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MEMORANDUM

TO: All Property Valuation Administrators

FROM: Thomas S. Crawford, Director
Division of Local Support
Office of Property Valuation 

DATE: August 22, 2018

SUBJECT: 2019-2022 Recommended Agriculture Value Guidelines

Accompanying this memorandum are the recommended Agricultural Assessment Value Guidelines that have been updated for the 2019-2022 quadrennial physical review of real property that will be completed by all property valuation administrator (PVA) offices. These recommended guidelines are intended to create equitable and uniform agricultural assessments across the state. Although Section 172 of the Kentucky Constitution provides that all property not otherwise exempt shall be assessed at its fair cash value, Section 172A of the Constitution allows farmland to be assessed at its agricultural value. The Supreme Court of Kentucky, in its 1984 Dolan v. Land decision, ruled that the assessment of property - whether at its fair cash or agricultural value - must result in an equal tax burden for all property owners. It is the Office of Property Valuation's position that compliance with this court decision is obtained by having the assessment of farmland based upon a per acre value for each of the various land classes assigned to a particular farm with a separate valuation of all buildings based on the individual characteristics of the structures.

Since the land agricultural values recommended by these guidelines are the result of averaging various counties' information for a specific region of the state, a PVA office may have data that could be more useful in assessing farmland in his or her county. When a PVA believes this is the case, it is acceptable to depart from these guidelines; however, the method used must be documented and result in a uniform standard of assessment. The PVA should inform the office of the alternative method so that it can be reviewed and approved. The method used by the PVA will also be reviewed as part of the Office's biennial performance audit of the PVA office.

The following narrative provides a description of the various classes of farmland and the average cash rents received for cropland and pastureland in the six designated United States Department of Agriculture (USDA) districts in Kentucky. Also detailed is the adjustment to those rent values so that farm improvements are not double assessed, the allocation of the cropland and pastureland values to all of the property classes and how the capitalization rate used was determined.

Exhibit A provides a more detailed description of the type of land that should be included in each property class. Exhibit B lists the various counties in each Agricultural Statistical District (ASD) and the unadjusted cropland and pastureland rents for each county along with an average for the district. Finally, Exhibit C assigns per acre values for each property class in the various ASDs using the adjusted average values for each district.

Thank you for your careful review and implementation of these guidelines. If you have any questions please do not hesitate to contact your field representative or me.

Commonwealth of Kentucky
Department of Revenue
Local Valuation
501 High Street
Frankfort, Ky. 40602



**Agricultural Assessment
Recommended Guidelines
2019-2022 Quadrennial Cycle**

Using 2008 - 2017 Data

10 Year Weighted Analysis on Surveyed Cash Rents



Revised 08/1/2018
Kentucky Department of Revenue

Introduction

"Cash Rent" for farmland, 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 farmland values in that they reflect the economic returns to the land, which yield estimates of value when capitalized.

Set forth below is a step-by-step explanation of how a cash rent per acre figure for each class of property in each of the six agricultural districts was developed. 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 C. These values are ready for your use without further calculation.

Step 1

Classes of Land

The following classifications are used by the U.S. Government to identify farmlands (Exhibit A which follow in the next section 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) Pasture - |
| Class VII | Mostly Woodland (60% of Class V) Pasture - |
| Class VIII | 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 details the average unadjusted cash rent values for each of the six agricultural statistical districts ("ASD") based on averaged 2008 through 2017 data from each county within the district:

| ASD | Cropland | Pastureland |
|---------------|-----------|-------------|
| 1 - Purchase | \$ 96.80 | \$ 33.16 |
| 2-Midwest | \$ 128.58 | \$ 30.86 |
| 3 - Central | \$ 80.76 | \$ 28.45 |
| 4 - Northern | \$ 65.41 | \$ 20.18 |
| 5 - Bluegrass | \$ 66.90 | \$ 26.77 |
| 6 - Eastern | \$ 52.32 | \$ 24.30 |
| Statewide | \$ 75.72 | \$ 26.82 |

Step 3

Adjustment to Per Acre Rental Amount for Improvements

The USDA has calculated that approximately 20% of total farm value is comprised of improvements. In order to compensate for the value of any farm improvements included in the cash rent figures, the average rental values shown in Step 2 must be reduced by 20%. Using only the statewide averages as an example, the adjusted amount for cropland would be:

$$\text{\$75.72} \times 80\% (.80) = \text{\$60.58}$$

The statewide average for pastureland would be:

$$\text{\$26.82} \times 80\% (.80) = \text{\$21.46}$$

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

Step 4

Application of Per Acre Rents to Each Property Class

Using the property classifications shown in Step 1 the per acre rents for cropland and pastureland values need to be allocated to the various classes of property. Using the adjusted statewide averages of \$60.58 for cropland and \$21.46 for pastureland, the following is an example of the calculations that must be done.

| | | | |
|------------|---|---|-------------------|
| Class I | \$ 60.58 per acre rent | = | \$ 60.58 per acre |
| Class II | $(\$60.58 + \$60.58 + \$60.58 + \$21.46)/4$ years | = | \$ 50.80 per acre |
| Class III | $(\$60.58 + \$60.58 + \$21.46 + \$21.46)/4$ years | = | \$ 41.02 per acre |
| Class IV | $(\$60.58 + \$21.46 + \$21.46 + \$21.46)/4$ years | = | \$ 31.24 per acre |
| Class V | \$ 21.46 per acre rent | = | \$ 21.46 per acre |
| Class VI | (80% of Class V) | = | \$ 17.17 per acre |
| Class VII | (60% of Class V) | = | \$ 12.88 per acre |
| Class VIII | (40% of Class V) | = | \$ 8.58 per acre |

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 capitalization 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 farmland 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 Internal Revenue Bulletins: 10-year average – 5.41% (2008-2017)

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. $(0.70 \times 0.0541 = 0.03787)$ This factor is 3.787%

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 the farm will likely fail. This factor is developed as follows:

$$5.41\% + 4\% = 9.41\%$$

The factor of 9.41% is then multiplied by the equity portion of the investment, 30%, to arrive at the equity component of the capitalization rate:

$$0.30 \times 0.0941 = 0.02823 \text{ or } 2.823\%$$

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 | 3.787% |
| Equity Component | 2.823% |
| Effective Tax Rate | 1.00% |
| Total Rate | 7.61% |

The adjusted rent per acre for each property class is divided by the 7.61% capitalization rate to produce agricultural value, per acre, per land classification, per agricultural statistical district.

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 nutrients or highly responsive to inputs of fertilizer. Row crops and small grains can be grown on these soils 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

AVERAGE CROPLAND AND

PASTURELAND RENTS

BY COUNTY IN EACH AGRICULTURAL

STATISTICAL DISTRICT

Rents - ASD #1

| COUNTY | 2018 <u>Adj</u> <u>Cropland</u> | 2018 <u>Adj</u> <u>Pasture</u> |
|-------------------|---------------------------------------|--------------------------------------|
| ASD District #1 | <u>Rents</u> | <u>Rents</u> |
| BALLARD | \$89 | \$39 |
| CALLOWAY | \$100 | \$26 |
| CARLISLE | \$102 | \$39 |
| FULTON | \$117 | \$31 |
| GRAVES | \$103 | \$43 |
| HICKMAN | \$110 | \$44 |
| LIVINGSTON | \$83 | \$23 |
| LYON | \$78 | \$21 |
| McCRACKEN | \$82 | \$41 |
| MARSHALL | \$67 | \$26 |
| TRIGG | \$133 | \$33 |
| Mean Value | \$96.80 | \$33.16 |
| Std. Dev. | \$19.14 | \$8.45 |
| C.O.V. | 19.77% | 25.47% |
| Samples | #11 | #11 |

Rents - ASD #2

| COUNTY | 2018 | 2018 |
|-------------------|-----------------|----------------|
| | <u>Adj.</u> | <u>Adj.</u> |
| ASD District #2 | <u>Cropland</u> | <u>Pasture</u> |
| | <u>Rents</u> | <u>Rents</u> |
| CALDWELL | \$107 | \$31 |
| CHRISTIAN | \$151 | \$41 |
| CRITTENDEN | \$102 | \$20 |
| DAVISS | \$119 | \$23 |
| HANCOCK | \$99 | \$31 |
| HENDERSON | \$142 | \$39 |
| HOPKINS | \$118 | \$19 |
| LOGAN | \$174 | \$36 |
| McLEAN | \$120 | \$35 |
| MUHLENBERG | \$85 | \$22 |
| OHIO | \$92 | \$19 |
| SIMPSON | \$140 | \$34 |
| TODD | \$163 | \$41 |
| UNION | \$172 | \$41 |
| WEBSTER | \$147 | \$32 |
| Mean Value | \$128.58 | \$30.86 |
| Std Dev. | \$29.20 | \$8.33 |
| C.O.V. | 22.71% | 26.99% |
| Samples | #15 | #15 |

Rents - ASD #3

| COUNTY | 2018 <u>Adj.</u> <u>Cropland</u> | 2018 <u>Adj.</u> <u>Pasture</u> |
|-----------------|--|---------------------------------------|
| ASD District #3 | <u>Rents</u> | <u>Rents</u> |
| ADAIR | \$73 | \$27 |
| ALLEN | \$72 | \$26 |
| BARREN | \$109 | \$38 |
| BRECKINRIDGE | \$82 | \$28 |
| BULLITT | \$60 | \$23 |
| BUTLER | \$93 | \$22 |
| CASEY | \$58 | \$23 |
| CLINTON | \$53 | \$30 |
| CUMBERLAND | \$46 | \$20 |
| EDMONSON | \$76 | \$24 |
| GRAYSON | \$67 | \$25 |
| GREEN | \$86 | \$30 |
| HARDIN | \$97 | \$28 |
| HART | \$80 | \$32 |
| JEFFERSON | \$72 | \$28 |
| LARUE | \$120 | \$40 |
| MARION | \$92 | \$33 |
| MEADE | \$99 | \$31 |
| METCALFE | \$65 | \$23 |
| MONROE | \$67 | \$24 |
| NELSON | \$95 | \$29 |
| RUSSELL | \$56 | \$29 |
| TAYLOR | \$108 | \$34 |
| WARREN | \$114 | \$37 |
| Mean Value | \$80.76 | \$28.45 |
| Std. Dev. | \$20.52 | \$5.24 |
| C.O.V. | 25.41% | 18.44% |
| Samples | #24 | #24 |

Rents - ASD #4

| COUNTY ASD District #4 | 2018 | 2018 |
|---------------------------|--|---|
| | <u>Adj.</u> <u>Cropland</u> <u>Rents</u> | <u>Adj.</u> <u>Pasture</u> <u>Rents</u> |
| BOONE | \$60 | \$21 |
| BRACKEN | \$78 | \$23 |
| CAMPBELL | \$51 | \$16 |
| CARROLL | \$52 | \$14 |
| GALLATIN | \$88 | \$14 |
| GRANT | \$52 | \$16 |
| HENRY | \$75 | \$26 |
| KENTON | \$50 | \$15 |
| OLDHAM | \$69 | \$29 |
| OWEN | \$51 | \$20 |
| PENDLETON | \$68 | \$18 |
| TRIMBLE | \$91 | \$28 |
| Mean Value | \$65.41 | \$20.18 |
| Std. Dev. | \$15.00 | \$5.45 |
| C.O.V. | 22.93% | 27.00% |
| Samples | #12 | #12 |

Rents - ASD #5

| COUNTY | 2018 <u>Adj.</u> <u>Cropland</u> <u>Rents</u> | 2018 <u>Adj.</u> <u>Pasture</u> <u>Rents</u> |
|------------------------|--|---|
| ASD District #5 | | |
| ANDERSON | \$49 | \$22 |
| BATH | \$69 | \$23 |
| BOURBON | \$74 | \$39 |
| BOYLE | \$52 | \$35 |
| CLARK | \$65 | \$28 |
| FAYETTE | \$87 | \$35 |
| FLEMING | \$69 | \$25 |
| FRANKLIN | \$66 | \$23 |
| GARRARD | \$44 | \$28 |
| HARRISON | \$60 | \$20 |
| JESSAMINE | \$60 | \$24 |
| LINCOLN | \$61 | \$30 |
| MADISON | \$30 | \$18 |
| MASON | \$76 | \$29 |
| MERCER | \$75 | \$33 |
| MONTGOMERY | \$51 | \$26 |
| NICHOLAS | \$74 | \$19 |
| ROBERTSON | \$58 | \$16 |
| SCOTT | \$60 | \$23 |
| SHELBY | \$102 | \$36 |
| SPENCER | \$91 | \$29 |
| WASHINGTON | \$74 | \$27 |
| WOODFORD | \$94 | \$28 |
| Mean Value | \$66.90 | \$26.77 |
| Std. Dev. | \$16.85 | \$6.04 |
| C.O.V. | 25.19% | 22.57% |
| Samples | #23 | #23 |

Rents - ASD #6

| COUNTY | 2018 <u>Adj.</u> <u>Cropland</u> <u>Rents</u> | 2018 <u>Adj.</u> <u>Pasture</u> <u>Rents</u> |
|-----------------|--|---|
| ASD District #6 | | |
| BELL | \$59 | \$29 |
| BOYD | \$35 | \$14 |
| BREATHITT | \$50 | \$28 |
| CARTER | \$47 | \$20 |
| CLAY | \$54 | \$25 |
| ELLIOTT | \$53 | \$16 |
| ESTILL | \$49 | \$20 |
| FLOYD | \$60 | \$32 |
| GREENUP | \$47 | \$19 |
| HARLAN | \$50 | \$38 |
| JACKSON | \$43 | \$18 |
| JOHNSON | \$52 | \$22 |
| KNOTT | \$88 | \$38 |
| KNOX | \$34 | \$18 |
| LAUREL | \$40 | \$18 |
| LAWRENCE | \$33 | \$17 |
| LEE | \$37 | \$12 |
| LESLIE | \$68 | \$41 |
| LETCHER | \$49 | \$27 |
| LEWIS | \$52 | \$24 |
| McCREARY | \$62 | \$24 |
| MAGOFFIN | \$43 | \$15 |
| MARTIN | \$63 | \$31 |
| MENIFEE | \$67 | \$18 |
| MORGAN | \$37 | \$18 |
| OWSLEY | \$47 | \$22 |
| PERRY | \$50 | \$26 |
| PIKE | \$60 | \$36 |
| POWELL | \$70 | \$35 |
| PULASKI | \$60 | \$31 |
| ROCKCASTLE | \$43 | \$23 |
| ROWAN | \$61 | \$22 |
| WAYNE | \$97 | \$33 |
| WHITLEY | \$36 | \$18 |
| WOLFE | \$37 | \$22 |
| Mean Value | \$52.32 | \$24.30 |
| Std. Dev. | \$14.42 | \$7.64 |
| C.O.V. | 27.56% | 31.44% |
| Samples | #35 | #35 |

EXHIBIT C

AGRICULTURAL VALUES PER ACRE

BY PROPERTY IN EACH

AGRICULTURAL STATISTICAL DISTRICT

ASD District #1

| Agricultural Value Calculations Form | | | | | | | |
|---------------------------------------|-----------|--------------------|--------------------|---------------------|----------|------------|---------|
| ASD District #1 | | 2019-2022 | | | | | |
| | | 10 Yr Wtd. | | Adjusted | | | |
| Typical Cropland Rent Per Acre | | \$96.80 Less Bldg. | | \$77.44 | | | |
| Typical Pasture Rent Per Acre | | \$33.16 Less Bldg. | | \$26.52 | | | |
| Rental Pro-Rata | | | | | | | |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Class I | \$77.44 | | Crop Every Year | \$77.44 | 0.0761 | \$1,017.59 | 100.00% |
| Class II | \$77.44 | \$26.52 | Crop 3 / Pasture 1 | \$64.71 | 0.0761 | \$850.33 | 83.56% |
| Class III | \$77.44 | \$26.52 | Crop 2 / Pasture 2 | \$51.98 | 0.0761 | \$683.07 | 67.13% |
| Class IV | \$77.44 | \$26.52 | Crop 1 / Pasture 3 | \$39.25 | 0.0761 | \$515.81 | 50.69% |
| Class V | | \$26.52 | Pasture Every Year | \$26.52 | 0.0761 | \$348.55 | 34.25% |
| Class VI | | | Pro-Rata 80% (V) | \$21.22 | 0.0761 | \$278.84 | 27.40% |
| Class VII | | | Pro-Rata 60% (V) | \$15.91 | 0.0761 | \$209.13 | 20.55% |
| Class VIII | | | Pro-Rata 40% (V) | \$10.61 | 0.0761 | \$139.42 | 13.70% |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Prime Crop | \$77.44 | | Classes I & II | \$71.07 | 0.0761 | \$933.96 | 100.00% |
| Cropland | \$77.44 | \$26.52 | Classes III & IV | \$45.62 | 0.0761 | \$599.44 | 64.18% |
| Pasture | | \$26.52 | Classes V & VI | \$23.87 | 0.0761 | \$313.69 | 33.59% |
| Woodland | | \$26.52 | Classes VII & VIII | \$13.26 | 0.0761 | \$174.27 | 18.66% |
| Mortgage Rates | | | | | | | |
| | 2008 | 6.38% | 2013 | 5.03% | | | |
| | 2009 | 6.50% | 2014 | 4.71% | | | |
| | 2010 | 6.41% | 2015 | 4.56% | | | |
| | 2011 | 6.12% | 2016 | 4.44% | | | |
| | 2012 | 5.61% | 2017 | 4.34% | | | |
| 10-Year Average of Mortgage Rates | | | | | | | |
| 20 Year Fixed 70%/30% Loans | | | | | | | |
| Source: IRS Internal Revenue Bulletin | | | | | | | |
| Average | 5.41% | | | | | | |
| Rate Calculations | | | | | | | |
| Mortgage Position | | 70% | x | 5.41% | Equals | 3.79% | |
| Mortgage Position | | 30% | x | 9.41% | Equals | 2.82% | |
| | | | Add | Indicated Land Rate | 6.61% | | |
| | | | | Effective Tax Rate | 1.00% | | |
| | | | | Indicated Cap Rate | 7.61% | | |

ASD District #2

| Agricultural Value Calculations Form | | | | | | | |
|---------------------------------------|-----------|------------|--------------------|---------------------|----------|------------|---------|
| ASD District #2 | | 2019-2022 | | | | | |
| | | 10 Yr Wtd. | | Adjusted | | | |
| Typical Cropland Rent Per Acre | | \$128.58 | | Less Bldg. | | \$102.87 | |
| Typical Pasture Rent Per Acre | | \$30.86 | | Less Bldg. | | \$24.69 | |
| Rental Pro-Rata | | | | | | | |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Class I | \$102.87 | | Crop Every Year | \$102.87 | 0.0761 | \$1,351.72 | 100.00% |
| Class II | \$102.87 | \$24.69 | Crop 3 / Pasture 1 | \$83.32 | 0.0761 | \$1,094.89 | 81.00% |
| Class III | \$102.87 | \$24.69 | Crop 2 / Pasture 2 | \$63.78 | 0.0761 | \$838.05 | 62.00% |
| Class IV | \$102.87 | \$24.69 | Crop 1 / Pasture 3 | \$44.23 | 0.0761 | \$581.22 | 43.00% |
| Class V | | \$24.69 | Pasture Every Year | \$24.69 | 0.0761 | \$324.39 | 24.00% |
| Class VI | | | Pro-Rata 80% (V) | \$19.75 | 0.0761 | \$259.52 | 19.20% |
| Class VII | | | Pro-Rata 60% (V) | \$14.81 | 0.0761 | \$194.64 | 14.40% |
| Class VIII | | | Pro-Rata 40% (V) | \$9.87 | 0.0761 | \$129.76 | 9.60% |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Prime Crop | \$102.87 | | Classes I & II | \$93.09 | 0.0761 | \$1,223.30 | 100.00% |
| Cropland | \$102.87 | \$24.69 | Classes III & IV | \$54.00 | 0.0761 | \$709.64 | 58.01% |
| Pasture | | \$24.69 | Classes V & VI | \$22.22 | 0.0761 | \$291.95 | 23.87% |
| Woodland | | \$24.69 | Classes VII & VIII | \$12.34 | 0.0761 | \$162.20 | 13.26% |
| Mortgage Rates | | | | | | | |
| | 2008 | 6.38% | 2013 | 5.03% | | | |
| | 2009 | 6.50% | 2014 | 4.71% | | | |
| | 2010 | 6.41% | 2015 | 4.56% | | | |
| | 2011 | 6.12% | 2016 | 4.44% | | | |
| | 2012 | 5.61% | 2017 | 4.34% | | | |
| 10-Year Average of Mortgage Rates | | | | | | | |
| 20 Year Fixed 70%/30% Loans | | | | | | | |
| Source: IRS Internal Revenue Bulletin | | | | | | | |
| Average | 5.41% | | | | | | |
| Rate Calculations | | | | | | | |
| Mortgage Position | 70% | x | 5.41% | Equals | 3.79% | | |
| Mortgage Position | 30% | x | 9.41% | Equals | 2.82% | | |
| | | | Add | Indicated Land Rate | 6.61% | | |
| | | | | Effective Tax Rate | 1.00% | | |
| | | | | Indicated Cap Rate | 7.61% | | |

ASD District #3

| Agricultural Value Calculations Form | | | | | | | |
|---------------------------------------|-----------|------------|--------------------|---------------------|----------|-----------|---------|
| ASD District #3 | | 2019-2022 | | | | | |
| | | 10 Yr Wtd. | | Adjusted | | | |
| Typical Cropland Rent Per Acre | | \$80.76 | | Less Bldg. | | \$64.61 | |
| Typical Pasture Rent Per Acre | | \$28.45 | | Less Bldg. | | \$22.76 | |
| Rental Pro-Rata | | | | | | | |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Class I | \$64.61 | | Crop Every Year | \$64.61 | 0.0761 | \$848.96 | 100.00% |
| Class II | \$64.61 | \$22.76 | Crop 3 / Pasture 1 | \$54.14 | 0.0761 | \$711.49 | 83.81% |
| Class III | \$64.61 | \$22.76 | Crop 2 / Pasture 2 | \$43.68 | 0.0761 | \$574.01 | 67.61% |
| Class IV | \$64.61 | \$22.76 | Crop 1 / Pasture 3 | \$33.22 | 0.0761 | \$436.54 | 51.42% |
| Class V | | \$22.76 | Pasture Every Year | \$22.76 | 0.0761 | \$299.06 | 35.23% |
| Class VI | | | Pro-Rata 80% (V) | \$18.21 | 0.0761 | \$239.25 | 28.18% |
| Class VII | | | Pro-Rata 60% (V) | \$13.66 | 0.0761 | \$179.44 | 21.14% |
| Class VIII | | | Pro-Rata 40% (V) | \$9.10 | 0.0761 | \$119.63 | 14.09% |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Prime Crop | \$64.61 | | Classes I & II | \$59.38 | 0.0761 | \$780.23 | 100.00% |
| Cropland | \$64.61 | \$22.76 | Classes III & IV | \$38.45 | 0.0761 | \$505.28 | 64.76% |
| Pasture | | \$22.76 | Classes V & VI | \$20.48 | 0.0761 | \$269.16 | 34.50% |
| Woodland | | \$22.76 | Classes VII & VIII | \$11.38 | 0.0761 | \$149.53 | 19.17% |
| Mortgage Rates | | | | | | | |
| | 2008 | 6.38% | 2013 | 5.03% | | | |
| | 2009 | 6.50% | 2014 | 4.71% | | | |
| | 2010 | 6.41% | 2015 | 4.56% | | | |
| | 2011 | 6.12% | 2016 | 4.44% | | | |
| | 2012 | 5.61% | 2017 | 4.34% | | | |
| 10-Year Average of Mortgage Rates | | | | | | | |
| 20 Year Fixed 70%/30% Loans | | | | | | | |
| Source: IRS Internal Revenue Bulletin | | | | | | | |
| Average | 5.41% | | | | | | |
| Rate Calculations | | | | | | | |
| Mortgage Position | | 70% | x | 5.41% | Equals | 3.79% | |
| Mortgage Position | | 30% | x | 9.41% | Equals | 2.82% | |
| | | | Add | Indicated Land Rate | 6.61% | | |
| | | | | Effective Tax Rate | 1.00% | | |
| | | | | Indicated Cap Rate | 7.61% | | |

ASD District #4

| Agricultural Value Calculations Form | | | | | | | |
|---------------------------------------|-----------|--------------------|---------------------|----------|----------|-----------|---------|
| ASD District #4 | | 2019-2022 | | | | | |
| | | 10 Yr Wtd. | | Adjusted | | | |
| Typical Cropland Rent Per Acre | | \$65.41 Less Bldg. | | \$52.33 | | | |
| Typical Pasture Rent Per Acre | | \$20.18 Less Bldg. | | \$16.14 | | | |
| Rental Pro-Rata | | | | | | | |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Class I | \$52.33 | | Crop Every Year | \$52.33 | 0.0761 | \$687.65 | 100.00% |
| Class II | \$52.33 | \$16.14 | Crop 3 / Pasture 1 | \$43.28 | 0.0761 | \$568.77 | 82.71% |
| Class III | \$52.33 | \$16.14 | Crop 2 / Pasture 2 | \$34.24 | 0.0761 | \$449.89 | 65.42% |
| Class IV | \$52.33 | \$16.14 | Crop 1 / Pasture 3 | \$25.19 | 0.0761 | \$331.00 | 48.14% |
| Class V | | \$16.14 | Pasture Every Year | \$16.14 | 0.0761 | \$212.12 | 30.85% |
| Class VI | | | Pro-Rata 80% (V) | \$12.91 | 0.0761 | \$169.70 | 24.68% |
| Class VII | | | Pro-Rata 60% (V) | \$9.69 | 0.0761 | \$127.27 | 18.51% |
| Class VIII | | | Pro-Rata 40% (V) | \$6.46 | 0.0761 | \$84.85 | 12.34% |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Prime Crop | \$52.33 | | Classes I & II | \$47.81 | 0.0761 | \$628.21 | 100.00% |
| Cropland | \$52.33 | \$16.14 | Classes III & IV | \$29.71 | 0.0761 | \$390.44 | 62.15% |
| Pasture | | \$16.14 | Classes V & VI | \$14.53 | 0.0761 | \$190.91 | 30.39% |
| Woodland | | \$16.14 | Classes VII & VIII | \$8.07 | 0.0761 | \$106.06 | 16.88% |
| Mortgage Rates | | | | | | | |
| | 2008 | 6.38% | 2013 | 5.03% | | | |
| | 2009 | 6.50% | 2014 | 4.71% | | | |
| | 2010 | 6.41% | 2015 | 4.56% | | | |
| | 2011 | 6.12% | 2016 | 4.44% | | | |
| | 2012 | 5.61% | 2017 | 4.34% | | | |
| 10-Year Average of Mortgage Rates | | | | | | | |
| 20 Year Fixed 70%/30% Loans | | | | | | | |
| Source: IRS Internal Revenue Bulletin | | | | | | | |
| Average | 5.41% | | | | | | |
| Rate Calculations | | | | | | | |
| Mortgage Position | 70% | x | 5.41% | Equals | 3.79% | | |
| Mortgage Position | 30% | x | 9.41% | Equals | 2.82% | | |
| | | | Indicated Land Rate | | | | 6.61% |
| | | Add | Effective Tax Rate | | | | 1.00% |
| | | | Indicated Cap Rate | | | | 7.61% |

ASD District #5

| Agricultural Value Calculations Form | | | | | | | | |
|---------------------------------------|-----------|-----------|--------------------|---------------------|----------|----------|-----------|---------|
| ASD District #5 | 2019-2022 | | 10 Yr Wtd. | Adjusted | | | | |
| Typical Cropland Rent Per Acre | | | \$66.90 | Less Bldg. | \$53.52 | | | |
| Typical Pasture Rent Per Acre | | | \$26.77 | Less Bldg. | \$21.41 | | | |
| Rental Pro-Rata | | | | | | | | |
| | Crop Base | Past Base | Cropping Pattern | | Adjusted | Cap Rate | Ag. Value | % |
| Class I | \$53.52 | | Crop Every Year | | \$53.52 | 0.0761 | \$703.27 | 100.00% |
| Class II | \$53.52 | \$21.41 | Crop 3 / Pasture 1 | | \$45.49 | 0.0761 | \$597.80 | 85.00% |
| Class III | \$53.52 | \$21.41 | Crop 2 / Pasture 2 | | \$37.47 | 0.0761 | \$492.32 | 70.00% |
| Class IV | \$53.52 | \$21.41 | Crop 1 / Pasture 3 | | \$29.44 | 0.0761 | \$386.85 | 55.01% |
| Class V | | \$21.41 | Pasture Every Year | | \$21.41 | 0.0761 | \$281.37 | 40.01% |
| Class VI | | | Pro-Rata 80% (V) | | \$17.13 | 0.0761 | \$225.10 | 32.01% |
| Class VII | | | Pro-Rata 60% (V) | | \$12.85 | 0.0761 | \$168.82 | 24.01% |
| Class VIII | | | Pro-Rata 40% (V) | | \$8.56 | 0.0761 | \$112.55 | 16.00% |
| | Crop Base | Past Base | Cropping Pattern | | Adjusted | Cap Rate | Ag. Value | % |
| Prime Crop | \$53.52 | | Classes I & II | | \$49.51 | 0.0761 | \$650.53 | 100.00% |
| Cropland | \$53.52 | \$21.41 | Classes III & IV | | \$33.45 | 0.0761 | \$439.58 | 67.57% |
| Pasture | | \$21.41 | Classes V & VI | | \$19.27 | 0.0761 | \$253.23 | 38.93% |
| Woodland | | \$21.41 | Classes VII & VIII | | \$10.71 | 0.0761 | \$140.69 | 21.63% |
| Mortgage Rates | | | | | | | | |
| | 2008 | 6.38% | 2013 | 5.03% | | | | |
| | 2009 | 6.50% | 2014 | 4.71% | | | | |
| | 2010 | 6.41% | 2015 | 4.56% | | | | |
| | 2011 | 6.12% | 2016 | 4.44% | | | | |
| | 2012 | 5.61% | 2017 | 4.34% | | | | |
| 10-Year Average of Mortgage Rates | | | | | | | | |
| 20 Year Fixed 80%/20% Loans | | | | | | | | |
| Source: IRS Internal Revenue Bulletin | | | | | | | | |
| Average | 5.41% | | | | | | | |
| Rate Calculations | | | | | | | | |
| Mortgage Position | 70% | x | 5.41% | Equals | 3.79% | | | |
| Mortgage Position | 30% | x | 9.41% | Equals | 2.82% | | | |
| | | | Add | Indicated Land Rate | 6.61% | | | |
| | | | | Effective Tax Rate | 1.00% | | | |
| | | | | Indicated Cap Rate | 7.61% | | | |

ASD District #6

| Agricultural Value Calculations Form | | | | | | | |
|---------------------------------------|-----------|------------|---------------------|------------|----------|-----------|---------|
| ASD District #6 | | 2019-2022 | | | | | |
| | | 10 Yr Wtd. | | Adjusted | | | |
| Typical Cropland Rent Per Acre | | \$52.32 | | Less Bldg. | | \$41.86 | |
| Typical Pasture Rent Per Acre | | \$24.30 | | Less Bldg. | | \$19.44 | |
| Rental Pro-Rata | | | | | | | |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Class I | \$41.86 | | Crop Every Year | \$41.86 | 0.0761 | \$550.06 | 100.00% |
| Class II | \$41.86 | \$19.44 | Crop 3 / Pasture 1 | \$36.25 | 0.0761 | \$476.40 | 86.61% |
| Class III | \$41.86 | \$19.44 | Crop 2 / Pasture 2 | \$30.65 | 0.0761 | \$402.74 | 73.22% |
| Class IV | \$41.86 | \$19.44 | Crop 1 / Pasture 3 | \$25.04 | 0.0761 | \$329.08 | 59.83% |
| Class V | | \$19.44 | Pasture Every Year | \$19.44 | 0.0761 | \$255.42 | 46.43% |
| Class VI | | | Pro-Rata 80% (V) | \$15.55 | 0.0761 | \$204.33 | 37.15% |
| Class VII | | | Pro-Rata 60% (V) | \$11.66 | 0.0761 | \$153.25 | 27.86% |
| Class VIII | | | Pro-Rata 40% (V) | \$7.77 | 0.0761 | \$102.17 | 18.57% |
| | Crop Base | Past Base | Cropping Pattern | Adjusted | Cap Rate | Ag. Value | % |
| Prime Crop | \$41.86 | | Classes I & II | \$39.06 | 0.0761 | \$513.23 | 100.00% |
| Cropland | \$41.86 | \$19.44 | Classes III & IV | \$27.85 | 0.0761 | \$365.91 | 71.30% |
| Pasture | | \$19.44 | Classes V & VI | \$17.49 | 0.0761 | \$229.87 | 44.79% |
| Woodland | | \$19.44 | Classes VII & VIII | \$9.72 | 0.0761 | \$127.71 | 24.88% |
| Mortgage Rates | | | | | | | |
| | 2008 | 6.38% | 2013 | 5.03% | | | |
| | 2009 | 6.50% | 2014 | 4.71% | | | |
| | 2010 | 6.41% | 2015 | 4.56% | | | |
| | 2011 | 6.12% | 2016 | 4.44% | | | |
| | 2012 | 5.61% | 2017 | 4.34% | | | |
| 10-Year Average of Mortgage Rates | | | | | | | |
| 20 Year Fixed 70%/30% Loans | | | | | | | |
| Source: IRS Internal Revenue Bulletin | | | | | | | |
| Average | 5.41% | | | | | | |
| Rate Calculations | | | | | | | |
| Mortgage Position | 70% | x | 5.41% | Equals | 3.79% | | |
| Equity Position | 30% | x | 9.41% | Equals | 2.82% | | |
| | | | Indicated Land Rate | | | | 6.61% |
| | | Add | Effective Tax Rate | | | | 1.00% |
| | | | Indicated Cap Rate | | | | 7.61% |