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February 25, 2011  
**FINAL VALUES**

**2011 CURRENT AGRICULTURAL USE VALUE OF LAND TABLES**

**EXPLANATION OF THE CALCULATION OF VALUES  
 FOR VARIOUS SOIL MAPPING UNITS FOR TAX YEAR 2011**

The annual current agricultural use values of land are calculated by the capitalization of net income from agricultural products assuming typical management, cropping and land use patterns, and yields for given types of soils. The necessary information is available for approximately 3,500 map units, which are the soils with slopes of 25 percent or less. The information used for a capitalized net income approach is as follows:

- YIELD INFORMATION
- CROPPING PATTERN
- CROP PRICES
- NON-LAND PRODUCTION COSTS
- CAPITALIZATION RATE

Each of these factors is explained below.

**A. YIELD INFORMATION**

For each of the soil mapping units, data regarding typical yields of each of the major field crops (corn, soybeans and wheat) were last published in 1984. In order to reflect more accurate yields, those yields of record have been updated annually since 2006. The yields are updated by a factor based on ten years of statewide yield information published by the Ohio Department of Agriculture. For 2011, yield data from calendar years 2000-2009 were averaged and divided by the 1984 yield for each crop (Exhibit A, page 5). This factor is applied to the 1984 crop yield of record for each soil. The table below shows the average yields used to develop the factor for each of the crops.

		<b>TY 2008</b>	<b>TY 2009</b>	<b>TY 2010</b>	<b>TY 2011</b>
<b>Crop</b>	<b>1984 Base</b>	<b>1997-2006</b>	<b>1998-2007</b>	<b>1999-2008</b>	<b>2000-2009</b>
Corn	118 bushels	139.0	140.7	140.1	144.9
Soybeans	36.5 bushels	42.0	42.0	41.2	42.5
Wheat	44 bushels	67.0	66.7	67.1	67.3

## B. CROPPING PATTERNS

The cropping pattern for each map unit is assigned a rotation based on the most recent five-year average of crop acres harvested in Ohio: 38.6% corn, 50.9% beans, and 10.5% wheat. This rotation is based on data from 2005-2009 and closely reflects current agricultural production in Ohio. The acres harvested in each year are shown in Exhibit B (see page 6).

There are two exceptions as follows:

- 1.) Soil map units with a productivity index of 55 or less are assumed to be most profitably used as pasture. In 2011 a minimum value of \$300 is used for these soils; in 2010 a minimum value of \$200 is used for these soils and in 2009, the minimum value is \$170.
- 2.) A pattern of 50% corn and 50% soybeans is used for organic soils.

## C. CROP PRICE INFORMATION

The crop prices used for the field crops are five-year weighted average prices. Crop price data is collected for seven years with the highest and lowest prices eliminated, and the average calculated using the remaining five years' data. The prices are weighted based on the statewide production for each year. For this calculation, the seven-year period is 2003 through 2009. The annual production and price per unit for each of these crops for the 2003 through 2009 period are shown in Exhibit C (see page 7).

The table shows average weighted prices for this period as well as prices for the three previous years. Each weighted price is reduced by 5% to allow for management.

		<b>TY 2008</b>	<b>TY 2009</b>	<b>TY 2010</b>	<b>TY 2011</b>
<b>Crop</b>	<b>Unit</b>	<b>2000-2006</b>	<b>2001-2007</b>	<b>2002-2008</b>	<b>2003-2009</b>
Corn	Bushel	\$2.02	\$2.29	\$2.66	\$2.89
Soybeans	Bushel	\$5.19	\$5.60	\$6.41	\$7.22
Wheat	Bushel	\$2.89	\$3.05	\$3.41	\$3.64

## D. NON-LAND PRODUCTION COSTS

Data on crop production costs were used to estimate average non-land production costs. The data are taken from the Ohio Crop Enterprise Budgets prepared by The Ohio State University Department of Agricultural, Environmental, and Development Economics for 2004-2010, inclusive. Again, data are collected for the seven-year period and the highest and lowest costs for each category are eliminated from the array. Five-year average costs per unit of specific non-land production cost items are computed from the remaining data as shown in Exhibit D (see page 8).

The budgets are computed for each crop at a base yield equal to the lowest yield reported and for each additional unit above the base yield based on information from the Ohio Crop Budgets (see Exhibits D-1 through Exhibit D-3, pages 9-11).

The five year average non-land production costs for tax year 2011 are summarized below and compared with the costs used for tax years 2008 and 2010:

NON-LAND PRODUCTION COSTS				
Crop – Base Cost	Yield	TY 2008	TY 2010	TY 2011
Corn	110 bu	\$242.39	\$286.65	\$300.98
Soybeans	35 bu	\$174.44	\$189.10	\$204.60
Wheat	51 bu	\$156.68	\$170.16	\$192.94
Additional Cost per Unit				
Corn	1 bu	\$ 0.90	\$ 0.83	\$ 0.84
Soybeans	1 bu	\$ 0.50	\$ 0.66	\$ 0.77
Wheat	1 bu	\$ 0.84	\$ 1.14	\$ 1.19

E. CAPITALIZATION RATE:

Five-year averaging is used to derive the Farm Credit Service interest rate of 7.0% assuming a 60% loan for a 15-year term, payable annually, and an interest rate of 7.3% for the 40 percent equity portion (see Exhibit E, page 12). A five percent appreciation over a period of 5 years is included to address the increase in farmland values due to the demand for additional land in an increasingly efficient operation.

The capitalization rate for typical Ohio farmland is computed by the Akerson mortgage-equity method as follows:

60% loan x annual debt service of 0.109795	=	0.0659
40% equity x equity yield rate of .073	=	0.0292
Subtotal		0.0951
<u>Less</u> equity buildup for 5 years		
% loan x % mortgage paid off x sinking fund factor at equity rate for 5 years (0.60) [1 - (7.0236/9.1079)] (0.172853)	=	(0.0237)
<u>Less</u> 5% appreciation times sinking fund factor		
@ equity yield rate of .0743 .05 x 0.172853	=	(0.0086)
Capitalization Rate before Taxes	=	0.0627 or 6.3%

For tax year 2009 the statewide average effective tax rate after application of the reduction factors, (Section 319.301 Ohio Revised Code), levied on agricultural property was 42.35 mills. The ten percent rollback authorized by Section 319.302 of the code reduced this rate further to 38.11 mills. As a percent of market value the effective tax rate to be used in this year's capitalization formula is 1.3%, (.35 x 38.11)/1000.

Capitalization rate including R.E. taxes 7.6%  
The 7.6% capitalization rate is the base rate for typical Ohio farmland.

## F. CROPLAND VALUES

The current agricultural use cropland value equals the net return for the rotation acre of the soil map unit divided by the capitalization rate. However, the minimum value for cropland is \$300 per acre for soils with 25 percent slope or less regardless of this calculated amount. In 2010, a minimum value of \$200 was used for these soils and in 2009, the minimum value was \$170.

## G. WOODLAND VALUE

- 1.) The woodland value, with slopes of 25% or less, equals the cropland value less the costs to convert the woodland to cropland. The conversion costs used in the formula are as follows:
  - a. Clearing - \$500 per acre for all soils
  - b. Drainage
    - a.) Excessively drained, well drained, moderately well drained, (E, W, MW) - No Conversion Cost
    - b.) Somewhat poorly drained, poorly drained, very poorly drained, saturated (SWP, P, VP) - \$500 for Tile Drainage
    - c.) For the following soil series, a \$250 adjustment for surface drainage was used: Allis, Atkins, Blanchester, Bono, Canadice, Clermont, Condit, Conneaut, Darien, Delmar, Frenchtown, Fries, Ginat, Ilion, Latty, Lorain, McGuffey, Mill, Miner, Montgomery, Muskego, Pauling, Peoga, Piopolis, Purdy, Roselms, Sheffield, Swanton, Toledo, Trumbull, Valley, Wabash, Wabasha, Warners, Wayland, Willette, and Zipp
- 2.) The minimum value for woodland with slopes of 25% or less, is \$200.

## H. PASTURELAND VALUE

Where soil map units listed in these tables or comparable soils are used for permanent pasture, the land should be valued as cropland unless clearing or drainage costs would be incurred in converting the land to cropland. If so, appropriate deduction should be made for the capital investment necessary for the land to be tilled.

## I. MINIMUM VALUES

Slopes of 25% or less:

Cropland & pasture	\$300
Woodland	\$200

Slopes greater than 25%

Woodland & pasture	\$200
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## Exhibit A - Average Crop Yields by Year in Ohio

2009 Ohio Department of Agriculture Annual Report and Statistics

Table 5 - Annual Summary: Crop Production and Value

<u>Year</u>	<u>Corn</u>	<u>Soybeans</u>	<u>Wheat</u>
1984	118	36.5	44
1985	127	41.5	62
1986	128	40.5	46
1987	120	37	58
1988	85	27	50
1989	118	31.5	51
1990	121	39	59
1991	96	36	49
1992	143	40	53
1993	110	38	52
1994	139	44	58
1995	121	38	61
1996	111	35	39
1997	134	44	63
1998	141	44	64
1999	126	36	70
2000	147	42	72
2001	138	41	67
2002	89	32	62
2003	156	38.5	68
2004	158	47	62
2005	143	45	71
2006	159	47	68
2007	150	47	63
2008	135	36	68
2009	174	49	72
1984	118	36.5	44
avg. 2000-2009	144.9	42.5	67.3
% change 1984 vs. 2000-2009 increase	1.227966 22.80%	1.164384 16.44%	1.529545 52.95%

**Exhibit B - Acres Harvested, 2005-2009  
TY 2011 Crop Rotation**

<u>Year</u>	<u>Corn</u>	<u>% of Total</u>	<u>Soybeans</u>	<u>% of Total</u>	<u>Wheat</u>	<u>% of Total</u>	<u>Corn, Beans &amp; Wheat Totals</u>
<b>2005</b>	3,410,000	<b>39.1%</b>	4,480,000	<b>51.4%</b>	830,000	<b>9.5%</b>	8,720,000
<b>2006</b>	3,110,000	<b>35.8%</b>	4,620,000	<b>53.2%</b>	960,000	<b>11.0%</b>	8,690,000
<b>2007</b>	3,780,000	<b>43.8%</b>	4,130,000	<b>47.8%</b>	730,000	<b>8.4%</b>	8,640,000
<b>2008</b>	3,260,000	<b>36.9%</b>	4,480,000	<b>50.7%</b>	1,090,000	<b>12.3%</b>	8,830,000
<b>2009</b>	3,310,000	<b>37.5%</b>	4,530,000	<b>51.4%</b>	980,000	<b>11.1%</b>	8,820,000
<b>Five Year Average</b>	3,374,000	<b>38.6%</b>	4,448,000	<b>50.9%</b>	918,000	<b>10.5%</b>	8,740,000

Ohio Dept. of Agriculture Annual Report--Table 5

**Exhibit C, FIVE YEAR AVERAGE CROP PRICES, TAX YEAR 2011**

Source: Ohio Agricultural Statistics Service

	<u>year</u>	<u>production</u>	<u>price</u>	<u>value (1000s)</u>
<b>CORN</b>	2003	478,920	\$ 2.45	1,173,354
	2004	491,380	\$ 1.85	909,053
	2005	464,750	\$ 1.80	836,550
	2006	470,640	\$ 3.30	1,553,112
	2007	541,500	\$ 3.95	2,138,925
	2008	421,200	\$ 3.95	1,663,740
	2009	546,360	\$ 3.70	2,021,532
	Totals	2,408,500		7,320,791
	Weighted Avg. Price		\$ 3.04	
After Management Allowance of 5%		\$ <b>2.89</b>		
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<b>SOYBEANS</b>	2003	162,640	\$ 7.20	1,171,008
	2004	207,740	\$ 5.15	1,069,864
	2005	201,600	\$ 5.55	1,118,880
	2006	217,140	\$ 6.25	1,357,125
	2007	194,110	\$ 10.10	1,960,514
	2008	161,280	\$ 9.60	1,548,288
	2009	221,970	\$ 9.60	2,130,912
	Totals	964,630		7,326,213
	Weighted Avg. Price		\$ 7.59	
After Management Allowance of 5%		\$ <b>7.22</b>		
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<b>WHEAT</b>	2003	68,000	\$ 3.20	217,600
	2004	55,180	\$ 3.15	173,817
	2005	58,930	\$ 3.20	188,576
	2006	65,280	\$ 3.30	215,424
	2007	45,990	\$ 5.50	252,945
	2008	74,120	\$ 5.80	429,896
	2009	70,560	\$ 4.35	306,936
	Totals	308,760		1,181,481
	Weighted Avg. Price		\$ 3.83	
After Management Allowance of 5%		\$ <b>3.64</b>		
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## Exhibit D, Production Costs, Tax Year 2011

### Determination of Five Year Average Costs for the Projected Crop Budgets

ITEM		UNITS	2004	2005	2006	2007	2008	2009	2010	5 yr. Avg.
<b>VARIABLE COSTS</b>										
<b>Seed</b>	CORN	1000k	\$1.10	\$1.10	\$1.13	\$1.16	\$2.05	\$2.50	\$2.81	\$1.59
	SOYBEANS	1000s	\$0.10	\$0.12	\$0.21	\$0.21	\$0.23	\$0.29	\$0.32	\$0.21
	WHEAT	1000s	\$0.04	\$0.01	\$0.01	\$0.01	\$0.02	\$0.02	\$0.02	\$0.02
<b>Fertilizer</b>	N Corn		\$0.24	\$0.26	\$0.34	\$0.29	\$0.49	\$0.55	\$0.27	\$0.33
	N Wheat		\$0.24	\$0.26	\$0.34	\$0.36	\$0.71	\$0.71	\$0.47	\$0.43
	P2O5		\$0.24	\$0.30	\$0.31	\$0.31	\$0.87	\$0.77	\$0.43	\$0.42
	K2O		\$0.13	\$0.18	\$0.21	\$0.20	\$0.48	\$0.72	\$0.35	\$0.29
	LIME		\$12.00	\$22.00	\$22.00	\$22.00	\$23.50	\$25.00	\$25.00	\$22.90
<b>Chemicals</b>	CORN		\$22.00	\$24.00	\$24.42	\$24.42	\$26.86	\$42.00	\$35.00	\$26.94
	SOYBEANS		\$26.00	\$39.00	\$21.10	\$21.10	\$21.10	\$30.00	\$30.00	\$25.64
	WHEAT		\$7.00	\$7.00	\$6.86	\$6.86	\$7.55	\$13.00	\$13.00	\$8.28
<b>Fuel, Oil, Grease</b>	CORN	-122	\$7.00	\$9.00	\$10.58	\$9.61	\$18.87	\$13.48	\$17.08	\$11.95
		-155	\$7.00	\$9.00	\$10.58	\$9.61	\$18.87	\$13.48	\$17.08	\$11.95
		-192	\$7.00	\$9.00	\$10.58	\$9.61	\$18.87	\$13.48	\$17.08	\$11.95
	SOYBEANS	-36	\$5.00	\$7.00	\$7.67	\$6.97	\$13.63	\$9.74	\$9.12	\$8.10
		-48	\$5.00	\$7.00	\$7.67	\$6.97	\$13.63	\$9.74	\$9.12	\$8.10
		-60	\$5.00	\$7.00	\$7.67	\$6.97	\$13.63	\$9.74	\$9.12	\$8.10
	WHEAT	-52	\$5.00	\$6.00	\$8.20	\$7.46	\$14.54	\$10.37	\$10.37	\$8.48
		-67	\$5.00	\$6.00	\$8.20	\$7.46	\$14.54	\$10.37	\$10.37	\$8.48
		-82	\$5.00	\$6.00	\$8.20	\$7.46	\$14.54	\$10.37	\$10.37	\$8.48
<b>Repairs</b>	CORN	-122	\$10.00	\$12.00	\$10.72	\$10.66	\$15.23	\$10.68	\$24.44	\$11.86
		-155	\$10.00	\$12.00	\$10.72	\$10.66	\$15.23	\$10.68	\$24.44	\$11.86
		-192	\$10.00	\$12.00	\$10.72	\$10.66	\$15.23	\$10.68	\$24.44	\$11.86
	SOYBEANS	-36	\$13.00	\$11.00	\$7.80	\$7.80	\$10.59	\$7.59	\$11.70	\$9.78
		-48	\$13.00	\$11.00	\$7.80	\$7.80	\$10.59	\$7.59	\$11.70	\$9.78
		-60	\$13.00	\$11.00	\$7.80	\$7.80	\$10.59	\$7.59	\$11.70	\$9.78
	WHEAT	-52	\$11.00	\$11.00	\$8.71	\$8.71	\$27.47	\$9.15	\$9.15	\$9.80
		-67	\$11.00	\$11.00	\$8.71	\$8.71	\$27.47	\$9.15	\$9.15	\$9.80
		-82	\$11.00	\$11.00	\$8.71	\$8.71	\$27.47	\$9.15	\$9.15	\$9.80
<b>Miscellaneous</b>	CORN	-122	\$12.00	\$6.00	\$6.00	\$6.00	\$6.00	\$7.00	\$7.00	\$6.40
		-155	\$13.00	\$7.00	\$7.00	\$7.00	\$7.00	\$8.00	\$8.00	\$7.40
		-192	\$14.00	\$8.00	\$8.00	\$8.00	\$8.00	\$9.00	\$9.00	\$8.40
	SOYBEANS	-36	\$12.00	\$7.00	\$7.00	\$7.00	\$7.00	\$8.00	\$8.00	\$7.40
		-48	\$13.00	\$7.00	\$7.00	\$7.00	\$7.00	\$8.00	\$8.00	\$7.40
		-60	\$14.00	\$7.00	\$7.00	\$7.00	\$7.00	\$8.00	\$8.00	\$7.40
	WHEAT	-52	\$12.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
		-67	\$13.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
		-82	\$14.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
<b>Drying:</b>										
<b>Fuel &amp; Electric</b>	CORN		\$0.13	\$0.15	\$0.16	\$0.14	\$0.11	\$0.11	\$0.11	\$0.12
<b>Trucking:</b>										
<b>Fuel Only</b>	CORN		\$0.04	\$0.04	\$0.06	\$0.06	\$0.09	\$0.15	\$0.02	\$0.06
	SOYBEANS		\$0.03	\$0.04	\$0.06	\$0.06	\$0.09	\$0.15	\$0.02	\$0.06
	WHEAT		\$0.03	\$0.03	\$0.06	\$0.06	\$0.09	\$0.15	\$0.04	\$0.06
<b>Interest on variable costs</b>			9.00%	6.50%	8.00%	8.50%	9.00%	9.00%	6.00%	8.20%
<b>FIXED COSTS</b>										
<b>Labor Charge</b>	CORN		\$32.40	\$36.00	\$36.00	\$36.00	\$48.60	\$43.20	\$40.50	\$38.34
	SOYBEANS		\$23.40	\$20.00	\$20.00	\$20.00	\$27.00	\$27.00	\$27.00	\$23.48
	WHEAT		\$18.00	\$20.00	\$20.00	\$20.00	\$27.00	\$27.00	\$27.00	\$22.80
<b>Machinery &amp; Equipment</b>	CORN		\$59.00	\$55.00	\$52.85	\$54.35	\$65.07	\$64.45	\$77.45	\$59.57
	SOYBEANS		\$54.00	\$47.00	\$44.60	\$46.56	\$53.86	\$52.45	\$53.42	\$50.66
	WHEAT		\$52.00	\$48.00	\$48.51	\$50.01	\$56.74	\$55.16	\$55.53	\$52.24

Source: Field Crop Enterprise Budgets 2010, OSU Extension, Dept. of Agricultural, Environmental, and Development Economics.



**2011 CORN BUDGET**  
conservation tillage

ITEM	Inputs - 5 Yr. Average			5 YR. AVG. COST	5 YEAR AVERAGE COST		
	UNITS	BASE 110 BUSHEL	@ ADD. BUSHEL		BASE 110 BUSHEL	@ ADD. BUSHEL	
SEED:	KERNELS (1000's)	27	0.13	\$1.59	\$43.25	\$0.21	
FERTILIZER:							
	N*	LB.	118.2	0.75	\$0.33	\$39.01	\$0.25
	P2O5	LB.	40.6	0.36	\$0.42	\$17.05	\$0.15
	K2O	LB.	40.8	0.27	\$0.29	\$11.82	\$0.08
	LIME	TON	0.25	0	\$22.90	\$5.73	\$0.00
CHEMICALS:					\$26.94	\$26.94	\$0.00
FUEL, OIL, GREASE					\$11.95	\$11.95	\$0.00
REPAIRS:					\$11.86	\$11.86	\$0.00
MISCELLANEOUS:					\$6.40	\$6.40	\$0.00
DRYING: FUEL & ELECTRIC ONLY				\$0.12	\$13.20	\$13.20	\$0.12
TRUCKING: FUEL ONLY					\$0.06	\$6.60	\$0.00
	<b>SUBTOTAL</b>					\$193.80	\$0.80
INTEREST: on Subtotal			8.2%/12 X 7 MOS 4.8% int x subtotal			\$9.27	\$0.04
LABOR CHARGE:					\$38.34	\$38.34	\$0.00
MACHINERY & EQUIPMENT CHARGE:					\$59.57	\$59.57	\$0.00
	<b>TOTALS</b>					\$300.98	\$0.84

10/28/2010

## 2011 SOYBEAN BUDGET

ITEM	Inputs - 5 Yr. Average			5 YR. AVG. COST	5 YR. AVERAGE COST	
	UNITS	BASE 35 <u>BUSHEL</u>	@ ADD. <u>BUSHEL</u>		BASE 35 <u>BUSHEL</u>	@ ADD. <u>BUSHEL</u>
SEED:	seeds (1000s)	180.0	0	\$0.21	\$37.80	\$0.00
FERTILIZER:						
	N LB.	0	0	\$0.00	\$0.00	\$0.00
	P2O5 LB.	28	0.8	\$0.42	\$11.89	\$0.34
	K2O LB.	63	1.4	\$0.29	\$18.41	\$0.41
	LIME TON	0.25	0	\$22.90	\$5.73	\$0.00
CHEMICALS:				\$25.64	\$25.64	\$0.00
FUEL, OIL, GREASE				\$8.10	\$8.10	\$0.00
REPAIRS:				\$9.78	\$9.78	\$0.00
MISCELLANEOUS:				\$7.40	\$7.40	\$0.00
TRUCKING: FUEL ONLY				\$0.06	\$2.10	\$0.00
<b>SUBTOTAL</b>					\$126.85	\$0.74
INTEREST: ON SUBTOTALLED COST		8.2%/12 X 5 MOS 3.4%	int x subtotal		\$4.33	\$0.03
LABOR CHARGE:				\$23.48	\$22.76	\$0.00
MACHINERY & EQUIPMENT CHARGE:				\$50.66	\$50.66	\$0.00
<b>TOTALS</b>					\$204.60	\$0.77

07/01/2010

2011 WHEAT BUDGET

ITEM	UNITS	Inputs - 5 Yr. Average		5 YR. AVG. COST	5 YR. AVERAGE COST		
		BASE 51 <u>BUSHEL</u>	@ ADD. <u>BUSHEL</u>		BASE 51 <u>BUSHEL</u>	@ ADD. <u>BUSHEL</u>	
SEED:	seeds (1000s)	1,400	0	\$0.02	\$28.00	\$0.00	
FERTILIZER:							
	N LB.	41	1.75	\$0.43	\$17.63	\$0.75	
	P2O5 LB.	32	0.63	\$0.42	\$13.44	\$0.26	
	K2O LB.	39	0.37	\$0.29	\$11.31	\$0.11	
	LIME TON	0.25	0	\$22.90	\$5.73	\$0.00	
CHEMICALS:				\$8.28	\$8.28	\$0.00	
FUEL, OIL, GREASE				\$8.48	\$8.48	\$0.00	
REPAIRS:				\$9.80	\$9.80	\$0.00	
MISCELLANEOUS:				\$6.00	\$6.00	\$0.00	
TRUCKING: FUEL ONLY				\$0.06	\$3.12	\$0.00	
SUBTOTAL						\$111.79	\$1.12
INTEREST: ON SUBTOTALLED COST		8.2%/12 X 8 MOS 5.5% int x subtotal			\$6.11	\$0.06	
LABOR CHARGE:				\$22.80	\$22.80	\$0.00	
MACHINERY & EQUIPMENT CHARGE:				\$52.24	\$52.24	\$0.00	
TOTALS						\$192.94	\$1.19

07/01/2010

01/07/2011

**RATES USED IN CAPITALIZATION RATE  
2005-2011**

<b>TAX YEAR</b>	<b>INTEREST RATE</b>	<b>EQUITY RATE</b>
2005	7.10	7.25
2006	<del>7.70</del>	9.50
2007	7.70	<del>10.25</del>
2008	6.95	9.25
2009	6.55	<del>5.25</del>
2010	6.70	5.25
2011	<del>6.05</del>	5.25
	7.00	7.30

\* Interest rate is based on a 15-year fixed multi flex loan offered by Farm Credit Services of Mid-America at [www.e-farmcredit.com/TodaysRates/FarmRates](http://www.e-farmcredit.com/TodaysRates/FarmRates).

\*\* Equity rate is the prime rate plus 2% at [www.bankrate.com](http://www.bankrate.com) from the Wall Street Journal's bank survey.

**ACTUAL CAPITALIZATION RATES USED IN CALCULATION  
2005-2011**

<b>TAX YEAR</b>	<b>CAPITALIZATION RATE</b>
2005	8.6%
2006	8.5%
2007	8.4%
2008	8.3%
2009	7.9%
2010	7.8%
2011	7.6%

## 2011 CAUV SAMPLE CALCULATION

**SOIL:** Millgrove, Silt Loam  
**SLOPE:** 0-2  
**EROSION:** Slight  
**DRAINAGE:** Very poorly  
**PROD. INDEX:** 100

	<u>CORN</u>	<u>BEANS</u>	<u>WHEAT</u>
PI DAT yield/acre (1984)	144	52	64
% increased yield	1.227966	1.164384	1.529545
adjusted yield/acre	177	61	98
X Crop Price/Unit	\$2.89	\$7.22	\$3.64
= GROSS INCOME / ACRE	\$511.53	\$440.42	\$356.72
YIELD / ACRE	177	61	98
BASE YIELD	110	35	51
= YIELD ABOVE BASE	67	26	47
X ADDED UNIT COST	\$0.84	\$0.77	\$1.19
ADDED UNIT COST / ACRE	\$56.28	\$20.02	\$55.93
BASE YIELD COST	\$300.98	\$204.60	\$192.94
= TOTAL NON-LAND PROD. COST	\$357.26	\$224.62	\$248.87
NET RETURN / ACRE	\$154.27	\$215.80	\$107.85
X CROPPING PATTERN	0.386	0.509	0.105
= ROTATIONAL NET RETURN / ACRE	\$59.55	\$109.84	\$11.32
TOTAL ROTATIONAL NET RETURN	\$180.71		
BASE CAP RATE	0.076		
CAUV LAND VALUE	\$2,377.82	SAY	\$2,380

**2008 CAUV SAMPLE CALCULATION****TY 2008 Final Calculation**

**SOIL:** Millgrove, Silt Loam  
**SLOPE:** 0-2  
**EROSION:** Slight  
**DRAINAGE:** Very poorly  
**PROD. INDEX:** 100

	<u>CORN</u>	<u>BEANS</u>	<u>WHEAT</u>	<u>HAY</u>
Current PI DAT yield	144	52	64	6
% increased yield	1.177966	1.150685	1.522727	1.024911
YIELD / ACRE	170	60	97	6.1
X PRICE / UNIT	\$2.02	\$5.19	\$2.89	\$79.80
= GROSS INCOME / ACRE	\$343.40	\$311.40	\$280.33	\$486.78
YIELD / ACRE	170	60	97	6.1
BASE YIELD	100	35	50	2
= YIELD ABOVE BASE	70	25	47	4.1
X ADDED UNIT COST	\$0.90	\$0.50	\$0.84	\$24.23
ADDED UNIT COST / ACRE	\$63.00	\$12.50	\$39.48	\$99.34
BASE YIELD COST	\$242.39	\$174.44	\$156.68	\$133.80
= TOTAL NON-LAND PROD. COST	\$305.39	\$186.94	\$196.16	\$233.14
NET RETURN / ACRE	\$38.01	\$124.46	\$84.17	\$253.64
X CROPPING PATTERN	0.35	0.45	0.15	0.05
= ROTATIONAL NET RETURN / ACRE	\$ 13.30	\$ 56.01	\$ 12.63	\$ 12.68
TOTAL ROTATIONAL NET RETURN	\$ 94.62			
BASE CAP RATE	0.083			
X MANAGEMENT FACTOR	0.95			
= ADJUSTED CAPITALIZATION RATE	0.07885			
CAUV LAND VALUE	\$1,199.97	SAY	\$1,200.00	

## 2011 CAUV SAMPLE CALCULATION

SOIL: Miami Silt Loam  
 SLOPE: 2-6  
 EROSION: Slight  
 DRAINAGE: Well  
 PROD. INDEX: 76

	<u>CORN</u>	<u>BEANS</u>	<u>WHEAT</u>
PI DAT yield/acre (1984)	108	38	50
% increased yield	1.227966	1.164384	1.529545
adjusted yield/acre	133	44	76
X Crop Price/Unit	\$2.89	\$7.22	\$3.64
= GROSS INCOME / ACRE	\$384.37	\$317.68	\$276.64
YIELD / ACRE	133	44	76
BASE YIELD	110	35	51
= YIELD ABOVE BASE	23	9	25
X ADDED UNIT COST	\$0.84	\$0.77	\$1.19
ADDED UNIT COST / ACRE	\$19.32	\$6.93	\$29.75
BASE YIELD COST	\$300.98	\$204.60	\$192.94
= TOTAL NON-LAND PROD. COST	\$320.30	\$211.53	\$222.69
NET RETURN / ACRE	\$64.07	\$106.15	\$53.95
X CROPPING PATTERN	0.386	0.509	0.105
= ROTATIONAL NET RETURN / ACRE	\$24.73	\$54.03	\$5.66
TOTAL ROTATIONAL NET RETURN	\$84.43		
BASE CAP RATE	0.076		
CAUV LAND VALUE	\$1,110.87	SAY	\$1,110

08/20/2010

## 2008 CAUV SAMPLE CALCULATION

SOIL: Miami Silt Loam  
 SLOPE: 2-6  
 EROSION: Slight  
 DRAINAGE: Well  
 PROD. INDEX: 76

	<u>CORN</u>	<u>BEANS</u>	<u>WHEAT</u>	<u>HAY</u>
PI DAT yield/acre	108	38	50	4.6
% increased yield	1.177966	1.150685	1.522727	1.024911
adjusted yield/acre	127	44	76	4.7
X PRICE / UNIT	\$2.02	\$5.19	\$2.89	\$79.80
= GROSS INCOME / ACRE	\$256.54	\$228.36	\$219.64	\$375.06
YIELD / ACRE	127	44	76	4.7
BASE YIELD	100	35	50	2
= YIELD ABOVE BASE	27	9	26	2.7
X ADDED UNIT COST	\$0.90	\$0.50	\$0.84	\$24.23
ADDED UNIT COST / ACRE	\$24.30	\$4.50	\$21.84	\$65.42
BASE YIELD COST	\$242.39	\$174.44	\$156.68	\$133.80
= TOTAL NON-LAND PROD. COST	\$266.69	\$178.94	\$178.52	\$199.22
NET RETURN / ACRE	(\$10.15)	\$49.42	\$41.12	\$175.84
X CROPPING PATTERN	0.35	0.37	0.15	0.13
= ROTATIONAL NET RETURN / ACRE	(\$3.55)	\$18.29	\$6.17	\$22.86
TOTAL ROTATIONAL NET RETURN	\$43.76			
BASE CAP RATE	0.083			
X MANAGEMENT FACTOR	1			
= ADJUSTED CAPITALIZATION RATE	0.083			
CAUV LAND VALUE	\$527.23	SAY	\$510.00	



## CAUV Summary Values

02/25/2010  
TY 2011- Final

productivity index	no. of units	net return/acre			cropland value/acre		
		low	high	avg.	low	high	avg.
<b>0-49</b>	601	0	27	0	300	300	300
<b>50-59</b>	749	0	59	12	300	780	328
<b>60-69</b>	1,114	0	96	47	300	1,260	632
<b>70-79</b>	798	43	132	85	570	1,740	1,126
<b>80-89</b>	211	88	161	124	1,160	2,110	1,641
<b>90-99</b>	35	140	179	153	1,840	2,360	2,017
<b>100+</b>	6	181	181	181	2,380	2,380	2,380
<b>all regions</b>	<b>3,514</b>	<b>\$0</b>	<b>\$181</b>	<b>\$46</b>	<b>\$300</b>	<b>\$2,380</b>	<b>\$700</b>

### TY 2008 Final (02/29/08)

productivity index	no. of units	net return/acre			cropland value/acre		
		low	high	avg.	low	high	avg.
<b>0-49</b>	600	0	48	15	100	100	100
<b>50-59</b>	749	0	87	29	100	100	100
<b>60-69</b>	1,117	0	87	21	100	490	188
<b>70-79</b>	797	0	61	36	100	710	431
<b>80-89</b>	206	29	78	56	370	990	708
<b>90-99</b>	35	67	95	76	850	1200	973
<b>100+</b>	6	95	95	95	1200	1200	1200
<b>all regions</b>	<b>3,510</b>	<b>\$0</b>	<b>\$95</b>	<b>\$28</b>	<b>\$100</b>	<b>\$1,200</b>	<b>\$249</b>

## CAUV Summary Values

02/25/2011  
FY 2011 - Final

productivity index	no. of units	net return/acre			cropland value/acre		
		low	high	avg.	low	high	avg.
0-49	601	0	27	0	300	300	300
50-59	749	0	59	12	300	780	328
60-69	1,114	0	96	47	300	1,260	632
70-79	798	43	132	85	570	1,740	1,126
80-89	211	88	161	124	1,160	2,110	1,641
90-99	35	140	179	153	1,840	2,360	2,017
100+	6	181	181	181	2,380	2,380	2,380
<b>all regions</b>	<b>3,514</b>	<b>\$0</b>	<b>\$181</b>	<b>\$46</b>	<b>\$300</b>	<b>\$2,380</b>	<b>\$700</b>

### TY 2010 Final (5/07/2010)

productivity index	no. of units	net return/acre			cropland value/acre		
		low	high	avg.	low	high	avg.
0-49	601	0	12	0	200	200	200
50-59	749	0	41	6	200	530	214
60-69	1,119	0	97	33	200	1,250	436
70-79	798	29	108	65	380	1,380	845
80-89	206	68	130	99	870	1,670	1,278
90-99	35	115	151	126	1,470	1,880	1,601
100+	6	148	148	148	1,900	1,900	1,900
<b>all regions</b>	<b>3,514</b>	<b>\$0</b>	<b>\$151</b>	<b>\$34</b>	<b>\$200</b>	<b>\$1,900</b>	<b>\$505</b>

### Average CAUV Values By Year

Productivity Index	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
0-49	100	100	100	100	100	100	100	100	100	100	108	100	100	176	200	300
50-59	100	100	111	114	107	104	102	101	114	106	134	100	100	200	214	328
60-69	114	163	230	233	200	181	125	113	104	101	125	123	188	435	436	632
70-79	257	373	448	452	417	394	285	244	157	124	241	283	431	746	845	1126
80-89	487	632	694	699	666	640	516	467	342	293	465	521	708	1059	1278	1641
90-99	689	850	894	908	869	842	713	663	533	492	675	747	973	1368	1601	2017
100+	820	990	1040	1060	1030	1000	870	820	690	650	880	970	1200	1620	1900	2380
<b>Totals</b>	160	209	258	262	242	231	180	163	135	123	177	181	249	459	505	700
<b>No. of Soils</b>	3050	3083	3246	3281	3371	3279	3307	3313	3313	3358	3482	3510	3511	3511	3514	3514

### Average CAUV Values By Reappraisal/Update Year

Productivity Index	1996	1999	2002	2005	2008	2011
0-49	100	100	100	100	100	300
50-59	100	114	102	106	100	328
60-69	114	233	125	101	188	632
70-79	257	452	285	124	431	1126
80-89	487	699	516	293	708	1641
90-99	689	908	713	492	973	2017
100+	820	1060	870	650	1200	2380
<b>Totals</b>	160	262	180	123	249	700
<b># Soils</b>	3050	3281	3307	3358	3511	3514

### Comparison of Inputs, Tax Years 2008-2011

<b>Crop Prices</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Difference</b>	
					<b>2008-11</b>	<b>2010-11</b>
<b>Corn</b>	\$2.02	\$2.29	\$2.66	\$2.89	<b>\$0.87</b>	\$0.23
<b>Soybeans</b>	\$5.19	\$5.60	\$6.41	\$7.22	<b>\$2.03</b>	\$0.81
<b>Wheat</b>	\$2.89	\$3.05	\$3.41	\$3.64	<b>\$0.75</b>	\$0.23
<b>Non-land Production Costs</b>						
<b>Base Cost</b>						
<b>Corn</b>	\$242.39	\$264.12	\$286.65	\$300.98	<b>\$58.59</b>	\$14.33
<b>Soybeans</b>	\$174.44	\$175.21	\$189.10	\$204.60	<b>\$30.16</b>	\$15.50
<b>Wheat</b>	\$156.68	\$159.01	\$170.16	\$192.94	<b>\$36.26</b>	\$22.78
<b>Additional Unit Cost</b>						
<b>Corn</b>	\$0.90	\$0.72	\$0.83	\$0.84	<b>(\$0.06)</b>	\$0.01
<b>Soybeans</b>	\$0.50	\$0.57	\$0.66	\$0.77	<b>\$0.27</b>	\$0.11
<b>Wheat</b>	\$0.84	\$0.86	\$1.14	\$1.19	<b>\$0.35</b>	\$0.05
<b>Capitalization Rate</b>						
<b>Mortgage/Equity Ratio</b>	60/40	60/40	60/40	60/40		
<b>Years</b>	15	15	15	15		
<b>Interest Rate</b>	7.29	7.06	7.24	7.00		
<b>Equity Rate</b>	8.15	7.65	7.80	7.30		
<b>Tax Additur</b>	1.4	1.4	1.4	1.3		
<b>Capitalization Rate</b>	8.3	7.9	7.8	7.6	(0.70)	(0.20)