

Appendix C. Prince Edward County Use-values

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 Jennifer Friedel 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 Lisa McGee at the Department of Conservation and Recreation in Richmond.

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

Land Class	Use Value Without Risk	Use Value With Risk
I	450	430
II	400	380
III	300	280
IV	240	230
Avg. I-IV	350	330
V	180	170
VI	150	140
VII	90	90
Avg. V-VII	120	120
Avg. I-VIII	310	290
VIII	30	30

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

Land Class	Use Value of Apple Orchard	Use Value of Other Orchard
I	320	320
II	240	240
III	140	140
IV	80	80
V	60	60
VI	50	50
VII	30	30
VIII	30	30

Use Value Taxation in Virginia¹

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.² 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.

¹ Information about Virginia's Use Value Assessment Program can be found at <http://usevalue.ageecon.vt.edu/>.
² A locality may adopt any combination of the four types of use-value taxation.

Table 3: Rental Rate Approach³ – Cropland and pastureland values based on NASS capitalized rental rates in Prince Edward or district value. (\$ / Acre).

Cropland	416
Irrigated Cropland	N/A
Pastureland	320

³For details see Estimates at <http://usevalue.ageecon.vt.edu/>.

Table 4: Forest Values (\$/Acre) - Prince Edward

	Site Productivity(\$/acre)			Non-Productive Land
	Fair	Good	Excellent	
N/A	N/A	N/A	N/A	N/A

Table 5: Open Space Recommended Values (\$/Acre) - Prince Edward

Golf Course	Swim and Racket Clubs
N/A	N/A

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.

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.ageecon.vt.edu/>. Because data on the land class composition of individual parcels is often unavailable, average use values have also been provided.³ 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*.⁴

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 nondisclosure

³ Data limitations prohibited the computation of average use values in a few counties and in most independent cities and townships.
⁴ Note, Class VIII land is not considered suitable for agricultural production and is therefore not included in this average.

Estimated Use Values For Prince Edward

Estimates apply to 2020



State Land Evaluation and Advisory Council (SLEAC)

Contacts

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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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Methods and Procedures: Determining the Use-Value of Agricultural and Horticultural Land in Virginia

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 (see footnote 3) for each crop in the composite farm for the proceeding seven budget years. A budget year lags a given tax year by two years (e.g., tax year 2014 corresponds to the budget year 2012). Additional information about these estimates can be found on Virginia's Land Use-Value Assessment Program website at <http://usevalue.agecon.vt.edu>.

Appendix C, Table C-2. Composite farm and average net returns in Prince Edward County.¹

Commodity	Total Acreage ²	Composite Farm(Acres) ³	Estimated Net Return (\$/acre)
Alfalfa	581	2	\$98.73
Barley	(D)	—	—
Cabbage	(D)	—	—
Corn ⁴	467	1	\$76.27
Cotton	—	—	—
Cucumbers	(Z)	—	—
Hay ⁵	11,436	34	\$0.32
Lima Beans	—	—	—
Pasture	14,314	42	\$3.69
Peanuts	—	—	---
Potatoes	3	—	—
Pumpkins	(D)	—	—
Snap Beans	(Z)	—	—
Sorghum	---	—	—
Soybeans	1,803	5	\$197.83
Sweet Corn	(D)	—	—
Tobacco	(D)	—	—
Tomatoes	1	—	—
Watermelons	1	—	—
Wheat	165	—	—
Double-Cropped ⁶	165	—	—
Total Cropland Harvested	28,606	84	
Net Return			\$17.69⁷

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

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

— = Represents 0 or not reported/calculated.

Transfers (<): Data used to estimate agricultural use-values for jurisdictions (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, the Coastal Plain and Piedmont regions. A transfer-in jurisdiction is noted by use of an arrow (<) after the name.

¹ Number of farms = 341. Data taken from the 2017 Census of Agriculture.

² Some data do not add exactly due to rounding, and some categories are not listed due to disclosure rules.

³ In an olympic average, the highest and lowest are dropped prior to calculating the arithmetic mean.

⁴ Corn acreage is corn-grain plus corn-silage acreages.

⁵ Hay acreage is (all hay + [all haylage, grass silage, and greenchop]) – (alfalfa hay + [haylage or greenchop from alfalfa or alfalfa mixtures]).

⁶ Double-cropped acreage is subtracted out to arrive at the total cropland harvest acreage.

⁷ Weighted average of crop estimated net returns by the composite farm acreage.

Methods and Procedures: Determining the Use-Value of Agricultural and Horticultural Land in Virginia

Appendix C, Table C-3. Worksheet for estimating the use-value of agricultural land in Prince Edward County for tax year 2020.

1. Estimated net Return:	\$17.69
2. Capitalization Rates	
a. Interest Rate Component¹	0.0531
b. Property Tax Component²	0.0047
c. Rate Without Risk	0.0578
d. Risk Component	0.0029
e. Rate With Risk³	0.0606
	Without Risk⁴ With Risk⁵
3. Unadjusted Use Value	\$306.29 \$291.70

4. Soil index

Land Class	Crop Acreage (No Pasture) ⁶	Productivity Index	Weighted Acreage
I	1	1.50	1.00
II	19,016	1.35	25,671.69
III	9,082	1.00	9,081.70
IV	5,477	0.8	4,381.88
V	41	0.60	24.69
VI	3,872	0.50	1,936.17
VII	3,541	0.30	1,062.42
Total	41,031		42,159.42
Soil Index Factor:⁷	1.03		

5. Agricultural use-values adjusted by land class

Class	Index	Without Risk	Reported ⁸	With Risk	Reported ⁸
I	1.50	\$447.13	\$450	\$425.84	\$430
II	1.35	\$402.41	\$400	\$383.25	\$380
III	1.00	\$298.08	\$300	\$283.89	\$280
IV	0.80	\$238.47	\$240	\$227.11	\$230
V	0.60	\$178.85	\$180	\$170.33	\$170
VI	0.50	\$149.04	\$150	\$141.95	\$140
VII	0.30	\$89.43	\$90	\$85.17	\$90
VIII	0.10	\$29.81	\$30	\$28.39	\$30

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

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 regions. A transfer-in jurisdiction is noted by use of an arrow < after the name.

¹ The 7-year average of the long-term interest rates charged by the various agricultural credit associations serving the state.

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

³ 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.

⁴ Estimated net return (line 1) divided by rate without risk (line 2c).

⁵ Estimated net return (line 1) divided by rate with risk (line 2e).

⁶ Data provided by National Resources Conservation Service, USDA. <https://websoilsurvey.nrcs.usda.gov/>.

⁷ Index factor = (total weighted acreage) / (total cropland acreage).

⁸ Rounded to the nearest \$10 and reported in Appendix B, Table 1a.

Methods and Procedures: Determining the Use-Value of Agricultural and Horticultural Land in Virginia

Appendix C, Table C-4. Net present value analysis for apples.

Input costs, revenues, and net income (loss) for processed and fresh market apple production.														
Per acre costs, revenues, and net income assuming a planting density of 300+ trees per acre using dwarf rootstock.														
Estimates apply to tax-year 2020														
Establishment Costs (applicable to both processed market and fresh market orchards)														
Land Clearing														
Land Preparation (labor, machinery, material)														
Planting (labor, machinery, trees)														
Total Establishment Cost														
Processed Market Apple Production														
	Pre- 1-3 Yrs	Early 4-6 Yrs	Full 7-15 Yrs	Late 16-20 Yrs		Pre- 1-3 Yrs	Early 4-6 Yrs	Full 7-15 Yrs	Late 16-20 Yrs		Pre- 1-3 Yrs	Early 4-6 Yrs	Full 7-15 Yrs	Late 16-20 Yrs
Pre-Harvest Var Costs														
Fertilizer	\$76.30	\$69.18	\$50.75	\$53.95		\$76.30	\$69.18	\$50.75	\$53.95		\$76.30	\$69.18	\$75.52	\$65.81
Lime	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Pesticides	\$204.16	\$456.20	\$912.77	\$912.77		\$204.16	\$456.20	\$912.77	\$912.77		\$206.19	\$772.35	\$1,146.78	\$1,146.78
Bee Rental	\$0.00	\$16.00	\$16.00	\$16.00		\$0.00	\$16.00	\$16.00	\$16.00		\$16.00	\$16.00	\$16.00	\$16.00
Pest Control	\$15.00	\$15.00	\$15.00	\$15.00		\$15.00	\$15.00	\$15.00	\$15.00		\$15.00	\$15.00	\$15.00	\$15.00
Mulch	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Pruning	\$11.83	\$142.76	\$237.93	\$237.93		\$11.83	\$142.76	\$237.93	\$237.93		\$199.18	\$398.48	\$664.12	\$531.29
Hand Thinning	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$257.91	\$515.82	\$386.87
Supplies (replace lost wrenches, etc.)	\$10.20	\$9.06	\$7.94	\$6.81		\$10.20	\$9.06	\$7.94	\$6.81		\$10.20	\$9.06	\$7.94	\$6.81
Miscellaneous	\$56.66	\$12.36	\$12.36	\$12.36		\$56.66	\$12.36	\$12.36	\$12.36		\$56.68	\$12.36	\$12.36	\$12.36
Variable Machinery Cost (fuel, oil, & maintenance)	\$56.72	\$534.50	\$534.50	\$534.50		\$56.72	\$534.50	\$534.50	\$534.50		\$141.80	\$534.50	\$534.50	\$534.50
Permanent Labor	\$128.21	\$415.17	\$778.96	\$778.96		\$128.21	\$415.17	\$778.96	\$778.96		\$256.41	\$518.96	\$778.96	\$778.96
Insurance	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00
Harvest Var Costs														
Harvest Labor	\$30.28	\$197.33	\$970.31	\$970.31		\$30.28	\$197.33	\$970.31	\$970.31		\$69.56	\$455.35	\$1,117.51	\$1,117.51
Variable Machinery Cost (fuel, oil, & maintenance)	\$52.07	\$179.33	\$179.33	\$179.33		\$52.07	\$179.33	\$179.33	\$179.33		\$52.07	\$179.33	\$179.33	\$179.33
Storage, Packing, Transportation, & Brokerage Fee	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00		\$215.14	\$1,843.47	\$4,259.49	\$3,306.08
Total Var Costs (AVG/Cycle)	\$3,173.17	\$2,106.95	\$3,888.00	\$3,890.07		\$3,173.17	\$2,106.95	\$3,888.00	\$3,890.07		\$3,550.70	\$3,740.31	\$9,323.33	\$8,097.30
Fixed Machinery Costs														
	\$66.68	\$58.65	\$58.65	\$58.65		\$66.68	\$58.65	\$58.65	\$58.65		\$66.68	\$66.68	\$66.68	\$66.68
General Overhead (8% (AVG/Cycle)														
	\$253.85	\$168.56	\$311.04	\$311.21		\$253.85	\$168.56	\$311.04	\$311.21		\$284.06	\$299.22	\$745.87	\$647.78
Total Fixed & Variable Costs	\$3,483.71	\$2,334.16	\$4,257.69	\$4,259.93		\$3,483.71	\$2,334.16	\$4,257.69	\$4,259.93		\$3,901.44	\$4,106.21	\$10,135.88	\$8,811.76
Gross Receipts														
Yield (LBS/Acre)	1,541	18,486	24,648	24,648		1,541	18,486	24,648	24,648		1,541	18,486	24,648	24,648
Price Received (\$/LB)	\$0.12	\$0.12	\$0.12	\$0.12		\$0.12	\$0.12	\$0.12	\$0.12		\$0.34	\$0.34	\$0.34	\$0.34
Total Revenue	\$190.39	\$2,284.68	\$3,046.24	\$3,046.24		\$190.39	\$2,284.68	\$3,046.24	\$3,046.24		\$525.41	\$6,304.94	\$8,406.59	\$8,406.59
Annual Net Loss/Income (AVG/Cycle)	(\$3,303.34)	(\$668.73)	(\$1,211.45)	(\$1,213.69)		(\$3,303.34)	(\$668.73)	(\$1,211.45)	(\$1,213.69)		(\$3,376.09)	\$574.61	(\$1,729.29)	(\$405.17)
Discounted (Loss/Income)														(\$17,191.66)

Methods and Procedures: Determining the Use-Value of Agricultural and Horticultural Land in Virginia

Appendix C, Table C-5. Worksheet for estimating the use-value of orchard land in Prince Edward County.

1. Estimated net returns (loss) per acre

Age of trees	Processed fruit	Fresh fruit
1-3 years	-\$3,303.34	-\$3,376.09
4-6 years	-\$668.73	\$574.61
7-15 years	-\$1,211.45	-\$1,729.29
16-20 years	-\$1,213.69	\$405.17
Discounted (20-year cycle)	-\$18,694.76	-\$17,191.66
Use of sales (10-year avg %)	66%	34%
Apple insurance (annual avg/acre)	\$775.95	

2. Weighted average net return values

TY2020 ¹	TY2019	TY2018	TY2017	TY2016	TY2015	TY2014
-\$17,402.52	-\$18,617.27	-\$19,377.40	-\$18,616.25	-\$19,677.43	-\$3,403.09	-\$7,533.62

3. Net returns

a. Net return to "trees and land" (olympic average of lines 2a through 2g) ²	\$0.00
b. Net return attributable to "land only" (Class III) ³	\$17.22
c. Net return attributable to "trees only"	-\$17.22

4. Capitalization rate

a. Interest rate ⁴	0.0531
b. Property tax ⁵	0.0047
c. Depreciation of apple trees ⁶	0.0500
d. Depreciation of "other" trees ⁷	0.0500
e. Apple orchard capitalization rate	0.1078
f. "Other" orchard capitalization rate	0.1078

5. Use-value of apple orchard and "other" orchard

Class	Orchard Index ⁸	Apple Trees	Apple Trees and Land ⁹	Other Trees ⁹	Other trees and Land ⁹
I	0.8	-\$127.82	\$319.31	-\$127.82	\$319.31
II	1.0	-\$159.77	\$242.64	-\$159.77	\$242.64
III	1.0	-\$159.77	\$138.31	-\$159.77	\$138.31
IV	1.0	-\$159.77	\$78.69	-\$159.77	\$78.69
V	0.8	-\$119.83	\$59.02	-\$119.83	\$59.02
VI	0.6	-\$95.86	\$53.18	-\$95.86	\$53.18
VII	0.4	-\$63.91	\$25.52	-\$63.91	\$25.52
VIII	0.0	\$0.00	\$29.81	\$0.00	\$29.61

Note: The estimated net returns assume a planting density of 135 trees per acre. Additional information about these estimates can be found at Virginia's Land Use-Value Assessment Program website, <http://usevalue.agecon.vt.edu/>. Estimates are applicable to tax year 2020.

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, the Coastal Plain and Piedmont regions. A transfer-in jurisdiction is noted by use of an arrow (-) after the name.

¹ Average net return of the eight orchard categories listed in section 1 of this table. The weights are provided by the percentage of total trees represented by each category.

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

³ This is determined by dividing the unadjusted net return value (Table C-3, line 3) by the soil index factor (Table C-3, section 4).

⁴ The 7-year average of long-term interest rates charged by the various agricultural credit associations serving the state.

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

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

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

⁸ The orchard index is applicable only in determining the value of the trees. The land index (Appendix C, Table C-3) is applied to land.

⁹ The use-value of trees and land is determined by adding the appropriate without-risk land use-value (Appendix C, Table C-3) to the use-value of the trees.