

Tennessee Consumers' Views About Cidery Visits

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The Hard Cider Industry and Tennessee's Hard Cider Industry

Hard apple ciders have been a growing segment of alcoholic beverage consumption and, as of 2019, there were 1,145 cider makers in the U.S. (Cyder Market 2019). Hard cider-making facilities are called cideries. Cideries may use apple juice that is purchased, apples purchased and pressed into juice, or apples grown on-site then pressed into juice to make the hard cider. Hence, some cideries grow apples on-site to make their cider, while others purchase juice or apples. Cider is not brewed like beer; rather, it is fermented using a process similar to making wine.

Like wineries or breweries, cideries can constitute an agritourism destination. For example, wine trails have been used to tie winery visits with those to nearby attractions, services and accommodations (Che & Wargenau, 2011). As noted, cideries could also serve as attractions in concert with rural landscapes and other nearby attractions, services and accommodations (Smith and Lal 2017). In addition to the cider-making experience, visitors could also have the opportunity to visit orchards where the cider apples are produced.

While some other states have a well-developed hard cider industry, the industry in Tennessee is just beginning. The state currently has 12 cider makers (Cyder Market 2019). New York, California, Michigan, Washington and Oregon have the largest number of cider producers (Cyder Market 2019).

Given that the cider industry is emerging in Tennessee, little market information exists about preferences by consumers in the state regarding hard apple ciders or tourism visits to cideries. The industry could potentially benefit from information regarding Tennessee consumer preferences for cider and cidery services. The overall goal of this research is to develop a greater understanding of the Tennessee market for hard apple cider and to explore ways to facilitate the growth of the state's emerging hard cider industry. The information from this study should be of interest to entrepreneurs and businesses that are interested in beginning or expanding hard cider-making enterprises in Tennessee. The objectives of this study are to provide market information about Tennessee consumers' views on visiting cideries in the state, the distances they would be willing to travel to visit a cidery, their expenditures at cideries, what services/amenities they view as important when they visit cideries, and the factors that might influence their purchases of hard ciders at cideries.

Survey Instrument and Data Collection

An online survey of Tennessee residents aged 21 years or older who at least occasionally consume alcohol was conducted in July 2019.¹ The survey was hosted online through

¹ Human subjects approval to conduct the survey was obtained through UTK IRB-17-03525-XM.

Qualtrics, using a panel of Tennessee residents who met the participation criteria. A total of 1,261 residents responded to the survey and met the survey qualifications.

The survey instrument contained several sections, including familiarity with hard ciders and past visits to cideries, interest in future visits to cideries, cider expenditures, and preferences for services offered at cideries. Demographics were also collected to compare the sample demographics with those of the overall population of Tennessee.

The respondents were told that, as potential consumers of this product, their opinions, shopping and demographic information, and preferences would help build a better understanding of how consumers' shopping patterns, attitudes and demographics shape their purchases of hard apple cider — information important for industry development. The survey instrument defined hard cider as cider made from apples that is fermented to an alcoholic beverage.

Results

Respondent Demographics

The average age of the respondents was 48 years old, slightly older than the state average (**Table 1**). Female respondents comprised 50.7 percent of those surveyed (48.8 percent males and 0.5 percent of the respondents preferred not to disclose). About 44.6 percent of the respondents were college graduates (well over the state average). Respondents were predominantly white (86.1 percent) or African American (8.4 percent). Close to 36 percent of the respondents' incomes were between \$20,000 and \$59,999 and 25.2 percent were between \$60,000 and \$99,999. Approximately 41.2 percent of the respondents resided in the Eastern region of the state, with 38.8 and 20 percent residing in the Middle and Western regions, respectively. Most of the respondents resided in a suburban area (45 percent), with 41.7 percent from either a small town or rural area. Respondents residing in a city totaled 13.2 percent. Approximately 74.7 percent of the respondents did not have a farm background. Approximately 89.5 percent of the respondents were responsible for food shopping in their household, with 69.3 of the respondents shopping for food and beverage in a metropolitan area. The average household size was 2.5 individuals.

Table 1. Selected Demographics for Hard Apple Cider Survey Respondents (N = 1,261)

Category	Value	Tennessee Census
Average Age	48.2	38.6 ¹
Average Household Size (person/household)	2.5	2.5
Female Respondents (%)	50.7	51.2
Male Respondents (%)	48.8	48.8
College Graduates (%)	44.6	26.1 ²
Race (%)		
White	86.1	78.5
African American	8.4	17.1
Income (%)		
\$20,000 - \$59,999	35.6	\$48,708 ³
\$60,000 - \$99,999	25.2	
Regional Residence (%)		
East	41.2	33.5
Middle	38.8	39.7
West	20.0	26.9
Residence Classification (%)		
Rural	20.8	33.6
Suburban	45.0	66.4 ⁴
Small Town	20.9	
City	13.2	
Has Farm Background (%)	25.3	
Responsible for Food Shopping in Household (%)	89.5	

¹median age; ²bachelor's degree or higher, percent of persons age 25 years+; ³median household income;

⁴resident of an urbanized area value.

Source: US Census Bureau. Tennessee QuickFacts. Accessed 10/25/19 at

<https://www.census.gov/quickfacts/TN>; US Census 2010, Tennessee: 2010; 2010 Census of Population and Housing. Accessed 10/25/19 at <https://www.census.gov/prod/cen2010/cph-2-44.pdf>.

About 19.9 percent of respondents stated they consume alcoholic beverages one to three times per year; 32.6 percent one to three times per month; 37.6 percent one to three times per week; and around 10 percent daily (**Figure 1**). While respondents who do not consume alcohol are excluded from this study, it should be noted that around 70.1 percent of the U.S. population had consumed alcoholic beverages in the past year (NIH 2019).

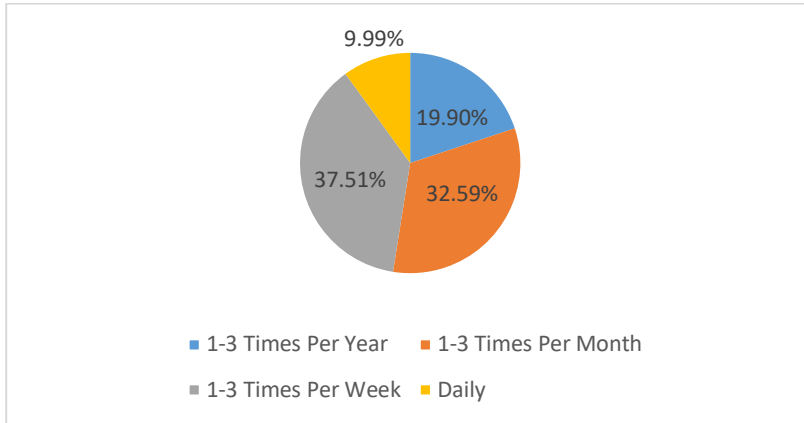


Figure 1. Alcoholic Beverage Consumption by Respondents (N = 1,261)

Familiarity With and Prior Purchases of Hard Apple Cider

Respondents were asked about their familiarity with hard apple cider. Approximately 84.5 percent of the respondents were at least slightly familiar with hard apple cider, with only 15.5 percent being not familiar at all (Table 2).

Table 2. Familiarity With Hard Apple Cider (N = 1,261)

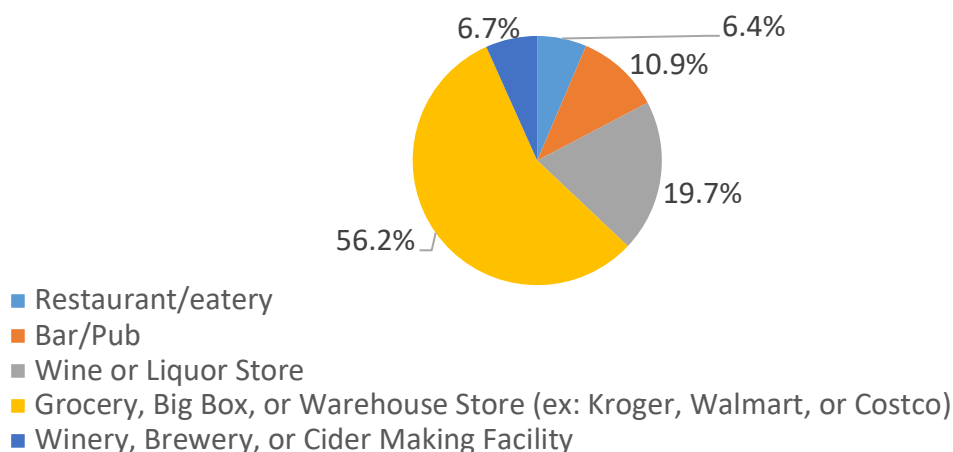
Category	Percent				
	Extremely Familiar	Very Familiar	Moderately Familiar	Slightly Familiar	Not Familiar at all
Familiar with hard apple cider	7.0	20.9	33.9	22.7	15.5

Those who had tried hard cider were asked about the frequency with which they purchased it. The most common response was every six months (29.3 percent), followed by once a month (24.7 percent), once a year (18.0 percent), and once every two years (12.1 percent) (N = 816). About 69.8 percent of the respondents purchased hard cider at least as frequently as once every six months (Table 3).

Table 3. Frequency Respondents Purchase Hard Apple Cider (N = 816)

Category	Percent
Daily	1.7
Once a week	4.4
Every two weeks	9.7
Once a month	24.7
Every six months	29.3
Once a year	18.0
Once every two years	12.1

The respondents primarily purchased their hard apple cider at grocery, big box or warehouse stores (56.2 percent), with purchases at wine/liquor stores and a bar or pub at 19.7 percent and 10.9 percent, respectively (**Figure 2**). Approximately 6.7 percent purchased hard apple cider at a winery, brewery or cider-making facility.

**Figure 2. Retail Outlets Where Respondents Usually Purchased Hard Apple Cider (N = 816)**

The most frequent packaging for the hard apple cider purchased was in four- or six-pack bottles (46.8 percent), followed by a single serving bottle (19.5 percent) and by a pint glass on draft (11.6 percent) (**Table 4**). Least frequently reported was a growler, at less than 2 percent.

Table 4. Packaging Type When Respondents Purchase Hard Cider (N = 816)

Category	Percent
By the pint glass on draft	11.6
In a single-serving can	6.5
In a single-serving bottle	19.5
In a multiple-serving bottle (i.e., 750 ml bottle)	9.3
In a growler (32 or 64 ounce)	1.6
In a 4- or 6-pack of bottles	46.8
In a 4- or 6-pack of cans	3.8
Other	0.9

The most frequent responses for how much respondents spent when they purchased hard apple cider fell between \$8 and \$15, with \$10 to \$14.99 having the most responses (**Table 5**). If the midpoints of the expenditure intervals are used, the average expenditure per purchase was \$8.74.

Table 5. Respondents Expenditures Each Time Purchase Hard Apple Cider (N = 816)

Category	Percent
Less than \$3	2.9
\$3-\$3.99	6.1
\$4-\$4.99	9.1
\$5-\$5.99	8.3
\$6-\$6.99	9.7
\$7-\$7.99	9.7
\$8-\$8.99	14.9
\$9-\$9.99	12.4
\$10-\$14.99	18.6
\$15-\$19.99	5.9
\$20 or more	2.3

For future purchases of hard cider, 54.6 percent indicated they were most likely to purchase at grocery, big box or warehouse stores, followed by wine or liquor stores (21.1 percent), bar or pub (9.4 percent), winery, brewery or cider-making facility (7.6 percent), and a restaurant or eatery (7.4 percent) (**Figure 3**).

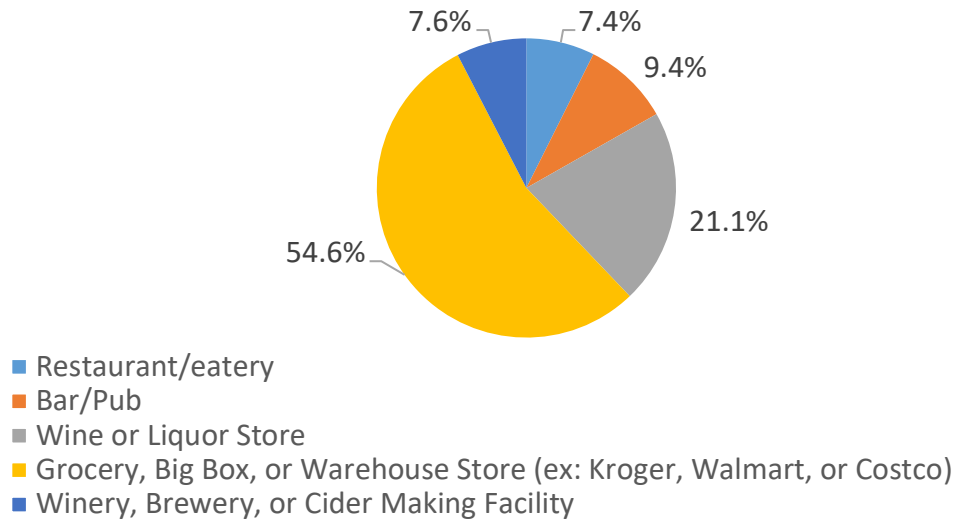


Figure 3. Retail Outlets Where Respondents Most Likely Will Purchase Hard Apple Cider in the Future (N = 816)

Tennessee Cidery Visits

The next set of questions pertained to visits to a Tennessee cidery. As shown in **Figure 4**, approximately 10.7 percent of the respondents had visited a Tennessee cidery, with 81.1 percent indicating they had not but would like to do so in the future. Only 8.2 percent said they had never visited and would likely never visit a cidery. Among those who had visited a cidery, 83.0 percent purchased a hard cider product (N = 135).

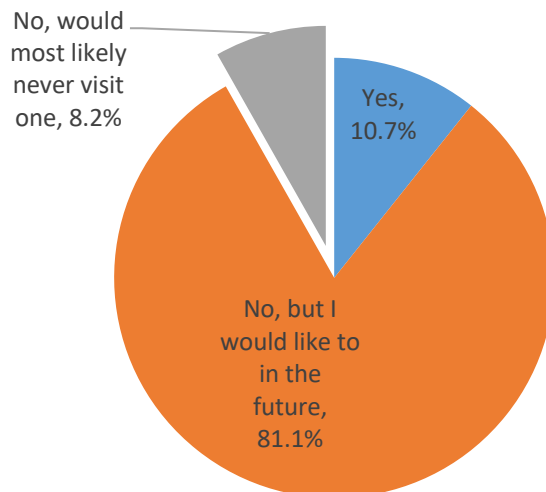


Figure 4. Respondent Past Visits or Visit Intentions to a Tennessee Cidery (N = 1,261)

Past Cidery Visits

When at a cider-making facility, the most frequent packaging preferred for hard apple cider purchases were by the pint glass on draft and in a multiple-serving bottle (both at 20.5 percent), followed by a single-serving can or bottle (both at 17.0 percent) (**Table 6**). Note, this differs from the types of packaging most often purchased overall, as shown in **Table 4**. For example, the percentages of respondents who purchased hard cider at cidery on draft in a pint glass or in a multiple-serving bottle (e.g., 750 ml) were much higher than the percentages who usually purchase the product in these types of packaging. However, the percentage who purchased cider at a cidery in a four- or six pack of bottles was much lower than the percentage that usually purchased hard cider in that type of packaging. Hence, respondents exhibited willingness to purchase cider in packaging types other than the usual four-pack of bottles when they visited a cidery.

Table 6. Packaging Type Used When Purchased Hard Cider at Tennessee Cidery (N = 112)

Category	Percent
By the pint glass on draft	20.5
In a single-serving can	17.0
In a single-serving bottle	17.0
In a multiple-serving bottle (i.e., 750 ml bottle)	20.5
In a growler (32 or 64 ounces)	5.4
In a 4- or 6-pack of bottles	14.3
In a 4- or 6-pack of cans	3.6
Other	1.8

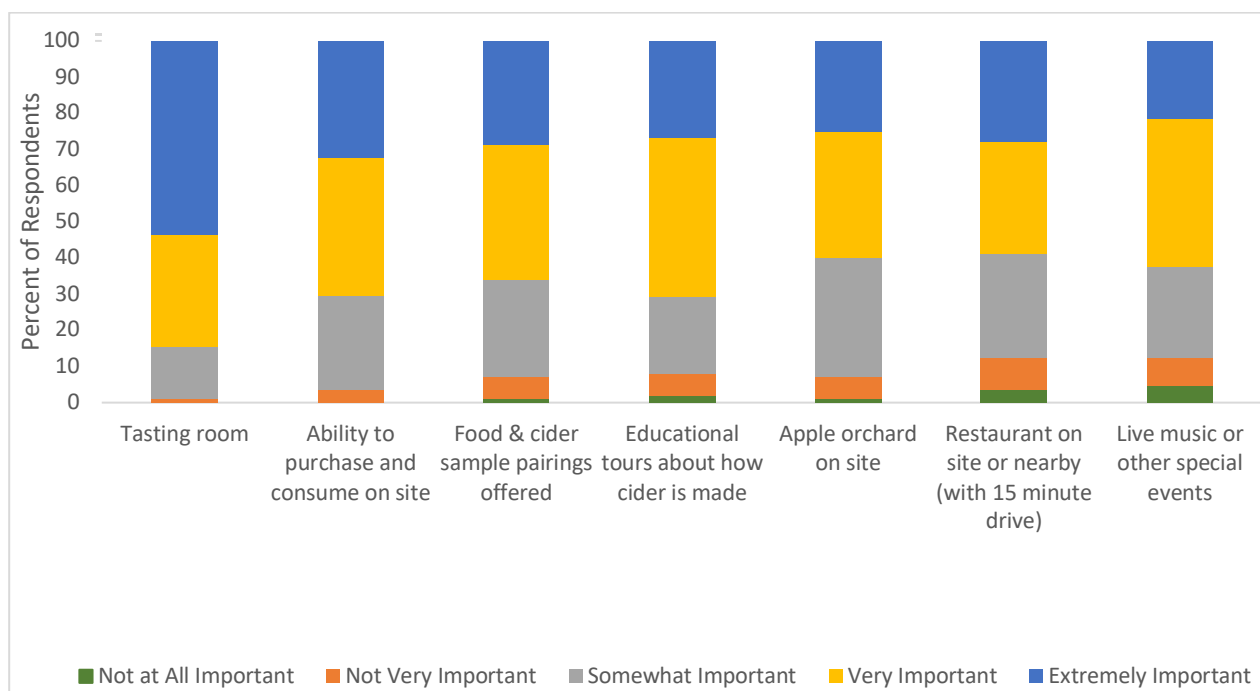
The most frequent responses regarding how much they spent when they purchased hard apple cider at a cidery was between \$10 and \$14.99 at 17.0 percent, followed by \$15 to \$19.99 (13.4 percent), \$6 to \$6.99 (11.6 percent), and \$4 to \$4.99 (9.8 percent) (**Table 7**). If the midpoints of expenditures are used to calculate an estimate of the weighted-average expenditure, the expenditure amount is \$11.07. Note, this is much higher than the average expenditures across all retail outlets at \$8.74. Hence, respondents tended to spend more when they visited cider-making facilities.

Table 7. Respondents Expenditures Each Time Purchase Tennessee Hard Apple Cider (N = 112)

Category	Percent
Less than \$3	7.1
\$3-\$3.99	4.5
\$4-\$4.99	9.8
\$5-\$5.99	2.7
\$6-\$6.99	11.6
\$7-\$7.99	6.2
\$8-\$8.99	7.1
\$9-\$9.99	8.9
\$10-\$14.99	17.0
\$15-\$19.99	13.4
\$20-\$29.99	8.0
\$30 or more	3.6

As can be seen in **Figure 5**, the respondents were asked about their level of agreement (1 = not at all important, ..., 5 = extremely important) with a series of statements concerning the importance of factors that influenced their decision to purchase hard cider at a cidery. Nearly 54 percent rated the cider tasting as extremely important, as indicated by the blue shaded area of the stacked bar chart in **Figure 5**. This was followed in importance by getting to sample before the person buys cider and supporting a local business. Cider apples being grown on site were only of extreme importance to just under 20 percent of the respondents, and it was rated overall of least importance among the factors examined.





(N = 112)

Figure 5. Factors Valued by Consumers When Purchasing at a Cidery

Future Cidery Visits

All respondents who indicated they had visited a cidery or might in the future were asked several questions about potential future visits to cideries. Respondents were asked about how far they would be willing to travel to visit a Tennessee cidery. The distribution of responses indicated that the most commonly selected maximum distance was 26 to 50 miles (30.2 percent), followed by 51 to 75 miles (18.6 percent), and 11 to 25 miles (15.3 percent) (**Table 8**). If the midpoints of intervals of the distances are used, and a weighted average is calculated, the average maximum distance respondents would be willing to travel is 62.3 miles.

Table 8. Maximum Distance Respondent Would Drive to Visit a Tennessee Cider-Making Facility (N = 1,158)

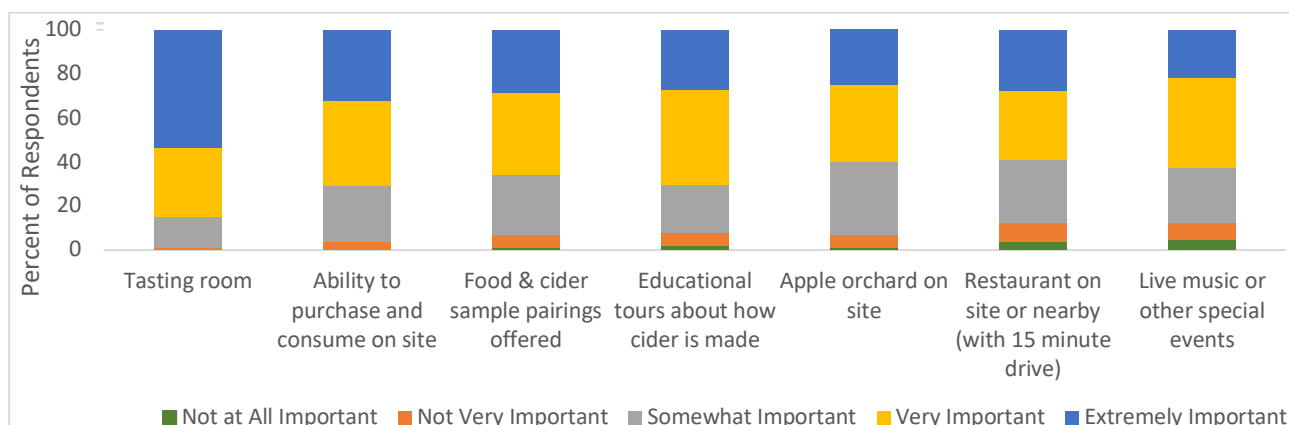
Category	Percent
0-10 miles	5.1
11-25 miles	15.3
26-50 miles	30.2
51-75 miles	18.6
76-100 miles	14.5
100-149 miles	8.1
150 miles or greater	8.2

The respondents were asked how frequently they would visit a Tennessee cidery in the future. Approximately 72.2 percent indicated at least once or twice per year, with once per year receiving the greatest responses at 38.1 percent (Table 9).

Table 9. Frequency Would Visit a Tennessee Cider-Making Facility (N = 1,158)

Category	Percent
Less than once per year	20.5
Once per year	38.1
Two times per year	34.1
Once a month	5.7
Once a week	0.8
More often than once a week	0.9

The respondents were asked to indicate the importance (1 = not at all important, ... , 5 = extremely important) of a number of cider characteristics in making their decision to visit a cidery. As can be seen in Figure 6, a tasting room was the most important, followed by ability to purchase and consume the cider on-site and educational tours about how cider is made, plus food and cider sample pairings offered. Least important was live music or other special events.



(N = 1,158)

Figure 6. Importance of Cider Characteristics on Respondents' Decision to Visit a Cidery

As shown in **Table 10**, for future visits to a cidery, 69 percent of the respondents indicated they would spend \$10 or more. The most frequent response was between \$10 to \$14.99. If the midpoints are used to calculate a weighted average of expected future expenditures, this value would be \$16.63.

Table 10. Respondents Expected Expenditures in a Future Visit to a Tennessee Cidery (N = 1,158)

Category	Percent
Less than \$3	1.4
\$3-\$3.99	2.6
\$4-\$4.99	3.7
\$5-\$5.99	6.1
\$6-\$6.99	3.8
\$7-\$7.99	4.2
\$8-\$8.99	3.6
\$9-\$9.99	5.5
\$10-\$14.99	19.3
\$15-\$19.99	14.9
\$20-\$29.99	16.6
\$30 or more	18.2

Respondent Demographics and Willingness to Visit a Tennessee Cidery

Table 11 compares respondent demographics for those who either had visited or would consider visiting a cidery in Tennessee and those who had or would not make such a visit. For continuous variables (e.g., age), means comparisons were made using t-tests. For categorical variables with greater than two levels (e.g., region), chi-square tests of association were used. For categorical variables with only two levels, a two-sample test of equality of proportions was used. Notably, those who have or would visit a cidery are

younger, more likely to be female, have a farm background, and are located in East Tennessee than those who would not. In addition, those who would visit a Tennessee cidery agreed more strongly with the statement that they try to purchase local foods whenever possible. Hence, Tennessee cidery visitors would likely be individuals who value foods being locally produced.

Table 11. Demographics Across Willingness to Visit a Tennessee Cidery

Demographic	Have Visited or Would Consider Visiting a Tennessee Cidery ^a	
	Yes	No
Age (N = 1,259)	47.9	51.4 **
Household Income (N = 1,154)	\$69,705	\$66,222
Female (N = 1,261)	51.5%	42.7%
College Graduate (N = 1,261)	44.4%	46.6%
Metro (N = 1,261)	58.3%	58.2%
Try to Purchase Local Foods Whenever Possible (1 = strongly disagree, ..., 5 = strongly agree)	4.1	3.6 ***
Farm Background (N = 1,261)	26.5%	11.7% ***
Region (N = 1,261):		
West	19.0%	31.1% ***
Middle	38.9%	37.8%
East	42.1%	31.1%

^a ***=significance at $\alpha=.01$, **=significance at $\alpha=.05$, *=significance at $\alpha=.01$.

Summary and Conclusions

This study examined Tennessee consumers' views about visiting cider-making facilities. Most adult Tennessee consumers who at least occasionally consume alcohol are familiar with hard apple ciders, and the majority have tried hard apple cider before. However, the majority of the respondents are only occasional consumers of hard apple cider, with nearly 60 percent consuming it every six months or less frequently.

Most respondents who had purchased hard apple cider in the past had done so at grocery stores, big box stores or warehouse clubs. Only around 7 percent who had tried it had purchased it at a winery, brewery or cider-making facility.

Among those who had purchased hard cider, their expenditures per purchase were around \$8.74, while among those who had visited a cidery and purchased, the average expenditure was around \$11.07. This result suggests that respondents will spend more per purchase when they visit a cidery than when they purchase at other outlets. Part of the value of a visit to a cidery is the experience. While good-tasting cider was most important

among previous visitors, the ability to sample before buying, the reputation of the cidery, and the ability to support local businesses were also very important. Among factors of whether to purchase the cider, whether the cider apples were grown on-site was of least importance. Though most had not visited a cidery in the past, most respondents were interested in doing so. From the data, it appears that cideries located within an hour to an hour-and-a half drive (75 miles or less) would have a location advantage. About 60 percent indicated they would visit a cidery once per year or less. Among past and future potential visitors, a tasting room is most important to attract them to visit, followed by the ability to purchase and consume on-site. Food and cider sample pairings are also of interest to future visitors. In this case, live music and special events were the least important potential reasons to visit. Among future visitors, the most frequently cited expenditure level was between \$10 and \$14.99. Potential cidery visitors tend to be younger, female, from East Tennessee, from a farm background, and value local foods. Hence, these individuals might serve as a target market for promotional materials and activities geared toward attracting Tennessee residents to visit cideries in the state. Additional research should examine how Tennessee cideries might attract visitors from out of state.

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