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Agricultural Land Sales in Virginia, 2022

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Abstract

This report extends the analysis from previous years' "Agricultural Land Sales in Virginia" reports (Kayser et al. 2022) to cover agricultural land transactions within the Commonwealth of Virginia for the year 2022. Similar to prior editions, this report provides a detailed examination of market-based agricultural land sales, utilizing verified arm's-length transactions. The analysis captures market trends at both the statewide and Agricultural Statistics District (ASD) levels, providing a comprehensive view of the agricultural land market in Virginia.

In 2022, the average dollar per acre for agricultura2023l land transactions increased to $6,479, a 4.9% rise from the previous year's $6,175. However, the growth rate in value slowed compared to the 11.6% increase observed between 2020 and 2021. The total number of transactions declined by 20.1%, with 2,159 reported transactions recorded after data cleaning. These findings highlight the moderation of market activity following the peak of post-pandemic recovery. Notably, transactions in the more moderate price ranges ($6,000 per acre and below) constituted 62.5% of total sales, while high-value transactions ($10,000 per acre and above) represented 20.3% of the annual volume. This report leverages real transaction data from the Virginia Department of Taxation to provide a reliable and detailed understanding of Virginia's agricultural land market, reflecting a market adjustment as life normalized after the disruptions of the COVID-19 pandemic.

Section 1: Motivation and Statewide Overview

Introduction

Virginia's storied agricultural diversity has profoundly influenced its economic landscape, establishing a rich legacy of significance in the state's economic history. In 2022, Virginia's agricultural sector remained a vital pillar of the state's economy, generating over $82.3 billion in economic output and contributing $43.8 billion in value-added impact (Farmville Herald, 2022; Rephann, 2023). Together with forestry, these industries had a combined economic impact of more than $105 billion, providing approximately 490,000 jobs across the Commonwealth (Farmville Herald, 2022; Rephann, 2023; Virginia Department of Agriculture and Consumer Services, n.d.). Virginia's agricultural exports also saw significant growth, reaching over $5.1 billion, driven by strong demand for products like soybeans, animal products, and wood products, especially in international markets such as China and Europe (Weldon Cooper Center, 2022). Despite the lingering effects of the COVID-19 pandemic, the state's agriculture and forestry sectors demonstrated resilience, continuing to be major economic drivers in both rural and urban areas.

This report focuses on the actual sales of agricultural land in 2022, examining arm's-length transactions in the open market. By relying on real transaction data provided to the Virginia Department of Taxation (the "Department"), it offers a data-driven perspective on market trends, in contrast to the opinion-based valuations found in surveys like those from the U.S. Department of Agriculture's National Agricultural Statistics Service. The detailed methodologies and research procedures outlined in the following sections reflect the market conditions as life began returning to normal after the disruptions of the COVID-19 pandemic. As a result, this report captures market-driven trends for agricultural land in Virginia for 2022, reflecting the post-pandemic environment.

The Data

This report focuses on the fair market value of agricultural land, based on verified arm's-length transactions. Here, fair market value refers to the price that agricultural land, typically undeveloped parcels of 20 acres or more, will bring in an open market. The data comes directly from local governments across Virginia and is independently reported to the Department.

Each transaction recorded in the Department's database includes essential details, such as the date of recordation, instrument number, document type, the parties (grantor and grantee), sales price, and a description of the land parcel(s). While the dataset doesn't cover every agricultural land sale in Virginia, it represents a significant sample of fair market transactions, excluding non-market transfers like deeds of gift, foreclosures, or government purchases.

A total of 2,159 transactions were thoroughly reviewed and included in this analysis, with each one meticulously verified to ensure the accuracy of both the acreage and sales values reported.

Research Purpose

The statistics in this report are intended to provide a general sense of historical trends in Virginia's agricultural land market, and is not representative of specific prices or values of individual parcels. These figures offer a broad perspective on market values and regional patterns across the Commonwealth's agricultural land sector. It's important to recognize that these statistics are not a substitute for detailed appraisals or local market analyses when evaluating the value of particular parcels.

This report sheds light on past market conditions in Virginia, but does not forecast future market values. Additionally, the data analyzed includes both forestland and open land, some of which may not be suitable for some types of agricultural production. The information for this report is drawn from two specific land class codes in the Department's sales transaction database: Class 5, covering undeveloped parcels of 20 to 100 acres, and Class 6, including undeveloped parcels over 100 acres.

Methods and Procedures

For this report, data sourced from the Virginia Department of Taxation was thoroughly validated. First, it was organized by locality, and the sale price and acreage for each transaction were cross-verified using the local GIS system and property tax records.

To ensure accuracy, unverified transactions with incorrect class codes or missing sales information were excluded. The remaining data then went through two rounds of cleaning and validation, followed by an outlier analysis conducted with a box plot. Outliers were identified based on "value per acre" in dollars, with transactions falling beyond 1.5 times the interquartile range being removed. After consolidating data from all localities into a single spreadsheet, descriptive statistics were generated for each locality.

Statewide Overview

Figure 1 indicates the average dollar per acre for land sold in Virginia from 2020 to 2022 alongside the total volume of transactions. In 2022, the average dollar per acre was $6,479, marking a 4.9% increase from $6,175 in 2021. This growth rate is less than the 11.6% increase from $5,533 in 2020 to $6,175 in 2021.

Conversely, USDA opinion-based survey data reports that the average dollar per acre for traded land in Virginia in 2022 was $5,100, showing a 8.5% increase from 2021.

The data cleaned total transaction volume for 2022 was 2,159, which represents a -20.1% decrease from the previous year. This figure is after removing 14.7% of the transactions from the initially recorded 2,530 transactions after data cleaning, which can be found in Table 2.

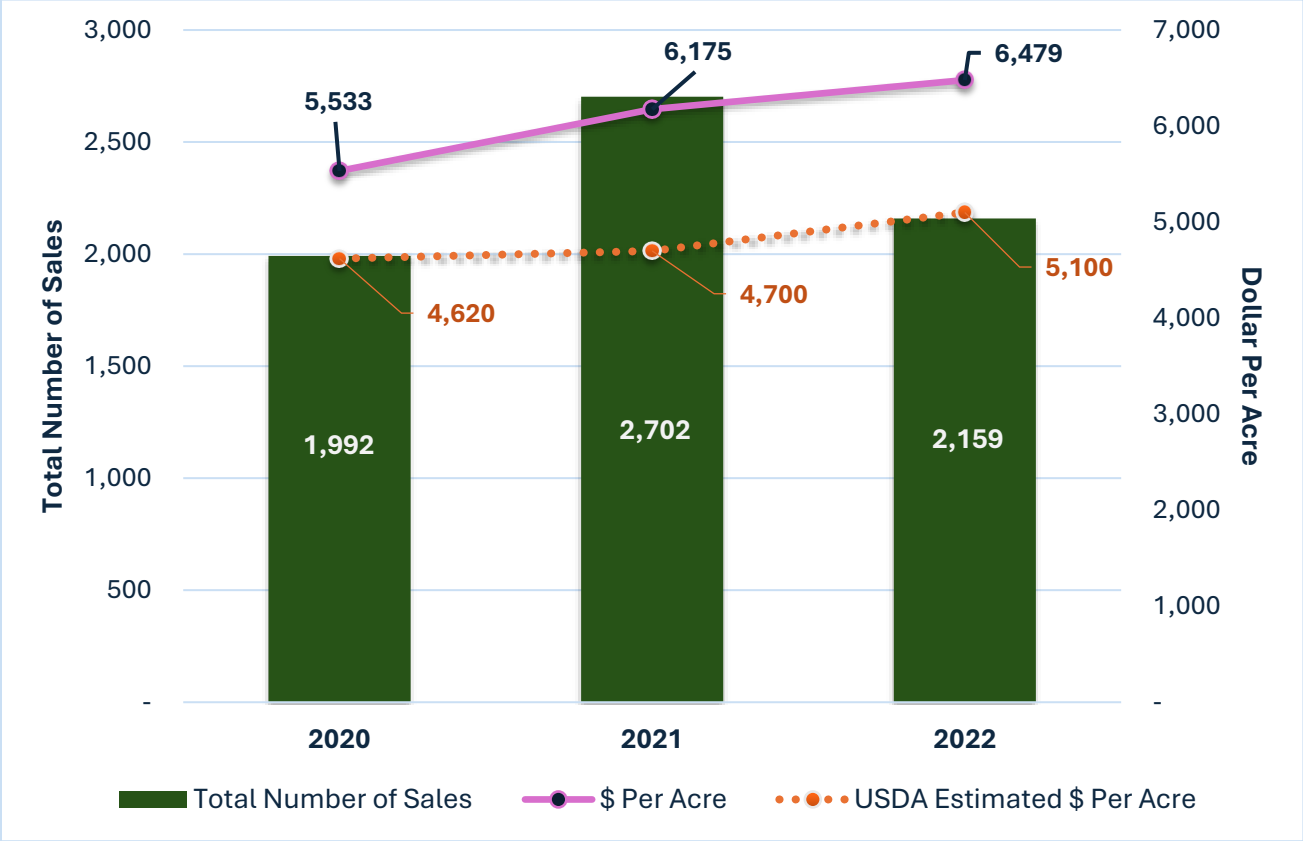

Figure 1: Estimated Virginia Ag Land Values in number of transactions and dollar per acre, 2020-2022.

In 2022, a total of 2,159 transactions were analyzed. The data visualization, denoted as "Figure 2", categorizes these transactions based on the value per acre, providing a granular view of transaction volumes across different price segments. The data reveals considerable variations in transaction volumes across different value ranges. Specifically, the transactions for land sold for less than $6,000 per acre accounted for 1,350 transactions, representing 62.5% of the total transactions, denoting a concentration of activity in more moderate valuation brackets.

Notably, the range between $2,000 to less than $3,000 per acre witnessed the highest volume of transactions with 361 sales, comprising 16.7% of the annual total. Furthermore, transactions for land valued at $10,000 per acre and above were quantified at 438 transactions, equating to 20.3% of the yearly aggregate. Within this higher-valued tier, land transactions exceeding $15,000 per acre constituted 9.7% of the total market activity. This distribution underscores a significant engagement at the upper end of the market value spectrum.

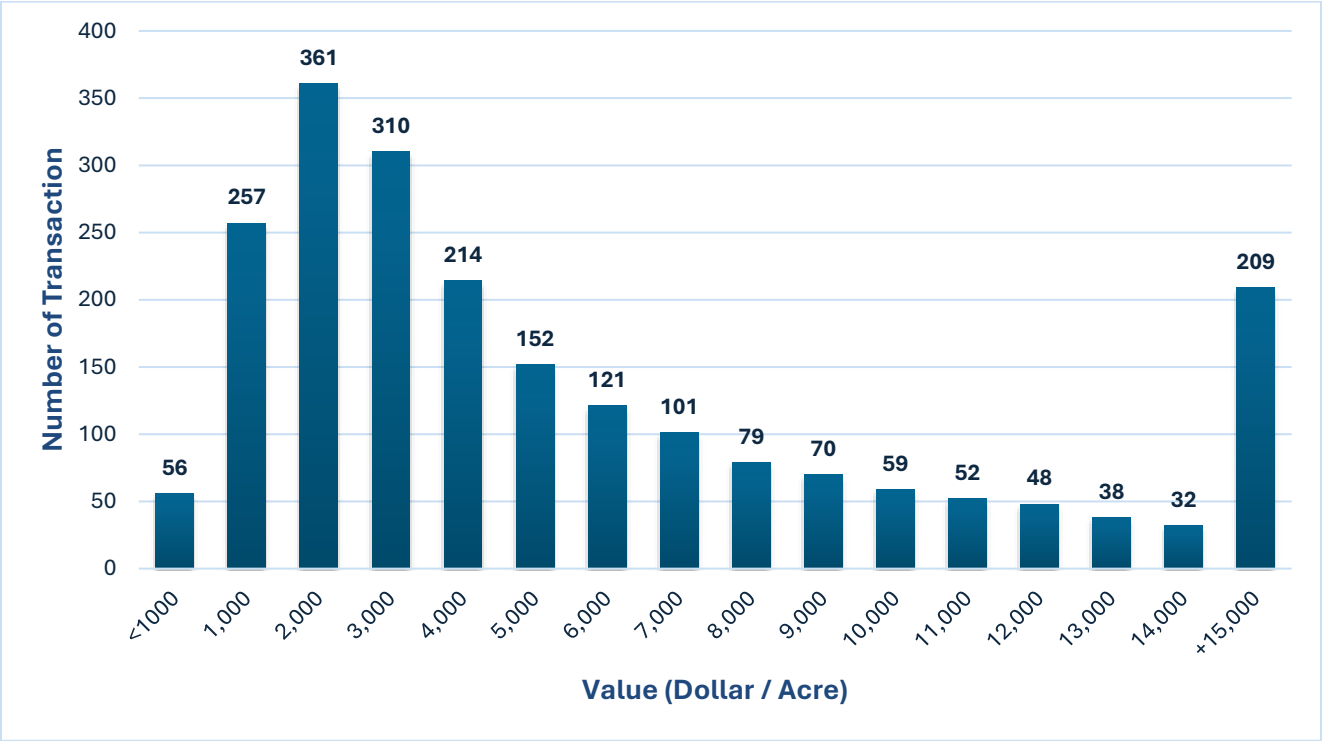

Figure 2: Value Per Acre by Transaction Volume, 2021.

Figure 3 delineates the transaction volumes segmented by parcel size for the year 2022, focusing exclusively on parcels over 20 acres. The transactions involving land parcels sized between 20 and 39 acres constituted 43.2% of the total, with 932 transactions recorded. It can be intuitively observed that as the land size increases, the number of land transactions decreases. Only 9 sales occurred in the 500+ acre range, making it the least active. Generally, the data shows a trend where the number of sales decreases as parcel size increases. The exception was the 100-199 acre range, where 304 sales were recorded.

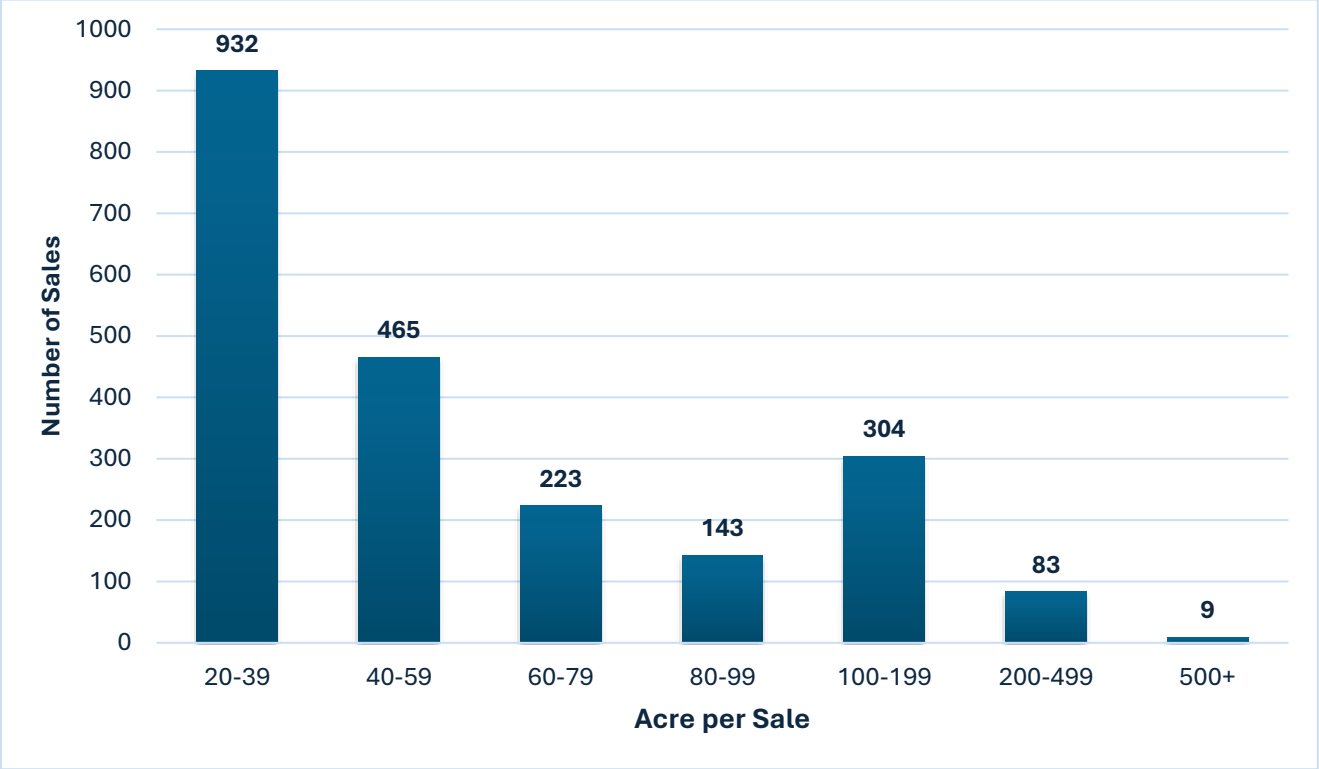

Figure 3: Parcel Size and Sales Volume, 2022.

In 2022, Figure 4 depicts a decline in land transaction activity compared to the previous year. The number of verified transactions fell by approximately 20.1%, decreasing from 2,702 transactions in 2021 to 2,159 transactions in 2022. Despite this drop, the transaction volume in 2022 remained higher than in 2020, which recorded 1,992 transactions.

Additionally, the total acreage involved in these transactions (noted in parentheses) decreased by around 21%, from 184,785 acres in 2021 to 145,891 acres in 2022. This reduction in both transaction volume and total acreage traded reflects a slowdown in market activity compared to the previous year's peak.

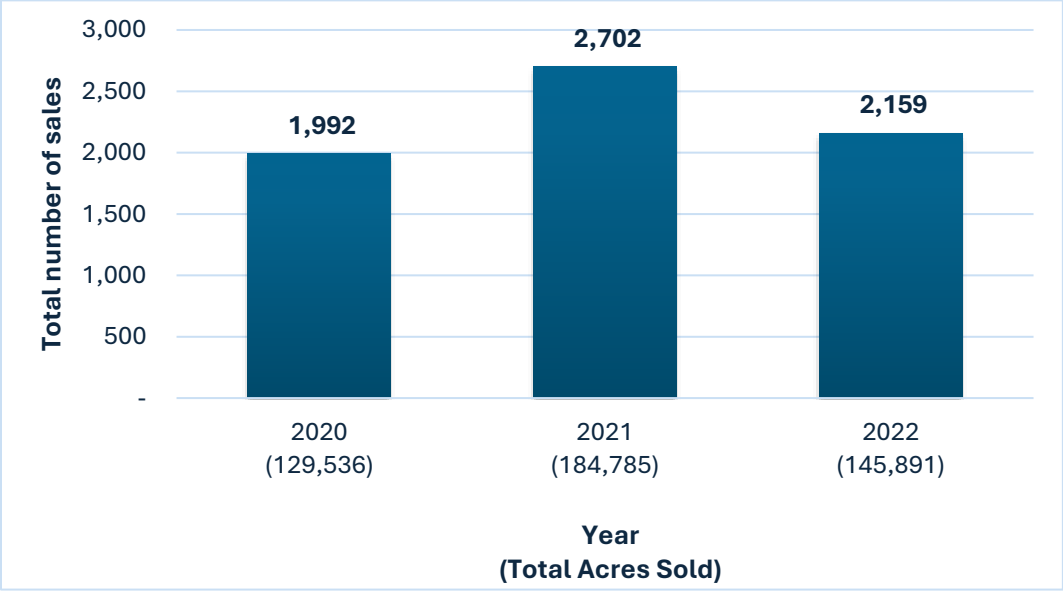

Figure 4: Annual Number of Sales and Acres Sold, 2019-2021.

Section 2: Regional Overview

The regional averages were assessed using Agricultural Statistics Districts (ASD), which are defined by the USDA. These districts are composed of neighboring counties that share similar agricultural traits (USDA NASS 2018). This report includes a map and table representing each ASD (refer to Fig. 5). Table 1 details the average and median sale prices per acre for these districts. As with other real estate, the value of individual parcels can vary based on various factors—both apparent and underlying—such as soil quality, distance from urban centers, recreational or natural features, and other characteristics unique to the location.

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

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

According to Table 1, from 2020 to 2021, the statewide average land value per acre increased by 11.6%, rising from $5,533 to $6,175. The Western district saw the most significant growth, with the average price per acre jumping by 26.7%, from $5,851 in 2020 to $7,413 in 2021. The Eastern and Central districts also experienced notable increases, with the average prices per acre rising by 23.8% and 21.5%, respectively. However, in the Northern district, despite a positive average price increase of 9.6%, the median value declined by 5.3%, indicating more variability in the prices of land within the district. Similarly, the Southeastern district saw a median value drop of 11.9%, despite a modest 3.5% increase in the average price per acre, suggesting a wider range of sale prices in this area.

Between 2021 and 2022, the overall statewide average per acre increased by 7.8%, moving from $6,175 to $6,649. The Northern district led in growth, with the average price per acre increasing by 8.8%, from $10,389 to $11,302. Following closely, the Central and Southeastern districts experienced average price increases of 14.4% and 6.3%, respectively. However, despite these increases, the Southwestern district saw only a marginal rise of 0.6% in the average price per acre, from $4,824 in 2021 to $4,820 in 2022, indicating a stabilization in prices for that region.

Table 1: Average and Median Per Acre Sales Prices by District, 2019-2021.

District		**Year**			**% Change**	
		2019	2020	2021	2019-20	2020-21
Central	Mean	$5,747	$6,985	$7,989	21.5	0.1
	Median	$4,142	$4,772	$5,414	15.2	13.5
Eastern	Mean	$4,818	$5,963	$5,718	23.8	-4.1
	Median	$3,396	$3,976	$3,667	17.1	-7.8
Northern	Mean	$9,600	$10,389	$11,302	8.2	8.8
	Median	$8,780	$8,313	$9,876	-5.3	18.8
Southeastern	Mean	$4,701	$4,866	$5,050	3.5	3.8
	Median	$2,953	$2,601	$3,176	-11.9	22.1
Southern	Mean	$3,524	$4,298	$4,800	22	11.7
	Median	$2,541	$2,711	$3,120	6.7	15.1
Southwestern	Mean	$4,554	$4,824	$4,820	5.9	-0.1
	Median	$3,500	$3,495	$3,727	-0.1	6.6
Western	Mean	$5,851	$7,413	$7,308	26.7	-1.4
	Median	$4,823	$5,779	$6,146	19.8	6.3
Total	Mean	$5,533	$6,175	$6,479	11.6	4.9
	Median	$3,928	$4,210	$4,349	7.2	3.3

Table 2 outlines the total number of recorded land transactions in each district from 2020 to 2022, with outliers included. Over these three years, the total number of transactions was 2,403 in 2020, 3,153 in 2021, and 2,530 in 2022. The percentages in parentheses in the total row represent the difference ratios between the original data and the data after outlier removal. In 2022, removing outliers resulted in a 14.7% reduction in transactions, a trend consistent with the previous years, where outlier removal led to a 16.7% reduction in 2021 and a 17.1% reduction in 2020.

Examining transactions at the district level, the Southern district recorded a significant increase of 43.6% in transactions from 2020 to 2022, growing from 281 transactions in 2020 to 408 in 2022. Meanwhile, the Central and Western districts also saw notable changes, with the Central district experiencing a 21.4% decrease in

transactions in 2022 compared to 2021. Conversely, the Northern district experienced a decline in 2022 after remaining relatively stable from 2020 to 2021.

Table 2: Transaction volume by ASD, 2019-2021[1]

District	Number of Recorded Transactions		
	2020	2021	2022
Central	681	823	644
Eastern	166	275	253
Northern	387	388	273
Southeastern	177	205	159
Southern	281	433	408
Southwestern	496	785	581
Western	215	244	212
Total (Difference Ratio)	2,403 (17.1)	3,153 (16.7)	2,530 (14.7)

Table 3 outlines the agricultural land sales trends and total acres sold by district in Virginia for 2022. The Central district had the highest number of transactions, with 533 sales, while the Southwestern district followed closely with 530 sales. The Southern district also saw a considerable number of sales, recording 393 transactions. The third column displays the average annual acreage sold per district for the 2020-2021 period. Statewide, a total of 145,891 acres were sold in 2022, reflecting a 7.2% decrease from the 2020-2021 average of 157,160 acres.

Looking at individual districts, the Eastern district experienced the largest growth, with a 18.2% increase in acreage sold, rising from the 2020-2021 average of 13,100 acres to 15,479 acres in 2022. Conversely, the Northern district saw the steepest decline, with a 30.1% reduction in acreage sold, decreasing from 15,305 acres to 10,696 acres. Additionally, the Southeastern and Western districts also faced declines, with decreases of 16.5% and 14.1%, respectively, highlighting varying patterns of land sales across the state.

[1] These values represent the original data from the Virginia Department of Taxation.

Table 3: Agricultural Land Sales Trends by District, 2021[2].

District	No. of 2022 Sales	2022 Total Acres Sold	Average Annual Acres Sold 2020-2021	% Change in 2022 from 2020-2021 Average
Central	533	35,980	41,475	- 13.2
Eastern	179	15,479	13,100	18.2
Northern	195	10,696	15,305	- 30.1
Southeastern	152	11,887	14,234	- 16.5
Southern	393	25,965	23,075	12.5
Southwestern	530	32,764	34,697	- 5.6
Western	177	13,121	15,275	- 14.1
Total	2,159	145,891	157,160	- 7.2

[2] Final data obtained through selection and validation process

Section 3: Virginia Real Estate Class Trends

Table 4 and Figure 6 below present a detailed summary of all recorded real estate transactions in Virginia between 2013 and 2022, based on data from the annual Virginia Assessment/Sales Ratio Studies . These studies examine the frequency of sales across six land categories defined by the Department: single-family residential urban (Class 1), single-family residential suburban (Class 2), multi-family residential (Class 3), commercial and industrial (Class 4), agricultural land between 20 and 100 acres (Class 5), and agricultural land exceeding 100 acres (Class 6).

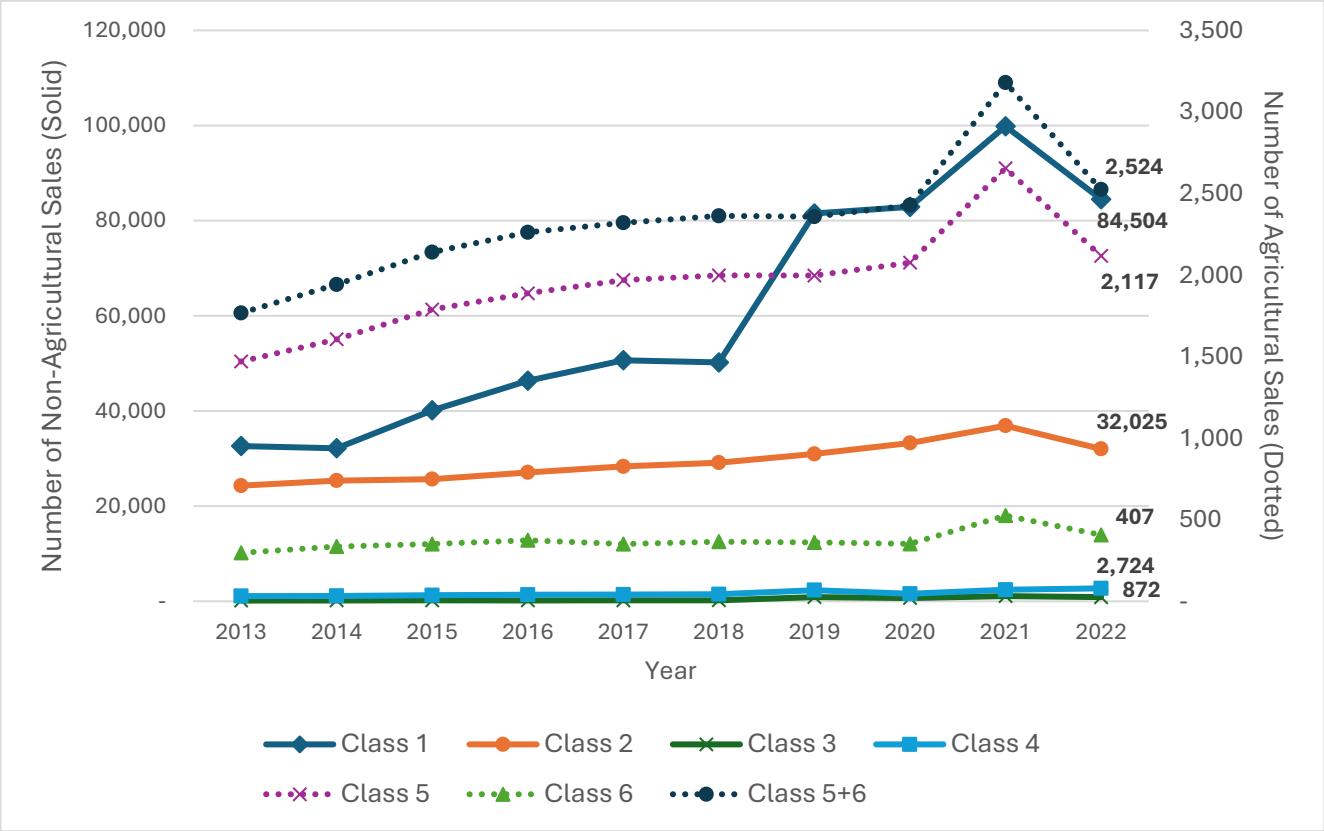

Figure 6: Total Sale Trends by Property Class, 2013-2022.

Table 4 shows the volume of land transactions for Property Classes 1 through 6 in Virginia over a ten-year period from 2013 to 2022. The total number of land sales transactions in Virginia has been on a consistent upward trend, with 59,940 transactions in 2013, 82,933 in 2017, and 143,432 in 2021, but it slightly dropped to 122,649 in 2022.

The first column, Property Classification, provides descriptions for each class category. Classes 5 and 6 represent agricultural land, categorized by size into 20-100 acres and over 100 acres, respectively. Additionally, the combined figures for Classes 5 and 6 are displayed in the first row of the report. The combined transactions for agricultural land began around 3.0% in 2013, and gradually decreased to 2.0% by 2019. However, there was a slight increase to 2.1% in 2022. Breaking it down, Class 5 rose from 1.7% in 2020 to 1.9% in 2021 but dropped to 1.7% again in 2022, and Class 6 also saw a decrease from 0.4% to 0.3% over the same period.

This trend is more visually presented in Figure 6 above, which features three dotted lines representing Classes 5, 6, and the combined Class 5+6. While the absolute numbers differ significantly from the non-agricultural classes, examining the slopes reveals a sharp increase from 2020 to 2021, but a decrease again in 2022.

Table 4: Total number of sales by property class, 2013-2022

Property Classification	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Class 1	32,627	32,158	40,133	46,349	50,653	50,203	81,510	82,896	99,846	84,504
Single-family residential urban	54.4%	52.9%	57.8%	60%	61.1%	60.2%	69%	68.6%	69.6%	68.9%
Class 2	24,307	25,371	25,678	27,092	28,342	29,131	30,975	33,273	36,900	32,025
Single-family residential suburban	40.6%	41.8%	37%	35.1%	34.2%	34.9%	26.2%	27.5%	25.7%	26.1%
Class 3	149	174	192	186	205	206	878	677	1,093	872
Multi-family residential	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%	0.7%	0.6%	0.8%	0.7%
Class 4	1,090	1,121	1,279	1,376	1,413	1,469	2,340	1,569	2,413	2,724
Commercial and industrial	1.8%	1.8%	1.8%	1.8%	1.7%	1.8%	2%	1.3%	1.8%	2.2%
Class 5	1,470	1,606	1,789	1,888	1,969	1,998	1,997	2,076	2,655	2,117
Agricultural 20-100 acres	92.5%	2.6%	2.6%	2.4%	2.4%	2.4%	1.7%	1.7%	1.9%	1.7%
Class 6	297	336	351	374	351	365	361	352	525	407
Agricultural over 100 acres	0.5%	0.6%	0.5%	0.5%	0.4%	0.4%	0.3%	0.3%	0.4%	0.3%
Total	59,940	60,766	69,422	77,265	82,933	83,372	118,061	120,843	143,432	122,649
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Class 5+6 Total	1,566	1,767	1,942	2,140	2,262	2,320	2,363	2,358	2,428	3,180
	3%	3.2%	3.1%	2.9%	2.8%	2.8%	2%	2%	2.2%	2.1%

Source: “Virginia Sales/Assessment Ratio Study,” Virginia Department of Taxation, 2021.

Summary and Conclusions

This report presents an in-depth analysis of Virginia's agricultural land market for 2022, drawing on verified transaction data reported to the Virginia Department of Taxation. As the agricultural sector adjusted to post-pandemic conditions, the market exhibited signs of both resilience and moderation. The report analyzes 2,159 arm’s-length transactions, revealing key market trends and behaviors. One of the standout findings is the 4.9% increase in the average dollar per acre, which rose from $6,175 in 2021 to $6,479 in 2022. Although this growth was slower than the previous year's 11.6% increase, it demonstrates the continued strength of Virginia’s agricultural land market despite a reduction in overall transaction volume.

The analysis shows that transaction volumes decreased by 20.1%, reflecting a cooling in market activity after a peak in 2021. Transactions for land priced below $6,000 per acre dominated the market, accounting for 62.5% of total sales. High-value transactions, priced at $10,000 per acre and above, represented 20.3% of the total market volume. This distribution indicates a sustained demand across different price segments, although with a noticeable concentration in the lower price ranges.

Regional analysis provides further insight into the dynamics of the agricultural land market across Virginia. The Central and Southwestern districts recorded the highest numbers of transactions, while the Eastern district saw a significant increase in acreage sold. In contrast, the Northern district experienced the steepest decline in acreage sold, underscoring the varying patterns of land sales across the state. These regional disparities highlight the complexity of market trends and the importance of localized assessments.

In conclusion, the agricultural land market in Virginia in 2022 showed resilience despite facing challenges such as reduced transaction volumes and a slower rate of price growth. The report's detailed analysis of transaction data offers valuable insights into market trends, revealing a stabilization of prices and diverse regional dynamics. While the findings provide a broad overview of historical trends, they emphasize the importance of localized appraisals and ongoing monitoring to adapt to evolving market conditions. This report serves as a critical resource for understanding the post-pandemic agricultural land market in Virginia and informs future market assessments and decision-making within the sector.

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