

Questions regarding any *statutorily* related issues surrounding use-value assessment should be directed to Theresa Born at the Property Tax Unit, Virginia Department of Taxation. Questions regarding the *technical* aspects of the methodology for the agricultural or horticultural use-value estimates should be directed to Gordon Groover at the Department of Agricultural and Applied Economics, Virginia Tech. Questions about forest use-value estimates should be directed to Dean Cumbia at the Department of Forestry in Charlottesville. Questions about open space use-value estimates should be directed to Sarah Richardson at the Department of Conservation and Recreation in Richmond.

**Table 1: Income Approach** – Estimated use value of agricultural land in *Shenandoah* (\$ / Acre).

Land Class	Use Value Without Risk	Use Value With Risk
<i>I</i>	940	900
<i>II</i>	850	810
<i>III</i>	630	600
<i>IV</i>	500	480
<i>Avg. I-IV</i>	690	660
<i>V</i>	380	360
<i>VI</i>	310	300
<i>VII</i>	190	180
<i>Avg. V-VII</i>	250	240
<i>Avg. I-VII</i>	640	610
<i>VIII</i>	60	60

**Table 2: Income Approach** – Estimated use value of orchards in *Shenandoah* (\$ / Acre).

Land Class	Use Value of Apple Orchard	Use Value of Other Orchard
<i>I</i>	670	670
<i>II</i>	510	510
<i>III</i>	290	290
<i>IV</i>	160	160
<i>V</i>	120	120
<i>VI</i>	110	110
<i>VII</i>	50	50
<i>VIII</i>	60	60

**Table 3: Rental Rate Approach**<sup>5</sup> – Cropland and pastureland values based on NASS capitalized rental rates in *Shenandoah* or *district value*. (\$ /Acre).

<i>Cropland</i>	804
<i>Irrigated Cropland</i>	N/A
<i>Pastureland</i>	359

<sup>5</sup>For details see Estimates at <http://usevalue.agecon.vt.edu/>

**Table 4: Forest Values (\$/Acre) - Shenandoah**

	Site Productivity(\$/acre)			
	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>	<i>Non-Productive Land</i>
Forest Land	179	266	292	100

**Table 5: Open Space Recommended Values (\$/Acre) - Shenandoah**

<i>Golf Course</i>	<i>Swim and Racket Clubs</i>
1,000-1,500	2,000-4,000

N/A = not applicable to the county/city

**Transfers** <: Data used to estimate agricultural use values for a jurisdiction (counties/cities) may not be published or is insufficient. When this occurs, data from a nearby county is used. This process is referred to as transferring-in. Transferring-in is also used for jurisdictions with large areas of land lying in more than one physiographic region, for example coastal plain and piedmont. A transfer-in jurisdiction is noted by use of an arrow < after the name.

# Estimated Use Values For Shenandoah

*Estimates apply to 2019*



**State Land Evaluation and  
Advisory Council (SLEAC)**

## Contacts

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### Agricultural/Horticultural Estimates

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### Forest Estimates

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### Open Space Estimates

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## Use Value Taxation in Virginia<sup>1</sup>

Virginia law allows for *eligible* land in agricultural, horticultural, forest, or open space use to be taxed at the value in *use* (use value) as opposed to its *market* value.<sup>2</sup> The State Land Evaluation and Advisory Council (SLEAC) was created in 1973 with the mandate to estimate the use value of eligible land for each jurisdiction participating in the use-value taxation program. SLEAC provides for the development of an objective methodology for estimating the use value of land in *agricultural, horticultural, forest, and open space* use. The members of SLEAC have officially sanctioned the use value estimates reported in this brochure.

### Role of the SLEAC Estimates

Section 58.1–3229 (et seq.) of the *Code of Virginia* requires each participating jurisdiction's assessment office to *consider* SLEAC estimates when assessing the use value of eligible land. However, the local assessing office is not required to use SLEAC estimates verbatim.

### Agricultural/Horticultural Estimates

Tables 1 & 2 list the estimated use values of agricultural and horticultural land using an **income approach**. These estimates are based on capitalized net income - from agricultural or horticultural enterprises in each participating county. These values are updated annually. Note, the local assessing office can only make changes to assessed property values during a reassessment year.

Table 1 lists the estimated use value of land in *agricultural* use for each of the eight USDA Natural Resources Conservation Service (NRCS) land capability classifications.

For explanation of soil classifications see Procedures Manual on the use value website <http://usevalue.agecon.vt.edu/>. Because data on the land class composition of individual parcels is often unavailable, average use values have also been provided.<sup>3</sup> The average of land in classes I – IV represents the average use value of *cropland*. The average of land in classes V – VII represents the average use value of *pastureland*. The average of land in classes I – VII represents the average use value of *all agricultural land*.<sup>4</sup>

The *without risk* estimates apply to land that is not at risk of flooding. *The with risk estimates should only be applied to land parcels that are at risk of flooding due to poor drainage that cannot be remedied by tilling or drainage ditches.*

Table 2 lists the estimated use value of land in orchard use. Values are reported for both apple orchards and “other” orchards for each of the eight NRCS land capability classifications. “Other” orchard refers to peach, pear, cherry, or plum production. Table 3 lists the estimated use values of cropland and pastureland using a **rental rate approach**. These use-values are based on capitalized rental rates obtained annually from the USDA National Agricultural Statistical Service (NASS). If there are sufficient numbers of responses to meet the NASS nondisclosure requirements for a jurisdiction then the value is published. However, if there are not enough responses in a jurisdiction to meet non-disclosure

requirements, then all the non-disclosed jurisdictions within a crop reporting district are summarized and published as a *Combined Counties (District) value*.

### Forest Estimates

Table 4 lists, when appropriate, the estimated use values for forest land. For information pertaining to Forest land use taxation see

<http://www.dof.virginia.gov/land/usetax/introduction.htm>

### Open Space Estimates

Table 5 lists, when appropriate, the estimated use values recommended for open space land. A locality may have values for golf courses or swim and racket clubs.

#### Participating agencies:

- Virginia Department of Taxation  
<http://www.tax.virginia.gov/>
- Virginia Department of Agricultural and Applied Economics  
<http://www.aaec.vt.edu/>
- Virginia Department of Conservation and Recreation  
<http://www.dcr.virginia.gov/>
- Virginia Department of Forestry  
<http://www.dof.virginia.gov>



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<sup>1</sup> Information about Virginia's Use Value Assessment Program can be found at <http://usevalue.agecon.vt.edu/>

<sup>2</sup> A locality may adopt any combination of the four types of use-value taxation.

<sup>3</sup> Data limitations prohibited the computation of average use values in a few counties and in most independent cities and townships.

<sup>4</sup> Note. Class VIII land is not considered suitable for agricultural production and is therefore not included in this average.

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**Table 2: The composite farm and average net returns in Shenandoah.**

Annual net returns are determined through enterprise budgeting for crops that contributed one or more acres to the composite farm. The estimated net returns shown in the table below are "olympic" averages<sup>1</sup> for each crop in the composite farm for the proceeding 7 budget years. A budget year lags a given tax year by 2 years (e.g., tax year 2014 corresponds to the budget year 2012).

Additional information about these estimates can be found at Virginia's Use-Value Assessment Program website, <http://usevalue.agecon.vt.edu>.

Estimates apply to tax-year 2019.

**Number of Farms: 980<sup>2</sup>**

Commodity	Total Acreage <sup>3</sup>	Composite Farm(Acres) <sup>1</sup>	Estimated Net Return (\$/acre)
Alfalfa	2,335	2	\$113.38
Barley	1,209	1	\$8.87
Corn <sup>4</sup>	12,636	13	\$126.08
Cotton	---	---	---
Hay <sup>5</sup>	25,645	26	\$0.01
Pasture	49,876	51	\$13.41
Peanuts	---	---	---
Potatoes	10	---	---
Pumpkins	(D)	---	---
Snap Beans	15	---	---
Soybeans	4,392	4	\$230.74
Sweet Corn	15	---	---
Tobacco	---	---	---
Tomatoes	10	---	---
Watermelons	5	---	---
Wheat	400	---	---
Double-Cropped <sup>6</sup>	1,856	2	---
<b>Total Cropland Harvested</b>	<b>94,692</b>	<b>95</b>	
<b>Net Return</b>			<b>\$37.50<sup>7</sup></b>

Notes

(D) = Withheld to avoid disclosing data of individual farms.

(Z) = Less than half of the unit shown.

— = Represents 0 or not reported/calculated.

<sup>1</sup>In an olympic average, the highest and lowest are dropped prior to calculating the arithmetic mean.

<sup>2</sup>Data taken from the 2012 Census of Agriculture.

<sup>3</sup>Some data do not add exactly due to rounding and some categories are not listed due to disclosure rules.

<sup>4</sup>Corn acreage is corn-grain plus corn-silage acreages.

<sup>5</sup>Hay acreage is (all hay + all haylage, grass silage, greenchop) - (alfalfa hay + haylage or greenchop from alfalfa or alfalfa mixtures).

<sup>6</sup>Double-cropped acreage is subtracted from the crops listed in lines 2-9 to arrive at the total cropland harvest acreage. Weighted average of crop estimated net returns by composite farm acreage.

<sup>7</sup>Weighted average of crop estimated net returns by the composite farm acreage..

**Transfers <:** Data used to estimate agricultural use values for a jurisdiction (counties/cities) may not be published or is insufficient. When this occurs, data from a nearby county is used. This process is referred to as transferring-in. Transferring-in is also used for jurisdictions with large areas of land lying in more than one physiographic region, for example coastal plain and piedmont. A transfer-in jurisdiction is noted by use of an arrow < after the name.

**Table 3: Worksheet for estimating the use value of agricultural land in Shenandoah.**

Additional information about these estimates can be found at Virginia's Use Value Assessment Program website, <http://usevalue.agecon.vt.edu>.

Estimates apply to tax-year 2019.

<b>1. Estimated Net Return:</b>	\$37.50
<b>2. Capitalization Rates</b>	
<b>a. Interest Rate Component<sup>1</sup></b>	0.0529
<b>b. Property Tax Component<sup>2</sup></b>	0.0055
<b>c. Rate Without Risk</b>	0.0584
<b>d. Risk Component</b>	0.0029
<b>e. Rate With Risk<sup>3</sup></b>	0.0613

	<b>Without Risk<sup>4</sup></b>	<b>With Risk<sup>5</sup></b>
<b>3. Unadjusted Use Value</b>	\$641.89	\$611.32

<b>4. Soil Index</b>	<b>Land Class</b>	<b>Crop Acreage (No Pasture)<sup>6</sup></b>	<b>Productivity Index</b>	<b>Weighted Acreage</b>
	I	4,802	1.50	7,203.58
	II	26,232	1.35	35,413.33
	III	39,506	1.00	39,505.94
	IV	16,403	0.80	13,122.17
	V	---	0.60	---
	VI	5,034	0.50	2,517.06
	VII	5,106	0.30	1,531.79
	<b>Total</b>	<b>97,083</b>		<b>99,293.86</b>
	<b>Soil Index Factor:<sup>7</sup></b>	<b>1.02</b>		

#### 5. Agricultural Use Value Adjusted By Land Class

<b>Class</b>	<b>Land Index</b>	<b>Without Risk</b>	<b>Reported<sup>8</sup></b>	<b>With Risk</b>	<b>Reported<sup>8</sup></b>
I	1.50	\$941.40	\$940	\$896.57	\$900
II	1.35	\$847.26	\$850	\$806.91	\$810
III	1.00	\$627.60	\$630	\$597.71	\$600
IV	0.80	\$502.08	\$500	\$478.17	\$480
V	0.60	\$376.56	\$380	\$358.63	\$360
VI	0.50	\$313.80	\$310	\$298.86	\$300
VII	0.30	\$188.28	\$190	\$179.31	\$180
VIII	0.10	\$62.76	\$60	\$59.77	\$60

<sup>1</sup>The 7-year average of the long-term interest rates charged by the various Agriculture Credit Associations serving the state.

<sup>2</sup>The 7-year average of the effective true tax rates reported by the Virginia Department of Taxation.

<sup>3</sup>Rate should only be used when the soil has poor drainage that is not remedied by tilling or drainage ditches or when the land lies in a floodplain.

<sup>4</sup>Estimated Net Return (Line 1) divided by Rate without risk (Line 2c).

<sup>5</sup>Estimated Net Return (Line 1) divided by Rate with risk (Line 2e).

<sup>6</sup>Data provided by National Resources Conservation Service, United States Department of Agriculture. <https://websoilsurvey.nrcs.usda.gov/>

<sup>7</sup>Index factor = (Total Weighted Acreage) / (Total Cropland Acreage).

<sup>8</sup>Rounded to the nearest \$10 and reported in Table 1a.

**Transfers <:** Data used to estimate agricultural use values for a jurisdiction (counties/cities) may not be published or is insufficient. When this occurs, data from a nearby county is used. This process is referred to as transferring-in. Transferring-in is also used for jurisdictions with large areas of land lying in more than one physiographic region, for example coastal plain and piedmont. A transfer-in jurisdiction is noted by use of an arrow < after the name.

**Table 5: Worksheet for estimating the use value of orchard land in Shenandoah.**

The estimated net returns assume a planting density of 135 trees per acre. Additional information about these estimates can be found at Virginia's Use Value Assessment Program website, <http://usevalue.agecon.vt.edu/>. Estimates are applicable to tax-year **2019**

**1. Estimated Net Returns (Loss) Per Acre**

Age of Trees	Processed Fruit	Fresh Fruit
1-3 years	-\$3,318.32	-\$3,379.79
4-6 years	-\$843.59	\$531.38
7-15 years	-\$1,451.25	-\$1,788.57
16-20 years	-\$1,453.49	\$464.45
Discounted (20Yr Cycle)	-\$21,612.50	-\$18,404.32
Utilization of Sales (10Yr AVG %)	66%	34%
Apple Insurance (Annual AVG/acre)	\$1,916.68	

**2. Weighted Average Net Return Values**

a)	TY2019 <sup>1</sup>	-\$18,617.27
b)	TY2018	-\$19,377.40
c)	TY2017	-\$18,616.25
d)	TY2016	-\$19,677.43
e)	TY2015	-\$3,403.09
f)	TY2014	-\$7,533.62
g)	TY2013	-\$15,274.96

**3. Net Returns**

a) Net return to "trees and land" (Olympic average of 2a thru 2g) <sup>2</sup>	\$0.00
b) Net return attributable to "land only" (Class III) <sup>3</sup>	\$36.67
c) Net return attributable to "trees only"	-\$36.67

**4. Capitalization Rate**

a) Interest Rate <sup>4</sup>	0.0529
b) Property Tax <sup>5</sup>	0.0055
c) Depreciation of Apple Trees <sup>6</sup>	0.0500
d) Depreciation of "Other" Trees <sup>7</sup>	0.0500
e) Apple Orchard Capitalization Rate	0.1084
f) "Other" Orchard Capitalization Rate	0.1084

**5. Use Value of Apple Orchard and "Other" Orchard**

Class	Orchard Index <sup>8</sup>	Apple Trees	Apple Trees and Land <sup>9</sup>	Other Trees <sup>9</sup>	Other Trees and Land <sup>9</sup>
I	0.8	-\$270.55	\$670.85	-\$270.55	\$670.85
II	1.0	-\$338.18	\$509.08	-\$338.18	\$509.08
III	1.0	-\$338.18	\$289.42	-\$338.18	\$289.42
IV	1.0	-\$338.18	\$163.90	-\$338.18	\$163.90
V	0.8	-\$253.64	\$122.92	-\$253.64	\$122.92
VI	0.6	-\$202.91	\$110.89	-\$202.91	\$110.89
VII	0.4	-\$135.27	\$53.01	-\$135.27	\$53.01
VIII	0.0	\$0.00	\$62.76	\$0.00	\$62.76

<sup>1</sup>Average net return of the eight orchard categories listed in Section 1 of this table. The weights are provided by the percent of total trees represented by each category.

<sup>2</sup>In an olympic average, the highest and lowest values are dropped prior to calculating the arithmetic mean.

<sup>3</sup>This is determined by dividing the unadjusted net return value (Table 3, Line 1) by the soil index factor (Table 3, Section 4).

<sup>4</sup>The 7-year average of long term interest rates charged by the Virginia Department of Taxation.

<sup>5</sup>The 7-year average of the effective true tax rates charged by the Virginia Department of Taxation.

<sup>6</sup>The depreciation rate applicable to apple trees assumes that trees are replaced on a 20-year rotation.

<sup>7</sup>"Other" trees refer to peach, cherry, pear, and plum trees. The depreciation rate applicable to "other" trees assumes that trees are replaced on a 20-year rotation.

<sup>8</sup>The orchard index is applicable only in determining the value of the trees. The land index (Table3, Section 5) is applied to land.

<sup>9</sup>The use value of trees and land is determined by adding the appropriate without-risk land-use-value (Table 3, Section 5) to the use value of the trees.

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