



Department of Local Government Finance

Agricultural Land Base Rate

Daniel Shackle
Commissioner

July 2024



Disclaimer

- This presentation and other Department of Local Government Finance materials are not a substitute for the law. The following is not legal advice, just an informative presentation. The Indiana Code always governs.



Agricultural Land Base Rate - Calculation

$$\text{Market Value In Use} = \frac{\text{Net Income}}{\text{Capitalization Rate}}$$



Questions?



Agricultural Land Base Rate - History

- 2002** – Real Property Assessment Guidelines
 - \$1,050/acre (*remained unchanged in 2003 and 2004*)

- 2005** – 50 IAC 27-6-1(a)
 - \$880/acre

- 2005** – Senate Enrolled Act 327-2005 (SEC. 34)
 - Set the 2006 also at \$880/acre.
 - Instructed DLGF to adjust from a 4-yr rolling average to a 6-yr rolling average (IC 6-1.1-4-4.5) in 2007 which resulted in an Ag Land Base Rate of \$1,140/acre.



Agricultural Land Base Rate - History

2008 – \$1,200/acre

2009 – \$1,250/acre

2010 – \$1,400/acre

2010 – Senate Enrolled Act 396-2010 (SEC. 1)

- Required the highest year of the six-year average to be excluded in the calculation.
- Reduced the 2010 calculation to \$1,290.

2011 – \$1,500/acre



Agricultural Land Base Rate - History

2012 – \$1,630/acre

2013 – \$1,760/acre

2014 – \$2,050/acre

2015 – \$2,420/acre

2015 – Senate Enrolled Act 436-2015 (SEC. 7)

- Set the base rate for 2015 at the 2014 level of \$2,050/acre.
- New method for 2016's calculation which took the preceding year's base rate and multiplied it by an assessed value growth quotient.



Agricultural Land Base Rate - History

2016 – Senate Enrolled Act 308-2016

- Repealed the new method and re-inserted the previous method of using a six-year rolling average with the highest year excluded.
- Added the requirement of using the most current data available and adjust the capitalization rate after the preliminary base rate was determined.

2016 – \$1,960/acre



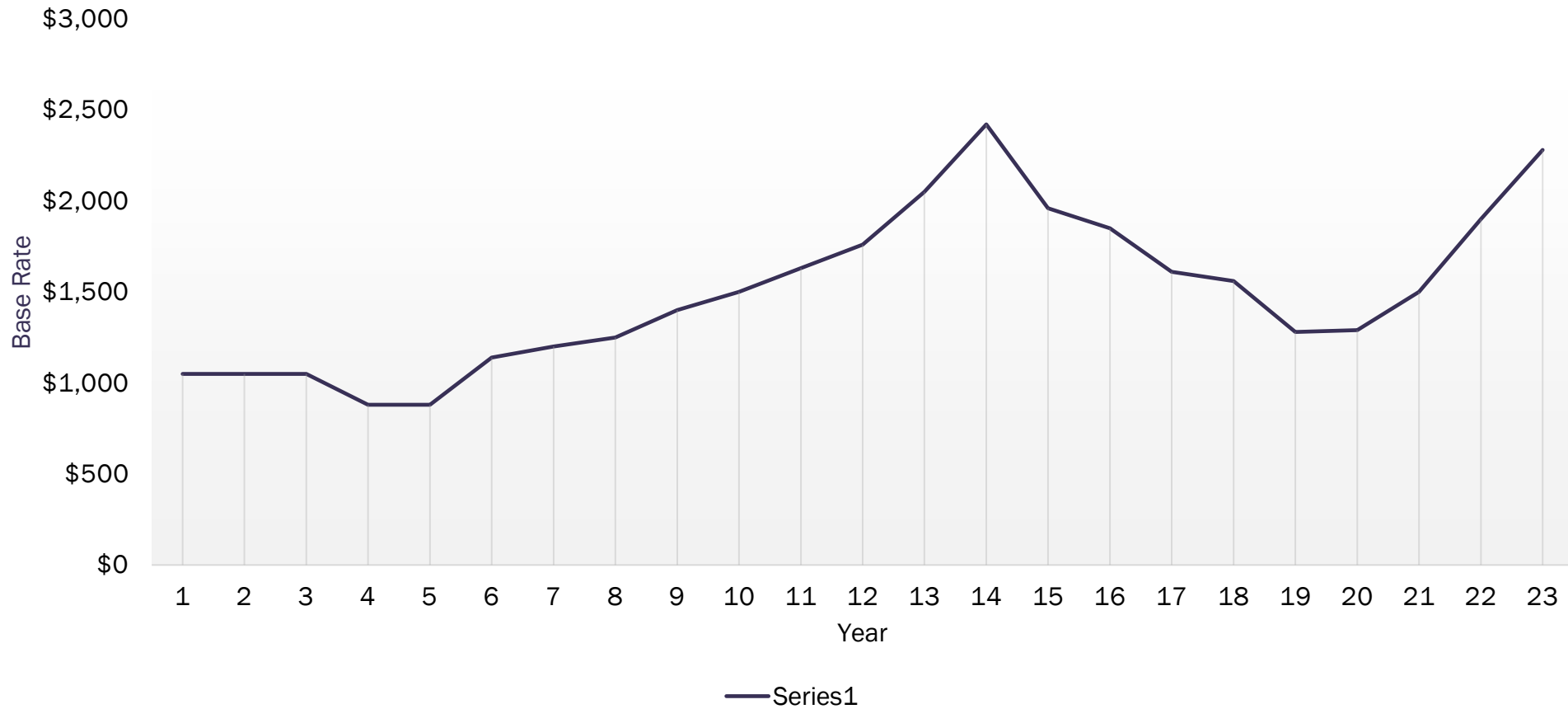
Agricultural Land Base Rate - History

2017	–	\$1,850/acre
2018	–	\$1,610/acre
2019	–	\$1,560/acre
2020	–	\$1,280/acre
2021	–	\$1,290/acre
2022	–	\$1,500/acre
2023	–	\$1,900/acre
2024	–	\$2,280/acre



Agricultural Land Base Rate - History

2002-2024 Agricultural Land Base Rate





Agricultural Land Base Rate - Calculation

SEA 308-2016 (IC 6-1.1-4-4.5(e))

(e) In making the annual determination of the base rate to satisfy the requirement for an annual adjustment under subsection (c) for the January 1, 2016, assessment date and each assessment date thereafter, the department of local government finance shall not later than March 1 of each year determine the base rate using the methodology reflected in Table 2-18 of Book 1, Chapter 2 of the department of local government finance's Real Property Assessment Guidelines (as in effect on January 1, 2005), except that the department shall adjust the methodology as follows:

- (1) Use a six (6) year rolling average adjusted under subdivision (3) instead of a four (4) year rolling average.
- (2) Use the data from the six (6) most recent years preceding the year in which the assessment date occurs for which data is available before one (1) of those six (6) years is eliminated under subdivision (3) when determining the rolling average.
- (3) Eliminate in the calculation of the rolling average the year among the six (6) years for which the highest market value in the use of agricultural land is determined.



Agricultural Land Base Rate - Calculation

SEA 308-2016 (IC 6-1.1-4-4.5(e))

...

(4) After determining a preliminary base rate that would apply for the assessment date without applying the adjustment under this subdivision, the department of local government finance shall adjust the preliminary base rate as follows:

- (A) If the preliminary base rate for the assessment date would be at least ten percent (10%) greater than the final base rate determined for the preceding assessment date, a capitalization rate of eight percent (8%) shall be used to determine the final base rate.
- (B) If the preliminary base rate for the assessment date would be at least ten percent (10%) less than the final base rate determined for the preceding assessment date, a capitalization rate of six percent (6%) shall be used to determine the final base rate.
- (C) If neither clause (A) nor clause (B) applies, a capitalization rate of seven percent (7%) shall be used to determine the final base rate.



Agricultural Land Base Rate - Calculation

SEA 308-2016 (IC 6-1.1-4-4.5(e))

...

(D) In the case of a market value in use for a year that is used in the calculation of the six (6) year rolling average under subdivision (1) for purposes of determining the base rate for the assessment date:

- (i)** that market value in use shall be recalculated by using the capitalization rate determined under clauses (A) through (C) for the calculation of the base rate for the assessment date; and
- (ii)** the market value in use recalculated under item (i) shall be used in the calculation of the six (6) year rolling average under subdivision (1).



Agricultural Land Base Rate - Calculation

$$\text{Market Value In Use} = \frac{\text{Net Income}}{\text{Capitalization Rate}}$$



Agricultural Land Base Rate - Calculation

Net Income

- Based on the productive capacity of the land.
- Income Capitalization Approach
 - Use-value is based on the residual or net income that will accrue to the land from agricultural production.
- Agricultural land in Indiana is nearly evenly divided between cash rent and owner-occupied.
- Department utilizes a six-year rolling average of both methods in determining the market value.



Agricultural Land Base Rate - Calculation

Net Income

- Net Operating Income and Net Cash Rent
 - Net Operating Income = the gross income received from the sale of crops less the variable costs (seed/fertilizer/etc.) and fixed costs (machinery, labor, property taxes).
- Net Cash Rent = the gross cash rent of an acre of farmland less the property taxes on the acre.



Agricultural Land Base Rate - Calculation

Net Income

- Net Operating Income and Net Cash Rent

Net Operating Income = The gross income received from the sale of crops less the variable costs (seed/fertilizer/etc.) and fixed costs (machinery, labor, property taxes).

Net Cash Rent = The gross cash rent of an acre of farmland less the property taxes on the acre.



Agricultural Land Base Rate - Calculation

Net Operating Income

- Represents the profits from the owner-occupied production of crops on agricultural land.
- The foundation for the calculations is derived from the June 24, 1999 Doster/Huie Report
 - The Department looks at the report to determine:
 - Yields (Indiana Agricultural Statistics Service) for corn and soybeans
 - Prices (Indiana Agricultural Statistics Service)

$$\text{Net Operating Income} = \text{Gross Income from Sales} - \text{Variable Costs \& Fixed Costs}$$

$$\text{Sales} = \text{Yields for Each Type of Crop} \times \text{Price per Bushel for Each Type of Crop}$$



Agricultural Land Base Rate - Calculation

Variable Costs (Purdue Crop Guide)

- Costs include labor, seed, fertilizer, chemicals, machinery repairs, and fuel.
 - Crop Contribution Margin = Sales - Variable Costs
 - Plus Government Payment

$$\text{Total Contribution Margin} = \text{Average of Crop Contribution Margin for Corn and Soybeans} + \frac{1}{2} \text{ of the Government Payment Amount}$$



Agricultural Land Base Rate - Calculation

Fixed Costs (“Overhead”) (Purdue Crop Guide)

- Overhead includes machinery, drying/handlining, and family/hired labor
- Real Estate Tax Deduction - \$10 per Doster/Huie Report

Income = Total Contribution Margin – Overhead Expenses

Estimated Land Value = Averaged the Four Years (1996-1999) Income and Divided it by a 1999 Interest Rate to Arrive at and Estimated Land Value of \$971

Net Income from Operating = Profits from the Owner-Occupied Production of Crops on Agricultural Land



Agricultural Land Base Rate - Calculation

Net Income

- Alterations made by the Department to the Doster/Huie report.
 - The Department added statistics for 1995 and deleted the estimates for 1999 because interest rates and income data were not available.
 - Doster/Huie only used November prices. Only a small portion of Indiana's grain is sold in November.
 - Calendar year average of the grain prices from IASS (USDA – Indiana Ag Statistics Service).
 - Market year average which is calculated by the IASS and is a weighted average that is based on the end-of-the-month grain price and the percentage of the total grain harvested that was sold that month.
- Instead of using the 1999 St. Paul Farm Cred Bank interest rate, the Department uses the quarterly farm loan rates published by the Federal Reserve Bank of Chicago's "AgLetter".



Agricultural Land Base Rate - Calculation

Net Income

- Net Cash Rent
 - Date derived from three Purdue Agricultural Economics Reports.
 - The Department used the statewide averages for average soil
 - The adjustment to reduce the rents for property taxes paid on the lands is based on an annual study conducted by the Department.



Agricultural Land Base Rate - Calculation

Capitalization Rate

- Converts the net income into an estimate of value.
- Reflects the annual income relative to the value of the agricultural land.
- Based on the annual average interest rate on agricultural real estate and operating loans in Indiana for this same period.



Agricultural Land Base Rate - Calculation

Capitalization Rate - IC 6-1.1-4-4.5(e)(4)

(4) After determining a preliminary base rate that would apply for the assessment date without applying the adjustment under this subdivision, the department of local government finance shall adjust the preliminary base rate as follows:

(A) If the preliminary base rate for the assessment date would be at least ten percent (10%) greater than the final base rate determined for the preceding assessment date, a capitalization rate of eight percent (8%) shall be used to determine the final base rate.

(B) If the preliminary base rate for the assessment date would be at least ten percent (10%) less than the final base rate determined for the preceding assessment date, a capitalization rate of six percent (6%) shall be used to determine the final base rate.

(C) If neither clause (A) nor clause (B) applies, a capitalization rate of seven percent (7%) shall be used to determine the final base rate.



Soil Productivity Factors

- Once the Agricultural Land Base Rate is calculated, a county/township assessor may apply soil productivity factors to determine the final assessed value of the acre.
 - Agricultural Land Use Types
 - Influence Factors for Agricultural Acreage
 - Soil Identification
 - Soil Maps (approximately 2,400) – USDA
 - Productivity Rating is based on average estimated crop yields, which in turn are based on the physical properties of the soil.
 - Corn Yields.
 - The more productive the soil, the higher the rating (1.28 - .50).



Thank you!



Daniel Shackle
Commissioner
Department of Local Government Finance

Email: dshackle@dlgf.in.gov

Phone: 317-234-5720

Website: <https://www.in.gov/dlgf/>

100 N. Senate Ave., Rm. N1058
Indianapolis, IN 46204