

Frequently Asked Questions about the CAUV Calculation

- 1. Why does the calculation use only corn, soybeans, and wheat? I don't grow any of those crops.**

The theory behind using corn, soybeans, and wheat is due to the fact that CAUV measures the productivity of land, not the income potential of different farming operations or styles. Corn, soybeans and wheat are the three most prevalently grown commodity crops in the state of Ohio, and so, they are considered the best gauge of the income potential of agricultural land in the state. This does lend itself somewhat to other crops, and livestock, as what soil is productive for corn, beans or wheat will also be productive for growing fruits, vegetables or grass for pasture.

- 2. I thought the formula also used hay as a crop. What happened to it?**

Hay was removed from the calculation beginning in 2010. Although hay was historically used in the calculation, it was found that the hay data was both unreliable and skewing CAUV values significantly. Because of the variability of the hay market, land with low soil productivity was ending up more valuable than land with high soil productivity. Hay prices were coming from auction barns, which do not have the same open market pricing nor stringent record-keeping as elevators for corn, beans and wheat. In addition, if you have ever been to a hay auction, you know that the first bales go for a lot of money, but the average and low quality hay at the end goes for very little – resulting in a high average price. It is almost certain that were hay still in the calculation, we would be seeing values much higher than they are now – especially for the low productivity soils.

- 3. I noticed that from 2005 to 2006, the yields changed a lot for the three crops in the calculation. How could yields change so much in one year?**

In part due to a closer examination of the CAUV program by local governments and schools and in the face of record low CAUV values in the early 2000s, it was discovered that yields used in the formula had not been updated since their recording in 1984. Using the 1984 yield numbers, without any update to modern yields, resulted in extremely low income numbers. The average corn yield in 1984 for all soil types was 118 bushels per acre (bpa), while the average in 2006, when updating was started, was at 159 bpa. Beginning in 2006, yields are now updated using a factor calculated using the 10-year average of yields in the state. The factor is derived by averaging the last ten years of statewide average yield data, and dividing the 1984 average yield by that number. That factor is then used in each soil calculation to update the individual soil's 1984 yield to a more modern number.

For example, in the 2012 calculation the 10-year average of corn yields was 146.5 bpa. The 1984 average corn yield, 118 bpa was divided by the 146.5 bpa to arrive at a factor of 1.241525, or a 24.15% increase in yield from 1984. Although this does increase the yield substantially, in most cases the yields used in the calculation will be somewhat less than the year's actual average yields. Using Miami Silt Loam as an example, the factor resulted in a

yield of 134 bpa in the 2012 calculation for this soil. Miami Silt Loam is an average productivity soil for the state of Ohio. By contrast, the average actual yield for 2011 was 158 bpa.

4. Ohio is a livestock producing state. Why isn't livestock considered in the CAUV formula?

As stated above, corn, soybeans and wheat are considered to be the best indicator of a soil's income producing potential, which is why livestock have not historically been included in the CAUV calculation. (See question 1, above). In turn, soils that are productive growing crops will also be productive growing pasture. That being said, it is clear the formula does not necessarily account for the differences in costs and income between crop farmers and livestock farmers. OFBF and other groups have questioned the Ohio Tax Department about the inclusion of livestock in the past, but have never received much discussion on the topic.

There are some basic challenges to including livestock, starting with just which livestock groups do you include? All livestock sectors are very different and experience very different markets, but share some similarities like costs. The similarities could allow for some sort of combination of the livestock markets for use in a calculation, but would require economists and data collection that could accurately portray that aggregation of data. Further, as we start to consider livestock, we must also think why aren't other crops like fruits, vegetables, timber or nursery crops included? All of these are important sectors of the agricultural economy in Ohio but are not specifically represented in the CAUV formula.

Second, what is the result of making our calculation more complicated by adding other data streams and will it serve the program best? Ohio enjoys a well-respected calculation based on generally accepted appraisal principles. Although it could take some study, the Ohio calculation can be easily understood and is extremely transparent to boot. Will adding more data make the CAUV calculation more suspect to the general public, including supporters, program participants and opponents?

Last, we must consider the administrative difficulties of collecting reliable and consistent data that accurately reflects the markets and results in an accurate reflection of farmland value.

5. CAUV is only going up because my local government/school/the state needs money. How can that happen to our program?

Although we often hear this sentiment about CAUV values, it is flatly wrong. There have not been any changes to the CAUV program to increase farmland taxes or to attempt to extract more money out of taxpayers. Instead, CAUV is the only valuation of land that does not allow for any subjective tinkering.

Consider the valuation of houses and residential property. A house may be valued at \$100,000 at a reappraisal. At the next update, recent sales may show that the auditor should increase that value to at least \$120,000. But in the three years between reappraisal and

update, there has been a golf course built around that house along with other high-value homes and upscale amenities, which could further serve to push that value even higher. Although this is the same house it was three years ago, new development and home sales around it have pushed up its value extensively.

In contrast, farmland that is valued using CAUV can only use the calculation for its value. If farmland is located in the same space as the home above, and now surrounded by all these high value amenities, it will not matter for the farmland's CAUV value. Although its market value or selling value may go up due to the development pressure around it, CAUV ensures that only the capitalization of net income from typical crops using typical management on the soils present can be used to value the land.

6. My auditor says property values have gone down in my county. How is it possible that my CAUV value can go up at a time like this?

CAUV value is based on the calculation and not on comparable sales or appraisals based on highest and best use of the property. As the real estate market continues to recover from the housing bubble, it is still common for a county – on average – to see a reduction in overall property values. But remember, those properties are valued based on what they could best be used for, which in a time of low development, is going to be lowered. Farmland, in contrast, is based on its income producing potential. Even during the recession, farm income has been at record levels and that has reflected in the CAUV calculation due to the increased crop prices and lowered interest rates.

7. Why should I even be enrolled in the CAUV program if the value is going to go up this much?

There is no doubt that the CAUV program still provides a large amount of savings to Ohio farmers. Since 1975, qualifying Ohio farmers have paid taxes on the CAUV value, instead of the market value of their property. All other land in the state is valued and taxed at fair market value – the price at which land would change hands between a willing seller and willing buyer with adequate time and knowledge (except qualifying forest land).* As we have seen farmland values skyrocket across the state and the country, CAUV still provides a significant reduction from fair market value. On average, CAUV value still only represents about 35% to 40% of actual fair market value of farmland. For example in 2011, the most recent data available, the average statewide value of an acre of land in CAUV was \$922, while that same land had an average market value of \$2,980 – representing an average 69% reduction in value.

*Note that the Ohio Forest Tax Law program values qualifying lands at fair market value but exempts 50% of the value for taxation purposes. While a great choice for those who qualify, CAUV typically provides a better savings than the Ohio Forest Tax Law.

Illustration: Below is a comparison of property using average market value and average CAUV value from Henry County, Ohio. Henry County had a property reappraisal in 2011.

Farm without CAUV		CAUV		Savings	
Average Market Value per acre * 200 acres	\$779,800.00	Average CAUV Value per acre *200 acres	\$310,600.00	Value Savings	\$469,200.00 or 60%
Assessed on 35% of MV	\$272,930.00	Assessed on 35%	\$108,710.00		
Multiplied by Avg. Class I Effective Property Tax Rate (2010 - payable 2011)	41.4600	Multiplied by Avg. Class I Effective Property Tax Rate (2010 - payable 2011)	41.4600		
Assessed Value * Tax Rate	\$11,315.68	Assessed Value* Tax Rate	\$4,507.12	Savings	\$6,808.56

**Note: this is an over simplified version of tax accounting using average values and average statewide tax rate. This calculation also does not consider the 10% property tax reduction, or the Tax Rollback Factor, which could serve to increase or lower taxes further.

8. If CAUV value doubles, doesn't that mean my taxes will double too?

Not necessarily, although your tax bill will increase. Remember that CAUV value only applies to the "all other land" portion of your property. Your house, one-acre home site, and any buildings will also be valued separately based on their market value. Although the tax bill for agricultural land starts with the assigned CAUV value, Ohio levies property taxes on 35% of the value of land. The taxable value of your land then is your CAUV value multiplied by 35%. Next, your tax rate determined by both the unvoted and voted millage of your tax district is applied. The tax rate will differ depending on where you live, but the bulk of your tax bill is really due to voted levies in your area. Further complicating the amount from levies is the tax reduction factor, or the "920 effect" as it is often called. This principle holds that almost all levies can only collect in each subsequent year, what they did in their first year. This means while the millage rate will stay the same, the effective millage rate – or how much is actually collected per property owner – will decrease as property values go up. There are also several other general programs that reduce your tax bill. The most prevalent is the 10% rollback that is applied to property taxes, and was created as a tradeoff when Ohio put an income tax in place. Additionally, there is a 2.5% rollback on the value of an owner-occupied home, and a further substantial exemption for the value of a home owned by a senior citizen. All of these factors mean that while the increase in CAUV values certainly is a large contributing factor to your tax bill, it is not the only reason that taxes go up.

9. Why is the capitalization rate so low?

In general, the capitalization rate in this type of formula represents the cost of borrowing money to make an investment. The type of calculation used in the CAUV formula is actually a typical and widely accepted method of appraising a commercial investment. The capitalization rate is intended to represent the rate of return a prudent investor would expect on an average or typical Ohio farm considering only agricultural factors.

The capitalization rate is derived from the interest rates at Farm Credit Services of Mid-America for a 15-year loan. As anyone who has bought farmland recently knows, interest rates are at their historic lows. While this means it's a great time to borrow money and buy property or even refinance, the low interest rates result in a low capitalization rate. Because the capitalization rate is the factor with which we divide net income, it results in a higher net CAUV value.

The law also requires that in determining the capitalization rate, the tax department must use:

- the typical term of years, per cent of mortgage and return on farm mortgages as reported by federal land bank and other sources;
- the return on investors equity, extracted from market data;
- the depreciation or appreciation expected in agricultural land over the next five years, using USDA data.

After application of these factors, the capitalization rate shall only have the effective real property tax rate added to it, reduced by the rate of assessment (35%) and the further property tax reductions required by law (10% rollback). Because regulation requires this type of calculation, without rule change, the capitalization rate cannot be changed. (OAC 5703-25-33).

10. Isn't the discovery of natural gas and the value of pipeline easements what is really driving up these values?

No, CAUV values can only be determined using the CAUV calculation which does not take any mineral interests into account. While other property taxes could be due on certain mineral interests, they will not factor into the CAUV calculation or the resulting values of farmland that is enrolled in the CAUV formula.

11. Who is responsible for these increases?

No person is responsible for these increases, the farm economy is responsible. The CAUV calculation is based on hard data and simple math. The beauty of a math problem is that the subjectivity of humans cannot sway it one way or another. The CAUV calculation in place today is nearly the same calculation that provided record low values only 7 years ago.