


2024 CAUV EXPLANATION Proposed Final Values

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TODAY'S AGENDA

- Presentation Methodology
 - CAUV Formula
 - Formula Inputs
 - Input Source
 - 2024 Calculations
 - Sample Calculation
 - Year-to-Year Comparison
 - Odds & Ends
 - Questions
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PRESENTATION METHODOLOGY

Liberally borrowing (C&P) from Dept. of Tax 7/12/24 presentation.

- https://dam.assets.ohio.gov/image/upload/tax.ohio.gov/real_property/2024explanationwithexhibts.pdf
- https://dam.assets.ohio.gov/image/upload/tax.ohio.gov/real_property/2024publichearingpowerpoint.pdf

Auditor Sheets nor I determined these values.

Please don't shoot the messenger!



OHIO DEPARTMENT OF TAXATION

AGRICULTURAL
ADVISORY COMMITTEE



Order



COUNTY AUDITOR

CAUV FORMULA – WORDS

CAUV land values 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.

There are 3,514 different soil types with slopes of 25% or less.

CAUV FORMULA - MATHEMATICALLY

$$((\text{Yield x Price}) - \text{Non Land Costs})_{C, B, \text{ and } W} \times \text{Rotation \%}_{C, B, \text{ and } W}$$

Capitalization Rate



FORMULA INPUTS

- Crop Prices
 - Yield
 - Non-Land Production Costs
 - Crop Rotation
 - Capitalization Rate
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INPUT SOURCES

Crop Prices

- USDA Statistics Service

Yield

- USDA Statistics Service

Non-Land Production Costs

- OSU Production Budgets – College of Food, Ag, and Enviro Services

Crop Rotation

- USDA Statistics Service

Capitalization Rate

- USDA Equity and FCS Interest
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CROP PRICES

5-Year Olympic Average

- Prior 7 years, remove high & low year
- 2017-2023

Crop Year	Corn	Soybeans	Wheat
2023	\$4.60	\$12.60	\$6.30
2022	\$6.28	\$14.40	\$7.85
2021	\$5.92	\$13.60	\$6.49
2020	\$4.69	\$11.30	\$5.27
2019	\$3.91	\$9.04	\$5.22
2018	\$3.74	\$8.69	\$5.08
2017	\$3.61	\$9.62	\$4.90

				Variance	
	2021	2023	2024	2021 – 2024	2023 – 2024
Corn	\$3.59	\$4.21	\$4.40	\$0.81	\$0.19
				22.56%	4.51%
Soybeans	\$9.10	\$10.22	\$10.81	\$1.71	\$0.59
				18.79%	5.77%
Wheat	\$4.76	\$5.20	\$5.52	\$0.76	\$0.32
				15.97%	6.15%

YIELD

1984 Base Year

- Last time yield study by soil type performed

Adjust by 10-Year Average of Actual Yields

- 2014-2023

Multiple Base Year x Adjustment Factor

2014	176	52.5	74
2015	153	50	67
2016	159	54.5	80
2017	177	49.5	74
2018	187	56	75
2019	164	49	56
2020	171	55	71
2021	193	57	85
2022	187	55.5	79
2023	198	58	90
Average 2014-2023	176.5	53.7	75.1
1984 Base	118	36.5	44
Average/1984 base	1.495763	1.471233	1.706818
% Increase	49.58%	47.12%	70.68%

		TY 2021	TY 2022	TY 2023	TY 2024
Crop	1984 Base	2011-2020	2012-2021	2013-2022	2014-2023
Corn	118.0 bu	163.4 bu	167.4 bu	174.1 bu	176.5 bu
Soybeans	36.5 bu	50.8 bu	51.8 bu	52.9 bu	53.7 bu
Wheat	44.0 bu	69.2 bu	72.0 bu	73.1 bu	75.1 bu

NON-LAND PRODUCTION COST


OSU Farm Budgets for Base Yield

Plus: Added Unit cost for each bushel over Base Yield

				Variance	
	2021	2023	2024	2021-2024	2023-2024
Corn	\$491.35	\$509.17	\$530.29	\$38.94	\$21.12
+bu	\$1.34	\$1.31	\$1.28	(\$0.06)	(\$0.03)
Beans	\$322.85	\$323.41	\$333.03	\$10.18	\$9.62
+bu	\$0.89	\$1.03	\$1.13	\$0.24	\$0.10
Wheat	\$284.91	\$264.36	\$272.17	(\$12.74)	\$7.81
+bu	\$1.29	\$1.37	\$1.45	\$0.16	\$0.08

CROP ROTATION

5- Year Average of Total Acres Harvested in Ohio

- Corn – 37%
 - Soybeans – 57%
 - Wheat – 6%
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TY 2024 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>
2019	2,570,000	35.6%	4,270,000	59.1%	385,000	5.3%	7,225,000
2020	3,300,000	37.9%	4,920,000	56.5%	490,000	5.6%	8,710,000
2021	3,340,000	38.2%	4,880,000	55.9%	515,000	5.9%	8,735,000
2022	3,180,000	36.4%	5,080,000	58.2%	465,000	5.3%	8,725,000
2023	3,400,000	39.0%	4,730,000	54.2%	590,000	6.8%	8,720,000
Five Year Average	3,158,000	37.4%	4,776,000	56.8%	489,000	5.8%	8,423,000

CAPITALIZATION RATE

Two Components

- Interest Rate
 - 7-Year Olympic Average of FCS rate for 25-Year loan
- Equity Rate
 - 25-Year average of USDA ROR

CAPITALIZATION RATE

	2021	2024	Variance
Mortgage/Equity Ratio	80/20	80/20	2021-2024
Interest Rate, 25-Year Fixed			
Multi-Flex Loan*	5.46%	6.20%	0.74%
Equity Rate**	7.21%	7.75%	0.54%
Tax Additur	1.6%	1.4%	(-0.17%)
Capitalization Rate	7.80%	8.20%	0.40%

*Farm Credit Services, 25-Year fixed multi-flex rate for loan amounts \$75,000 and over.

**25-year average rate of total return on farm equity

2024 CAUV SAMPLE CALCULATION

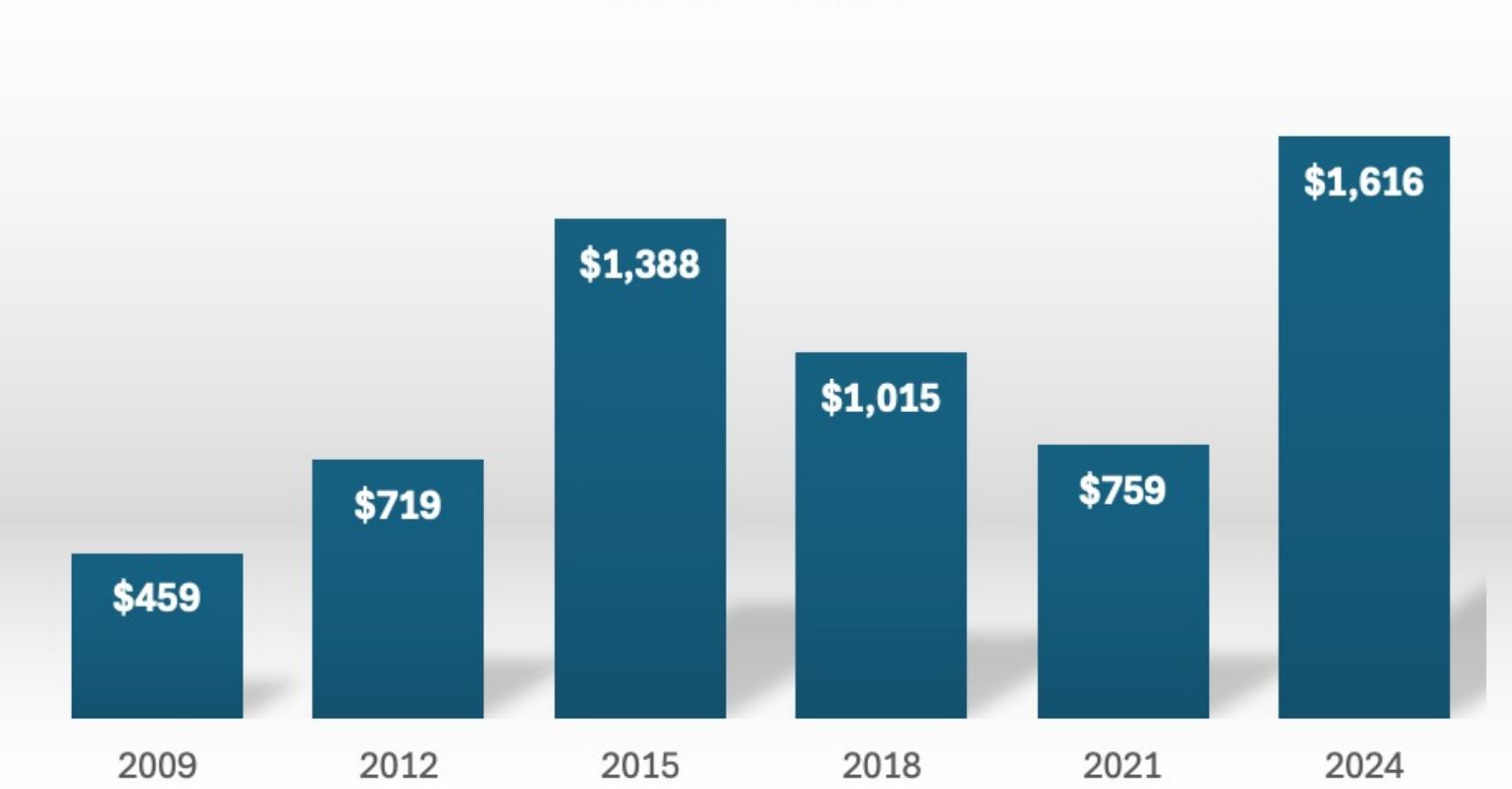
SOIL:	Miami Silt Loam
SLOPE:	2-6
EROSION:	Slight
DRAINAGE:	Well
PROD. INDEX:	76

	<u>CORN</u>	<u>BEANS</u>	<u>WHEAT</u>
PI DAT yield/acre (1984)	108	38	50
% increased yield	1.50	1.47	1.71
adjusted yield/acre	162	56	85
X Crop Price/Unit	\$4.40	\$10.81	\$5.52
= GROSS INCOME / ACRE	\$712.80	\$605.36	\$469.20
YIELD / ACRE	162	56	85
BASE YIELD	142	44	60
= YIELD ABOVE BASE	20	12	25
X ADDED UNIT COST	\$1.28	\$1.13	\$1.45
ADDED UNIT COST / ACRE	\$25.60	\$13.56	\$36.25
BASE YIELD COST	\$530.29	\$333.03	\$272.17
= TOTAL NON-LAND PROD. COSTS	\$555.89	\$346.59	\$308.42
NET RETURN / ACRE	\$156.91	\$258.77	\$160.78
X CROPPING PATTERN	37.4%	56.8%	5.8%
= ROTATIONAL NET RETURN / ACRE	\$58.68	\$146.98	\$9.33
TOTAL ROTATIONAL NET RETURN	\$214.99		
BASE CAP RATE	8.20%		
VALUE	\$2,621.84	<i>Rounded</i>	\$2,620

Average CAUV Values by Year, 2016 - 2024

Productivity Index									Proposed Final 2024
	2016	2017	2018	2019	2020	2021	2022	2023	
0-49	350	350	350	350	350	350	350	350	350
50-59	466	430	400	378	351	358	409	607	691
60-69	1235	1061	896	731	488	598	915	1502	1728
70-79	2255	1969	1723	1469	1073	1253	1672	2364	2629
80-89	3302	2909	2586	2270	1783	1969	2439	3244	3548
90-99	4074	3602	3226	2863	2303	2512	3007	3871	4223
100+	4750	4205	3810	3420	2820	2990	3550	4430	4850
Average	1310	1153	1015	876	668	759	999	1443	1616
No. of Soils	3514	3514	3514	3514	3514	3517	3517	3517	3517

AVG CAUV



TY2023 CAUV SAVINGS

CAUV Acres in Ohio	16,007,270
Taxable Value of Those Acres as CAUV	\$9,493,892,335
Taxable Value of Those Acres if Not CAUV	\$32,779,622,580
Percent Savings	71.04%




Soil Type	2021 Value	2024 Value	% Increase
BeA	\$1,020	\$2,340	129.41%
BgB	\$760	\$2,040	168.42%
Blg1B1	\$1,260	\$2,630	108.73%
Cr	\$350	\$1,700	385.71%
Crd1B1	\$1,020	\$2,340	129.41%
Crd1B2	\$750	\$2,030	170.67%
Crd1C2	\$620	\$1,840	196.77%
Lu	\$1,420	\$2,860	101.41%
Pm	\$2,240	\$3,870	72.77%
TrA	\$1,260	\$2,650	110.32%

ODDS & ENDS

Conservation

- Programs
- Practices

Woodland Values

- Clearing
 - Drainage
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CONSERVATION

Programs

- CRP, CREP, Wetlands Mitigation Banks, Etc.
- 100% of acres under contract
- “Payments of other compensation under a retirement or conservation program under an agreement with an agency of the federal government”

Practices

- Filter strips, grass waterways, wetlands, field borders, wind breaks
- 25% of total acres

Priced at lowest value on Soil Table

36-Month period to avoid “Conservation Recoupment”



WOODLANDS

Clearing Cost

- \$4,476 per acre all soils (\$1,000 in TY2023)

Drainage Cost

- \$1,030 per acre for most soils (\$890 in TY2023)

For TY2024

- \$230 for all soils
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QUESTIONS

