VIRGINIA 2016 COMMERCIAL GRAPE REPORT

This Year's Report Prepared By:
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VIRGINIA WINE

VCU VIRGINIA COMMONWEALTH UNIVERSITY
School of Business

2016 GROWING SEASON

Virginia's 2016 growing season followed a generally challenging winter, with significant snowfall and low temperatures in January and February. Three solid weeks of late winter/early spring rains were followed by a late frost in the first and second weeks of April. The late frost was especially damaging to smaller growers, many of whom lost their entire crops for the year. A hotter than usual summer, especially in late July and early August, presented growers with another set of challenges, especially as rain was intense but infrequent during this period.

A late start to winter, as well as an overall warmer-than-usual November and December, extended the time available for harvest, with many growers not completing their harvest before the end of November when students from Virginia Commonwealth University began reaching out to them to collect data for this report. Cold weather didn't truly arrive until the second week of December, when temperatures stayed consistently below freezing for the first time in the 2016 season.

SPECIAL THANKS TO ALL GROWERS WHO TOOK THE TIME TO PARTICIPATE IN THIS YEAR'S SURVEY!

ABOUT THE SURVEY

This year marks the first year the Virginia Commonwealth University School of Business managed the annual Commercial Grape Report (CGR) data collection and reporting on behalf of the Virginia Wine Board. Prior to 2016, the CGR was managed and produced by the Virginia Wine Board. Prior to 2010, the CGR was produced by NASS (National Agricultural Statistics Service).

2016 is the first year that the CGR has attempted to capture qualitative data as well as quantitative data. Working with the Wine Board, the team from VCU developed a series of multiple-choice and open-ended questions with the intent of giving growers more of a voice in the survey, allowing them to describe some of the challenges they face growing and selling grapes, and giving them an opportunity to tell the Board ways they think it can better help them. Limited qualitative responses are included in this report; however all qualitative responses were read and considered by the Board as it seeks to find ways to provide more support to growers.

The 2016 survey, as well as the 2010 through 2015 surveys, drew upon exact data provided by Virginia grape producers. The information presented in this report was gathered through a survey of all known grape producers in Virginia. Data was collected during the months of October 2016 through February 2017 by mail, telephone and email. Information obtained for this survey was kept completely confidential. Only aggregate data is presented in this report.

Hard and electronic copies of the survey were send to 319 known grape producers in Virginia. 213 responded for a 67% response rate. Not all respondents answered all questions, so the response rate for some questions may be lower.

There were 62 fewer responses to the 2016 survey than the 2015 survey. Therefore direct comparison of year-over-year totals would be misleading since they include different numbers of growers. However, there is an added analysis for this year's report that looks at year-over-year comparisons using those responses that were common to 2015 and 2016.

This year, "median" response values for the various survey questions as well as "average" response values are provided. The median represents a value that divides the distribution of responses, to any given survey question, in half such that 50% of responses are lower than the median and 50% are higher. The average may be unduly influenced by extreme values, the median is not. If the average and median are nearly the same, the distribution is more or less symmetric with higher and lower values offsetting each other. If there is a large difference between the median and average, it means there is one or more extreme values or the distribution is skewed. Thus, both median and average values for response are provided in this year's report.

The grape growers' report represents an on going process in which we hope to have all Virginia grape growers participate in this important research in the future.

For further inquiries about the Virginia Wine Board, please contact Ms. Annette Boyd at 804.344.8200. For questions about this survey, please contact Dr. Van Wood, VCU Professor of Marketing, at 804.519.2022 or vrwood@vcu.edu.

Picture by Arthur Swartwout

Grape Production, Acreage and Average Price by Variety

	Tons Produced	Bearing Acres	Non-Bearing Acres	Average Price	Median Price	25th Percentile Price	75th Percentile Price
Total	**6530**	**2562**	**445**	**$2,097**	**$2,100**	**$1,770**	**$2,500**
Vinifera	**4910**	**2003**	**369**	**$2,317**	**$2,200**	**$2,000**	**$2,500**
Albariño	44	24	9	$2,433*	$2,500	$2,275	$2,650
Cabernet Franc	929	319	56	$2,188	$2,100	$1,900	$2,400
Cabernet Sauvignon	533	205	24	$2,263	$2,200	$2,100	$2,500
Chardonnay	760	373	65	$2,256	$2,195	$2,086	$2,500
Gewurztraminer	4	6	2	$2,000*	$2,000	**	**
Malbec	45	25	8	$2,640*	$2,300	$1,888	$2,882
Merlot	620	252	35	$2,239	$2,200	$2,050	$2,500
Petit Manseng	195	72	8	$2,315	$2,225	$2,200	$2,500
Petit Verdot	495	205	50	$2,573	$2,500	$2,224	$2,700
Pinot Gris/Grigio	101	48	2	$1,900*	$2,000	$1,800	$2,100
Pinot Noir	61	26	4	$2,000*	$2,000	**	**
Riesling	54	21	7	$2,250*	$2,250	**	**
Sauvignon Blanc	148	48	12	$2,550*	$2,550	**	**
Syrah	55	19	3	$2,320*	$2,200	$2,200	$2,700
Tannat	92	43	10	$2,798	$2,700	$2,400	$2,775
Viognier	435	204	42	$2,418	$2,465	$2,249	$2,500
Other White Vinifera	164	49	11	$1,921*	$1,925	$1,813	$2,000
Other Red Vinifera	172	64	21	$2,272	$2,100	$2,000	$2,425
Hybrid	**1220**	**382**	**58**	**$1,456**	**$1,440**	**$1,200**	**$1,620**
Chambourcin	352	93	20	$1,523	$1,500	$1,288	$1,700
Seyval	73	24	6	$1,420*	$1,400	**	**
Traminette	163	77	7	$1,358	$1,390	$1,225	$1,300
Vidal Blanc	546	139	14	$1,513	$1,500	$1,275	$1,700
Other White Hybrid	54	34	8	$1,337*	$1,200	$1,100	$1,800
Other Red Hybrid	31	16	3	$1,300*	$1,300	**	**
American	**401**	**177**	**18**	**$1,491**	**$1,600**	**$1,400**	**$1,724**
Concord	76	25	12	$650*	$650	**	**
Niagara	135	42	0	$1,361*	$1,700	**	**
Norton	173	97	1	$1,715*	$1,600	$1,400	$1,800
Other White American	6	7	4	$1,600*	$1,600	**	**
Other Red American	10	7	0	**	**	**	**

** Less than 10 growers supplied price information*
*** Insufficient data*

Grape Production and Acreage by District and County

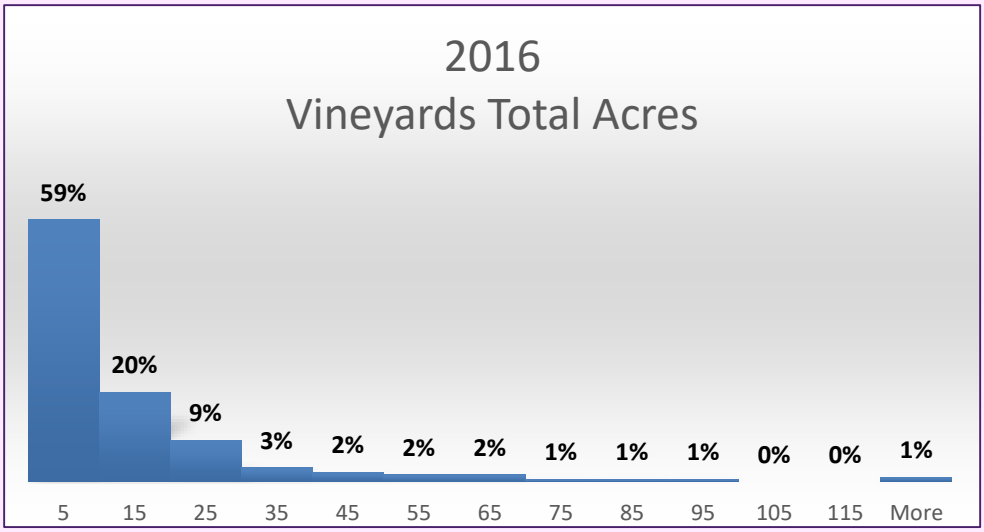
County		Tons Produced	Bearing Acres	Non-Bearing Acres
State Total		**6530**	**2562**	**445**
Northern	Clarke*	X	X	X
	Fauquier	347	162	48
	Loudoun	1385	554	143
	Madison	124	73	1
	Rappahannock	173	64	8
	Rockingham	113	41	13
	Shenandoah	311	90	31
	Warren*	X	X	X
	Other Counties	257	85	21
	District Total	**2710**	**1069**	**265**
Western	Augusta	170	43	12
	Botetourt	5	3	2
	Rockbridge	79	27	4
	Other Counties	48	20	12
	District Total	**302**	**93**	**30**
Central	Albemarle	933	424	35
	Amherst	40	30	4
	Bedford*	X	X	X
	Greene	44	20	6
	Hanover	19	20	5
	Louisa*	X	X	X
	Nelson	709	224	11
	Orange	896	232	15
	Spotsylvania*	X	X	X
	Other Counties	103	86	16
	District Total	**2744**	**1036**	**92**
Eastern	Westmoreland	144	72	7
	Other Counties	230	145	28
	District Total	**374**	**217**	**35**
Southern	Franklin	5	2	0
	Halifax	5	11	13
	Patrick	61	27	0
	Pittsylvania*	X	X	X
	Other Counties	330	110	13
	District Total	**401**	**150**	**26**

**Indicated counties are included in the "Other Counties" section for their respective districts*

SURVEY ANALYTICS

Vineyard Sizes:

The histogram shows the distribution of respondents' vineyard size by total areas. Each bin corresponds to 10 areas. 59% of the reported growers have between 0 and 10 acres. The average vineyard size is 15.1 acres and the median, 7.3 acres; 50% of the reported vineyards are 7.3 acres or less. The median being much lower than the average is due to two 100-acre-plus vineyards reporting and the strong right skew.



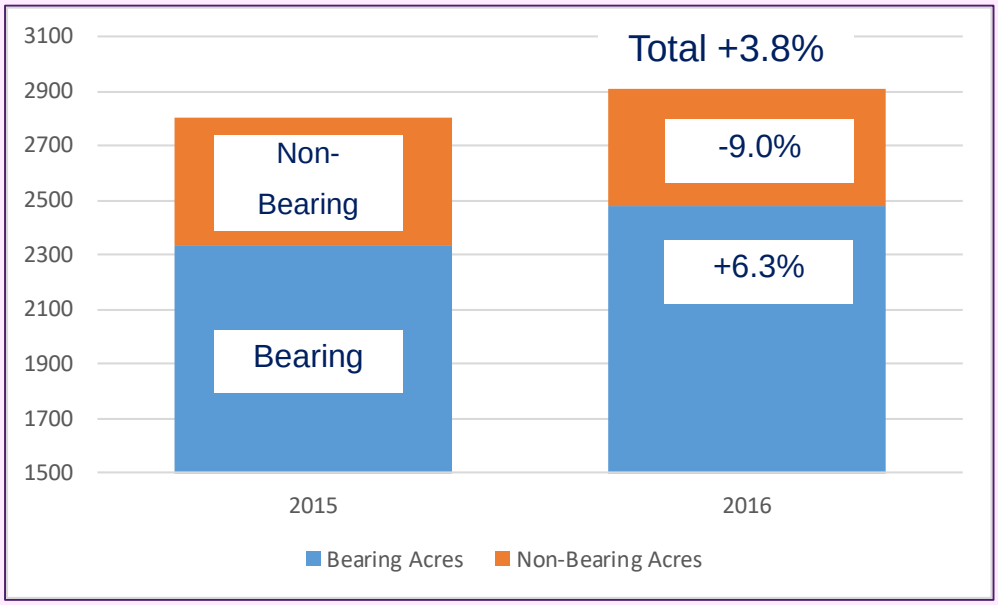
Year-over-year comparisons:

As noted in the introductions, values in the tables on pages 4 and 5 cannot be compared to values from the 2015 survey due to different sample sizes. However, there were 192 growers who responded to both the 2015 and 2016 surveys. This set of growers, representing 60% of surveyed growers, can be compared year over year. The charts showing 2016 and 2017 only use these 192 respondents.

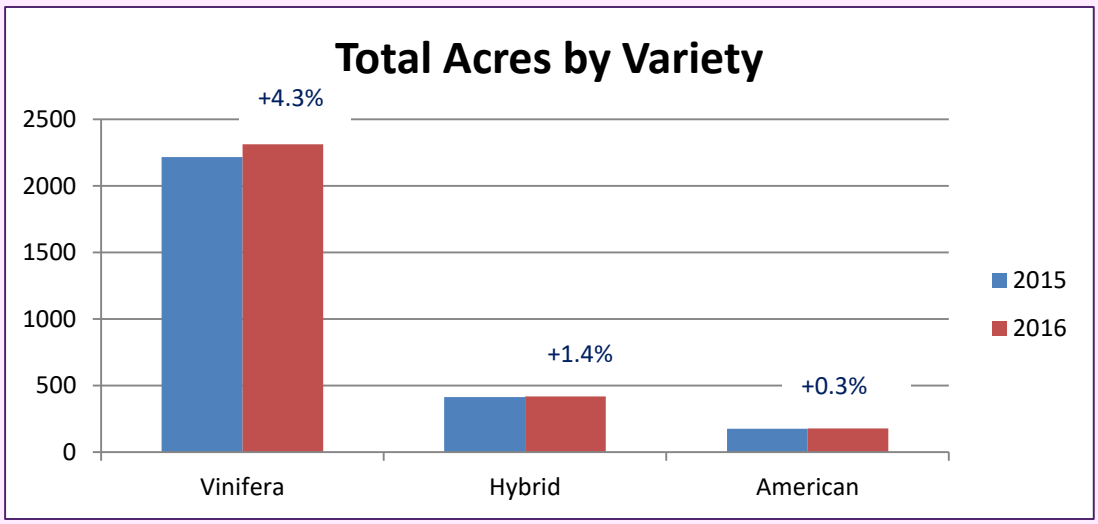
Vineyard size:

Bearing acres increased 6.3% from 2015 to 2016. The increase was in part due to previously non-bearing acres becoming bearing; non-bearing acres decreased by 9.0%. There was also increased acreage under vine. Total acres increased 3.8%. The increase in total acres is statistically significant. Also demonstrating continued growth in Virginia's grape wine industry, 63% of growers said they plan to grow more tons of grapes while only 7% said they plan to decrease or stop growing grapes.

Total Acres 2015 & 2016
(192 only)

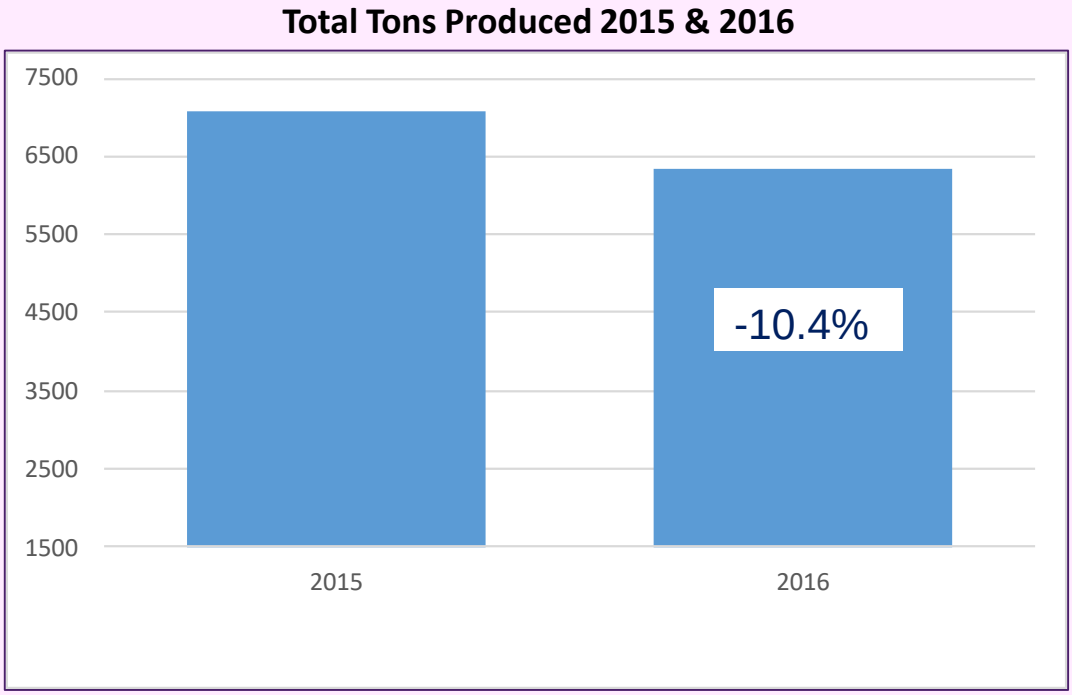


All grape types, Vinifera, Hybrid and American, showed some increase. Vinifera, however, showed the greatest increase in both volume and percentage.



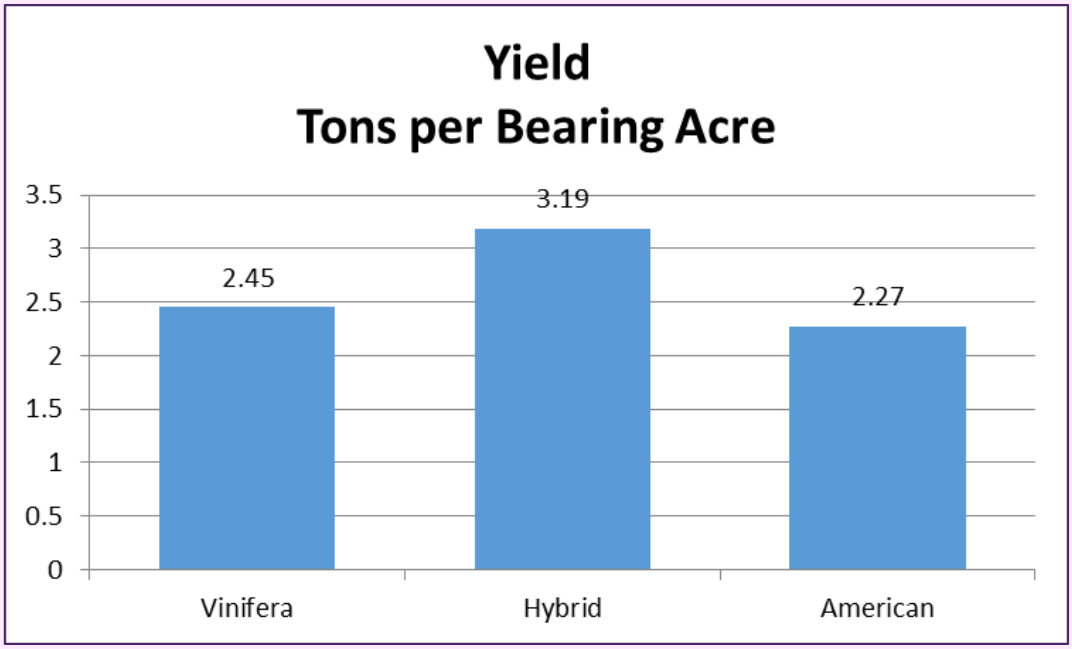
Tons Produced:

There was a 10.4% decrease in the total number of tons produced from 2015 to 2016. This was primarily, if not totally, due to weather.

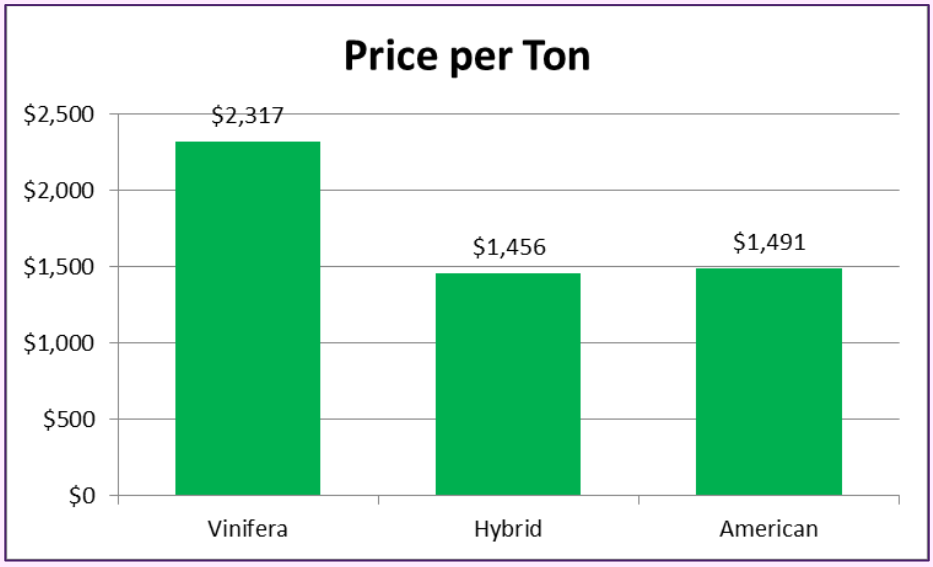


Yield and Price:

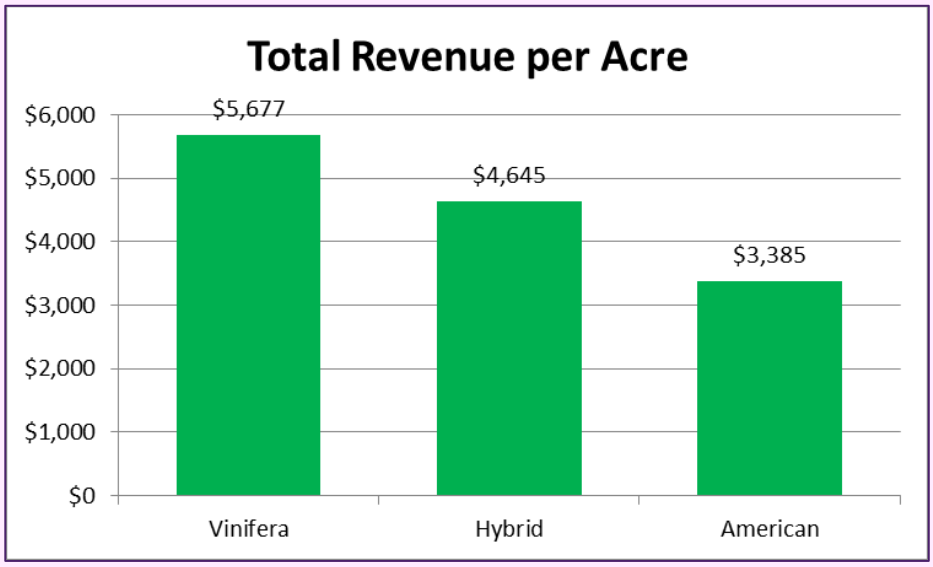
Hybrid had statistically significantly higher yield per bearing acre than either Vinifera or American. The small difference between Vinifera and American is not statistically significant.



Vinifera returned a statistically significantly higher price per ton than either Hybrid or American. The difference between Hybrid and American is not statistically significant.



Hybrids, having significantly higher yield per acre than Vinifera and significantly lower price per ton, leads to the natural question of how revenue per acre compares. The yield and price difference tend to offset so there is no meaningful difference in revenue per acre. American shows significantly lower revenue per acre than both Vinifera and Hybrid.



Differences in price per ton for grape varieties within type were also analyzed. There is either no difference in price between varieties within type or such a small difference that the data is insufficient to detect it.

QUALITATIVE QUESTIONS

I'm satisfied with the number of varieties of grapes available for me to purchase to grow: (178 Respondents)

Strongly Agree - 36 growers (20%)

Agree - 67 growers (38%)

Neither Agree Nor Disagree - 36 growers (20%)

Disagree - 33 growers (19%)

Strongly Disagree - 6 growers (3%)

In the next five years I plan to: (194 Respondents)

122 growers (63%) plan to grow more tons of grapes.

58 growers (30%) plan to grow about the same tonnage of grapes.

3 growers (1.5%) plan to grow fewer tons of grapes.

11 growers (5.5%) plan to stop growing grapes.

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