COMMONWEALTH OF KENTUCKY
KENTUCKY BOARD OF TAX APPEALS
FILE NO. K12-S-03

JAMIE CLAIRE CORUM — APPELLANT

VS. — PREHEARING COMPLIANCE STATEMENT

HARLAN COUNTY PROPERTY VALUATION ADMINISTRATOR — APPELLEE

Comes now the Appellee, Harlan County PVA, by counsel, and submits to the Kentucky Board of Tax Appeals, pursuant to Amended Prehearing Order, the following Prehearing Compliance Statement.

1. See attached stipulations.

2. Witnesses:

   (A) Felicia Wooten, Harlan County PVA
   P. O. Box 209, Harlan, KY 40831, (606) 573-1990

   (B) Thomas Crawford
   Frankfort, KY (502) 564-8338

   (C) G. Herbert Pritchett
   222 Union Street, Madisonville, KY 42431, (270) 821-5765

3. Summary of issues of fact and issues of law:

   The primary issue involved in this matter is the value of the property and the method in which the value is determined for such property classified as agricultural property. Mrs. Wooten, the Harlan County PVA, followed the appropriate guidelines as established by the Department of Revenue in assessing the property of the Appellant.

4. Exhibits:

(A) Kentucky Revenue Cabinet Agricultural Guidelines

(B) Property Data Cards

(C) Assessment by G. Herb Pirtchett

Respectfully submitted,

Michael E. Pace
Assistant Harlan County Attorney
Counsel for Appellee
HARLAN COUNTY PVA

CERTIFICATE OF SERVICE

I hereby certify that the foregoing Prehearing Compliance Statement was served by US mail, postage prepaid, to the following this June 20, 2014:

Kentucky Board of Tax Appeals
128 Brighton Park Blvd.
Frankfort, KY 40601

Kenton Ball
228 East High Street
P. O. Box 34106
Lexington, KY 40588-4106

Michael E. Pace
Assistant Harlan County Attorney
P. O. Box 1440
Harlan, KY 40831-1440

COMMONWEALTH OF KENTUCKY
KENTUCKY BOARD OF TAX APPEALS
FILE NO. K12-S-03

JAMEE CLAIRE CORUM — APPELLANT

v. Stipulations

HARLAN COUNTY PROPERTY VALUATION ADMINISTRATOR — APPELLEE

Come the Appellant, Jamie Claire Corum, and the Appellee, Felicia Wooten, Harlan County Property Valuation Administrator, both by counsel, and submit the following Stipulations (Stip) to the Kentucky Board of Tax Appeals for use at the July 22,2014 hearing. All Stipulations shall concern the assessment date of January 1,2012 unless specified otherwise.

Stip 1: The Appellant owns a tree farm in Harlan County, Kentucky consisting of approximately 992 acres (hereinafter the Corum Farm).

Stip 2: The Appellant's tree farming activities on the Corum Farm constitute agriculture.

Stip 4: The portion of the Corum Farm used for tree farming is entitled to the Agricultural Use Exemption provided by Section 172A of the Kentucky Constitution.

Stip 5: The Appellee has no training or experience in tree farming, forestry or forest economics.

Stip 6: The Appellee assessed the Corum Farm at a flat rate of $ 125 per acre.

Stip 7: The Appellee used the rate of $ 125 per acre for on all woodland in Harlan County, Kentucky.

Stip 8: The Farm Property Data Card prepared by the Appellee shows all 992 acres of the Corum Farm as Class VI in the Soil capability classification.

Stip 9: In assessing the Corum Farm, the Appellee did not consider the individual soil characteristics of the Corum Farm.

Stip 10: In assessing the Corum Farm, the Appellee did not consider any other individual characteristics of the Corum Farm.

Stip 11: The Appellee's office contains sufficient computer capability to access Geographic Information Survey (GIS) data from the Commonwealth Office of Technology, Division of Geographic Information.

Stip 12: The Appellant timely protested the 2012 assessment of the Corum Farm to the Appellee and to the Harlan County Board of Assessment Appeals.

Stip 13: The Appellant timely appealed the 2012 decision of the Harlan County Board of Assessment Appeals to the Kentucky Board of Tax Appeals.

Respectfully submitted,
OFFICE OF THE HARLAN COUNTY ATTORNEY

Michael E. Pace
PO Box 1440
Harlan, Kentucky 40831.1440
606.573.1794 T
606.573.5818 T

2A041 (10-90)

FARM PROPERTY DATA CARD 5577

Account Number: 359600.02

Map Number: 103-00-00-008.00

Property Location: Abner Blount Bledsoe

359600.02

TINA JAMES CLARK & AS
P O BOX 1235
TINSLEY FORK KY 40984

103-00-00-008.00

STONEY FORK AT 40700-7000

District: Comm. Dist.

NOTES: for 2011 added 55 acre from 102-1 per Carmen - Gayle Gurgens)

Combined Acct #'s 359600.01 + 359600.03 323235

12/9 12/5 12-17 Combined 102-2.01 with this

PROPERTY DESCRIPTION

Size of Farm

Estimate: 100 Acres

(Source): +55 937

Deed: Acres

Calculated: ~~1,035.67~~ Acres

Shape of Farm

1. ☐ Typical
2. ☐ Elongated Depth
3. ☐ Elongated Width
4. ☐ Irregular
5. ☐ Noncontiguous
6. ☐

Location

1. ☐ Poor 4. ☐ Better
2. ☐ Fair 5. ☐ Best
3. ☐ Typical 6. ☐

Road Type:

Frontage:

SOIL CAPABILITY CLASSIFICATION AND VALUATION

Class	Acreage	Value/Acre	Value/Class	Adjustment	Adjusted Value/Class
VI	~~1033~~	125			
	937				
for 2011	992	125			

Adjustments for Extraordinary or Substandard Site Characteristics:

AGRICULTURAL USE VALUE OF LAND:

AGRICULTURAL USE ASSESSMENT AND FAIR CASH VALUE OF FARM

1 Year	2 Date Inspected	3 Total Taxable Value (Sum of Columns 4–7)	4 Land Agricultural Value	5 Improvements' Agricultural Value	6 Tobacco Base Agricultural Value	7 Residential* Fair Cash Value	8 Improvements' Fair Cash Value	9 Land Fair Cash Value	10 Total Fair Cash Value (Sum of Columns 7–9)
94	7/27	199,875	129,125	14,950	—	55,800	14,950	361,550	432,300
F		192,725	129,775	7,000		55,800	7,000		424,350
FEB 14 1997									
		179925	117125	7000		55800	7000	327917	389,750
						55800	7,000	347,200	410,000
2011		186,800	124,000	7,000					

(Phase E 339-815)

*See attached Residential Property Data Card.

62A036 (6-90)

RESIDENTIAL PROPERTY DATA CARD

(1) Map Number: 103-00-00-008.00

(2) Account Number: 10[illegible]

(3) PROPERTY LOCATION: KY 3465 - Abner's Br.

359600 02
CORUM JAMIE CLAIRE & AS
CUSTODIAN FOR JAMES T CORUM II
H C 86 BOX 1225
STONEY FORK KY 40988-9603

TAXING DISTRICT: COMMON

ASSESSMENT DATA

Year	Date Inspected	(6) Land Value	(7) Improvement Value	(8) Total Assessed Value
94	7/27	5,075	47,925 @ 28	[illegible]
	Storage/Carport/Storage	2800		55,800
FEB 14 1997				

SALES DATA

(9) Sale Price	(10) Sale Date	Deed Book and Page

BUILDING PHOTOGRAPH

103-00-00-008.00 9/26/13 ABNER'S BR

42-17

Date Photograph Taken 10-12-93

LAND DATA

(11) LOT SIZE: _____ Sq. Ft.

(12) FRONTAGE: _____ Lin. Ft.

(13) ACREAGE: _____ Acres

SOURCE: Owner: _____
Deed: _____
Calculated: ✓

(14) STREET/ROAD
1. ☐ 2 Lane
2. ☑ Secondary
3. ☐ Multi-Lane
4. ☐ Gravel
5. ☐ Unimproved
6. ☐ Private
7. ☐ _____

(17) PUBLIC UTILITIES
1. ☐ City Water
2. ☐ Natural Gas
3. ☐ Water & Gas
4. ☐ Water & Sewer
5. ☐ All Three
6. ☐ None
7. ☐ _____

(15) DRIVEWAY
1. ☐ Vacant
2. ☐ Paved
3. ☑ Gravel
4. ☐ Unimproved
5. ☐ _____

(18) SIDEWALKS
1. ☐ Rural
2. ☐ Yes
3. ☑ No
4. ☐ _____

(16) FLOOD HAZARD
1. ☑ None
2. ☐ Slight
3. ☐ Severe
4. ☐ _____

(19) TOPOGRAPHY
1. ☐ Level
2. ☑ Rolling
3. ☐ Steep
4. ☐ _____

APPRAISAL DATA

Appraiser: _____ Date: _____

(20) NEIGHBORHOOD
1. ☐ Poor
2. ☑ Fair
3. ☐ Typical
4. ☐ Better
5. ☐ Best
6. ☐ _____

(21) SITE CONDITION
1. ☐ Poor
2. ☑ Fair
3. ☐ Average
4. ☐ Good
5. ☐ Excellent
6. ☐ _____

(22) RESIDENCE CONDITION
1. ☐ Vacant Parcel
2. ☐ Unlivable
3. ☐ Poor
4. ☑ Fair
5. ☐ Good
6. ☐ Very Good
7. ☐ New
8. ☐ _____

(23) CONSTRUCTION QUALITY
1. ☐ Vacant Parcel
2. ☐ Poor
3. ☑ Economy
4. ☐ Standard
5. ☐ Custom
6. ☐ Luxury
7. ☐ _____

APPRAISER'S NOTES

COMPUTER RECORD NO.

62A036 (6-90)

RESIDENTIAL PROPERTY ~~DATA~~ CARD

(1) Map Number: 103-00-00-008.00

(2) Account Number: 3[illegible]

(3) PROPERTY LOCATION: KY 3165 - Abner's Br.

359600 02
CORUM JAMIE CLAIRE & AS
CUSTODIAN FOR JAMES T CORUM II
H C 86 BOX 1225
STONEY FORK KY 40988-9603

TAXING DISTRICT: Common

BUILDING PHOTOGRAPH

103-00-00-008.00 9/26/13 ABNER'S BR

42-17

Date Photograph Taken 10-12-93

LAND DATA

(11) LOT SIZE: _____ Sq. Ft.

(12) FRONTAGE: _____ Lin. Ft.

(13) ACREAGE: _____ Acres

SOURCE: Owner: _____

Deed: _____

Calculated: —

(14) STREET/ROAD
1. ☐ 2 Lane
2. ☑ Secondary
3. ☐ Multi-Lane
4. ☐ Gravel
5. ☐ Unimproved
6. ☐ Private
7. ☐ _____

(17) PUBLIC UTILITIES
1. ☐ City Water
2. ☐ Natural Gas
3. ☐ Water & Gas
4. ☐ Water & Sewer
5. ☐ All Three
6. ☐ None
7. ☐ _____

(15) DRIVEWAY
1. ☐ Vacant
2. ☐ Paved
3. ☑ Gravel
4. ☐ Unimproved
5. ☐ _____

(18) SIDEWALKS
1. ☐ Rural
2. ☐ Yes
3. ☑ No
4. ☐ _____

(16) FLOOD HAZARD
1. ☑ None
2. ☐ Slight
3. ☐ Severe
4. ☐ _____

(19) TOPOGRAPHY
1. ☐ Level
2. ☑ Rolling
3. ☐ Steep
4. ☐ _____

ASSESSMENT DATA

Year	Date Inspected	(6) Land Value	(7) Improvement Value @ 12	(8) Total Assessed Value
94	7/27	—	12,950	3/3
	Barn/storage		2,000	14,950
FEB 14 1994	Mfg		7000	7000

SALES DATA

(9) Sale Price	(10) Sale Date	Deed Book and Page

APPRAISAL DATA

Appraiser: _____ Date: _____

(20) NEIGHBORHOOD
1. ☐ Poor
2. ☑ Fair
3. ☐ Typical
4. ☐ Better
5. ☐ Best
6. ☐ _____

(21) SITE CONDITION
1. ☐ Poor
2. ☑ Fair
3. ☐ Average
4. ☐ Good
5. ☐ Excellent
6. ☐ _____

(22) RESIDENCE CONDITION
1. ☐ Vacant Parcel
2. ☐ Unlivable
3. ☐ Poor
4. ☑ Fair
5. ☐ Good
6. ☐ Very Good
7. ☐ New
8. ☐ _____

(23) CONSTRUCTION QUALITY
1. ☐ Vacant Parcel
2. ☐ Poor
3. ☑ Economy
4. ☐ Standard
5. ☐ Custom
6. ☐ Luxury
7. ☐ _____

APPRAISER'S NOTES

COMPUTER RECORD NO.

Introduction

"Cash Rent" for farm land, i.e., cropland, pastureland, woodland, etc. has been selected as the basis for the development of the agricultural values for assessment purposes. Cash Rent was chosen because it is reflective of income producing capability, and is derived from the market.

The use of cash rent as an indication of agricultural use value has several advantages. First, it represents an income stream to the landowner. The owner has accepted an agreeable (and market driven) rent in the form of a cash payment rather than assume the risk and costs involved in personally pursuing the production of crops or livestock. Second, cash rents depict gross income from investments in land that can be used to determine the use value of that land. Rents are related to farm land values in that they reflect the economic returns to the land, which yield estimates of value when capitalized.

We have set forth below a step-by-step explanation of how we have developed a cash rent per acre figure for each class of property in each of the six agricultural districts. These six districts correspond to the agricultural statistical districts used by the United States Department of Agriculture for Kentucky. The actual per acre values for each district which are available for your use appear in Exhibit B. These values are ready for your use without further calculation. The following is a step-by-step explanation of how those figures were calculated.

Step 1

Classes of Land

The following classifications are used by the U.S. Government to identify farm lands (Exhibit A attached hereto sets forth a description of each of these classes and a description of the more traditional classifications used by many PVA Offices).

Class I	Cropped every year.
Class II	Cropped for 3 years; pastured for 1 year
Class III	Cropped for 2 years; pastured for 2 years
Class IV	Cropped for 1 year; pastured for 3 years
Class V	Permanent Pasture
Class VI	Pasture – Woodland (80% of Class V)
Class VII	Pasture – Mostly Woodland (60% of Class V)
Class VIII	Pasture – Mostly Woodland (40% of Class V)

Most counties have access to a system to break farms down into the recognized eight land classes per USDA-NRCS Soil Surveys. For those counties that do not have or are presently transferring their system to these classes, the following modified system is recognized;

Prime Crop	Classes I & II
Cropland	Classes III & IV
Pasture	Classes V & VI
Woodland	Classes VII & VIII

Step 2

Cash Rents by USDA District

The following table represents the average unadjusted cash rent values for each of the six agricultural statistical districts ("ASD") based on averaged 2000 through 2009 data from each county within the district:

ASD	Cropland	Pastureland
1 – Purchase	$ 79.12	$ 32.71
2 – Midwest	$ 94.76	$ 33.57
3 – Central	$ 61.87	$ 28.22
4 – Northern	$ 61.42	$ 24.26
5 – Bluegrass	$ 60.70	$ 27.12
6 – Eastern	$ 56.16	$ 28.56
Statewide	$ 65.63	$ 28.79

Step 3

Application of per acre rents to each class

Using these classifications, we have prepared an example of the computation for each class below using cash rents for cropland and pastureland. For this example only, we will use the Statewide Average Rounded of $ 65 per acre for cropland and $ 29 per acre for pasture. As noted above the actual per acre rates which you will use are set forth in Exhibit B.

(Cash Rent Per Acre)			
Class I	$ 65 per acre cropland	=	$ 65 per acre
Class II	($65 + $65 + $65 + $29)/4 years	=	$ 56 per acre
Class III	($65 + $65 + $29 + $29)/4 years	=	$ 47 per acre
Class IV	($65 + $29 + $29 + $29)/4 years	=	$ 38 per acre
Class V	$ 29 per acre pastureland	=	$ 29 per acre
Class VI	(Pro-rata 80% of Class V)	=	$ 23 per acre
Class VII	(Pro-rata 60% of Class V)	=	$ 17 per acre
Class VIII	(Pro-rata 40% of Class V)	=	$ 12 per acre

Step 4

Adjustment to per acre figure for improvements

The USDA has calculated that about 20% of total farm value nationwide is made up of improvements. In order to compensate for the value attributable to any farm improvements included in the cash rent figures, the averaged rental amounts set forth above in Step 2 are discounted by 20%. This will prevent the double valuing of farm improvements.

All farm improvements will then be valued separately and added to the total land value for final determination of the overall agricultural value for farms.

Step 5

Capitalization of Cash Rents

Capitalization is the process of translating or converting an income stream into an indication of the present value of a property

The capitalization rate is an expression of interest, usually in terms of an annual percentage. The capitalization rate must be based upon the money market, physical and economic risks, marketability, and the attractiveness of other forms of investment, i.e., the current financial market information.

The "cap rate" must represent what sellers, buyers, and investors require in terms of an overall rate in order to attract the capital required to transfer farm ownership.

The formula for developing the capitalization rate for use in assessing farm land in Kentucky is the "mortgage-equity" method. This is composed of the actual cost of money to a farm purchaser together with the purchaser's equity investment.

The first component in the formula is a ten year average of mortgage interest rates as obtained from Farm Credit Services and IRS Rev Rules: 10-year average – 7.00% (2000-2009)

Since the first mortgage is typically 70% of the price of the farm property the 10-year average interest rate must be multiplied by 0.70 to arrive at the weighted factor that represents the first mortgage. (0.70 x 0.0700 = 0.0490) This factor is 4.90%

The second component in the formula is the return on investor's equity that has been developed from farm income divided by actual farm sales. This return is actually fairly low, roughly 3% to 4% on the properties examined. This percentage is combined with the first mortgage interest rate to create the actual annual cost of the investment in the farm. If the owner cannot pay the interest and obtain some return on his equity in the property he will probably fail. This factor is developed as follows:

$$7.00\% + 4\% = 11.00\%$$

The factor of 11.00% is then multiplied by the equity portion of the investment, 30%, to arrive at the equity component of the capitalization rate:

$$0.30 \times 0.1100 = 0.0330 \text{ or } 3.30\%$$

The total of these two components represent the money cost to the purchaser. To this is added the statewide effective property tax rate, 1%, to complete the formula. The effective tax rate represents the annual tax liability of the property and must be considered just as is the real cost of money to the purchaser.

These three components then comprise the capitalization rate used to compute property values:

Mortgage Component	4.90%
Equity Component	3.30%
Effective Tax Rate	1.00%
Total Rate	9.20%

The adjusted rent per acre is divided by the 9.20% capitalization rate to produce agricultural value, per acre, per land classification, per agricultural statistical district.

Examples **Statewide Average Cropland (Adjusted)**
$ 52.50 divided by 0.0920 = $ 570.63

Statewide Average Pastureland (Adjusted)
$ 23.03 divided by 0.0920 = $ 250.32

ACTUAL RECOMMENDED PER ACRE VALUES TO BE USED

The actual adjusted per acre values for each class in each of the six districts appears in Exhibit B. We have also provided you with the actual survey figures for each county within the districts in Exhibit C. If you would prefer to use your county specific data rather than the general district data, please contact your Field Representative or Jeffrey D. Kelley, Webster County PVA for further assistance with the computation.

Note -- From LRC Research Study Report 307 (January 2003)
Chapter III -- Property Taxes -- Page 21, 22;

"Legal Limitations

Despite the availability in principle of alternatives to lessen the impact of property taxes on forest management, and despite the use of some of these alternatives in other states, Kentucky law imposes limitations that make it exceptionally difficult to change the way forestland is currently taxed in the state. Kentucky Constitution § 171 requires all property of a particular class to be taxed uniformly, meaning at the same rate. Currently, forestland is classified as agricultural property. Thus, the state could not constitutionally provide a lower rate for forestland without also applying that lower rate to all agricultural property.

The state probably could not legally avoid this problem by classifying forestland separately, under a special forest management program or otherwise. It would not likely be recognized as a legitimate constitutional classification. In *Gillis v. Yount*, Ky. 748 S.W.2d 357 (1988), the Kentucky Supreme Court struck down a law designating unmined coal as a separate class of property, holding that classifications could not be based on a desire to provide an economic advantage for a particular industry or group of property owners. Agricultural land is classified separately from other real property by constitutional amendment. Indeed forestland currently receives its special use valuation based on its constitutional classification as agricultural land.

Kentucky also could not constitutionally mandate a particular valuation method. It could not, for example, require forestland to be assessed according to its income producing potential under a particular formula, such as with a productivity tax. The Kentucky Supreme Court held this impermissible in *Kentucky Board of Tax Appeals v. Gees*, Ky. 534 S.W.2d 247 (1976). The law providing for use valuation, the court said, is "self-executing." It is up to the property valuation administrators, using whatever appropriate and acceptable techniques available, to determine the correct assessed value."

Exhibit A

LAND CAPABILITY CLASSES

Class I

These soils are suited to a wide variety of plants and may be used safely for cultivated crops, pasture, range, woodland, and wildlife. The soils are nearly level and erosion hazard (wind and water) is low. These soils are deep, generally well-drained, and easily worked. They hold water Well and are either fairly well supplied with plant nutriments or highly responsive to inputs of fertilizer. Row crops and small grains can be grown on these soils year after year after year under high level management. This class represents level land.

Class II

These soils require careful soil management, including conservation practices, to prevent deterioration or to improve air and water relations when cultivated. The limitations are few and the practices are easy to apply. The soils may be used for cultivated crops, pasture, range, woodland, or wildlife food and cover. Various combinations of cropping systems and conservation practices may be used. Most recommendations include a rotation of 2 years of row crops followed by 1 year of hay and pasture. This class represents land having a slope of up to 6%

Class III

These soils have more restrictions than those in Class II and when used for cultivated crops the conservation practices are usually more difficult to apply and maintain. They may be used for cultivated crops, pasture, woodland, range, or wildlife food and cover. Again various combinations of cropping and conservation practices may be used. These range from 2 years of row crops and 1 year of hay and pasture and 1 year of row crops followed by 2 years of hay or pasture. A recommended rotation consists of 2 years of row crops followed by 2 years of hay and pasture. This class represents land having a slope up to 14%

Class IV

The restrictions in use for soils in this class are greater than those in Class III and the choice of plants is more limited. When cultivated, more careful management is required and conservation practices are more difficult to apply and maintain. These soils may be used for crops, pasture, woodland, range, or wildlife food and cover. This class has some severe limitations that restrict the choice of plants and require very careful management. A recommended rotation consists of 1 year of row crops followed by 3 years of hay and pasture. This class represents land having a slope up to 20%.

Class V

These soils have limitations that restrict the kind of plants that can be grown and that prevent normal tillage of cultivated crops. They are nearly level but some are wet, frequently overflowed by streams, are stony, and have climatic limitations, or have some combination of these limitations. This class has few erosion problems but is subject to frequent and severe flooding. This class should be kept in hay and pasture continuously.

Class VI

Physical conditions of soils placed in this class are such that it is practical to apply range and pasture improvements, if needed, such as seeding, liming, fertilizing, and water control with contour furrows, drainage ditches, diversions, or water spreaders. This class has severe limitations that make it generally unsuitable for cultivation. Land in this class should be limited to pasture, woodland, or wildlife food and cover. No row crops can be grown on this class. This class represents land having a slope up to 40%.

Class VII

Physical conditions of soils in this class are such that it is impractical to apply such pasture or range improvements as seeding, liming, fertilizing, and water control with contour furrows, ditches, diversions, or water spreaders. This class is unsuitable for cultivation and should be used only for pasture, woodland, or wildlife food and cover. A ground cover adequate for erosion control is necessary. This class represents land having a slope of up to 80%.

Class VIII

Soils and land forms in this class cannot be expected to return significant on-site benefits from management of crops, grasses, or trees, although benefits from wildlife use, watershed protection, or recreation may be possible. This class has severe limitations that prevent use for commercial production of plants and restricts the use to recreation, wildlife, water supply or esthetic purposes.

Prime Cropland

This soil group is suitable for a wide variety of crops, pasture, range, woodland, and wildlife. These soils will be nearly level with minimal erosion hazards. These soils will also be deep, well-drained and easily workable and row crops and grains can be grown year after year. This soil group corresponds closely to Class I and some Class II soil in the USDA soil survey method.

Cropland

These soils may be used for cultivated crops, pasture, range, woodland or wildlife and they require careful soil conservation practices to maintain their productiveness. Various combinations or crop systems may be employed with rotation of the various crops and pasture schemes followed. These soils relate to Class II, III, and IV in the USDA soil survey method.

Pasture

These soils have some limitations as to the capability to produce crops and as such are suitable for continuous use for hay and pasture land. A good ground cover is generally always needed on these soils for adequate erosion protection. These soils usually have steep slopes.

Woodland

These soils have few expectations for significant crop, grasses, or other uses beyond natural tree growth, wildlife use, watershed protection or possible recreation.

Exhibit – B – Statewide Model

Agricultural Value Calculations Form

Statewide 2011-2014

	10-Yr Avg.		Adjusted
Typical Cropland Rent Per Acre	$65.63	Less Bldg.	$52.50
Typical Pasure Rent Per Acre	$28.79	Less Bldg.	$23.03

Rental Pro-Rata

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Class I	$52.50		Crop Every Year	$52.50	0.0920	$570.63	100.00%
Class II	$52.50	$23.03	Crop 3 / Pasture 1	$45.14	0.0920	$490.56	85.97%
Class III	$52.50	$23.03	Crop 2 / Pasture 2	$37.77	0.0920	$410.48	71.93%
Class IV	$52.50	$23.03	Crop 1 / Pasture 3	$30.40	0.0920	$330.40	57.90%
Class V		$23.03	Pasture Every Year	$23.03	0.0920	$250.32	43.87%
Class VI			Pro-Rata 80% (V)	$18.43	0.0920	$200.26	35.09%
Class VII			Pro-Rata 60% (V)	$13.82	0.0920	$150.19	26.32%
Class VIII			Pro-Rata 40% (V)	$9.21	0.0920	$100.13	17.55%

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Prime Crop	$52.50		Classes I & II	$48.82	0.0920	$530.59	100.00%
Cropland	$52.50	$23.03	Classes III & IV	$34.08	0.0920	$370.44	69.82%
Pasture		$23.03	Classes V & VI	$20.73	0.0920	$225.29	42.46%
Woodland		$23.03	Classes VII & VIII	$11.52	0.0920	$125.16	23.59%

Mortgage Rates

2000	8.20%	2005	6.44%
2001	8.20%	2006	6.02%
2002	7.88%	2007	6.10%
2003	7.36%	2008	6.38%
2004	6.93%	2009	6.50%

10-Year Average of Mortgage Rates
20 Year Fixed 80%/20% Loans
Source: Farm Credit Services

Average 7.00%

Rate Calculations

Mortgage Position	70%	x	7.00%	Equals	4.90%
Mortgage Position	30%	x	11.00%	Equals	3.30%
			Indicated Land Rate		8.20%
		Add	Effective Tax Rate		1.00%
			Indicated Cap Rate		9.20%

Exhibit – B – ASD District #1

Agricultural Value Calculations Form

ASD District #1 2011-2014

	10 Yr Avg.		Adjusted
Typical Cropland Rent Per Acre	$79.12	Less Bldg.	$63.30
Typical Pasture Rent Per Acre	$32.71	Less Bldg.	$26.17

Rental Pro-Rata

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Class I	$63.30		Crop Every Year	$63.30	0.0920	$687.93	100.00%
Class II	$63.30	$26.17	Crop 3 / Pasture 1	$54.01	0.0920	$587.04	85.34%
Class III	$63.30	$26.17	Crop 2 / Pasture 2	$44.73	0.0920	$486.16	70.67%
Class IV	$63.30	$26.17	Crop 1 / Pasture 3	$35.45	0.0920	$385.28	56.01%
Class V		$26.17	Pasture Every Year	$26.17	0.0920	$284.40	41.34%
Class VI			Pro-Rata 80% (V)	$20.93	0.0920	$227.52	33.07%
Class VII			Pro-Rata 60% (V)	$15.70	0.0920	$170.64	24.81%
Class VIII			Pro-Rata 40% (V)	$10.47	0.0920	$113.76	16.54%

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Prime Crop	$63.30		Classes I & II	$58.66	0.0920	$637.49	100.00%
Cropland	$63.30	$26.17	Classes III & IV	$40.09	0.0920	$435.72	68.35%
Pasture		$26.17	Classes V & VI	$23.55	0.0920	$255.96	40.15%
Woodland		$26.17	Classes VII & VIII	$13.08	0.0920	$142.20	22.31%

Mortgage Rates

2000	8.20%	2005	6.44%
2001	8.20%	2006	6.02%
2002	7.88%	2007	6.10%
2003	7.36%	2008	6.38%
2004	6.93%	2009	6.50%

10-Year Average of Mortgage Rates
20 Year Fixed 80%/20% Loans
Source: Farm Credit Service

Average 7.00%

Rate Calculations

Mortgage Position	70%	x	7.00%	Equals	4.90%
Mortgage Position	30%	x	11.00%	Equals	3.30%
			Indicated Land Rate		8.20%
		Add	Effective Tax Rate		1.00%
			Indicated Cap Rate		9.20%

Exhibit – B – ASD District #2

Agricultural Value Calculations Form

ASD District #2 2011-2014

	10 Yr Avg		Adjusted
Typical Cropland Rent Per Acre	$94.76	Less Bldg.	$75.81
Typical Pasture Rent Per Acre	$33.57	Less Bldg.	$26.86

Rental Pro-Rata

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Class I	$75.81		Crop Every Year	$75.81	0.0920	$823.91	100.00%
Class II	$75.81	$26.86	Crop 3 / Pasture 1	$63.57	0.0920	$690.90	83.86%
Class III	$75.81	$26.86	Crop 2 / Pasture 2	$51.33	0.0920	$557.90	67.71%
Class IV	$75.81	$26.86	Crop 1 / Pasture 3	$39.09	0.0920	$424.89	51.57%
Class V		$26.86	Pasture Every Year	$26.86	0.0920	$291.88	35.43%
Class VI			Pro-Rata 80% (V)	$21.48	0.0920	$233.51	28.34%
Class VII			Pro-Rata 60% (V)	$16.11	0.0920	$175.13	21.26%
Class VIII			Pro-Rata 40% (V)	$10.74	0.0920	$116.75	14.17%

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Prime Crop	$75.81		Classes I & II	$69.69	0.0920	$757.41	100.00%
Cropland	$75.81	$26.86	Classes III & IV	$45.21	0.0920	$491.39	64.88%
Pasture		$26.86	Classes V & VI	$24.17	0.0920	$262.69	34.68%
Woodland		$26.86	Classes VII & VIII	$13.43	0.0920	$145.94	19.27%

Mortgage Rates

2000	8.20%	2005	6.44%
2001	8.20%	2006	6.02%
2002	7.88%	2007	6.10%
2003	7.36%	2008	6.38%
2004	6.93%	2009	6.50%

10-Year Average of Mortgage Rates
20 Year Fixed 80%/20% Loans
Source: Farm Credit Service

Average 7.00%

Rate Calculations

Mortgage Position	70%	x	7.00%	Equals	4.90%
Mortgage Position	30%	x	11.00%	Equals	3.30%
			Indicated Land Rate		8.20%
		Add	Effective Tax Rate		1.00%
			Indicated Cap Rate		9.20%

Exhibit – B – ASD District #3

Agricultural Value Calculations Form

ASD District #3 2011-2014

	10 Yr Avg		Adjusted
Typical Cropland Rent Per Acre	$61.87	Less Bldg.	$49.50
Typical Pasture Rent Per Acre	$28.22	Less Bldg.	$22.58

Rental Pro-Rata

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Class I	$49.50		Crop Every Year	$49.50	0.0920	$537.94	100.00%
Class II	$49.50	$22.58	Crop 3 / Pasture 1	$42.77	0.0920	$464.80	86.40%
Class III	$49.50	$22.58	Crop 2 / Pasture 2	$36.04	0.0920	$391.65	72.81%
Class IV	$49.50	$22.58	Crop 1 / Pasture 3	$29.31	0.0920	$318.51	59.21%
Class V		$22.58	Pasture Every Year	$22.58	0.0920	$245.36	45.61%
Class VI			Pro-Rata 80% (V)	$18.06	0.0920	$196.29	36.49%
Class VII			Pro-Rata 60% (V)	$13.55	0.0920	$147.22	27.37%
Class VIII			Pro-Rata 40% (V)	$9.03	0.0920	$98.15	18.24%

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Prime Crop	$49.50		Classes I & II	$46.13	0.0920	$501.37	100.00%
Cropland	$49.50	$22.58	Classes III & IV	$32.67	0.0920	$355.08	70.82%
Pasture		$22.58	Classes V & VI	$20.32	0.0920	$220.83	44.05%
Woodland		$22.58	Classes VII & VIII	$11.29	0.0920	$122.68	24.47%

Mortgage Rates

2000	8.20%	2005	6.44%
2001	8.20%	2006	6.02%
2002	7.88%	2007	6.10%
2003	7.36%	2008	6.38%
2004	6.93%	2009	6.50%

10-Year Average of Mortgage Rates
20 Year Fixed 80%/20% Loans
Source: Farm Credit Service

Average 7.00%

Rate Calculations

Mortgage Position	70%	x	7.00%	Equals	4.90%
Mortgage Position	30%	x	11.00%	Equals	3.30%
			Indicated Land Rate		8.20%
		Add	Effective Tax Rate		1.00%
			Indicated Cap Rate		9.20%

Exhibit – B – ASD District #4

Agricultural Value Calculations Form

ASD District #4 2011-2014

	10 Yr Avg		Adjusted
Typical Cropland Rent Per Acre	$61.42	Less Bldg.	$49.14
Typical Pasture Rent Per Acre	$24.26	Less Bldg.	$19.41

Rental Pro-Rata

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Class I	$49.14		Crop Every Year	$49.14	0.0920	$534.03	100.00%
Class II	$49.14	$19.41	Crop 3 / Pasture 1	$41.70	0.0920	$453.26	84.87%
Class III	$49.14	$19.41	Crop 2 / Pasture 2	$34.27	0.0920	$372.48	69.75%
Class IV	$49.14	$19.41	Crop 1 / Pasture 3	$26.84	0.0920	$291.71	54.62%
Class V		$19.41	Pasture Every Year	$19.41	0.0920	$210.93	39.50%
Class VI			Pro-Rata 80% (V)	$15.53	0.0920	$168.75	31.60%
Class VII			Pro-Rata 60% (V)	$11.64	0.0920	$126.56	23.70%
Class VIII			Pro-Rata 40% (V)	$7.76	0.09201	$84.37	15.80%

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Prime Crop	$49.14		Classes I & II	$45.42	0.09201	$493.64	100.00%
Cropland	$49.14	$19.41	Classes III & IV	$30.56	0.09201	$332.09	67.27%
Pasture		$19.41	Classes V & VI	$17.47	0.09201	$189.84	38.46%
Woodland		$19.41	Classes VII & VIII	$9.70	0.09201	$105.47	21.37%

Mortgage Rates

2000	8.20%	2005	6.44%
2001	8.20%	2006	6.02%
2002	7.88%	2007	6.10%
2003	7.36%	2008	6.38%
2004	6.93%	2009	6.50%

10-Year Average of Mortgage Rates
20 Year Fixed 80%/20% Loans
Source: Farm Credit Service

Average 7.00%

Rate Calculations

Mortgage Position	70%	x	7.00%	Equals	4.90%
Mortgage Position	30%	x	11.00%	Equals	3.30%
			Indicated Land Rate		8.20%
		Add	Effective Tax Rate		1.00%
			Indicated Cap Rate		9.20%

Exhibit – B – ASD District #5

Agricultural Value Calculations Form

ASD District #5 **2011-2014**

	10 Yr Avg		Adjusted
Typical Cropland Rent Per Acre	$60.70	Less Bldg.	$48.56
Typical Pasture Rent Per Acre	$27.12	Less Bldg.	$21.70

Rental Pro-Rata

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Class I	$48.56		Crop Every Year	$48.56	0.0920	$527.77	100.00%
Class II	$48.56	$21.70	Crop 3 / Pasture 1	$41.84	0.0920	$454.78	86.17%
Class III	$48.56	$21.70	Crop 2 / Pasture 2	$35.13	0.0920	$381.78	72.34%
Class IV	$48.56	$21.70	Crop 1 / Pasture 3	$28.41	0.0920	$308.79	58.51%
Class V		$21.70	Pasture Every Year	$21.70	0.0920	$235.80	44.68%
Class VI			Pro-Rata 80% (V)	$17.36	0.0920	$188.64	35.74%
Class VII			Pro-Rata 60% (V)	$13.02	0.0920	$141.48	26.81%
Class VIII			Pro-Rata 40% (V)	$8.68	0.0920	$94.32	17.87%

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Prime Crop	$48.56		Classes I & II	$45.20	0.0920	$491.27	100.00%
Cropland	$48.56	$21.70	Classes III & IV	$31.77	0.0920	$345.29	70.28%
Pasture		$21.70	Classes V & VI	$19.53	0.0920	$212.22	43.20%
Woodland		$21.70	Classes VII & VIII	$10.85	0.0920	$117.90	24.00%

Mortgage Rates

2000	8.20%	2005	6.44%
2001	8.20%	2006	6.02%
2002	7.88%	2007	6.10%
2003	7.36%	2008	6.38%
2004	6.93%	2009	6.50%

10-Year Average of Mortgage Rates
20 Year Fixed 80%/20% Loans
Source: Farm Credit Service

Average **7.00%**

Rate Calculations

Mortgage Position	70%	x	7.00%	Equals	4.90%
Mortgage Position	30%	x	11.00%	Equals	3.30%
			Indicated Land Rate		8.20%
		Add	Effective Tax Rate		1.00%
			Indicated Cap Rate		9.20%

Exhibit – B – ASD District #6

Agricultural Value Calculations Form

ASD District #6 2011-2014

	10 Yr Avg		Adjusted
Typical Cropland Rent Per Acre	$56.16	Less Bldg.	$44.93
Typical Pasture Rent Per Acre	$28.56	Less Bldg.	$22.85

Rental Pro-Rata

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Class I	$44.93		Crop Every Year	$44.93	0.0920	$488.29	100.00%
Class II	$44.93	$22.85	Crop 3 / Pasture 1	$39.41	0.0920	$428.30	87.71%
Class III	$44.93	$22.85	Crop 2 / Pasture 2	$33.89	0.0920	$368.31	75.43%
Class IV	$44.93	$22.85	Crop 1 / Pasture 3	$28.37	0.0920	$308.31	63.14%
Class V		$22.85	Pasture Every Year	$22.85	0.0920	$248.32	50.85%
Class VI			Pro-Rata 80% (V)	$18.28	0.0920	$198.66	40.68%
Class VII			Pro-Rata 60% (V)	$13.71	0.0920	$148.99	30.51%
Class VIII			Pro-Rata 40% (V)	$9.14	0.0920	$99.33	20.34%

	Crop Base	Past Base	Cropping Pattern	Adjusted	Cap Rate	Ag. Value	%
Prime Crop	$44.93		Classes I & II	$42.17	0.0920	$458.30	100.00%
Cropland	$44.93	$22.85	Classes III & IV	$31.13	0.0920	$338.31	73.82%
Pasture		$22.85	Classes V & VI	$20.56	0.0920	$223.49	48.76%
Woodland		$22.85	Classes VII & VIII	$11.42	0.0920	$124.16	27.09%

Mortgage Rates

2000	8.20%	2005	6.44%
2001	8.20%	2006	6.02%
2002	7.88%	2007	6.10%
2003	7.36%	2008	6.38%
2004	6.93%	2009	6.50%

10-Year Average of Mortgage Rates
20 Year Fixed 80%/20% Loans
Source: Farm Credit Service

Average 7.00%

Rate Calculations

Mortgage Position	70%	x	7.00%	Equals	4.90%
Equity Position	30%	x	11.00%	Equals	3.30%
			Indicated Land Rate		8.20%
		Add	Effective Tax Rate		1.00%
			Indicated Cap Rate		9.20%

Exhibit – C – ASD District #1

COUNTY ASD District #1	2010 *Adj* *Cropland* *Rents*	2010 *Adj* *Pasture* *Rents*
BALLARD	$73	$29
CALLOWAY	$76	$25
CARLISLE	$78	$27
FULTON	$86	$34
GRAVES	$88	$44
HICKMAN	$95	$40
LIVINGSTON	$65	$27
LYON	$74	$29
McCRACKEN	$72	$31
MARSHALL	$71	$37
TRIGG	$93	$38
Mean Value	**$79.12**	**$32.71**
Std. Dev.	**$9.82**	**$6.32**
C.O.V.	**12.41%**	**19.32%**
Samples	**#11**	**#11**

Exhibit – C – ASD District #2

COUNTY ASD District #2	2010 *Adj. Cropland Rents*	2010 *Adj. Pasture Rents*
CALDWELL	$78	$26
CHRISTIAN	$92	$48
CRITTENDEN	$62	$27
DAVIESS	$96	$31
HANCOCK	$89	$47
HENDERSON	$115	$35
HOPKINS	$85	$22
LOGAN	$103	$36
McLEAN	$89	$28
MUHLENBERG	$79	$26
OHIO	$98	$35
SIMPSON	$93	$28
TODD	$98	$35
UNION	$134	$49
WEBSTER	$111	$28
Mean Value	**$94.76**	**$33.57**
Std Dev.	**$17.11**	**$8.66**
C.O.V.	**18.05%**	**25.81%**
Samples	**#15**	**#15**

Exhibit – C – ASD District #3

COUNTY ASD District #3	2010 *Adj. Cropland Rents*	2010 *Adj. Pasture Rents*
ADAIR	$55	$26
ALLEN	$57	$25
BARREN	$62	$26
BRECKINRIDGE	$73	$27
BULLITT	$45	$18
BUTLER	$74	$22
CASEY	$61	$27
CLINTON	$51	$22
CUMBERLAND	$47	$21
EDMONSON	$59	$30
GRAYSON	$52	$21
GREEN	$48	$26
HARDIN	$72	$34
HART	$49	$26
JEFFERSON	$59	$37
LARUE	$81	$43
MARION	$69	$32
MEADE	$78	$32
METCALFE	$52	$29
MONROE	$60	$36
NELSON	$67	$27
RUSSELL	$51	$30
TAYLOR	$77	$33
WARREN	$87	$26
Mean Value	**$61.87**	**$28.22**
Std. Dev.	**$12.07**	**$5.87**
C.O.V.	**19.51%**	**20.80%**
Samples	**#24**	**#24**

Exhibit – C – ASD District #4

COUNTY ASD District #4	2010 *Adj. Cropland Rents*	2010 *Adj. Cropland Rents*
BOONE	$53	$23
BRACKEN	$66	$26
CAMPBELL	$52	$23
CARROLL	$60	$19
GALLATIN	$71	$17
GRANT	$37	$19
HENRY	$78	$22
KENTON	$52	$20
OLDHAM	$65	$35
OWEN	$63	$32
PENDLETON	$74	$34
TRIMBLE	$67	$24
Mean Value	**$61.42**	**$24.26**
Std. Dev.	**$11.48**	**$6.00**
C.O.V.	**18.69%**	**24.72%**
Samples	**#12**	**#12**

Exhibit – C – ASD District #5

COUNTY ASD District #5	2010 *Adj. Cropland Rents*	2010 *Adj. Pasture Rents*
ANDERSON	$64	$21
BATH	$56	$27
BOURBON	$43	$33
BOYLE	$40	$28
CLARK	$57	$25
FAYETTE	$49	$27
FLEMING	$57	$31
FRANKLIN	$59	$26
GARRARD	$69	$27
HARRISON	$69	$30
JESSAMINE	$60	$22
LINCOLN	$58	$30
MADISON	$37	$23
MASON	$58	$27
MERCER	$76	$24
MONTGOMERY	$50	$27
NICHOLAS	$63	$27
ROBERTSON	$54	$19
SCOTT	$58	$19
SHELBY	$68	$37
SPENCER	$90	$41
WASHINGTON	$69	$31
WOODFORD	$92	$23
Mean Value	**$60.70**	**$27.12**
Std. Dev.	**$13.48**	**$5.33**
C.O.V.	**22.20%**	**19.65%**
Samples	**#23**	**#23**

Exhibit – C – ASD District #6

COUNTY ASD District #6	2010 *Adj.* *Cropland* *Rents*	2010 *Adj.* *Pasture* *Rents*
BELL	$55	$23
BOYD	$53	$31
BREATHITT	$105	$26
CARTER	$62	$37
CLAY	$44	$23
ELLIOTT	$61	$38
ESTILL	$56	$31
FLOYD	$53	$32
GREENUP	$46	$20
HARLAN	$56	$40
JACKSON	$57	$24
JOHNSON	$49	$27
KNOTT	$83	$46
KNOX	$36	$20
LAUREL	$47	$15
LAWRENCE	$56	$36
LEE	$31	$11
LESLIE	$78	$48
LETCHER	$69	$37
LEWIS	$44	$26
McCREARY	$49	$26
MAGOFFIN	$60	$22
MARTIN	$49	$28
MENIFEE	$53	$25
MORGAN	$51	$27
OWSLEY	$36	$16
PERRY	$63	$37
PIKE	$48	$31
POWELL	$66	$32
PULASKI	$53	$27
ROCKCASTLE	$53	$28
ROWAN	$60	$27
WAYNE	$72	$31
WHITLEY	$44	$26
WOLFE	$70	$25
Mean Value	**$56.16**	**$28.56**
Std. Dev.	**$14.07**	**$8.13**
C.O.V.	**25.05%**	**28.45%**
Samples	**#35**	**#35**

GENERAL OVERVIEW OF ASSESSMENT PROCEDURES FOR AGRICULTURAL PROPERITES

Kentucky's Constitution in Section 171, mandates that:

> "The General Assembly shall provide by law an annual tax which, with other resources shall be sufficient to defray the estimated expenses of the Commonwealth for each fiscal year. Taxes...***shall be uniform upon all property of the same class*** (emphasis added), subject to taxation within the territorial limits of the authority levying the tax..."

As ratified on November 4, 1969, section 172a of the Kentucky Constitution provides:

> "Notwithstanding contrary provisions, The General Assembly shall provide by general law for the assessment for ad valorem purposes of agricultural and horticultural land according to the land's value for agriculture and horticultural use."

Kentucky Revised Statues (KRS), chapter 132, which deals with the levy and assessment of property taxes, defines the terms agricultural or horticultural value in KRS 132.101 (11). It notes this value is, "based upon the income-producing capability and comparable sales of farmland purchased for farm purposes where the price is indicative of farm use value..." Subsections (a) through (g) note that it is appropriate to consider a number of factors including:

(a) Relative percentages of tillable land, pasture land, and woodland.
(b) The degree of productivity of the soil, and
(g) Factors which affect the general agricultural or horticultural economy such as: interest, price of farm products, cost of farm materials and supplies, labor or any economic factor which would affect net farm income.

Hence, the enabling legislation (KRS 132) recognizes that income-producing capability must be identified and further notes that comparable sales of farm land purchased for farm purposes must be considered. The factors mentioned in KRS 131.010 (11) are important as they relate to the two differing methodologies proposed.

In 1984, the *Dolan v. Land* decision noted that an assessment procedure must, "...result in an effective tax which was equally burdensome on all farm tax payers." A method of assessment must, "...take into account the specific characteristics of each farm."

Dolan, citing *Kentucky Board of Tax Appeals v. Gess, KY.534 S.W.2D 247(1976)* noted, "the income producing capacity of land is not the only factor to be considered when establishing the value of the

property." This reality is especially important when one looks at Dr. Stainback's proposed assessment procedure. *Gess* also noted that comparable sales alone cannot be used, "...unless and until all extraneous factors, if any, entering into the price or prices paid are identified and eliminated."

SUMMARY OF KDOR AGRICULTURAL ASSESSMENT RECOMMENDATIONS

The Kentucky Department of Revenue (KDOR) provides a methodology for local PVAs to consider when implementing the assessment of agricultural or horticultural properties. It is a recommendation to PVAs who can choose to use it or not, depending upon whether or not it fits the reality they see in their counties. This assessment procedure is uniform across all classes of agricultural properties. It takes into account the soil capability of each property by dividing it into 8 different classes of soils. Recognizing that the higher the productivity of the soil, the higher its value, it establishes percentages assigned to each soil's class, based upon the highest class (class I). These classes recognize the productivity of the various soils for both traditional row crop uses and for the growing of timber.

The Department then relies upon 10-year averages of cash rents as obtained by the USDA-FSA and the National Agricultural Statistics Service, by county. These rents are then used as a model for each of the six agricultural districts as recognized by the Kentucky Agricultural Statistics Service. The income is based upon the soils class of each soil found on the farm. The income from these cash rents are then capitalized into an agricultural value estimate using a capitalization rate derived by the recognized band of investment technique. This recognized technique recognizes that an overall capitalization rate is made up of a mortgage component and equity component and the return of and return on capital in each of these components must be satisfied in an overall capitalization rate. As is appropriate, market averages for the average loan to value ratio for farms, the prevailing Farm Credit interest rate (which is also the rate used by the Internal Revenue Service for the calculation of agricultural value for tax reporting purposes) and the resulting return on equity is used.

Appropriate application therefore of the prevailing class cash rental for the various land classes corresponds for the rent paid for property for agricultural purposes. It is divided by an appropriate rate of return recognized by the valuation industry to arrive at an assessment that is fair and "equally burdensome" to all farmers.

Strengths

This methodology has the following strengths:

1. It is based on cash rents that are made for agricultural purposes only and would therefore have no undue urban or other development related issues.

2. It utilizes recognized techniques by the valuation industry in arriving at a value estimate.

3. As such it is "equally burdensome" to all farmers,

4. It is a guide to be used by PVAs in the various counties in accordance with case law and is not mandated for use.

5. The percentage applied to each land class has been generally derived from sales of properties of those various land classes and is therefore in line with market forces.

Weakness:

1. The methodology used are multi-year averages which, in increasing markets would tend to under assess properties for their agricultural value and in declining markets would tend to over assess properties. However, the use of multi-year averages would also tend to depress volatility and would be in line with most assessment procedures where assessors reassess those properties that have not sold every 4 or 5 years.

STAINBACK/CUSHING METHODOLOGY WEAKNESSES

Dr. Andrew Stainback proposes a methodology that as I understand it assumes 70-year cycles of the harvesting of timber. It further uses Soil Equivalent Value (SEV) and discounts projected profits from woodland used for strictly timber growing, at a discount rate that is not directly derived from the market. This methodology has a number of weaknesses which are outlined as follows:

1. It is contrary to both the *Dolan* and *Gess* decisions which note that the assessment of properties based upon their income only is not appropriate.

2. It relies upon the assumption that income from an acre of timber is only realized once every 70 years. In fact, timber farms contain multiple acres and well managed timber farms have periodic revenues based upon periodic harvesting of a portion of the acreage under management. Indeed, well managed timber farms periodically cut and thin their stands so as to promote optimal growth of the superior trees. The results of this effort are sold. Hence, to discount only one year of income due in the 70^{th} year runs contrary to the practice of well managed timber farms. It is also totally illogical and contrary to reality. If a young person of 25 purchased a timber tract, under the Stainback methodology, that person would have to live to 95 (25 + 70) to receive any income off the property. The Stainback scenario is simply contrary to what actually occurs – timber tracts are harvested periodically.

3. The 70-year assumption appears to assume that the timber land has no pre-marketable timber on it, which is most of the time, not the case. Most timber

tracts when purchased, do have some timber in various stages of growth on the tract.

4. The Stainback model relies upon numbers that cannot be easily quantified and therefore the model is prone to wide swings in valuation indicators – depending upon the multiple assumptions that must be incorporated into the valuation model. For instance, how much will stumpage timber bring 70 years from now. Obviously, this price cannot be predicted with any appreciable degree of accuracy.

5. It further does not recognize that differing trees have differing growth rates and differing prices. The choice of which tree species to plant can significantly change the value estimated under this approach.

6. Although the state has some 12.7 million acres of forested land, 92% of that land is privately owned by more than 400,000 small land owners. Additionally over 94% of all private land owners hold 100 acres or less of timberland. [1] In short, an overwhelming majority of the woodland in Kentucky that must be assessed for taxation purposes is owned by small owners; contains less than 100 acres; and can be assumed therefore to be cultivated using low timber management techniques. Hence, the Stainback Valuation Method, when applied to these properties would under assess them thereby placing a larger burden of taxation on larger timber farms that are more intensively managed.

7. It fails to recognize that, particularly in smaller tracts, woodland is used for agricultural purposes other than for timber harvesting. Such uses include the growing of timber along streams and rivers for erosion control where the harvesting of the timber would destroy the erosion purpose of the stand. Hence, application of the Stainback methodology on timber acreage that is not projected to be harvested would not conform to the reality associated with the farm.

8. Its methodology also would not work for those farms that are subject to conservation, wetland mitigation, and wetland reserve easements. The timber on these farms is precluded from ever being harvested.

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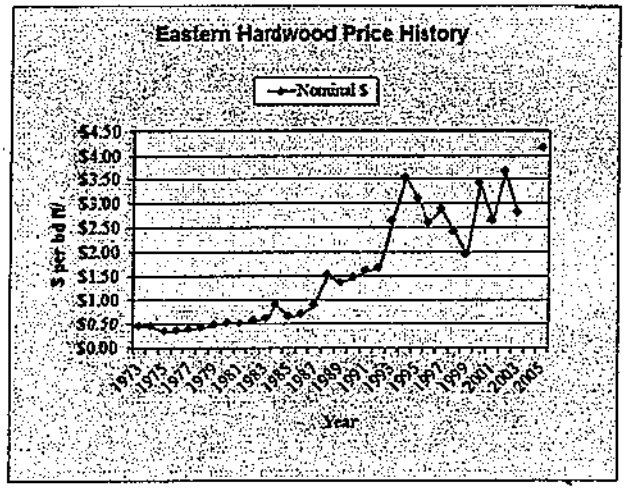
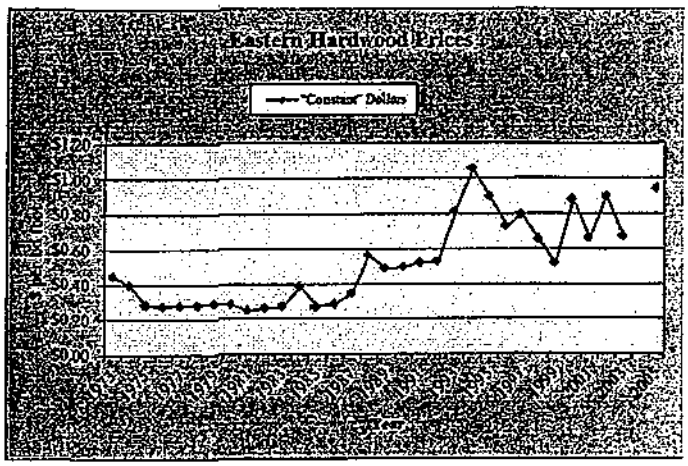
[1] *Kentucky Forest our Renewable Natural Resource,* brochure, Kentucky Division of Forestry, Kentucky Tree Farm Committee in Kentucky Forest Industries Association

ILLUSTRATIONS OF STAINBACK/CUSHING MODEL WEAKNESSES

The most obvious weakness of this model is taking today's prices and applying a reversion financial factor on those prices to arrive at a value. If as the Stainback model assumes, harvesting is 70 years off, then the 70 year hence price projection must be utilized to project back to a present worth – not the price of timber today. One way to project futures prices is to look at the historical prices and trends. We therefore looked back to see what eastern hardwood prices have done over the last 40 some years for which there is data. We utilized the Statistical Abstract of America, Table 850, to look at eastern hardwood price history since 1973. That data is graphically displayed both in nominal and "constant dollar" prices. The constant dollar prices displayed are the nominal prices adjusted for inflation using the consumer price index.





The compounded yearly change in "constant" dollars over various periods is summarized in the following table.

Period	*Compounded Yearly Change*
1973 to 1987	-1.85%
1988 to 1995	3.60%
1996 to 2005	2.85%
1973 to 2005	2.33%

As that table shows, in various years the compounded yearly change has ranged from -1.85% to 3.60% with the compounded yearly change of "constant" dollars being some 2.33%. Hence, in using the Stainback/Cushing Model, I assumed an increasing cost in eastern hardwood lumber at somewhere around 2.33%, compounded yearly.

The next problem deals with price variability - what base price do you use? The following table from the Kentucky Woodland Magazine illustrates this problem.

As the reader can see, depending upon the type of hardwood and year, prices ranged from just under $300 per thousand board feet to almost $700 per thousand board feet.

HOW OFTEN IS THE TIMBER HARVESTED

As noted earlier the Cushing and Stainback models, assume a 70 year harvesting period for the timber. In point of fact, prudent timber management consists of periodic thinning of the timber and existing timber stands are many times managed based on periodic cutting of either the entire tract or portions of the tract. The 70 year harvesting period further is in contradiction with a report entitled "Hardwood Plantations as an Investment" authored by the University of Tennessee Extension Services in cooperation with the Cooperative Extension Service of the University of Kentucky. In that publication, the authors assume a 45 year harvesting period and the timber being clear cut for saw timber. They note that "thinning could start around age 20 and produce periodic income and shorten the time needed to provide higher valued products."

Table 1. Net present value (NPV), internal rate of return (IRR) and annual equivalent (AE) investments at various establishment costs after 45 years.

Establishment Costs ($/acre)	NPV ($/acre)	IRR (%)	AE ($/acre/year)
$90	$398.14	9.09	$20.78
130	368.14	8.19	19.22
175	334.39	7.48	17.46
225	296.89	6.88	15.50
275	259.39	6.41	13.54

Overall depending upon the assumptions, the indicated valuation ranged from -$20.94 to $527.50 per acre – highlighting the problem associated with using discounted cash flow analysis in appraising timber.

It is noteworthy that in this publication depending upon establishment costs, the net present value of the timber range from just under $260 to just under $400 per acre (Table 1).

Table 2. Net present value (NPV), internal rate of return (IRR) and annual equivalent (AE) investments at various discount rates after 45 years.

Discount rate	NPV ($/acre)	IRR (%)	Annual Equivalent ($/acre/year)
4%	$527.50	8.09	$21.50/ac/yr
6%	242.93	8.09	12.68
8%	110.47	8.09	6.96 Before tax is negative
10%	19.36	8.09	-1.51 Before tax is negative
12%	-20.94	8.09	-1.92 Before tax is negative

Depending upon a choice of discount rates ranging from 4-8%, the net present value was just over $110 to just under $530 per acre (Table 2).

Depending upon the price of the timber, (they used $175 to $325/MBF), the net present value ranged from just under $400 to just under $800 per acre (Table 3). In Table 4, if one assumes a yield of $5,100 per board foot, by iteration, the net present value is over $400 per acre (Table 4).

Table 3. Net present value (NPV), internal rate of return (IRR) and annual equivalent (AE) investments at various stumpage prices after 45 years.

$/MBF	NPV ($/acre)	IRR (%)	Annual Equivalent ($/acre/year)
$175	$398.14	9.09%	$20.78
225	531.18	9.69	27.73
275	664.22	10.18	34.67
325	797.26	10.60	41.62

Table 4. Net present value (NPV), internal rate of return (IRR) and annual equivalent (AE) investments at various yield rates after 45 years.

Yield (bd ft/acre)	NPV ($/acre)	IRR (%)	AE ($/acre/year)
4,000	$242.93	8.09%	$12.68
6,000	398.14	9.09	20.78
8,000	553.35	9.79	28.89
10,000	708.57	10.33	36.99
12,000	863.78	10.79	45.00

THE EFFECT OF MANAGEMENT DECISIONS ON THE RESULTING VALUE

In contradiction to the *Gess* and *Dolan* cases under the Stainback and Cushing models, the resulting value is more a function of management and management's decisions than the intrinsic value of the land, for timber purposes. The resulting value depends widely upon factors that are controlled by the manager/owner of the timber and not by the attributes of the land itself.

To further demonstrate the wide change in variability depending upon these management/owner decisions and how one incorporates them into the analysis, I estimated the value using the Stainback and Cushing methodology using various assumptions. The discount rate assumptions ranged from 3% to 8% with the real price appreciation ranging from 0% to 2.33% per year (in "real" dollars), the growing age ranging from 60 to 80 years and the periodic cutting cycle for a portion of the property ranging from 20-30 years – all assuming a 300 acre timber tract. The results of the value calculations are contained on the following page.

As the reader can see, the value estimate range was significantly wide - ranging from $16.00 per acre to as much as $1,593.00 per acre.

Realistically, we believe that discount rates from 5-8% assuming 60 year growing cycles and 20-30 year periodic harvests would be the norm of prudent timber management. In the Stainback/Cushing model, these assumptions return value estimates of from $112 to $801 per acre, depending upon whether or not one uses real price appreciation and yield estimates of from 4,000 board feet per acre to 5,172 board feet per acre. This results in a midrange indication around $450 per acre.

In all of the preceding scenarios, we did not input a yearly rent to the timberland. We do believe that some yearly rent imputation is appropriate as it has been our experience that these lands can rent for some $10 per year for hunting and recreational purposes. We also did not input any revenues accruing to the periodic thinning of the stand, which would certainly occur and bring in revenue. There are other potentials for income as well. We also did not subtract any expenses such as property tax expenses in the model either, essentially mirroring the Steinback/Cushing Model.

2.33% "real" price appreciation			
Discount Rate	Growing Age	Thinning Cycle	Value per Acre
3%	80	20	$1,500
5%	80	20	$666
8%	80	20	$261
3%	60	20	$1,593
5%	60	20	$801
8%	60	20	$339
3%	60	30	$1,541
5%	60	30	$694
8%	60	30	$244
3%	60	60	$1,391
5%	60	60	$439
8%	60	60	$81

No "real" price appreciation			
Discount Rate	Growing Age	Thinning Cycle	Value per Acre
3%	80	20	$578
5%	80	20	$305
8%	80	20	$140
3%	60	20	$706
5%	60	20	$393
8%	60	20	$185
3%	60	30	$598
5%	60	30	$293
8%	60	30	$112
3%	60	60	$349
5%	60	60	$110
8%	60	60	$20

2.33% "real" price appreciation			
Discount Rate	Growing Age	Thinning Cycle	Value per Acre
3%	80	20	$1,160
5%	80	20	$515
8%	80	20	$202
3%	60	20	$1,232
5%	60	20	$619
8%	60	20	$263
3%	60	30	$1,192
5%	60	30	$537
8%	60	30	$189
3%	60	60	$1,075
5%	60	60	$339
8%	60	60	$63

No "real" price appreciation			
Discount Rate	Growing Age	Thinning Cycle	Value per Acre
3%	80	20	$447
5%	80	20	$236
8%	80	20	$108
3%	60	20	$546
5%	60	20	$304
8%	60	20	$143
3%	60	30	$463
5%	60	30	$227
8%	60	30	$87
3%	60	60	$270
5%	60	60	$85
8%	60	60	$16

CONCLUSION

Therefore, after looking at the two differing assessment models and techniques, this writer is of the opinion that the KDOR model more closely conforms to traditional valuation procedures as envisioned by section 172a of the Kentucky Constitution, KRS 132.010 (9), (11) and the *Dolan and Gess* decisions. The Stainback methodology runs counter to many of the realities occurring in the timberland marketplace as well as many of the criteria set forth in the before mentioned court cases, statutes, and sections of the Constitution.