



# Agricultural and Horticultural Update: Changes and Options



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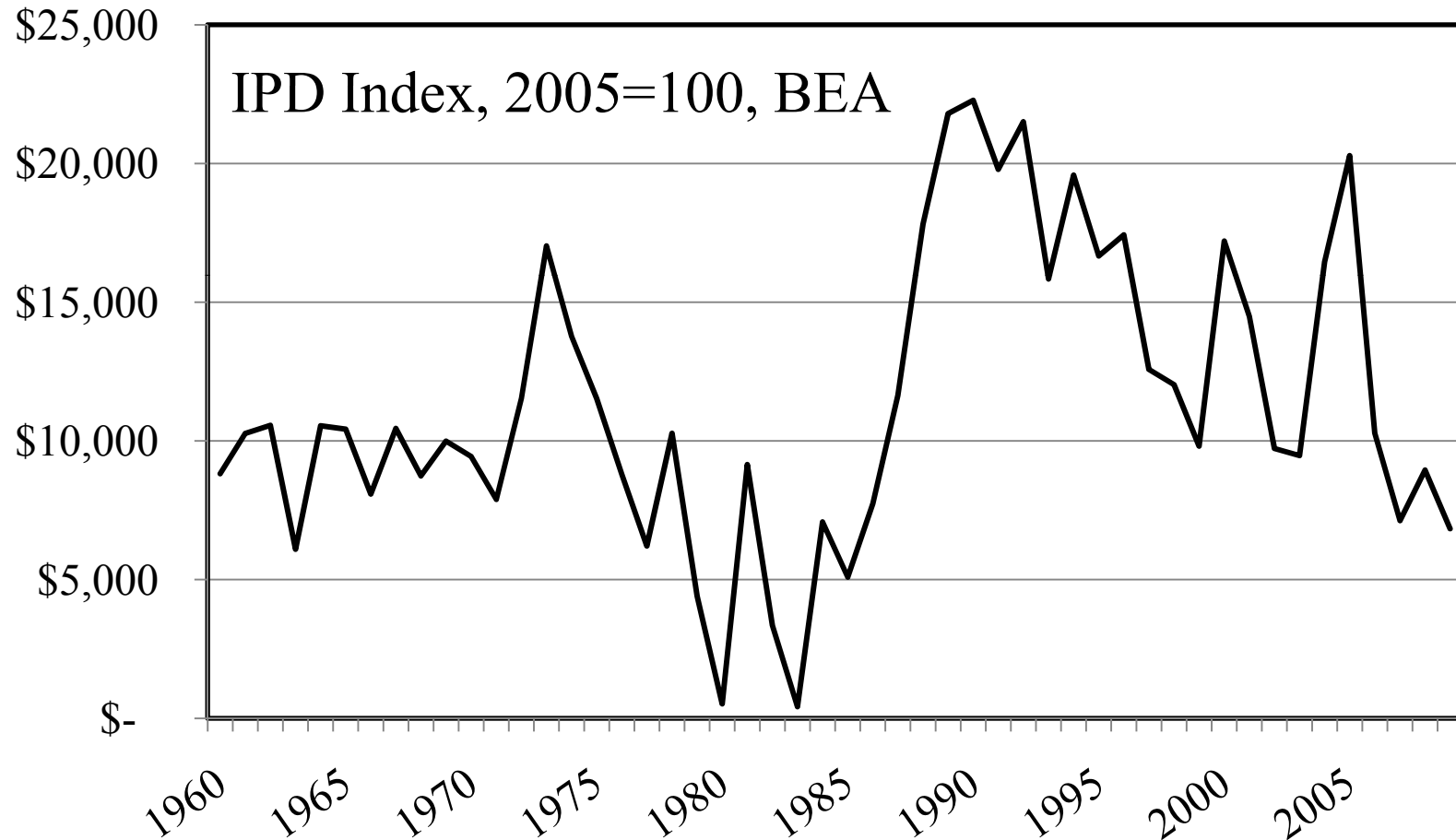
# Objectives



- Current Status
- Description of methods
- Overview of agricultural and horticultural use values
  - What's changed?
  - Income Approach vs Rental Rate Approach
- Answer questions



# Real Net Farm Income Virginia \$/farm



Data, Economic Research Service/USDA, years 1960-2009



# Current Status TY2011





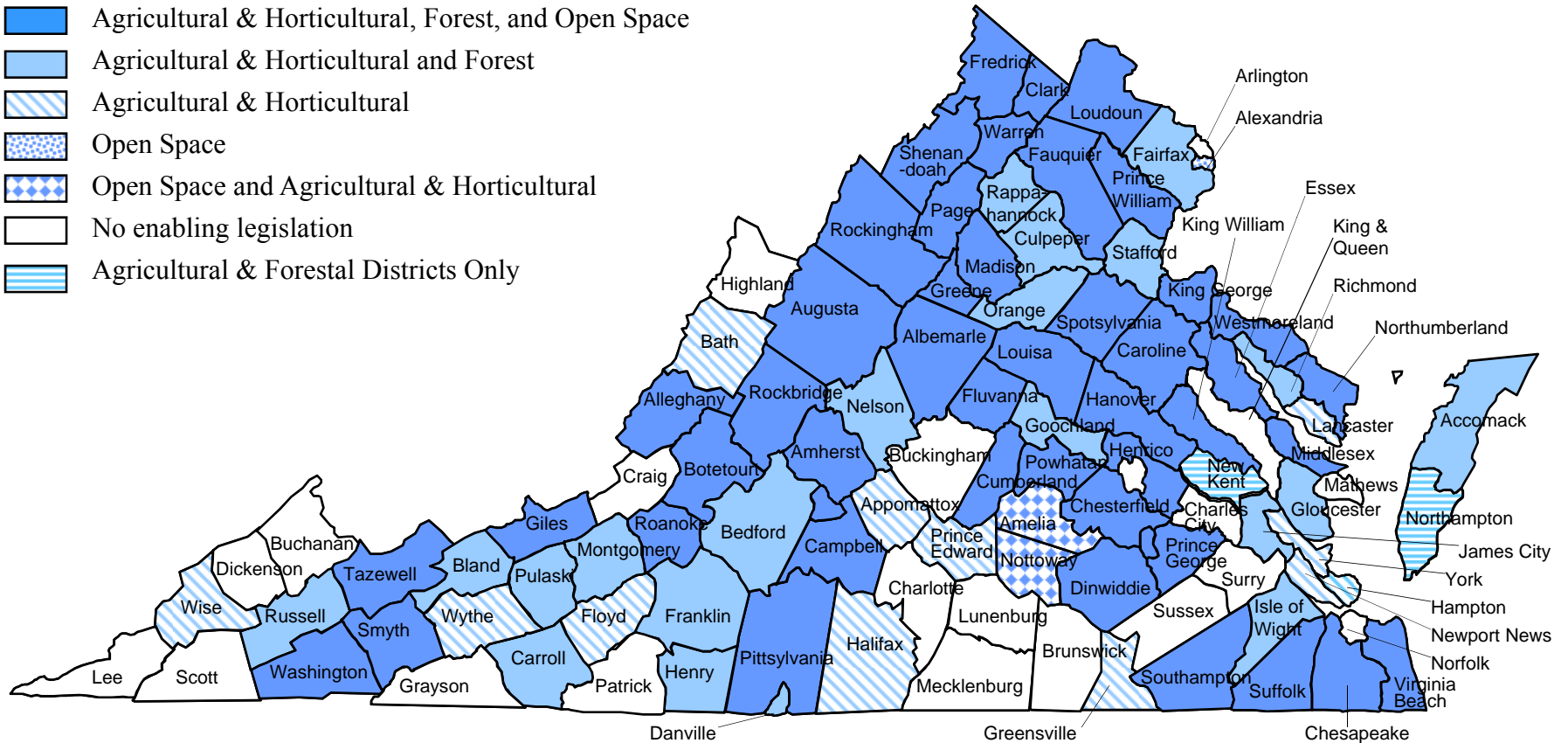
- **Agricultural and horticultural:** 92 counties/cities
- **Forest:** 75 counties/cities
- **Open Space:** 53 counties/cities



# TY2011: Counties/Cities\* with enabling legislation for use-value taxation



-  Agricultural & Horticultural, Forest, and Open Space
-  Agricultural & Horticultural and Forest
-  Agricultural & Horticultural
-  Open Space
-  Open Space and Agricultural & Horticultural
-  No enabling legislation
-  Agricultural & Forestal Districts Only



\* Counties/Cities are identified from annual use-value reports and may differ from actual implementation. Contact government officials in each county/city for the current use-value implementation. Not all participating cities are identified on this map.



# Overview



- Virginia use value taxation legislation was passed in 1972
- Virginia law allows for the preferential taxation of agricultural, horticultural, forestal, and open space land
- Eligible land in any of these categories can be assessed at the land's value in use (use value) as opposed to the land's market value



## Overview (cont.)



- State Land Evaluation and Advisory Council (SLEAC) provides annual use value estimates for each jurisdiction in the program
- Responsibility for final value of assessment resides with the local assessing officer
- Buildings and other improvements “on the land” are assessed at fair market value



# Two Approaches



Capitalized:

- Net income (Income Approach)
- Rental rates (Rental Rate Approach)





# Income Approach

## *The Composite Farm*



Jurisdiction's composite farm

- Considered only crops with 1 or more acres in the composite farm for each jurisdiction
  - Acres of crop  $\div$  number of farms  $\geq$  1 acre
- Net returns/profits are based on the totals for the jurisdiction's composite farm



# Income Approach

## *Crops in Model*



Traditional	Added for TY2009/20010	
Alfalfa hay Barley Corn Cotton Hay (grass) Potatoes Soybeans Wheat	Peanuts Tobacco	Pasture  Cucumbers Pumpkins Snap Beans Sweet Corn Tomatoes Watermelons



# Income Approach

## *Data Sources*



**Only published secondary sources are used.**

- 2007 Census of Agriculture - composite farm acres
- Virginia Cooperative Extension – budgets
- Farm Service Agency - Federal payments
- USDA-RMA – crop insurance, net proceeds
- USDA-NASS – yields and prices
- Virginia Department of Taxation - tax rates
- AgFirst – long and short interest rates



**Reporting:**  
**Table 2**  
**Accomack**  
**TY2011**

	<b>Total Acreage</b>	<b>Composite Farm (Acres)</b>	<b>Estimated Net Return (\$/Acre)</b>
<b>1. No. of Farms = 248</b>			
2. Corn	32,670	132	\$15.72
3. Alfalfa	---	---	---
4. Hay	555	2	\$0.00
5. Wheat	13,235	53	\$36.34
6. Barley	---	---	---
7. Soybeans	36,928	149	\$30.16
8. Potatoes	1,568	6	\$1,214.59
9. Cotton	---	---	---
10. Pasture	2,325	9	\$21.43
11. Peanuts	---	---	---
12. Tobacco	---	---	---
13. Snap Beans	1,839	7	\$0.00
14. Cucumbers	D	---	---
15. Pumpkins	4	0	\$0.00
16. Sweet Corn	485	2	\$13.66
17. Tomatoes	D	---	---
18. Watermelons	13	0	\$0.00
19. <i>Double-Cropped</i>	<i>(-) 13,235</i>	<i>(-) 53</i>	
<b>20. Totals</b>	<b>76,387</b>	<b>307</b>	<b>\$64.37</b>



# Income Approach

## *Basic Formula*



$$\textit{Use value} = \frac{\textit{Net return}}{\textit{Capitalization rate}}$$

### **Net Return Variables:**

- Crop Prices
- Crop Yields
- Input Prices
- Federal Payments
- Crop Ins

### **Capitalization Rate Variables:**

- Long-Term Interest Rates
- Local Property Taxes



# Rental Rate Approach



- National Ag Statistics Service (NASS)
  - Collects annual cash rental rates for
    - Cropland non-irrigated
    - Cropland irrigated (very limited)
    - Pastureland
  - Developed methods for TY2010 sent values to COR under my name – informational values
  - SLEAC approved values for TY2011
  - Rental rate approach applies the same cap rates as the income approach

$$Use\ value = \frac{Cash\ Rent}{Capitalization\ Rate}$$



# Income vs Rental Rate

## TY2011



<b>Jurisdiction</b>	Cropland \$/ac		Pasture Land \$/ac	
	<i><b>Income</b></i> (Average I-IV)	<i><b>Rent</b></i>	<i><b>Income</b></i> (Average V-VII)	<i><b>Rent</b></i>
Accomack	850	790	190	480 <sup>ep</sup>
Albemarle	80	210	30	200
Loudoun	30	330	20	300
Northampton	1,290	810	240	470 <sup>ep</sup>
Pittsylvania	120	290	50	240
Rockingham	430	650	150	450
Southampton	810	770	270	430
Warren	0	270	0	260
Washington	300	550	110	340
<sup>ep</sup> Eastern District Combined pasture rent \$36 per ac				



# *Virginia's Use-Value Taxation Program*

## **Farm Example**



- Consider a farm in Cumberland County in TY2011 with 400 acres (150 ac cropland, 150 ac pastureland, and 100 ac timber land)
- Comprised of
  - 100 acres (Class I land),
  - 50 acres (Class III),
  - 150 acre (Class IV), and
  - 100 acres (Good forest)
  - **Assume that the Fair Market Value** of the land is **\$1,500/acre**
- Use-value assessment values are based on 2 approaches
  - Capitalized income (Ag, hort, and forest)
  - Capitalized rental rates (Ag)





# Virginia's Use-Value



## TY2011 Values for Cumberland County

<b>Income Approach:</b> 2011 Estimated use values of agricultural land (\$/acre)											
	<i>Cropland</i>					<i>Pastureland</i>					
	I	II	III	IV	<b>AVG I-IV</b>	V	VI	VII	<b>AVG V-VII</b>	<b>AVG I-VII</b>	VIII
<i>W/Out Risk</i>	190	170	130	100	<b>140</b>	80	60	40	<b>50</b>	<b>120</b>	10
<i>W/Risk</i>	180	160	120	100	<b>130</b>	70	60	40	<b>50</b>	<b>110</b>	10

<b>Rental Rate Approach:</b> 2011 Estimated use values of agricultural land (\$/acre)	<i>Cropland</i>	<i>Pastureland</i>
	300	220

2011 Forest Land Use Values	Fair	Good	Excellent	Non-Productive land
Cumberland County	340	471	682	100



# *Income Approach*

## **Farm Example**

<b>Income Approach TY2011</b>	<b>Fair Market Value (Estimated)</b>
Class I                    100 acres (\$190/acre) = \$19,000 Class III                    50 acres (\$130/acre) = \$6,500 Class IV                    150 acres (\$100/acre) = \$15,000 Good forest land        100 acres (\$471/acre) = \$47,100	400 acres (\$1,500/acre) = \$600,000
<p style="text-align: center;"><i>Total Assessment (using land classes) = \$87,600</i></p> <p style="text-align: center;"><i>Total Assessment (using AVG \$140/acre) = \$89,100</i></p>	<p style="text-align: center;"><i>Fair Market Value = \$600,000</i></p>
<p style="text-align: center;"><i>Fair Market Assessed Value</i></p> <p style="text-align: center;"><i>Use-value Assessed (income) Value</i></p> <p style="text-align: center;"><i>Deferred Value</i></p>	<p style="text-align: center;"><b>\$600,000</b></p> <p style="text-align: center;"><b><u>-\$89,100</u></b></p> <p style="text-align: center;"><b>\$510,900</b></p>



# Rental Rate Approach



## Farm Example

<b>Rental Rate Approach: TY2011</b>	<b>Fair Market Value (Estimated)</b>
<i>Cropland 150 (\$300/acre) = \$45,000</i>	<i>Fair Market Value \$600,000</i>
<i>Pastureland 150 acres (\$220/acre) = \$33,000</i>	
<i>Forest 100 acres (\$471/acre) = \$47,100</i>	
<i>Total Assessment (Rental rates) and Good Forest = \$125,100</i>	
	<i>Fair Market Assessed Value \$ 600,000</i>
	<i>Use-value Assessed (rental) Value <u>-\$ 125,100</u></i>
	<i>Deferred Value \$ 474,900</i>



# *Deferred Taxes*



## **Farm Example**

	<b>Fair Market Value</b>	<b>Income Approach</b>	<b>Rental Rate Approach</b>
Total Values	\$600,000	\$89,100	\$125,100
Property Tax Rate	\$0.68/\$100		
Property Tax	\$4,080	\$606	\$851
Deferred Taxes for 5 years		\$3,474	\$3,229



# *Virginia's Use-Value Taxation Program*



## **Farm Example**

### **Note:**

- If the land contained farm structures, e.g., a poultry house and/or grain bins, they would be taxed at their fair market value. Use-value assessment only applies to land.
- Farm dwellings and lots are taxed at fair market value.

### **Assumptions:**

- Owner meets all eligibility requirements for use-value assessment.



# *Virginia's Use-Value Taxation Program*



## **Orchard/Hort Operations**

- **Horticultural** is defined as only apples and other tree fruit (pears and stone fruit)
- Add-on values apply to apples and other tree-fruit
- Method for estimating net returns to orchard operation was developed in 1977



# Useful Reports



- VA procedures manual 2011  
<http://pubs.ext.vt.edu/446/446-011/446-011.html>
- See the Fall 2011 issues of the Journal of *Public Budgeting & Finance* for an article on use value assessment  
[www.blackwellpublishing.com/journal.asp?ref=0275-1100](http://www.blackwellpublishing.com/journal.asp?ref=0275-1100)
- Economic Benefits of Farmland Preservation: Evidence from the United States. Lori Lynch and Joshua M. Duke - WP 07-04  
<http://ageconsearch.umn.edu/bitstream/7342/2/wp070004.pdf>



# Useful Reports



- *Why Use-value Estimates Differ: Comparing Halifax and Pittsylvania Counties*

**[usevalue.agecon.vt.edu/publications.htm](http://usevalue.agecon.vt.edu/publications.htm)**

- *Use-Value Taxation in Virginia: A Brief Discussion*

**[usevalue.agecon.vt.edu/publications.htm](http://usevalue.agecon.vt.edu/publications.htm)**

- *Results of the 2003 Agricultural and Horticultural Use-Value Taxation Program Survey*

**[usevalue.agecon.vt.edu/publications.htm](http://usevalue.agecon.vt.edu/publications.htm)**

- *Measuring the Impact of Use-Value Taxation for Northampton County, Virginia*

**[usevalue.agecon.vt.edu/publications.htm](http://usevalue.agecon.vt.edu/publications.htm)**





# *Virginia's Use-Value Taxation Program*



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*Thanks!*  
*&*  
*Questions?*

*For more information see*  
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