



# 2022 Virginia Cider Apple Report



VIRGINIA  
WINE



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WINE & CIDER CONSULTING



# BACKGROUND OF CIDER IN VIRGINIA

Virginia has a good climate for growing apples. Nationally, Virginia is ranked sixth in apple production. The early growth of the hard cider industry in Virginia led to a number of commercial apple growers across the state to plant cider specific and heirloom apple cultivars in 2015. The hard cider industry has continued to grow since then, many of those heirloom and cider apple cultivars are now available to cider makers across Virginia and beyond. In the Commonwealth, cider is predominantly made from dessert apples, although some producers are using specialized cider apple varieties to produce regionally distinctive ciders. There are 54 different cultivars of apples in Virginia that are used to make cider.

"Americans are drinking 10 times more cider than they were a decade ago", says Michelle McGrath, executive director of the American Cider Association (ACA). "Small brands are now the industry's hottest sector; the regional cider market share grew to 51% in early 2022, up from 29% in 2018, according to Nielsen's most recent cider market review." Craft cider has boomed in Virginia in recent years, growing to nearly 50 cider producers. These cider makers represent about 5% of total cider production in the United States (US), producing nearly 800,000 gallons of fermented cider from Virginia grown apples.

Modern American ciders, for the most part, are characterized by light flavor, being made from dessert apples, diluted with water and often having a variety of other flavorings added as well as sweeteners prior to retail sale. These products are intended to compete in the larger market and are made and marketed in a similar fashion. The Virginia cider industry has always seen a reviving interest in "craft" ciders, those that are positioned more in the wine and specialty sectors. This is likely due to Virginia's wine industry and long history of growing high quality, intensely flavored dual purpose and heirloom apple cultivars. Many of these "craft" cider producers are small with limited local distribution, but some are gaining more recognition for the diverse varieties and styles of Virginia ciders that showcase the inherent agricultural nature of cider and taste of place.

Virginia cideries range from small (550 gallons) to large (100,000 gallons). Producers are obtaining fruit in several different formats. Some producers are growing their own fruit, or buying apples from larger commercial orchards, and pressing it onsite. There are also several different custom juice operations in Virginia that provide producers with fresh pressed juice. Other producers are buying fruit or concentrate from out of state. Most Virginia cideries are doing a combination of these business models.

# CIDER TERMINOLOGY

Fermented cider is commonly referred to as hard cider in the United States, while unfermented fresh apple juice is known as just cider or sweet cider. For the purposes of this report, 'cider' will be referring to the fermented beverage and 'juice' will refer to the unfermented, unfiltered fresh pressed juice. Cider is a fermented beverage with an alcohol content ranging from 2% to 8.5% alcohol; many appear similar to sparkling wines and they are typically categorized as dry or sweet, and in some cases have a variety of flavors added. Cider can be made from any variety of apples.

Of the limited cider research that exists to date, the majority comes from the United Kingdom, the largest cider producer in the world. Research conducted at Long Ashton Research Station (LARS) in 1903 resulted in an apple categorization system based on acidity and tannin levels. This is because the balance of sugar, acid, and tannin required for a high quality cider is generally hard to obtain from a single cultivar of apple. For the purpose of this report we have combined some of the language from the LARS categorization system, with more commonly used vocabulary from the Virginia apple and cider communities. Table 1 below features a cider apple classification system using Virginia grown apple cultivars and their flavor traits based on acidity and tannin levels.

TABLE 1: CIDER APPLE CLASSIFICATION SYSTEM USING VIRGINIA GROWN APPLE CULTIVARS

CATEGORY	FLAVOR TRAITS	COMMON VIRGINIA CULTIVARS
DESSERT SWEET	low acidity and low tannins	Fuji, Gala, Honeycrisp, Red and Golden Delicious, Cameo, Ginger Gold
DESSERT ACIDIC SHARP	high acidity and low tannins	Granny Smith, Ida Red, Gold Rush, Pink Lady, Jonathan, Grimes Golden
SPECIALTY CIDER	low or high acidity and high tannins	Virginia Hewe's Crab, Harrison, Dabinette, Yarlington Mill, Wickson Crab Apple
HEIRLOOM DUAL PURPOSE DESSERT/CIDER	low or high acidity and low or high tannins	Albemarle Pippin, Black Twig, Winesap, Stayman, Roxbury Russet, Ashmeades Kernel

# HARVEST NARRATIVE

The 2022 apple growing season in Virginia was successful despite a late March and mid-April frost according to Dr. S. Sherif, Ph.D., Assistant Professor of Pomology at Virginia Tech. Apple growers reported that the majority of apple cultivars were unaffected by these frost events. Full crop loads were reported across the Commonwealth, with fruit exhibiting excellent quality parameters.

The 2022 growing season was unprecedented for apples in the United States. It was the first year in recent memory where not a single apple producing state in the country had a late spring frost or other type of crop failure, resulting in a surplus of apples nationwide. Virginia's specialty cider apple market also saw a surplus of apples in 2022. Unfortunately, demand has not matched supply, leading some Virginia apple growers to speculate that too many Specialty and Heirloom cider varieties were planted and there is a glut on the market. Approximately 10% of Virginia cider makers grow their own fruit, indicating the cider industry is largely built upon grower relationships and is reliant on commercial apple growers to produce the raw ingredients needed by cidermakers.



# METHODOLOGY

The 2022 Virginia Cider Report was conducted on behalf of the Virginia Wine Board and Virginia Cider Association with data collection and management from Panacea Wine & Cider Consulting. This data has not historically been collected and this 2022 report is the first of its kind in Virginia.

The Virginia cider industry was surveyed in late fall 2022, including apple growers and cider producers to analyze the current state of the Virginia cider market. The information contained within this report is an analysis of the survey data received. The survey was developed through a collaborative effort among Virginia Cider Association and other apple and cider industry stakeholders. The survey was distributed electronically with support from the Virginia Cider Association and Virginia Cooperative Extension agents. A paper format was sent through the US Postal Service along with a stamped return envelope. Information obtained through this survey is required by law to remain confidential; thus certain data will not be published to avoid disclosure of proprietary information.

This inaugural 2022 Virginia Cider Report collected data from 31 producers and is estimated to represent 88% of the total cider production within Virginia based on previous industry information. Cider producers provided details on the apple cultivars processed, including bushels of apples processed, gallons of fresh juice purchased, as well as price paid for fruit and juice.

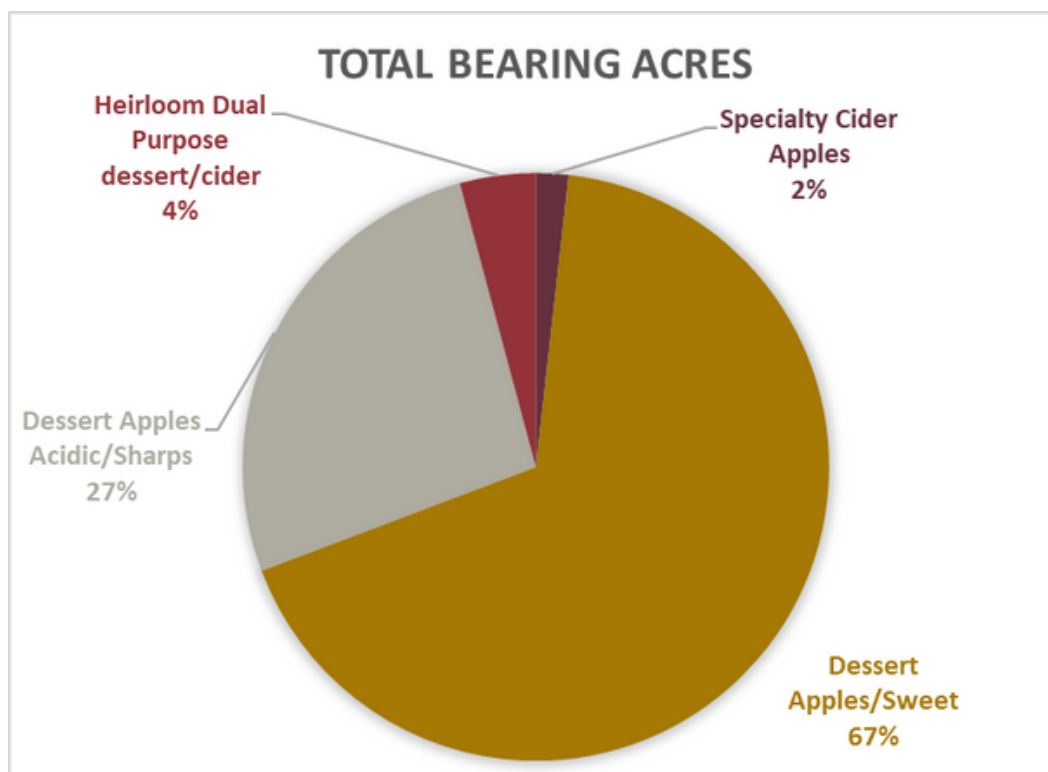
## STUDY LIMITATIONS

Responses from the cider industry are estimated to represent 90% of the cider production in the state. The response rate from apple growers was lower, at approximately 60%. Survey questions left blank or responded to in a different format were not included in the data tabulation.

# SUMMARY OF FINDINGS

## PRODUCTION BY TOTAL BEARING ACRES IN 2022

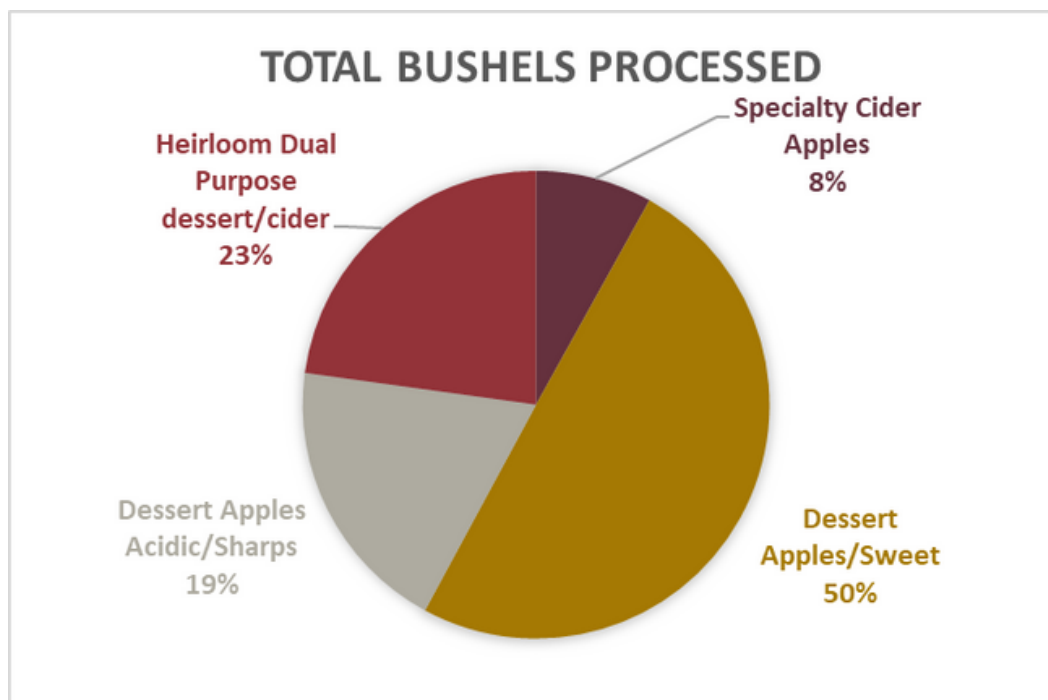
- 8,200 bearing acres of apples are grown in Virginia; of those, 1,333 bearing acres (16%) are used for cider production.
- Of the bearing acres used for cider, a reported 94% of those acres (1,123 acres) are Dessert Apple cultivars, 4% are Heirloom/ Dual purpose (50 acres), and 2% are Specialty cider apples (21 acres).
- Virginia apple growers primarily grow dessert apple cultivars, but some larger growers have small scale plantings of specialty cider and heirloom apples.





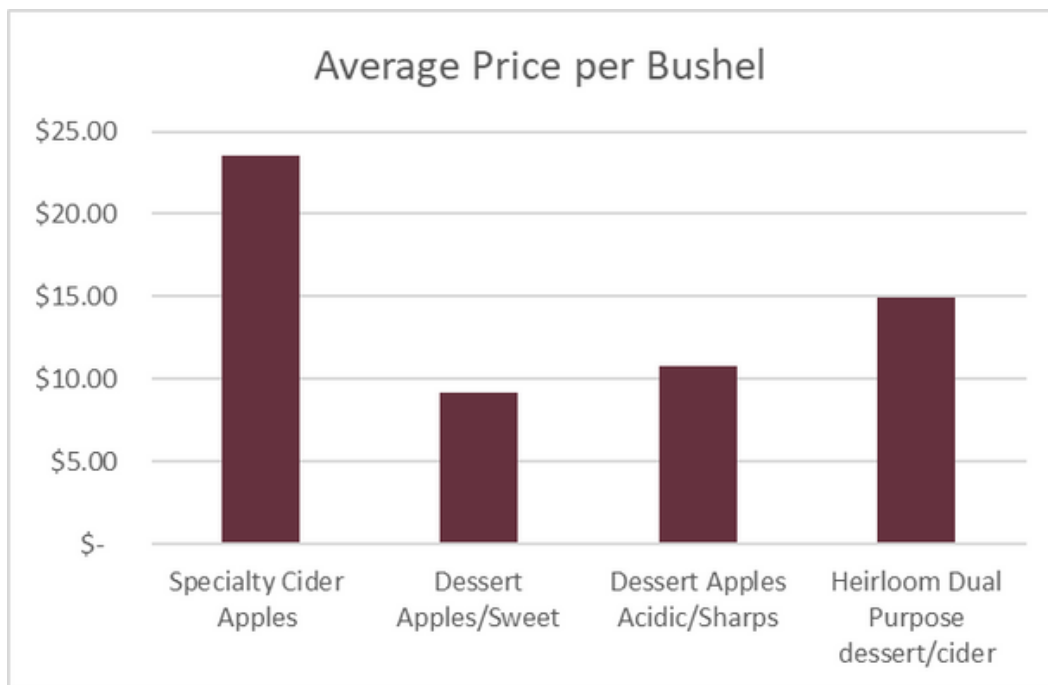
## PRODUCTION BY TOTAL BUSHEL PROCESSSED IN 2022

- A total of 267,000 bushels of apples were processed for cider production, this yielded a reported 800,000 gallons of cider from Virginia grown apples. This shows Virginia cideries are using predominantly Virginia grown apples for their production, having a positive impact on the Commonwealth's apple growers.
- 24% of Virginia cideries processed whole fruit onsite, reporting over 58,000 bushels processed and over 175,000 gallons of finished cider. The remaining 76% of the 2022 Virginia cider production was made from fresh juice purchases or apple juice concentrate.



# AVERAGE PRICE PER BUSHEL BY APPLE CATEGORY IN 2022

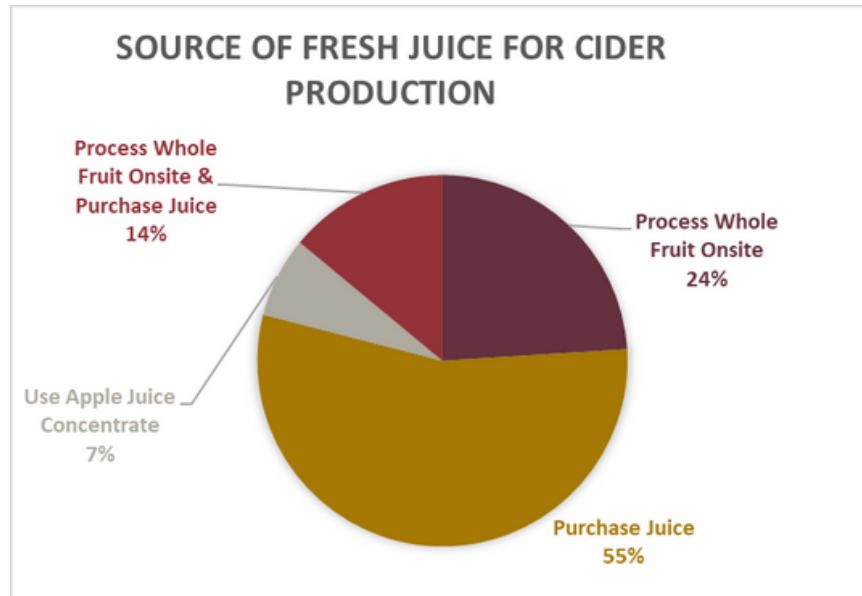
- Average price per bushel was reported as \$9.16/bu for Dessert Apples/Sweet, \$10.80/bu for Dessert Apples Acidic/Sharp, \$14.93 for Heirloom/Dual Purpose dessert/cider, and \$23.55/bu for Specialty Cider Apples.
- A bushel is a unit of volume that is used for measuring agricultural produce such as apples. A bushel is equivalent in volume to eight gallons (35.2 liters). For the purpose of this report a bushel was considered equivalent to 42 pounds /bushel (lbs/bu.).



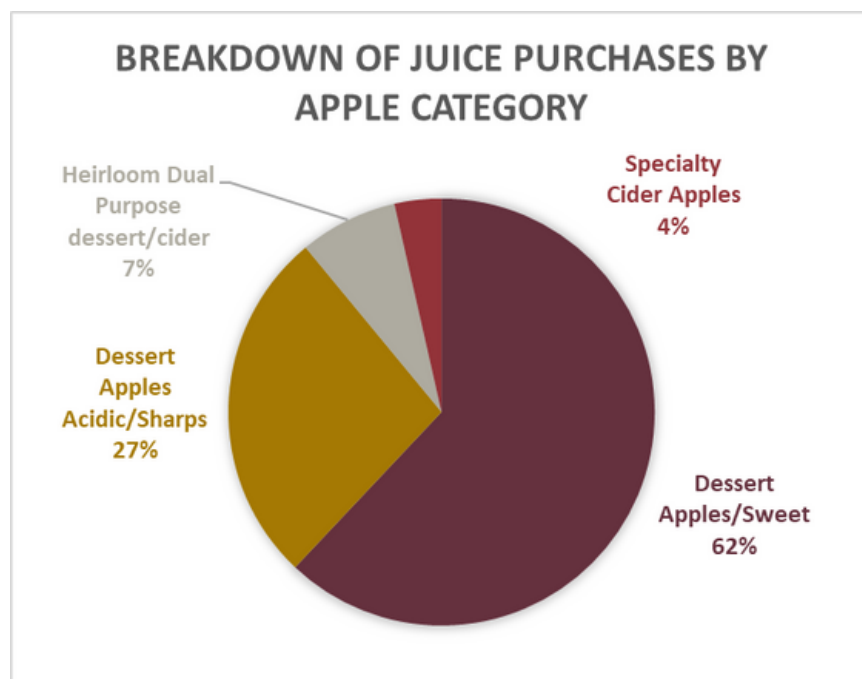


# PRODUCTION BY VOLUME IN 2022

- 69% of cideries purchase fresh juice from custom juicing operations around the state, reporting over 500,000 gallons of fresh juice purchases



- A total of 89% of all apple juice purchases were Dessert Sweet and Sharp cultivars, 62% Dessert Apples/Sweet apples, 27% Dessert Apples Acidic/Sharp apples, 7% Heirloom/ Dual purpose apples, 4% Specialty Cider apples



# AVERAGE PRICE PER GALLON BASED ON APPLE CATEGORY IN 2022

- The overall average price per gallon based on apple category were reported as; \$2.50/gallon for Dessert Apples regardless of whether classified as Sweet or Sharp. Heirloom/Dual Purpose and Specialty cider cultivars averaged \$5.73/ gallon. The overall average price of juice sold was \$3.75/gallon.

TABLE 2: 2022 AVERAGE PRICE PER GALLON BY APPLE CULTIVAR,  
MINIMUM, AVERAGE, AND MAXIMUM PRICES REPORTED

PRICE PER GALLON			
CULTIVAR	MIN	AVG	MAX
CRABAPPLES	\$7.50	\$9.17	\$12.50
HARRISON	\$2.50	\$7.33	\$7.50
ASHMEAD KERNEL	\$5.00	\$6.05	\$7.25
BLACK TWIG	-	\$7.00	-
OLD WINESAP	-	\$5.60	-
STAYMAN	\$2.50	\$4.05	-
CRIPPS PINK (PINK LADY®)	\$2.50	\$3.75	-
ARKANSAS BLACK	\$2.50	\$2.87	\$3.33

Cultivars are ranked from highest average price per gallon to lowest average price per gallon

PRICE PER GALLON			
CULTIVAR	MIN	AVG	MAX
FUJI	-	\$2.50	-
GALA	-	\$2.50	-
GINGER GOLD	-	\$2.50	-
GOLDEN DELICIOUS	-	\$2.50	-
GRANNY SMITH	-	\$2.50	-
HONEYCRISP	-	\$2.50	-
JONAGOLD	-	\$2.50	-
RED DELICIOUS	-	\$2.50	-
ROME	-	\$2.50	-

In order to offer the most unbiased and accurate representation of the pricing, any fruit that was self-grown or internally transferred was not included in aggregate data calculations. All cultivars reported had a minimum of 3 reported price points for fresh juice and whole fruit purchases.

# MARKET CHANNELS FOR VIRGINIA APPLE GROWERS IN 2022

Apple growers around the state have various market channels to sell their fruit. It is no surprise that the direct to consumer and wholesale markets yield the highest return on investment. It is worth noting that the cider market averages approximately 2.5 times more than the maximum processing price. Growers who responded to this survey provided the pricing for cider fruit in the Commonwealth. All other data points were taken from both federal and state government agencies as well as USApple.org. A conversion rate of 42 lbs/bushel was used in calculations.

TABLE 3: MARKET CHANNELS FOR VIRGINIA APPLE GROWERS. CIDER PRICING REPORTED IN THE SURVEY WAS COMPARED TO OTHER STATE AND FEDERAL AGENCY REPORTS

MARKET CHANNEL	MINIMUM PRICE PER POUND	AVERAGE PRICE PER POUND	MAXIMUM PRICE PER POUND
FRESH DIRECT TO CONSUMER*	\$1.00	\$1.56	\$2.62
FRESH WHOLESALE**	\$0.36	\$0.48	\$0.83
CIDER	\$0.18	\$0.29	\$0.71
PROCESSING ***	\$0.05	\$0.06	\$0.10
*Fresh direct source: Virginia Department of Agriculture and Consumer Sciences **Wholesale pricing source: <u>United States Department of Agriculture</u> ***Processing source: Virginia Department of Agriculture and Consumer Sciences and USApple.org			



# CONCLUSIONS

Virginia is the sixth largest apple producing state in the USA, with a growing cider and craft beverage sector. Commercial apple growers around the Commonwealth have invested in planting both specialized cider and heirloom apple cultivars since 2015. These plantings have grown to 6% of the total bearing acres in 2022 and are currently meeting the demand of ciders. Ciders demand for both dessert and specialty/heirloom apple cultivars is currently being met or exceeded by apple growers. Cider producers and apple growers would likely benefit from working together to identify each other's needs and concerns for future profitability and sustainability.

# ACKNOWLEDGEMENTS

This report was conducted on behalf of the Virginia Wine Board, in collaboration with the Virginia Cider Association, and with management and data collection by Panacea Wine and Cider Consulting. This report was reviewed for content by the Virginia Cider Association. Thank you to everyone for participating in the surveys and contributing to the 2022 Virginia Cider Report.

