



March 1, 2013
Final Values - 2013

2013 CURRENT AGRICULTURAL USE VALUE OF LAND TABLES

EXPLANATION OF THE CALCULATION OF VALUES
FOR VARIOUS SOIL MAPPING UNITS FOR TAX YEAR 2013

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 2013, yield data from calendar years 2002-2011 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.

Table with 6 columns: Crop, 1984 Base, TY 2010 (1999-2008), TY 2011 (2000-2009), TY 2012 (2001-2010), TY 2013 (2002-2011). Rows include Corn, Soybeans, and Wheat.

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: 38.7% corn, 51.2% beans, and 10.1% wheat. This rotation is based on data from 2007-2011 and closely reflects current agricultural production in Ohio. The acres harvested in each year are shown in Exhibit B (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 2013, a minimum value of \$350 is used for these soils. In 2012 a minimum value of \$350 is used for these soils; in 2011 a minimum value of \$300 is used for these soils and in 2010, the minimum value is \$200.
- 2.) A pattern of 50% corn and 50% soybeans is used for organic soils.

C. CROP PRICES

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 2005 through 2011. The annual production and price per unit for each of these crops for the 2005 through 2011 period are shown in Exhibit C (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.

		TY 2010	TY 2011	TY 2012	TY 2013
Crop	Unit	2002-2008	2003-2009	2004-2010	2005-2011
Corn	Bushel	\$2.66	\$2.89	\$3.19	\$3.91
Soybeans	Bushel	\$6.41	\$7.22	\$7.74	\$8.98
Wheat	Bushel	\$3.41	\$3.64	\$3.98	\$4.54

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 2006-2012, 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 (pages 8-9).

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 (Exhibits D-1 through Exhibit D-3, pages 10-12). The five year average non-land production costs for tax year 2013 are summarized below and compared with the costs used for tax years 2010 and 2012:

NON-LAND PRODUCTION COSTS				
Crop Base Cost	Yield/2013	TY 2010	TY 2012	TY 2013
Corn	118 bu	\$286.65	\$350.71	\$391.90
Soybeans	36 bu	\$189.10	\$227.51	\$248.69
Wheat	52 bu	\$170.16	\$211.52	\$230.62
Additional Cost per Unit				
Corn	1 bu	\$ 0.83	\$ 0.90	\$ 1.04
Soybeans	1 bu	\$ 0.66	\$ 0.93	\$ 1.12
Wheat	1 bu	\$ 1.14	\$ 1.41	\$ 1.61

E. CAPITALIZATION RATE

Five-year averaging is used to derive the Farm Credit Service interest rate of 6.19% assuming a 60% loan for a 15-year term, payable annually, and an interest rate of 6.05% for the 40 percent equity portion (Exhibit E, page 13). 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 0.104245	=	0.0625
40% equity x equity yield rate of .0605	=	0.0242
Subtotal		0.0867
<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 - (7.2943/9.5928)] (0.177219)	=	(0.0255)
<u>Less</u> 5% appreciation times sinking fund factor @ equity yield rate of .069 .05 x 0.177219	=	(0.0089)
Capitalization Rate before Taxes =		0.0524 or 5.2%

For tax year 2011 the statewide average effective tax rate after application of the reduction factors, (Section 319.301 Ohio Revised Code), levied on agricultural property was 46.29 mills. The ten percent rollback authorized by Section 319.302 of the code reduced this rate further to 41.66 mills. As a percent of market value the effective tax rate to be used in this year's capitalization formula is 1.5%, (.35 x 41.66)/1000.

Capitalization rate including R.E. taxes 6.7%

The 6.7% capitalization rate is the base rate for typical Ohio farmland.

F. CROPLAND VALUES

The current agricultural use cropland value equals the rotational net return per acre of the soil map unit divided by the capitalization rate. However, the minimum value for cropland is \$350 per acre for soils with 25 percent slope or less regardless of this calculated amount. In 2012 a minimum value of \$350 was used for these soils; in 2011, the minimum value was \$300 and in 2010, the minimum value was \$200.

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 \$230.

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.

I. MINIMUM VALUES

Slopes of 25% or less:

Cropland & pasture	\$350
Woodland	\$230

Slopes greater than 25%:

Woodland & pasture	\$230
--------------------	-------

Exhibit A - Average Crop Yields by Year in Ohio

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	48.5	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
2010	163	48	61
2011	158	47.5	58
Average 2002-2011	148.5	48.7	65.3
1984	118	36.5	44
Average/1984 Base % increase	1.258475 25.85%	1.197260 19.73%	1.484091 48.41%

**Exhibit B - Acres Harvested, 2007-2011
TY 2013 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 & Wheat Totals</u>
2007	3,780,000	43.8%	4,130,000	47.8%	730,000	8.4%	8,640,000
2008	3,260,000	36.9%	4,480,000	50.7%	1,090,000	12.3%	8,830,000
2009	3,310,000	37.5%	4,530,000	51.4%	980,000	11.1%	8,820,000
2010	3,270,000	38.0%	4,590,000	53.3%	750,000	8.7%	8,610,000
2011	3,220,000	37.4%	4,540,000	52.7%	850,000	9.9%	8,610,000
Five Year Average	3,368,000	38.7%	4,454,000	51.2%	880,000	10.1%	8,702,000

Ohio Dept. of Agriculture Annual Report--Table 5

Exhibit C, FIVE YEAR AVERAGE CROP PRICES, TAX YEAR 2013

Source: Ohio Agricultural Statistics Service

	<u>year</u>	<u>production</u>	<u>price</u>	<u>value (1000s)</u>
CORN	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
	2010	533,010	\$ 5.55	2,958,206
	2011	508,760	\$ 6.40	3,256,064
	Totals		2,512,710	
Weighted Avg. Price			\$ 4.11	
After Management Allowance of 5%			\$ 3.91	
SOYBEANS	2005	201,600	\$ 5.55	1,118,880
	2006	217,140	\$ 6.25	1,357,125
	2007	194,110	\$ 10.10	1,960,511
	2008	161,280	\$ 9.60	1,548,288
	2009	221,970	\$ 9.60	2,130,912
	2010	220,320	\$ 11.80	2,599,776
	2011	215,650	\$ 11.90	2,566,235
	Totals		1,014,820	
Weighted Avg. Price			\$ 9.46	
After Management Allowance of 5%			\$ 8.98	
WHEAT	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
	2010	45,750	\$ 5.20	237,900
	2011	49,300	\$ 6.60	325,380
	Totals		301,700	
Weighted Avg. Price			\$ 4.78	
After Management Allowance of 5%			\$ 4.54	

Exhibit D, Production Costs, Tax Year 2013
Determination of Five Year Average Costs for the Projected Crop Budgets

ITEM		<u>Units</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>5 yr. Avg.</u>	
VARIABLE COSTS											
Seed	CORN	1000k	\$1.13	\$1.16	\$2.05	\$2.50	\$2.81	\$2.88	\$3.13	\$2.28	
	SOYBEANS	1000s	\$0.21	\$0.21	\$0.23	\$0.29	\$0.32	\$0.33	\$0.36	\$0.28	
	WHEAT	1000s	\$0.01	\$0.01	\$0.02	\$0.02	\$0.02	\$0.02	\$0.03	\$0.02	
Fertilizer	N Corn		\$0.34	\$0.29	\$0.49	\$0.55	\$0.27	\$0.50	\$0.53	\$0.43	
	N Wheat		\$0.34	\$0.36	\$0.74	\$0.71	\$0.47	\$0.63	\$0.71	\$0.58	
	P2O5		\$0.31	\$0.31	\$0.87	\$0.77	\$0.43	\$0.70	\$0.66	\$0.57	
	K2O		\$0.21	\$0.20	\$0.48	\$0.72	\$0.35	\$0.50	\$0.53	\$0.41	
	LIME		\$22.00	\$22.00	\$23.50	\$25.00	\$25.00	\$25.00	\$25.00	\$24.10	
Chemicals	CORN		\$24.42	\$24.42	\$26.86	\$42.00	\$35.00	\$35.00	\$44.28	\$32.66	
	SOYBEANS		\$21.10	\$21.10	\$21.10	\$30.00	\$30.00	\$30.00	\$33.55	\$26.44	
	WHEAT		\$6.86	\$6.86	\$7.55	\$13.00	\$13.00	\$13.00	\$21.34	\$10.68	
Fuel, Oil, Grease	CORN	-122	\$10.58	\$9.64	\$18.87	\$13.48	\$17.08	\$19.77	\$22.59	\$15.96	
		-155	\$10.58	\$9.64	\$18.87	\$13.48	\$17.08	\$19.77	\$22.59	\$15.96	
		-192	\$10.58	\$9.64	\$18.87	\$13.48	\$17.08	\$19.77	\$22.59	\$15.96	
	SOYBEANS	-36	\$7.67	\$6.97	\$13.63	\$9.74	\$9.12	\$12.27	\$14.02	\$10.49	
		-48	\$7.67	\$6.97	\$13.63	\$9.74	\$9.12	\$12.27	\$14.02	\$10.49	
		-60	\$7.67	\$6.97	\$13.63	\$9.74	\$9.12	\$12.27	\$14.02	\$10.49	
	WHEAT	-52	\$8.20	\$7.46	\$14.51	\$10.37	\$10.37	\$10.37	\$16.64	\$10.76	
		-67	\$8.20	\$7.46	\$14.51	\$10.37	\$10.37	\$10.37	\$16.64	\$10.76	
		-82	\$8.20	\$7.46	\$14.51	\$10.37	\$10.37	\$10.37	\$16.64	\$10.76	
	Repairs	CORN	-122	\$10.72	\$10.66	\$15.23	\$10.68	\$21.11	\$21.18	\$21.18	\$15.78
			-155	\$10.72	\$10.66	\$15.23	\$10.68	\$21.11	\$21.18	\$21.18	\$15.78
			-192	\$10.72	\$10.66	\$15.23	\$10.68	\$21.11	\$21.18	\$21.18	\$15.78
SOYBEANS		-36	\$7.80	\$7.80	\$10.59	\$7.59	\$11.70	\$14.47	\$14.47	\$10.47	
		-48	\$7.80	\$7.80	\$10.59	\$7.59	\$11.70	\$14.47	\$14.47	\$10.47	
		-60	\$7.80	\$7.80	\$10.59	\$7.59	\$11.70	\$14.47	\$14.47	\$10.47	
WHEAT		-52	\$8.71	\$8.71	\$27.47	\$9.15	\$9.15	\$10.85	\$14.39	\$10.45	
		-67	\$8.71	\$8.71	\$27.47	\$9.15	\$9.15	\$10.85	\$14.39	\$10.45	
		-82	\$8.71	\$8.71	\$27.47	\$9.15	\$9.15	\$10.85	\$14.39	\$10.45	
Crop Insurance		CORN	-122	\$5.72	\$6.90	\$11.00	\$21.60	\$19.50	\$19.50	\$25.00	\$15.70
			-155	\$5.72	\$7.07	\$11.00	\$21.60	\$19.00	\$19.00	\$25.00	\$15.53
			-192	\$6.06	\$7.78	\$12.00	\$24.50	\$20.00	\$20.00	\$24.00	\$16.76
	SOYBEANS	-36	\$4.56	\$5.63	\$7.00	\$20.20	\$8.00	\$8.00	\$16.00	\$8.93	
		-48	\$4.50	\$5.58	\$7.50	\$20.80	\$8.00	\$8.00	\$19.00	\$9.62	
		-60	\$4.70	\$5.83	\$8.00	\$22.30	\$8.00	\$8.00	\$19.00	\$9.77	
	WHEAT	-52	\$5.39	\$3.94	\$5.77	\$10.50	\$5.50	\$5.50	\$14.00	\$6.53	
		-67	\$5.52	\$4.01	\$5.87	\$10.50	\$6.00	\$5.50	\$14.00	\$6.68	
		-82	\$5.87	\$4.26	\$6.20	\$11.00	\$6.00	\$6.00	\$14.00	\$7.01	

Exhibit D, Production Costs, Tax Year 2013

ITEM		Units	2006	2007	2008	2009	2010	2011	2012	5 yr. Avg.
Miscellaneous	CORN	-122	\$6.00	\$6.00	\$6.00	\$7.00	\$7.00	\$8.00	\$8.00	\$6.80
		-155	\$7.00	\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$7.80
		-192	\$8.00	\$8.00	\$8.00	\$9.00	\$9.00	\$10.00	\$10.00	\$8.80
	SOYBEANS	-36	\$7.00	\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$7.80
		-48	\$7.00	\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$7.80
		-60	\$7.00	\$7.00	\$7.00	\$8.00	\$8.00	\$9.00	\$9.00	\$7.80
	WHEAT	-52	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
		-67	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
		-82	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
Drying: Fuel & Electric	CORN		\$0.16	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11
Trucking: Fuel Only	CORN		\$0.06	\$0.06	\$0.09	\$0.15	\$0.02	\$0.02	\$0.03	\$0.05
	SOYBEANS		\$0.06	\$0.06	\$0.09	\$0.15	\$0.02	\$0.02	\$0.03	\$0.05
	WHEAT		\$0.06	\$0.06	\$0.09	\$0.15	\$0.04	\$0.02	\$0.02	\$0.05
Interest on variable costs		8.00%	8.50%	9.00%	9.00%	6.00%	6.00%	6.00%	7.50%	
FIXED COSTS										
Labor Charge	CORN		\$36.00	\$36.00	\$48.60	\$43.20	\$40.50	\$40.50	\$40.50	\$40.14
	SOYBEANS		\$20.00	\$20.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$25.60
	WHEAT		\$20.00	\$20.00	\$27.00	\$27.00	\$27.00	\$27.00	\$27.00	\$25.60
Machinery & Equipment	CORN		\$52.85	\$54.35	\$65.07	\$64.45	\$77.45	\$92.09	\$107.46	\$70.68
	SOYBEANS		\$44.60	\$46.56	\$53.86	\$52.45	\$53.42	\$71.83	\$85.40	\$55.62
	WHEAT		\$48.54	\$50.01	\$56.71	\$55.16	\$55.53	\$68.61	\$99.08	\$57.20

Source: Field Crop Enterprise Budgets 2012, OSU Extension, Dept. of Agricultural, Environmental, and Development Economics.

2013 CORN BUDGET
conservation tillage

ITEM	Inputs - 5 Yr. Average			5 YR. AVG. COST Exhibit D	5 YEAR AVERAGE COST	
	UNITS	BASE 118 <u>BUSHEL</u>	@ ADD. <u>BUSHEL</u>		BASE 118 BUSHEL	@ ADD. BUSHEL
SEED:	KERNELS (1000's)	28	0.12	\$2.28	\$62.93	\$0.28
FERTILIZER:						
	N*	LB. 128.0	0.59	\$0.43	\$55.04	\$0.25
	P2O5	LB. 43.8	0.37	\$0.57	\$24.97	\$0.21
	K2O	LB. 35.5	0.27	\$0.41	\$14.56	\$0.11
	LIME	TON 0.25	0	\$24.10	\$6.03	\$0.00
CHEMICALS:				\$32.66	\$32.66	\$0.00
FUEL, OIL, GREASE				\$15.96	\$15.96	\$0.00
REPAIRS:				\$15.78	\$15.78	\$0.00
CROP INSURANCE:				\$15.70	\$15.70	(\$0.01)
MISCELLANEOUS:				\$6.80	\$6.80	\$0.03
DRYING: FUEL & ELECTRIC ONLY				\$0.11	\$12.98	\$0.11
TRUCKING: FUEL ONLY				\$0.05	\$5.90	\$0.00
	SUBTOTAL				\$269.29	\$0.99
INTEREST: on Subtotal		7.5%/12 X 7 MOS 4.4% int x subtotal			\$11.78	\$0.04
LABOR CHARGE:				\$40.14	\$40.14	\$0.00
MACHINERY & EQUIPMENT CHARGE:				\$70.68	\$70.68	\$0.00
	TOTALS				\$391.90	\$1.04

1/10/2013

2013 SOYBEAN BUDGET

ITEM	Inputs - 5 Yr. Average			5 YR. AVG. COST Exhibit D	5 YR. AVERAGE COST	
	UNITS	BASE 36 BUSHEL	@ ADD. BUSHEL		BASE 36 BUSHEL	@ ADD. BUSHEL
SEED:	seeds (1000s)	180.0	0	\$0.28	\$50.40	\$0.00
FERTILIZER:						
	N LB.	0	0	\$0.00	\$0.00	\$0.00
	P2O5 LB.	29	0.8	\$0.57	\$16.32	\$0.46
	K2O LB.	58	1.4	\$0.41	\$23.71	\$0.57
	LIME TON	0.25	0	\$24.10	\$6.03	\$0.00
CHEMICALS:				\$26.44	\$26.44	\$0.00
FUEL, OIL, GREASE				\$10.49	\$10.49	\$0.00
REPAIRS:				\$10.47	\$10.47	\$0.00
CROP INSURANCE				\$8.93	\$8.93	\$0.06
MISCELLANEOUS:				\$7.80	\$7.80	\$0.00
TRUCKING: FUEL ONLY				\$0.05	\$1.80	\$0.00
SUBTOTAL					\$162.39	\$1.09
INTEREST: ON SUBTOTALLED COST		7.5%/12 X 5 MOS 3.1%	int x subtotal		\$5.07	\$0.03
LABOR CHARGE:				\$25.60	\$25.60	\$0.00
MACHINERY & EQUIPMENT CHARGE:				\$55.62	\$55.62	\$0.00
TOTALS					\$248.69	\$1.12

1/14/2013

2013 WHEAT BUDGET

ITEM	UNITS	Inputs - 5 Yr. Average		5 YR. AVG. COST Exhibit D	5 YR. AVERAGE COST	
		BASE 52 BUSHEL	@ ADD. BUSHEL		BASE 52 BUSHEL	@ ADD. BUSHEL
SEED:	seeds (1000s)	1,400	0	\$0.02	\$28.00	\$0.00
FERTILIZER:						
	N LB.	43	1.75	\$0.58	\$24.94	\$1.02
	P205 LB.	33	0.63	\$0.57	\$18.81	\$0.36
	K2O LB.	39	0.37	\$0.41	\$15.99	\$0.15
	LIME TON	0.25	0	\$24.10	\$6.03	\$0.00
CHEMICALS:				\$10.68	\$10.68	\$0.00
FUEL, OIL, GREASE				\$10.76	\$10.76	\$0.00
REPAIRS:				\$10.45	\$10.45	\$0.00
CROP INSURANCE:				\$6.53	\$6.53	\$0.01
MISCELLANEOUS:				\$6.00	\$6.00	\$0.00
TRUCKING: FUEL ONLY				\$0.05	\$2.60	\$0.00
SUBTOTAL					\$140.79	\$1.54
INTEREST: ON SUBTOTALLED COST			7.5%/12 X 8 MOS 5.0% int x subtotal		\$7.04	\$0.08
LABOR CHARGE:				\$25.60	\$25.60	\$0.00
MACHINERY & EQUIPMENT CHARGE:				\$57.20	\$57.20	\$0.00
TOTALS					\$230.62	\$1.61

1/10/2013

1/3/2013

**INTEREST RATES USED IN CAPITALIZATION RATE
2007-2013**

TAX YEAR	INTEREST RATE	EQUITY RATE
2007	7.70	10.25
2008	6.95	9.25
2009	6.55	5.25
2010	6.70	5.25
2011	6.05	5.25
2012	4.70	5.25
2013	4.30	5.25
	6.19	6.05

* 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.
 ** Equity rate is the prime rate plus 2% at www.bankrate.com from the Wall Street Journal's bank survey.

**ACTUAL CAPITALIZATION RATES USED IN CALCULATION
2007-2013**

TAX YEAR	CAPITALIZATION RATE
2007	8.4%
2008	8.3%
2009	7.9%
2010	7.8%
2011	7.6%
2012	7.5%
2013	6.7%

2013 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	1.258475	1.19726	1.484091
adjusted yield/acre	181	62	95
X Crop Price/Unit	\$3.91	\$8.98	\$4.54
= GROSS INCOME / ACRE	\$707.71	\$556.76	\$431.30
YIELD / ACRE	181	62	95
BASE YIELD	118	36	52
= YIELD ABOVE BASE	63	26	43
X ADDED UNIT COST	\$1.04	\$1.12	\$1.61
ADDED UNIT COST / ACRE	\$65.52	\$29.12	\$69.23
BASE YIELD COST	\$391.90	\$248.69	\$230.62
= TOTAL NON-LAND PROD. COST	\$457.42	\$277.81	\$299.85
NET RETURN / ACRE	\$250.29	\$278.95	\$131.45
X CROPPING PATTERN	0.387	0.512	0.101
= ROTATIONAL NET RETURN / ACRE	\$96.86	\$142.82	\$13.28
TOTAL ROTATIONAL NET RETURN	\$252.96		
BASE CAP RATE	0.067		
CAUV LAND VALUE	\$3,775.54	SAY	\$3,780

2/21/2013

2010 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	1.187288	1.128767	1.525
adjusted yield/acre	171	59	98
X Crop Price/Unit	\$2.66	\$6.41	\$3.41
= GROSS INCOME / ACRE	\$454.86	\$378.19	\$334.18
YIELD / ACRE	171	59	98
BASE YIELD	118	36	52
= YIELD ABOVE BASE	53	23	46
X ADDED UNIT COST	\$0.83	\$0.66	\$1.14
ADDED UNIT COST / ACRE	\$43.99	\$15.18	\$52.44
BASE YIELD COST	\$286.65	\$189.10	\$170.16
= TOTAL NON-LAND PROD. COST	\$330.64	\$204.28	\$222.60
NET RETURN / ACRE	\$124.22	\$173.91	\$111.58
X CROPPING PATTERN	0.39	0.51	0.1
= ROTATIONAL NET RETURN / ACRE	\$48.45	\$88.69	\$11.16
TOTAL ROTATIONAL NET RETURN	\$148.30		
BASE CAP RATE	0.078		
CAUV LAND VALUE	\$1,901.26	SAY	\$1,900

2013 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	1.258475	1.19726	1.484091
adjusted yield/acre	136	45	74
X Crop Price/Unit	\$3.91	\$8.98	\$4.54
= GROSS INCOME / ACRE	\$531.76	\$404.10	\$335.96
YIELD / ACRE	136	45	74
BASE YIELD	118	36	52
= YIELD ABOVE BASE	18	9	22
X ADDED UNIT COST	\$1.04	\$1.12	\$1.61
ADDED UNIT COST / ACRE	\$18.72	\$10.08	\$35.42
BASE YIELD COST	\$391.90	\$248.69	\$230.62
= TOTAL NON-LAND PROD. COST	\$410.62	\$258.77	\$266.04
NET RETURN / ACRE	\$121.14	\$145.33	\$69.92
X CROPPING PATTERN	0.387	0.512	0.101
= ROTATIONAL NET RETURN / ACRE	\$46.88	\$74.41	\$7.06
TOTAL ROTATIONAL NET RETURN	\$128.35		
BASE CAP RATE	0.067		
CAUV LAND VALUE	\$1,915.70	SAY	\$1,920

2/21/2013

2010 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	1.187288	1.128767	1.525
adjusted yield/acre	128	43	76
X Crop Price/Unit	\$2.66	\$6.41	\$3.41
= GROSS INCOME / ACRE	\$340.48	\$275.63	\$259.16
YIELD / ACRE	128	43	76
BASE YIELD	118	36	52
= YIELD ABOVE BASE	10	7	24
X ADDED UNIT COST	\$0.83	\$0.66	\$1.14
ADDED UNIT COST / ACRE	\$8.30	\$4.62	\$27.36
BASE YIELD COST	\$286.65	\$189.10	\$170.16
= TOTAL NON-LAND PROD. COST	\$294.95	\$193.72	\$197.52
NET RETURN / ACRE	\$45.53	\$81.91	\$61.64
X CROPPING PATTERN	0.39	0.51	0.1
= ROTATIONAL NET RETURN / ACRE	\$17.76	\$41.77	\$6.16
TOTAL ROTATIONAL NET RETURN	\$65.69		
BASE CAP RATE	0.078		
CAUV LAND VALUE	\$842.24	SAY	\$840

CAUV Summary Values

2/22/2013

FY 2013 - Final

productivity index	no. of units	net return/acre			cropland value/acre		
		low	high	avg.	low	high	avg.
0-49	601	0	60	0	350	350	350
50-59	749	0	98	29	350	1,470	516
60-69	1,114	0	143	81	350	2,130	1,218
70-79	798	77	196	131	1,140	2,920	1,958
80-89	211	134	232	183	2,000	3,460	2,743
90-99	35	207	251	221	3,080	3,750	3,310
100+	6	253	253	253	3,780	3,780	3,780
all regions	3,514	\$0	\$253	\$75	\$350	\$3,780	\$1,205

TY 2010 Final

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
all regions	3,514	\$0	\$151	\$34	\$200	\$1,900	\$505

CAUV Summary Values

2/22/2013

FY 2013 - Final

productivity index	no. of units	net return/acre			cropland value/acre		
		low	high	avg.	low	high	avg.
0-49	601	0	60	0	350	350	350
50-59	749	0	98	29	350	1,470	516
60-69	1,114	0	143	81	350	2,130	1,218
70-79	798	77	196	131	1,140	2,920	1,958
80-89	211	134	232	183	2,000	3,460	2,743
90-99	35	207	251	221	3,080	3,750	3,310
100+	6	253	253	253	3,780	3,780	3,780
all regions	3,514	\$0	\$253	\$75	\$350	\$3,780	\$1,205

TY 2012 Final

productivity index	no. of units	net return/acre			cropland value/acre		
		low	high	avg.	low	high	avg.
0-49	601	0	24	0	350	350	350
50-59	749	0	54	9	350	720	362
60-69	1,114	0	95	44	350	1,270	610
70-79	798	38	137	86	510	1,830	1,147
80-89	211	90	169	128	1,210	2,250	1,717
90-99	35	147	185	159	1,960	2,470	2,128
100+	6	187	187	187	2,490	2,490	2,490
all regions	3,514	\$0	\$187	\$45	\$350	\$2,490	\$719

Average CAUV Value Per Acre 1998-2013

Productivity		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Index		100	100	100	100	100	100	100	100	108	100	100	176	200	300	350	350
0-49		100	100	100	100	100	100	100	100	108	100	100	176	200	300	350	350
50-59		111	114	107	104	102	101	114	106	134	100	100	200	214	328	362	516
60-69		230	233	200	181	125	113	104	101	125	123	188	435	436	632	610	1218
70-79		448	452	417	394	285	244	157	124	241	283	431	746	845	1126	1147	1958
80-89		694	699	666	640	516	467	342	293	465	521	708	1059	1278	1641	1717	2743
90-99		894	908	869	842	713	663	533	492	675	747	973	1368	1601	2017	2128	3310
100+		1040	1060	1030	1000	870	820	690	650	880	970	1200	1620	1900	2380	2490	3780
Total		258	262	242	231	180	163	135	123	177	181	249	459	505	700	719	1205
No. of																	
Soils		3246	3281	3371	3279	3307	3313	3313	3358	3482	3510	3511	3511	3514	3514	3514	3514

Average CAUV Value Per Acre by Reappraisal/Update Year

Productivity		1998	2001	2004	2007	2010	2013
Index		100	100	100	100	200	350
0-49		100	100	100	100	200	350
50-59		111	104	114	100	214	516
60-69		230	181	104	123	436	1218
70-79		448	394	157	283	845	1958
80-89		694	640	342	521	1278	2743
90-99		894	842	533	747	1601	3310
100+		1040	1000	690	970	1900	3780
Total		258	231	135	181	505	1205
# Soils		3246	3279	3313	3510	3514	3514

Comparison of Inputs, Tax Years 2010-2013

<u>Crop Prices</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>Difference</u>	
					<u>2010-13</u>	<u>2012-13</u>
Corn	\$2.66	\$2.89	\$3.19	\$3.91	\$1.25	\$0.72
Soybeans	\$6.41	\$7.22	\$7.74	\$8.98	\$2.57	\$1.24
Wheat	\$3.41	\$3.64	\$3.98	\$4.54	\$1.13	\$0.56
<u>Non-land Production Costs</u>						
<u>Base Cost</u>						
Corn	\$286.65	\$300.98	\$350.71	\$391.90	\$105.25	\$41.19
Soybeans	\$189.10	\$204.60	\$227.51	\$248.69	\$59.59	\$21.18
Wheat	\$170.16	\$192.94	\$211.52	\$230.62	\$60.46	\$19.10
<u>Additional Unit Cost</u>						
Corn	\$0.83	\$0.84	\$0.90	\$1.04	\$0.21	\$0.14
Soybeans	\$0.66	\$0.77	\$0.93	\$1.12	\$0.46	\$0.19
Wheat	\$1.14	\$1.19	\$1.41	\$1.61	\$0.47	\$0.20
<u>Capitalization Rate</u>						
Mortgage/Equity Ratio	60/40	60/40	60/40	60/40		
Years	15	15	15	15		
Interest Rate	7.24	7.00	6.79	6.19		
Equity Rate	7.80	7.30	6.90	6.05		
Tax Additur	1.4	1.3	1.5	1.5		
Capitalization Rate	7.8	7.6	7.5	6.7	(1.10)	(0.80)