercial grape production in 2021 and include sales figures by variety, including the range and average price per pound. This survey likely underrepresents the total production in the state, but provides a glimpse into the production trends, including a five-year (2017-2021) summary of yields. Survey data may be used by State and Federal agencies in estimating the specialty crop production data for the state.

## DEMOGRAPHICS

Commercial grape producers, vineyard owners and operators, completed this survey with 30 complete responses utilized in the report. Individual vineyard operations were not identified, but zip codes were used to plot spatial trends across the state. Twenty-two counties in Minnesota were represented in the report (Figure 1). This sample greatly underestimates the total acreage planted in Minnesota, as compared to previous reports by these authors, and known plantings throughout the state are not represented in the 2021 data. Minnesota, like many other states, relies on self-reporting through annual surveys to produce these estimates because no commodity checkoff system is in place.

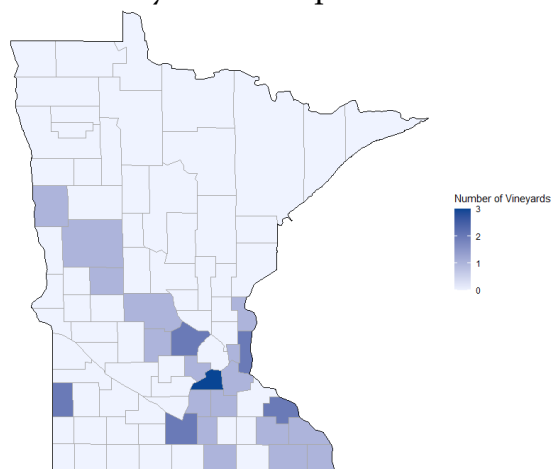


Figure 1. Map of Minnesota counties showing the reporting 30 vineyard operations and their location in the state

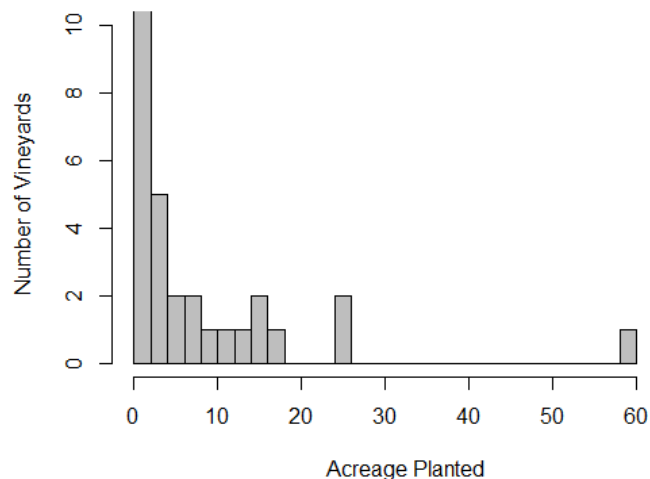


Figure 2. Distribution of reporting vineyards by acres planted

Growers reported 250.1 acres as planted with 187.91 in production in 2021. The average vineyard was 8.35 acres, and the median 3.5 acres. This calculates to roughly 6.3 acres in production on average with a median of 3 acres. The largest reported vineyard was 60 acres and the smallest 0.5 acres. Figure 2 shows the distribution of vineyards by number of reported acres planted.

## MARKETS

Grapes are typically sold through several market channels. Since the majority of Minnesota wineries operate under the Farm Winery License (Section 340A.315), direct sales of grapes to an operator’s own winery (internal material transfer) comprised the majority of sales reported (~60 percent). Other market outlets included sales to another winery (~39 percent), or other markets (<1 percent), specifically home winemakers (Figure 3). No respondents indicated using a third-party broker to sell grapes in 2021.

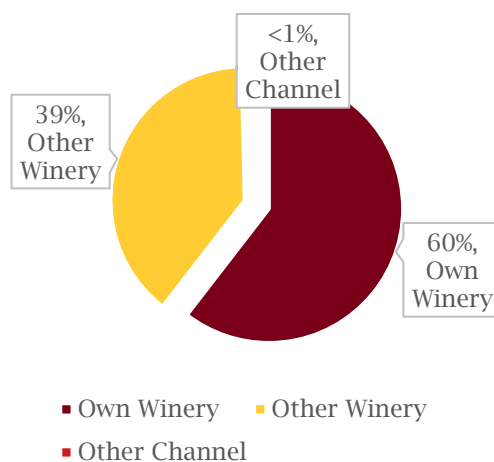


Figure 3. Estimated percentage of grapes sold through various outlets

## 2021 SURVEY RESULTS

Reported yields in 2021 were higher than in 2019 and 2020, which may reflect the higher survey response rate and/or greater production. The total amount of grapes reported as produced in 2021 was 796,012 lbs (398 tons). When production is averaged over all reporting grape producers, this represents a two-fold increase compared to the 2020 data. Production and sales data are summarized in Table 1. Of the reported grapes produced, the average yield per acre was 4236.1 lbs or roughly 2.12 ton/ac. The highest yielding vineyard reported 5.98 tons/ac. Crop loss was reported for many growers due to diseases, injury, and feeding by wild animals. The average price for grapes in 2021—calculated based on the average reported by each vineyard—was \$0.927/lb (\$1,854/ton) and ranged from \$0.70/lb to \$2.00/lb (Table 1). These averages represent a smaller range than reported by variety, as they are calculated from the average price for each respondent.

Growers’ data were aggregated by variety and reported separately when 5 or more producers report a variety. All other varieties are grouped into the “other” category (Table 2). The survey asked growers to report the total yield produced as well as the volume sold, and for what price. Table 2 underreports the total yields of grapes produced and is an artifact of data collection (by variety).

Table 1. Production and price data reported for the 2021 Minnesota grape harvest from 30 respondents

	Total Acres	Acres Producing	Pounds Produced	Price/lb	lb/Acre
Total	250.1	187.9	796,012	\$0.927	4,236.1
Average	8.35	6.26	26,534	-	-
Lower Range	0.5	0.5	500	\$0.70	1,000
Upper Range	60	52	225,000	\$2.00	11,960

\*The average provided from each operation was used in calculating this average.

Fewer varieties are reported individually in this report compared to previous years. The highest producing grapes were: ‘Frontenac blanc’ (79,413lb), ‘Frontenac’ (74,637 lb), and ‘La Crescent’ (66,698 lb) in Table 2. ‘Marquette’ was the 4<sup>th</sup> highest produced with 65,667 lb.(Table 2). Trailing behind this was ‘Frontenac gris’, ‘Petite Pearl’, and ‘Brianna’. ‘Frontenac blanc’ comprised the largest proportion of total reported yield at 14.5 percent (Table 3). The “other” varieties category included Bluebell, Crimson Pearl, Edelweiss, Kay Gray, King of the North, La Crosse, Leon Millot, Marechal Foch, Prairie Star, Sabrevois, Somerset Seedless, St. Pepin, and Valiant. The total reported yield for the “other” category was 109,677 lb, or 20.0 percent of the total volume of grapes produced. However, a large portion of these were not reported as sold to wineries.

Table 2. Production and price data by variety for Minnesota 2021 grape harvest

Variety	Total Yield (lb)	Sold Yield (lb)	Average Price/lb (\$)	Weighted Price/lb (\$)	Lower (\$)	Upper (\$)
Brianna	14,463	14,463	0.80	0.77	0.70	0.90
Frontenac	74,637	61,747	0.927	0.99	0.66	2.00
Frontenac blanc	79,413	79,085	0.941	1.028	0.70	2.00
Frontenac gris	55,811	47,843	0.915	1.116	0.70	2.00
Itasca	30,332	22,392	0.99	1.27	0.70	2.00
La Crescent	66,698	63,788	0.977	1.084	0.70	2.00
Marquette	65,667	53,117	0.967	1.061	0.70	2.00
Petite Pearl	41,397	26,947	0.836	0.931	0.70	1.00
St. Croix	9,618	9,618	0.829	0.796	0.70	0.95
Other*	109,677	48,307	0.815	0.796	0.65	1.20
<b>Total</b>	<b>547,713</b>	<b>427,307</b>				

\* Due to low sample size, “other” category includes Bluebell, Crimson Pearl, Edelweiss, Kay Gray, King of the North, La Crosse, Leon Millot, Marechal Foch, Prairie Star, Sabrevois, Somerset Seedless, St. Pepin, and Valiant.

Pricing data was collected based on grower-reported survey results, with the average price for each variety calculated in two ways. First, the average was established following the commonly recognized mean value by variety. The second calculation was the weighted average price comprised as the total weight of grapes sold at each price

by variety by grower. These results were then averaged. The weighted average provides a comprehensive and accurate assessment, as it accounts for the volume of grapes sold at a certain price point. This reduces the influence of small volumes of grapes sold at extremely high or low prices.

The average prices ranged from \$0.80 to \$0.99 for wine grapes (Table 2). The weighted average prices were slightly different as shown in the below table. The lowest reported price for wine grapes was \$0.65 and the highest was for \$2.00 per pound for several varieties. Five survey respondents indicated producing fruit crops in addition to grapes including apple, blueberry, black raspberry, cherry, pear, plum, raspberry, and rhubarb.

Five years of data were compiled to show general production trends from 2017 through 2021. Figure 4 shows the top produced varieties and their average production over five years. Year-to-year variation may reflect inconsistencies in under sampling the grower population (i.e., low survey response), relative to the number of growers in the state.

**Table 3. Grape yields reported for Minnesota 2021 harvest by percentage**

Variety	Growers (n)	Growers selling (n)	% of All Grapes Produced
Brianna	6	6	2.6%
Frontenac	21	15	13.6%
Frontenac blanc	13	11	14.5%
Frontenac gris	17	13	10.2%
Itasca	14	7	5.5%
La Crescent	16	13	12.2%
Marquette	20	15	12.0%
Petite Pearl	11	7	7.6%
St. Croix	7	7	1.8%
Other	--	--	20.0%

## **CROP LOSS**

Growers from across the state continue to report crop loss, with up to 100% due to bird damage, neglect, and winter injury. Cold damage from injury in 2020 contributed to lower yields for some growers who were still in recovery and retraining vines. Trunk injury, which may include winery injury and/or grapevine trunk diseases were also reported. Growers are encouraged to prune damaged wood and retrain vines to mitigate these fungal diseases. This includes retraining suckers to establish multiple trunks of different ages, planning for and replacing trunks, and rejuvenating cordons and spurs. Other weather events, spring frost and hail, accounted for additional loss for growers. Although not indicated in this survey, reports were made to the authors of vine injury and potential crop loss due to suspected spray drift. The reemergence of

broadleaf herbicide usage on agricultural lands (e.g. Dicamba, 2,4-D, etc.) that are highly volatile will continue to be an issue for grape growers. Registering specialty crops, such as grapes, with Fieldwatch (fieldwatch.com) is voluntary but a good first step in protecting crops from spray drift. Bees and wasps are also reported by farmers in contributing to crop loss (10-20%).

## SUMMARY

Approximately 80 farm wineries are active in Minnesota, and this survey reports on only 30 grape producers. While this survey provides some insight on grape production and sales in the state, it represents a subset of commercial grape growers in Minnesota. The intent was to provide a snapshot of the 2021 harvest season and give both growers and wine producers estimates of pricing and trends to assist in budgeting, establishing fair prices, and fiscal planning. Crop loss continues to affect growers in the state throughout the year. Winter injury and associated trunk disorders, bud injury, and frost were some of the top reasons for crop loss.

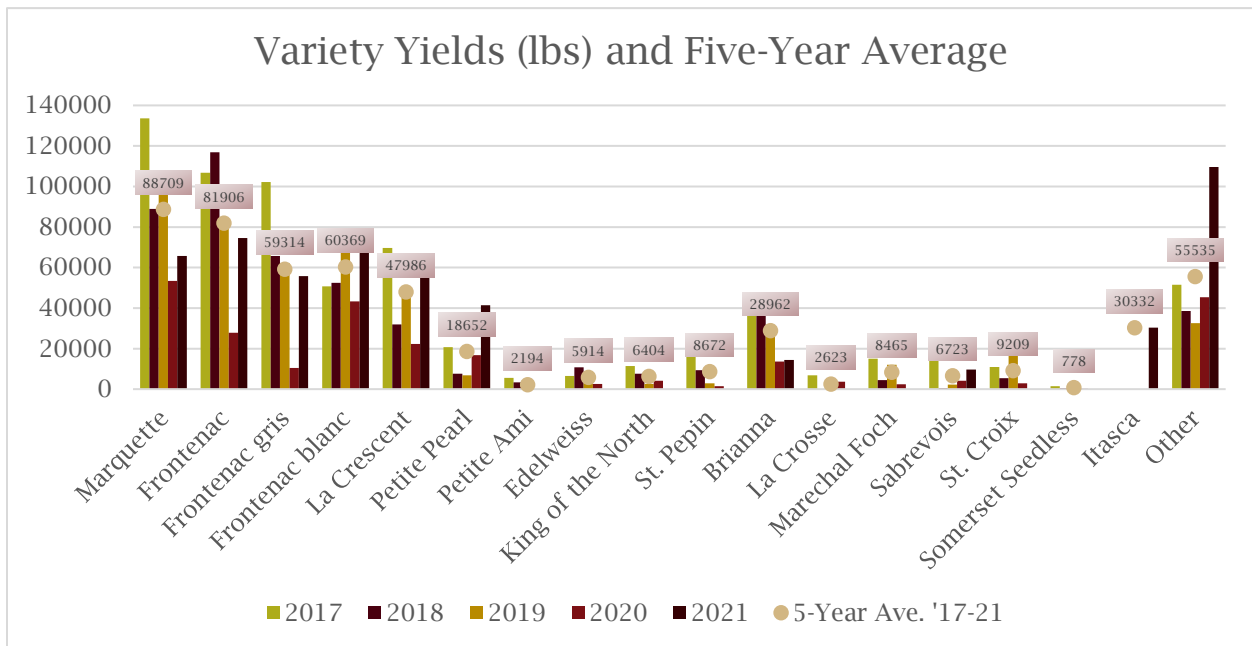


Figure 4. Yield data for five years (2017-2021) of top producing cold-hardy grapevines in Minnesota, based on 30 survey respondents. Five-year average is shown as the value and tan dot. Varieties no reported on a year may be in the “Other” category if less than 5 respondents reported growing that variety.