



Agricultural Land Sales in Virginia, 2019-2020

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Abstract

This report succeeds the “Agricultural Land Sales in Virginia” report (Kayser et al. 2022) analyzing agricultural land¹ sales in the Commonwealth of Virginia from 2010 through 2018 (the “2018 Report”). Similar to its predecessor, this report provides insight into agricultural land sales in the Commonwealth from 2019 through 2020 and summarizes the averages of market-based agricultural land transactions at the multicounty district and statewide levels. The highest growth rate was observed in the Northern Agricultural Statistics District (ASD). Statewide, the market-based estimates of farmland averaged \$5,533 per acre in 2020, a 14% increase from 2019.

Section 1: Motivation and Statewide Overview

Introduction

Virginia’s rich tradition in agricultural diversity has stamped its significance to Virginia’s economy in the history books. Agriculture is the largest private industry within the Commonwealth with an estimated \$82.3 billion in annual revenue (Virginia Department of Agriculture and Consumer Services, n.d.). Farmland continues to account for the vast majority of farm asset value (Hellerstein, Vilorio, and Ribaudó 2019). This report takes a close look at actual agricultural land sales in 2019 and 2020 and analyzes those arm’s-length open market transactions.

Unlike the U.S. Department of Agriculture’s National Agricultural Statistics Service landowner opinion-based valuation surveys, this report reflects actual market transaction data as reported to the Virginia Department of Taxation. The procedures and research processes remain the same as the 2018 Report, although the years studied are different. This report reflects the market trends that occurred just prior to and in the early stages of the COVID-19 pandemic.

The Data

The data analyzed represents the fair market value of agricultural land in recorded arm’s-length transactions. For the purposes of this report, the fair market value is deemed to be the value of the land on the open market through an analysis of recorded sales of undeveloped land of 20 acres or more. This data is independently reported to the Virginia Department of Taxation by each locality. Each transaction transferred into the Virginia Department of Taxation’s database lists the date of recordation, instrument number, document type, guarantor and guarantee, sales price, and a description of the parcel(s). The analyzed data does not include all agricultural land sales in the Commonwealth of Virginia. However, it is a large sample of fair market or “arm’s length” transactions, which excludes land transfers such as sales within a family, foreclosures, or sales to a government unit within the Commonwealth. A total of 1,992 transactions were reviewed and included in this analysis. Each transaction has been crosschecked and verified for accurate acreage and sale values.

¹ Reference to “agricultural land” throughout this report includes undeveloped land of 20 acres or more that may also be forested and/or have diverse topography.

Research Purpose

Statistics in this report should be regarded only as indicators of past general conditions in the agricultural land market. The reported data does not represent the prices or values of any parcel. However, the statistics do provide a general guide to Virginia agricultural land market values and geographic trends. Users should not regard these reported statistics as a substitute for an appraisal or market study of current local sales regarding the value of any particular land parcel. This data is intended to provide information on historical Virginia agricultural land markets and does not forecast future market values. The analyzed data may reflect forestland as well as open land that may not be suitable for agricultural use. The data collected for this report comes from two specific land class codes in the Virginia Department of Taxation’s land sales transaction database: Class 5 and Class 6. Class 5 consists of undeveloped parcels greater than 20 acres but less than 100 acres, and Class 6 consists of all undeveloped parcels greater than 100 acres.

Methods and Procedures

The data sourced from the Virginia Department of Taxation went through a validation process for this report. The data was sorted by locality, then each transaction’s sale price and acreage were validated using the local GIS system, land records, and/or property tax records. Parcel transaction data with an error in the class code or with missing sales information were excluded to obtain an accurate and effective representation in each locality. Data that remained after the two stages of cleaning and validation were checked for outliers using a box plot. The variable containing the “value per acre” in dollars was used as an indicator for outliers and any transactions with a value above or below the 1.5*IQR (interquartile range) were removed. Additionally, individual transactions with a large number of acres (more than 35,000) were also removed. After the data from all localities were compiled into a single spreadsheet, descriptive statistics were calculated for each locality.

Statewide Overview

This analysis found that the average price of agricultural land sold in Virginia during 2020 was \$5,533 per acre, a 14.29% increase from 2019 (fig. 1). This is in contrast to the USDA’s survey of farm real estate values in Virginia (a measurement of the value of all land and buildings on farms), which estimated an average of \$4,620 per acre in 2020, a 0.65% decrease from the year 2019.

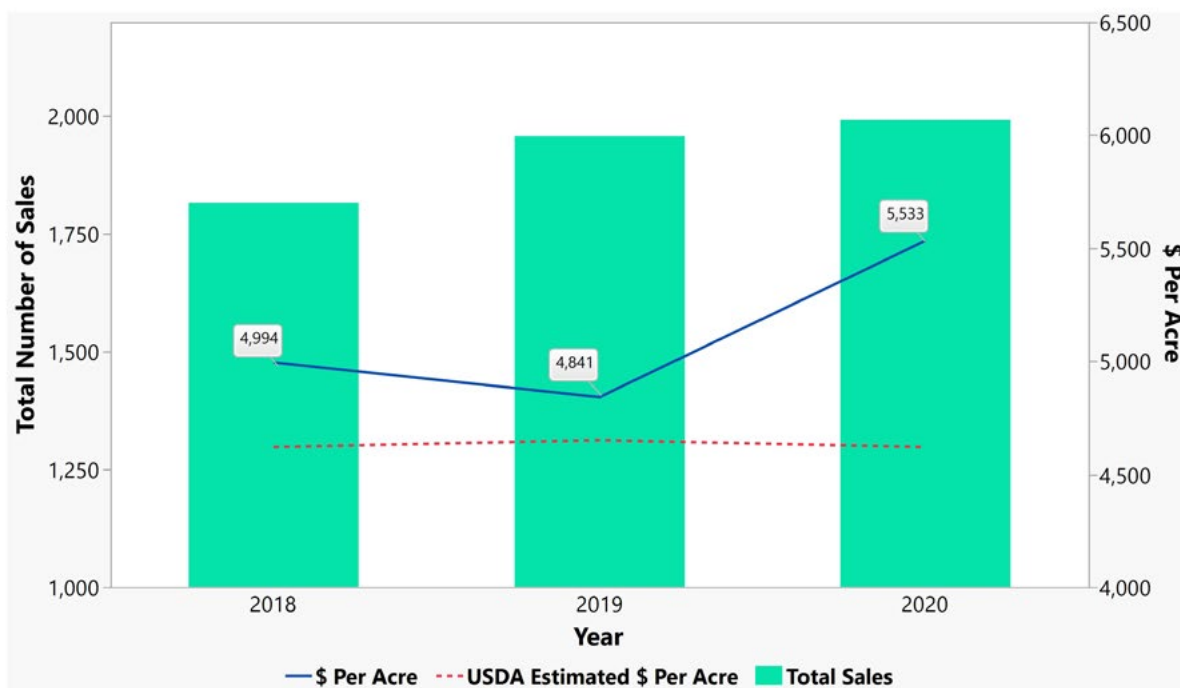


Figure 1: Estimated Virginia Ag Land Values and Volume, 2018-2020.

In 2020, land sales saw a wide variation in price per acre: About 72% of the sales were less than \$7,000 per acre and 18% of sales had prices between \$7,000 and \$13,000 per acre. A smaller percentage were higher dollar-per-acre sales, comparably speaking, as sales above \$13,000 per acre accounted for 10% of all transactions (fig. 2).

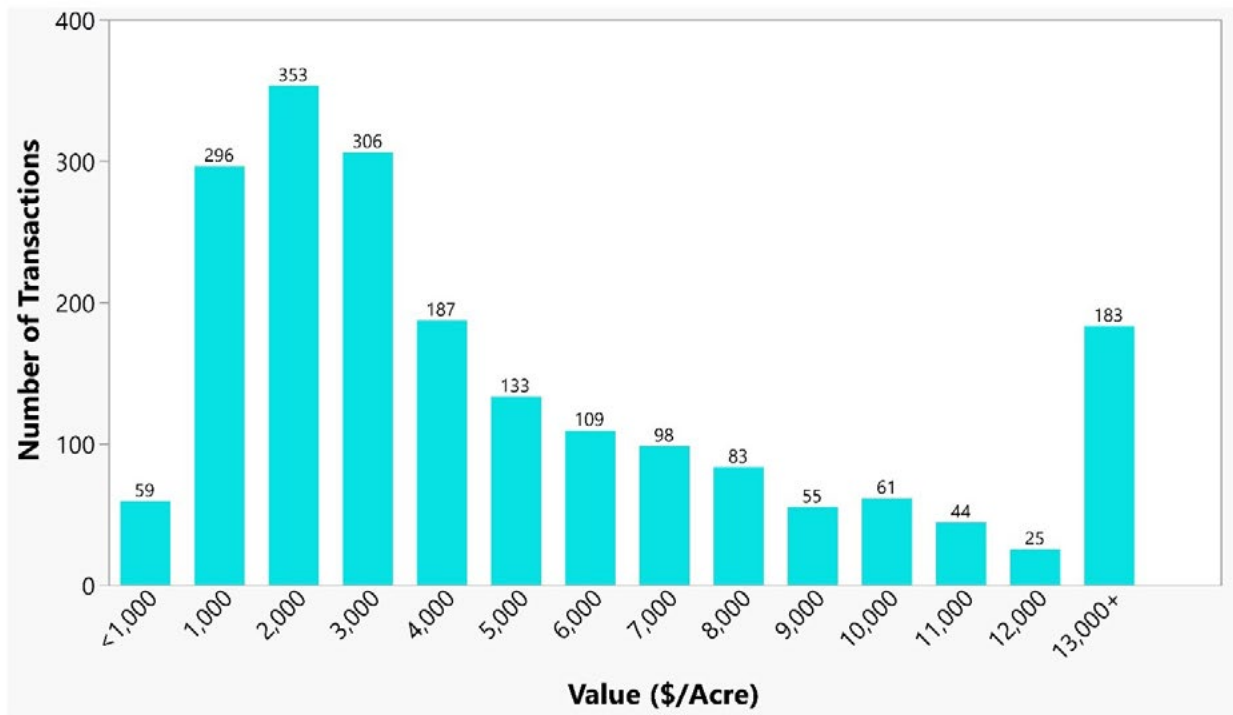


Figure 2: Value Per Acre by Transaction Volume, 2020.

Figure 3 shows the distribution of parcel size for the data year 2020, including the volume of transactions in property classes 5 and 6. As expected, smaller parcels of land change hands more frequently than larger parcels. Most observed agricultural real estate transactions transferred 200 acres or less, with the bulk of transactions ranging from 20 to 80 acres. In 2020, there were 939 parcels sold between 20 and 39 acres, accounting for 47% of all reviewed sales.

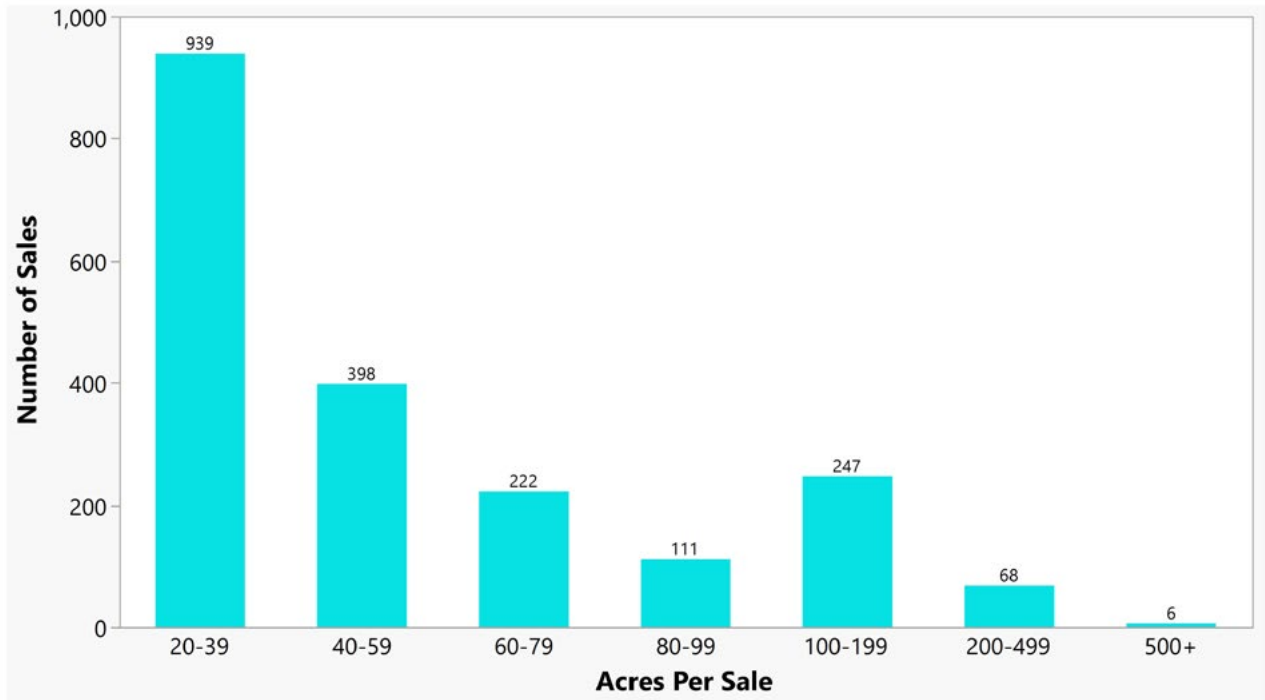


Figure 3: Parcel Size and Sales Volume, 2020.

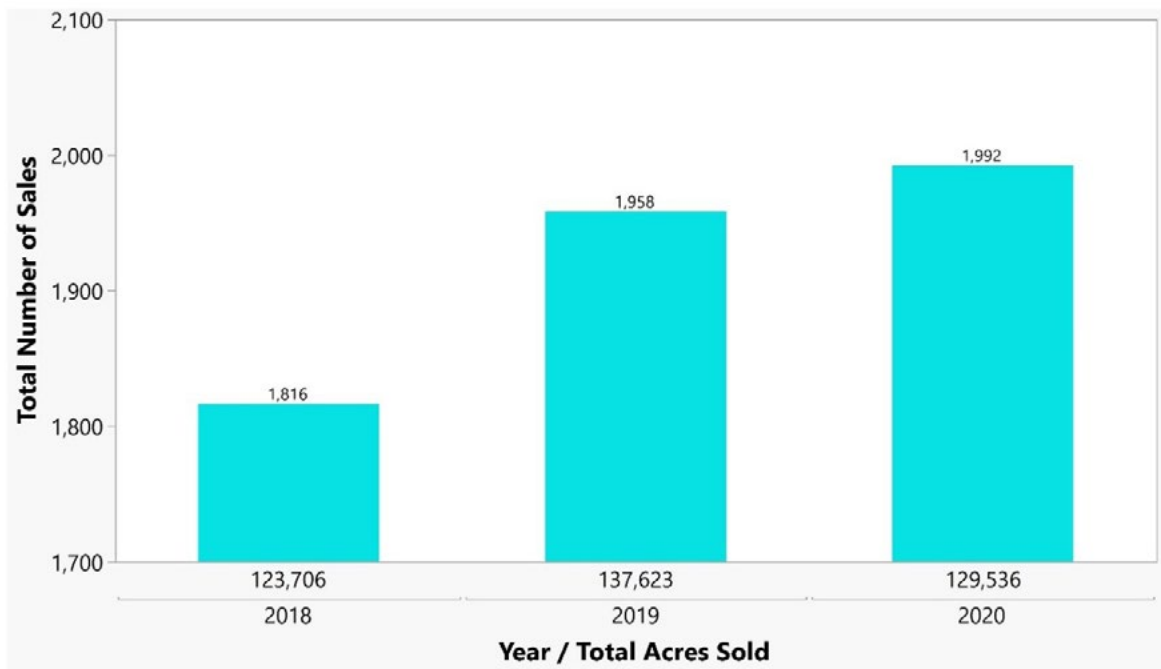


Figure 4: Annual Number of Sales and Acres Sold, 2018-2020.

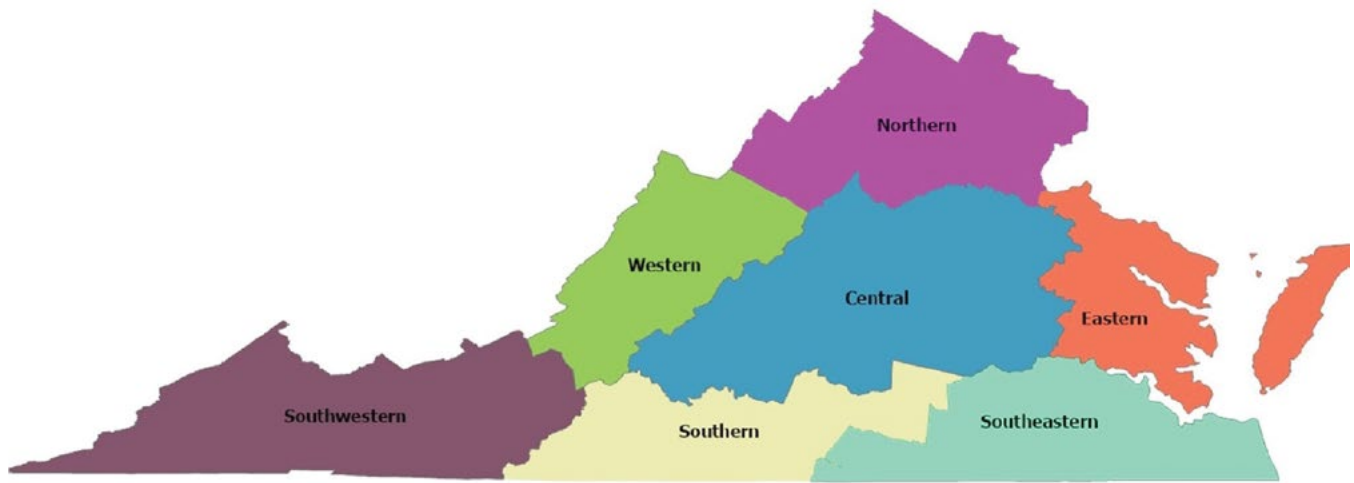
In comparison to 2018, the number of land sales were relatively higher in 2019 and 2020. The number of transactions increased from 2018 to 2020 but the acreage volume decreased from 2019 to 2020 (fig. 4).² In 2018, approximately 123,706 acres of land were sold, which increased by roughly 14,000 acres in 2019, but decreased in the following year (2020) by almost 8,000 acres.

Section 2: Regional Overview

Regional averages were analyzed by USDA-established Agricultural Statistics Districts (ASD). An ASD is defined as a contiguous group of counties having relatively similar agricultural characteristics (USDA NASS 2018). The map and table below outline each ASD for this report (fig. 5). The average and median sale prices (dollars per acre) in each of the Agricultural Statistics Districts are reflected in table 1. As is true with all real estate, variations in individual parcel values reflect a variety of observed and unobserved characteristics of individual parcels including soil quality, population and urban influence, recreational and natural amenities, locational characteristics, etc.

From 2018 to 2019, the mean value of land per acre mostly decreased, dropping 3.06 percent statewide. The largest decline in the mean value of land per acre was in the Eastern ASD with an 11.6% decrease. Looking at median values, the largest decline was in the Southeastern ASD, which decreased by 10.4% in 2019. In contrast, in 2020, the mean value per acre increased by 14.3% statewide. The highest mean land values for 2020 were seen in the Northern ASD at \$9,600 per acre, followed by the Western ASD at \$5,851 and the Central ASD at \$5,747. Both the mean and median values dramatically increased for Southeastern ASD from 2019 to 2020 by 26.5% and 32.9%, respectively. The Northern ASD also had a large mean (20.6%) and median (24.1%) increase from 2019 to 2020. The other districts saw mixed results for the average and median agricultural land values.

² The correlation between the decline in acreage volumes from 2019 to 2020 and the COVID-19 pandemic was not studied as part of this analysis and the authors make no representations thereto.



Districts	Jurisdictions			
Central	Albemarle Amelia Amherst Appomattox Bedford Buckingham	Campbell Caroline Chesterfield Cumberland Fluvanna Goochland	Greene Hanover Henrico Louisa Nelson	Orange Powhatan Prince Edward Spotsylvania
Eastern	Accomack Charles City Essex Gloucester James City	King & Queen King George King William Lancaster	Mathews Middlesex New Kent Northampton	Northumberland Richmond Westmoreland York
Northern	Arlington Clarke Culpeper Fairfax	Fauquier Frederick Loudoun Madison	Page Prince William Rappahannock Rockingham	Shenandoah Stafford Warren
Southeastern	Brunswick Chesapeake City Dinwiddie	Greensville Isle of Wight Mecklenburg	Prince George Southampton Suffolk City	Surry Sussex Virginia Beach City
Southern	Charlotte Franklin	Halifax Henry	Lunenburg Nottoway	Patrick Pittsylvania
Southwestern	Bland Buchanan Carroll Dickenson	Floyd Giles Grayson Lee Montgomery	Pulaski Russell Scott Smyth	Tazewell Washington Wise Wythe
Western	Alleghany Augusta	Bath Botetourt	Craig Highland	Roanoke Rockbridge

Figure 5: Agricultural Statistics Districts (ASD) of Virginia.

Table 1: Average and Median Per Acre Sales Prices by District, 2018-2020.

District		Year			% Change	
		2018	2019	2020	2018-19	2019-20
Central	Mean	\$5,470	\$5,534	\$5,747	1.18%	3.84%
	Median	\$3,975	\$3,988	\$4,142	0.32%	3.86%
Eastern	Mean	\$4,699	\$4,156	\$4,818	-11.56%	15.95%
	Median	\$3,125	\$3,054	\$3,396	-2.26%	11.17%
Northern	Mean	\$8,714	\$7,964	\$9,600	-8.61%	20.55%
	Median	\$7,854	\$7,073	\$8,780	-9.95%	24.14%
Southeastern	Mean	\$3,741	\$3,717	\$4,701	-0.65%	26.49%
	Median	\$2,481	\$2,222	\$2,953	-10.43%	32.87%
Southern	Mean	\$3,456	\$3,478	\$3,524	0.62%	1.33%
	Median	\$2,564	\$2,400	\$2,541	-6.40%	5.86%
Southwestern	Mean	\$4,414	\$3,990	\$4,554	-9.61%	14.14%
	Median	\$3,177	\$3,243	\$3,500	2.07%	7.94%
Western	Mean	\$5,959	\$5,756	\$5,851	-3.41%	1.65%
	Median	\$4,899	\$4,505	\$4,823	-8.05%	7.07%
Total	Mean	\$4,994	\$4,841	\$5,533	-3.06%	14.29%
	Median	\$3,557	\$3,523	\$3,928	-0.96%	11.50%

Table 2 shows the breakdown of recorded agricultural transactions across ASDs from 2018 to 2020 (prior to the data selection process). The recorded transactions in the Central, Southwestern, Northern, and Southern ASDs were the highest among all the districts in the Commonwealth.

Table 2: Land Class 5 and 6 Sales, 2018-2020³

District	Number of Recorded Transactions		
	2018	2019	2020
Central	663	579	681
Eastern	224	213	166
Northern	310	294	387
Southeastern	208	209	177
Southern	294	301	281
Southwestern	472	512	496
Western	192	211	215
Total	2,363	2,319	2,403

The number of agricultural land acres in Virginia sold on an annual basis remained close to the transaction volumes observed for 2019. Statewide, agricultural land sales totaled 129,536 acres in 2020, which is 0.86% less than the average annual acres sold in 2018-19. The volume of land sales varied by agricultural district, but the largest contributor to this decline was the Southeastern ASD. The Northern, Central and Western ASDs have a higher volume of land acres sold in 2020 than the previous two years.

³ These values represent the original data from the 2019-2020 Virginia Assessment/Sales Ratio Studies from the Virginia Department of Taxation.

Table 3: Agricultural Land Sales Trends, 2020⁴.

District	Number of 2020 Sales	2020 Total Acres Sold	Average Annual Acres Sold 2018-2019	% Change in 2020 from 2018-2019 Average
Central	548	37,315	32,458	15%
Eastern	143	10,019	11,835	-15%
Northern	255	14,241	11,060	29%
Southeastern	156	11,039	16,090	-31%
Southern	278	18,399	18,849	-2%
Southwestern	431	23,454	27,164	-14%
Western	181	15,069	13,209	14%
Total	1,992	129,536	130,665	-0.86%

Section 3: Virginia Real Estate Class Trends

Figure 6 and table 4 below take a broad look at all reported Virginia real estate transactions published in the annual Virginia Assessment/Sales Ratio Studies⁵ between 2010 and 2020, examining the sale frequencies for all six land classes designated by the Virginia Department of Taxation: single-family residential urban (Class 1), single-family residential suburban (Class 2), multi-family residential (Class 3), commercial and industrial (Class 4), agricultural land 20 to 100 acres (Class 5), and agricultural land over 100 acres (Class 6).

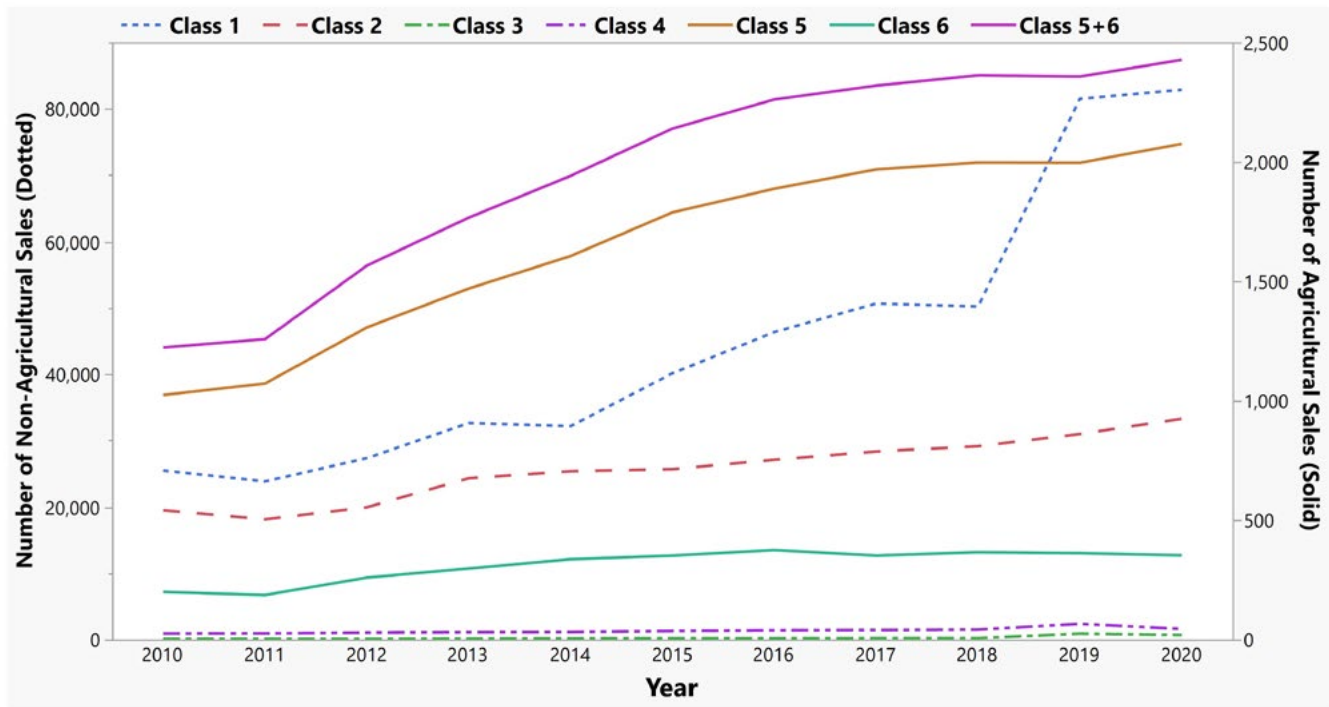


Figure 6: Total Sale Trends by Property Class, 2010-2020.

⁴ The values in this table reflect final data obtained through this report’s selection and validation process.

⁵ [Virginia Department of Taxation Assessment/Sales Ratio Studies](https://www.tax.virginia.gov/assessment-sales-ratio-studies). Available online: <https://www.tax.virginia.gov/assessment-sales-ratio-studies>.

Looking specifically at the transactions in 2019 and 2020, total sales modestly increased, although property Classes 3, 4, and 6 experienced a marginal decline. Unsurprisingly, the residential housing markets dominate the share of total land sales in 2020, of which single-family residential urban property sales accounted for more than 68% and single-family residential suburban property sales account for over 26% of arm's length transactions. In 2019-2020, multifamily residential sales and Class 6 agricultural land sales had the lowest shares (less than 1%) of total sales, with averages of 0.65% and 0.3% respectively. Agricultural land sales (Class 5 and 6) accounted for roughly 2% of the total number of sales in both 2019 and 2020. The overwhelming majority of agricultural land sales, 85% on average, were under 100 acres (Class 5).

Table 4: Total Number of Sales by Property Class, 2010-2020⁶.

Property Classification	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Class 1	25,475	23,831	27,340	32,627	32,158	40,133	46,349	50,653	50,203	81,510	82,896
Single-family Residential Urban	54.00%	53.90%	54.70%	54.40%	52.90%	57.80%	60.00%	61.10%	60.20%	69.00%	68.60%
Class 2	19,479	18,099	19,929	24,307	25,371	25,678	27,092	28,342	29,131	30,975	33,273
Single-family Residential Suburban	41.30%	40.90%	39.90%	40.6%	41.80%	37.00%	35.10%	34.20%	34.90%	26.20%	27.50%
Class 3	119	113	108	149	174	192	186	205	206	878	677
Multi-family Residential	0.30%	0.30%	0.20%	0.20%	0.30%	0.30%	0.20%	0.20%	0.20%	0.74%	0.56%
Class 4	887	917	1,033	1,090	1,121	1,279	1,376	1,413	1,469	2,340	1,569
Commercial and Industrial	1.90%	2.10%	2.10%	1.80%	1.80%	1.80%	1.80%	1.70%	1.80%	2.00%	1.30%
Class 5	1,024	1,072	1,307	1,470	1,606	1,789	1,888	1,969	1,998	1,997	2,076
Agricultural 20-100 acres	2.20%	2.40%	2.60%	2.50%	2.60%	2.60%	2.40%	2.40%	2.40%	1.70%	1.71%
Class 6	199	186	259	297	336	351	374	351	365	361	352
Agricultural over 100 acres	0.40%	0.40%	0.50%	0.50%	0.60%	0.50%	0.50%	0.40%	0.40%	0.31%	0.29%
Total	47,183	44,218	49,976	59,940	60,766	69,422	77,265	82,933	83,372	118,061	120,843
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Class 5+6 Total	1,223	1,258	1,566	1,767	1,942	2,140	2,262	2,320	2,363	2,358	2,428
	2.60%	2.80%	3.10%	2.90%	3.20%	3.10%	2.90%	2.80%	2.80%	1.90%	2.00%

In 2018, the Virginia Department of Taxation provided localities additional training on property class classifications, clarifying classification standards for single-family residential urban (Class 1) and single-family residential suburban (Class 2). As a result, gradual and steady increases in transaction volumes observed from 2010 to 2018 were less predictable for 2019 and 2020 as localities made adjustments to their reported property classifications.

⁶ These values represent the original data from the 2010-2020 Virginia Assessment/Sales Ratio Studies. Percentages indicate the percentage of total sales for each year.

Summary and Conclusions

This historical look at arm's-length transactions of agricultural and undeveloped land in the Commonwealth is a rearview mirror perspective of market values and is not a forecast of future land market conditions. The data showed that from 2019 to 2020, Virginia's agricultural land increased in value and transaction volume, yet the cumulative acreage of land sold across the state declined. Agricultural land sales consistently accounted for a small share of total land transactions in the Commonwealth. Most agricultural land sales conveyed between 20 and 100 acres (Class 5), a conclusion also drawn from the 2018 Report.

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