STATE OF INDIANA

DEPARTMENT OF LOCAL GOVERNMENT FINANCE

INDIANA GOVERNMENT CENTER NORTH
100 NORTH SENATE AVENUE N1058 (B)
INDIANAPOLIS, IN 46204

Certification of Agricultural Land Base Rate Value for Assessment Year 2025

This memorandum hereby serves to notify assessing officials of the agricultural base rate to be used for the January 1, 2025, assessment date: **$2,390 per acre**.

Land used for agricultural purposes shall be adjusted consistent with the guideline methodology that was in effect on January 1, 2005, except, in determining the annual base rate, the Department of Local Government Finance ("Department") shall adjust the methodology to use the lowest five years of a six (6) year rolling average. Senate Enrolled Act 308 then requires a comparison of the preliminary Table 2-18 base rate to the prior year's Table 2-18 base rate in order to determine the statutory capitalization rate to be used to calculate the final base rate for this assessment date.

Those portions of agricultural parcels that include land and buildings not used agriculturally, such as homes, homesites, and excess land and commercial or industrial land and buildings, shall be adjusted by the factor or factors developed for other similar properties within the geographic stratification. The residence portion of agricultural properties will be adjusted by the factors applied to similar residential properties.
50 IAC 27-6-1 (b)

The 2025 assessment year agricultural land value utilizes the land's current market value in use, which is based on the productive capacity of the land, regardless of the land's potential or highest and best use. The most frequently used valuation method for use-value assessment is the income capitalization approach. In this approach, use-value is based on the residual or net income that will accrue to the land from agricultural production.

As illustrated in the following equation, the market value in use of agricultural land is calculated by dividing the net income of each acre by the appropriate capitalization rate.

Market value in use = Net Income ÷ Capitalization Rate

The net income of agricultural land can be based on either the net operating income or the net cash rent. Net operating income is the gross income received from the sale of crops less the variable costs (i.e. seed and fertilizer) and fixed costs (i.e. machinery, labor, property taxes) of producing crops. The net cash rent income is the gross cash rent of an acre of farmland less the property taxes on the acre. Both methods assume the net income will continue to be earned into perpetuity.

The capitalization rate converts the net income into an estimate of value. The capitalization rate reflects, in percentage terms, the annual income relative to the value of an asset; in this case agricultural land. Conceptually, this capitalization rate incorporates the required returns to various forms of capital, associated risks, and the anticipated changes over time.

Since agricultural land in Indiana is nearly evenly divided between cash rent and owner-occupied production, the Department utilized a six-year rolling average (2019 to 2024) of both methods in determining the market value in use of agricultural land. The capitalization rate applied to both types of net income was based on the language contained in SEA 308. The table below summarizes the data used in developing the average market value in use.

Senate Enrolled Act 308 – Final Agricultural Land Base Rate

	NET INCOMES			MARKET VALUE IN USE		
Year	Cash Rent	Operating	Cap. Rate	Cash Rent	Operating	Average
2019	181	6	8.00%	2,263	75	1,169
2020	192	141	8.00%	2,400	1,763	2,081
~~2021~~	~~206~~	~~343~~	~~8.00%~~	~~2,575~~	~~4,288~~	~~3,431~~
2022	230	319	8.00%	2,875	3,988	3,431
2023	233	262	8.00%	2,913	3,275	3,094
2024	230	116	8.00%	2,875	1,450	2,163

Average Market Value in Use	**$2,390**

The statewide agricultural land base rate value for the 2025 assessment year will be $2,390 per acre. Dated December 31, 2024.

Scott Maitland, Acting Commissioner
Department of Local Government Finance

STATE OF INDIANA

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Certification of Agricultural Land Base Rate Value for Assessment Year 2025

This REVISED memorandum hereby serves to notify assessing officials of the agricultural base rate to be used for the January 1, 2025, assessment date: **$2,120 per acre**.

This revision is due to the passage of Senate Enrolled Act 1 (P.L.68-2025), which amended a capitalization rate percentage under the statewide agricultural land base rate determination contained in Ind. Code § 6-1.1-4-4.5. Please also note that, under House Enrolled Act 1427 (P.L.230-2025), the base rate calculated herein shall not apply to land that is assessed under Ind. Code § 6-1.1-4-12 (developer's discount for land held in inventory) for the January 1, 2025, assessment date only.

Land used for agricultural purposes shall be adjusted consistent with the guideline methodology that was in effect on January 1, 2005, except, in determining the annual base rate, the Department of Local Government Finance ("Department") shall adjust the methodology to use the lowest five years of a six-year rolling average. Senate Enrolled Act 1 (P.L.68-2025) and Senate Enrolled Act 308 (P.L.180-2016) require a comparison of the preliminary Table 2-18 base rate to the prior year's Table 2-18 base rate in order to determine the statutory capitalization rate to be used to calculate the final base rate for this assessment date.

Those portions of agricultural parcels that include land and buildings not used agriculturally, such as homes, homesites, excess land, and commercial or industrial land and buildings, shall be adjusted by the factor or factors developed for other similar properties within the geographic stratification. The residence portion of agricultural properties will be adjusted by the factors applied to similar residential properties (50 IAC 27-6-1 (b)).

The 2025 assessment year agricultural land value utilizes the land's current market value in use, which is based on the productive capacity of the land, regardless of the land's potential or highest and best use. The most frequently used valuation method for use value assessment is the income capitalization approach. In this approach, use value is based on the residual or net income that will accrue to the land from agricultural production.

As illustrated in the following equation, the market value in use of agricultural land is calculated by dividing the net income of each acre by the appropriate capitalization rate.

Market value in use = Net Income ÷ Capitalization Rate

The net income of agricultural land can be based on either the net operating income or the net cash rent. Net operating income is the gross income received from the sale of crops less the variable costs (i.e. seed and fertilizer) and fixed costs (i.e. machinery, labor, property taxes) of

producing crops. The net cash rent income is the gross cash rent of an acre of farmland less the property taxes on the acre. Both methods assume the net income will continue to be earned into perpetuity.

The capitalization rate converts the net income into an estimate of value. The capitalization rate reflects, in percentage terms, the annual income relative to the value of an asset; in this case agricultural land. Conceptually, this capitalization rate incorporates the required returns to various forms of capital, associated risks, and the anticipated changes over time.

Since agricultural land in Indiana is nearly evenly divided between cash rent and owner-occupied production, the Department utilized a six-year rolling average (2019 to 2024) of both methods in determining the market value in use of agricultural land. The capitalization rate applied to both types of net income was based on the language contained in SEA 1 (2025) and SEA 308 (2016).

The table below summarizes the data used in developing the average market value in use:

SEA 1 (2025) & SEA 308 (2016) – Final Agricultural Land Base Rate

	NET INCOMES			MARKET VALUE IN USE		
Year	Cash Rent	Operating	Cap. Rate	Cash Rent	Operating	Average
2019	181	6	9.00%	2,011	67	1,039
2020	192	141	9.00%	2,133	1,567	1,850
~~2021~~	~~206~~	~~343~~	~~9.00%~~	~~2,289~~	~~3,811~~	~~3,050~~
2022	230	319	9.00%	2,556	3,544	3,050
2023	233	262	9.00%	2,589	2,911	2,750
2024	230	116	9.00%	2,556	1,289	1,922
				Average Market Value in Use		**$2,120**

The statewide agricultural land base rate value for the 2025 assessment year will be $2,120 per acre.

Dated this 9 day of May, 2025.

Jason Cockerill, Commissioner
Department of Local Government Finance

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REFERENCE MATERIALS FOR VALUING AGRICULTURAL LAND FOR JANUARY 1, 2025

BASE RATE - $2,120

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9 & 10	Certification of Agricultural Land Base Rate Value for the Assessment Year of January 1, 2025
11-15	A paper written by Dr. D. Howard Doster & Dr. John M. Huie titled "A Method for Assessing Indiana Cropland - An Income Approach to Value" dated June 24, 1999.
16	SEA 308 (2016) / SEA 1 (2025) Calculation of Final Agricultural Base Rate
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General Notes for the Agricultural Land Market
Value in Use for January 1, 2025, Rate of $2,120

December 2024 ***(Revised May 2025)***

History:

In compliance with the Town of St. John v. State Board of Tax Commissioners court case, the 2002 Real Property Assessment Guidelines contained a section on valuing agricultural land based on its value in use. A summary of the Department's calculations can be found in Chapter 2, Page 100 of those guidelines, in Table 2-18. For the 2002 reassessment, the base rate for agricultural land was calculated to be $1,050 and remained unchanged for 2003 and 2004.

Pursuant to 50 IAC 27-6-1(a), the department issued the annual rate for March 1, 2005, to be $880. In the 2005 legislative session, SEA 327 was passed. This bill contained a non-code provision that set the base rate for agricultural land for both March 1, 2005, and March 1, 2006, at $880. SEA 327 also contained language for March 1, 2007, which instructed the Department of Local Government Finance to adjust the Department's methodology from a four-year rolling average to a six-year rolling average (IC 6-1.1-4-4.5).

- The base rate for March 1, 2007, was calculated to be $1,140 per acre.
- The base rate for March 1, 2008, was updated by removing 1999 data and adding 2005 data to the six-year average which resulted in a base rate of $1,200.
- The base rate for March 1, 2009, was updated by removing 2000 data and adding 2006 data to the six-year average which resulted in a base rate of $1,250.
- The base rate for March 1, 2010, was updated by removing 2001 data and adding 2007 data to the six-year average which resulted in a base rate of $1,400; however, in March of 2010, Senate Enrolled Act 396-2010 was signed into law which required the highest year of the six-year average to be excluded in the calculation. This change in the calculation lowered the base rate for March 1, 2010, from $1,400 to $1,290 when the 2007 data was excluded.
- The base rate for March 1, 2011, was updated by removing the 2002 data, adding the 2008 data, and excluding the highest year (2008) of the six-year average to arrive at a base rate of $1,500.
- The base rate for March 1, 2012, was updated by removing the 2003 data, adding the 2009 data, and excluding the highest year (2008) of the six-year average to arrive at a base rate of $1,630.
- The base rate for March 1, 2013, was updated by removing the 2004 data, adding the 2010 data, and excluding the highest year (2010) of the six-year average to arrive at a base rate of $1,760.
- The base rate for March 1, 2014, was updated by removing the 2005 data, adding the 2011 data, and excluding the highest year (2011) of the six-year average to arrive at a base rate of $2,050.
- The base rate for March 1, 2015, was updated by removing the 2006 data, adding the 2012 data, and excluding the highest year (2011) of the six-year average to arrive at a base rate of $2,420; however, Senate Enrolled Act 436-2015 was passed which set March 1, 2015, base rate at $2,050 (unchanged from 2014). SEA 436-2015 also established a new method of calculating the base rate for 2016 which took the preceding year's base rate and multiplied it times an assessed value growth quotient; however, in the 2016

legislative session, Senate Enrolled Act 308 repealed this new method and re-instated the previous method of using a six-year rolling average with the highest year excluded and added the requirement of using the most current data available and adjusting the capitalization rate after the preliminary base rate was determined.

- The base rate for January 1, 2016, was updated by removing the 2007, 2008, & 2009 data, adding the 2013, 2014, & 2015 data, excluding the highest year (2013) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 to arrive at a final base rate of $1,960.
- The base rate for January 1, 2017, was updated by removing the 2010 data, adding the 2016 data, excluding the highest year (2013) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 to arrive at a final base rate of $1,850.
- The base rate for January 1, 2018, was updated by removing the 2011 data, adding the 2017 data, excluding the highest year (2013) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 to arrive at a final base rate of $1,610.
- The base rate for January 1, 2019, was updated by removing the 2012 data, adding the 2018 data, excluding the highest year (2013) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 to arrive at a final base rate of $1,560.
- The base rate for January 1, 2020, was updated by removing the 2013 data, adding the 2019 data, excluding the highest year (2014) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 to arrive at a final base rate of $1,280.
- The base rate for January 1, 2021, was updated by removing the 2014 data, adding the 2020 data, excluding the highest year (2020) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 to arrive at a final base rate of $1,290.
- The base rate for January 1, 2022, was updated by removing the 2015 data, adding the 2021 data, revising last year's worksheets with current data, excluding the highest year (2021) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 to arrive at a final base rate of $1,500.
- The base rate for January 1, 2023, was updated by removing the 2016 data, adding the 2022 data, revising last year's worksheets with current data, excluding the highest year (2021) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 to arrive at a final base rate of $1,900.
- The base rate for January 1, 2024, was updated by removing the 2017 data, adding the 2023 data, revising last year's worksheets with current data, excluding the highest year (2021) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 to arrive at a final base rate of $2,280.
- The base rate for January 1, 2025, was updated by removing the 2018 data, adding the 2024 data, revising last year's worksheets with current data, excluding the highest year (2021) of the six-year average, and adjusting the capitalization rates per SEA 308-2016 and SEA 1-2025 to arrive at a final base rate of $2,120.

SEA 308 – The New Calculation of the Ag Land Base Rate Beginning January 1, 2016

IC 6-1.1-4-4.5(f) 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 use of agricultural land is determined.
(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.
    (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).

Updates to Table 2-18 for January 1, 2025

Table 2-18 – Years:
For January 1, 2025, the six years of data used in the calculations were: 2019, 2020, 2021, 2022, 2023, and 2024.

Table 2-18 – Net Income from Cash Rents:
Since agricultural land in Indiana is almost evenly divided between cash rent and owner-occupied production, the Department used an average of both types of income in its calculation.

The data for cash rents came from three Purdue Agricultural Economics Reports (PAER). For the 2019 & 2020 rents, go to Table 4 found on Page 19 of this packet for the July 2020 report. For the 2021 & 2022 rents, go to Table 4 found on Page 21 of this packet for the August 10, 2022, report. For the 2023 & 2024 rents, go to Table 3 found on Page 23 of this packet for the August 2024 report. From these tables, the Department used the statewide averages for average soil.

There is also an adjustment to these amounts to reduce the rents for property taxes paid on the land. This adjustment was based on an annual study conducted by the Department of Local Government Finance. (See pages 24 & 25 of this packet)

Table 2-18 – Net Income from Operating:
This income represents the profits from the owner-occupied production of crops on agricultural land.

The foundation for the calculations that the Department adopted comes from Table 1 (P-13) of June 24, 1999, Doster/Huie report.

Doster/Huie Report – Table 1-Yields:
The yields in this report were obtained from the Indiana Agricultural Statistics Service (IASS) for both corn and soybeans. The IASS publishes these statistics on an annual basis. Yield information for these four years can be found in the 1999-2000 publication for corn on page 31 in the Final Yield per Acre column of the Crop Summary section and on page 32 for soybeans.

Doster/Huie Report – Table 1-Prices:
The prices used in this report were for the month of November. They can be found in IASS publications for that time period. Note: The Department made an adjustment to this part of the calculation because the majority of the grain harvested in Indiana is not sold in November but throughout the year. This adjustment will be discussed later.

Doster/Huie Report – Table 1-Sales:
Yields for each type of crop (corn/soybeans) multiplied by the Price per Bushel for each type of crop equals Sales.

Doster/Huie Report – Table 1-Less Variable Costs:
This information can be found in the Purdue Crop Guide. This guide is an annual publication (ID-166). The dollar amount for each crop type can be found in the section titled “Estimated XXXX (year) Per Acre Production Costs in the column for Corn/Soybean Rotation for Average Soil. See the line for “Total direct cost per acre at harvest”. The costs include labor, seed, fertilizer, chemicals, machinery repairs, and fuel.

Doster/Huie Report – Table 1-Crop Contribution Margin:
Sales less Variable Costs equal Crop Contribution Margin for each type of crop (corn/soybeans).

Doster/Huie Report – Table 1-Plus Government Payment:
The publication adds government payments as a source of additional revenue for the land. This amount for each year was estimated by the authors of the publication.

Doster/Huie Report – Table 1-Total Contribution Margin:
This number represents the average of the Crop Contribution Margin for corn and soybeans plus one-half (1/2) of the amount for the government payment. (The sum of the three numbers is divided by two.)

Doster/Huie Report – Table 1-Less Overhead:
The overhead expense for machinery, drying/handling, & family/hired labor can be found in the Purdue Crop Guide (ID-166). The dollar amount for each crop type can be found in the section titled "Estimated 20___ (year) Per Acre Production Costs in the column for Corn/Soybean Rotation for Average Soil. See the lines for "Indirect charges per acre".

Doster/Huie Report – Table 1-Real Estate Tax:
A deduction of $10 for real estate taxes was estimated by the authors.

Doster/Huie Report – Table 1-Income:
Total Contribution Margin less the Overhead Expenses of machinery, drying/handling, labor, & real estate taxes equals Income.

Doster/Huie Report – Table 1-Estimated Land Value:
The authors of the paper then averaged the four years (1996 – 1999) income and divided it by a 1999 interest rate to arrive at an Estimated Land Value of $971.

Table 2-18 – Net Income from Operating:
This income represents the profits from the owner-occupied production of crops on agricultural land. While the foundation for the calculations that the Department adopted comes from Table 1 of the June 24, 1999, Doster/Huie report, the Department did make some alterations to it.

<u>Adjustments Made To The Doster/Huie Report By the Department</u>

Years:
The Department added the statistics for 1995 which were available and deleted the estimates for 1999 since interest rates and income data were not available.

Price:
The Department added two averages to the Doster/Huie report since this report used only November prices. Since only a small portion of Indiana's grain is sold in November, the Department developed two annual averages for the calculation. The first average was the calendar year average of the grain prices which are published in the IASS book. The second average was the market year average. This average 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.

Interest Rate:
Instead of using the 1999 St. Paul Farm Credit Bank interest rate, the Department chose to use the quarterly farm loan rates published by the Federal Reserve Bank of Chicago. The FRBC publishes an agricultural newsletter on a quarterly basis called the "AgLetter". This newsletter provides interest rates on farm loans for operating loans, feeder cattle, and real estate. The Department averaged the interest rates for the operating loans and real estate categories. A study was conducted on different sources of interest rates between Purdue Agricultural Economics Reports, the St. Paul Farm Credit Bank, and the Federal Reserve Bank of Chicago. The study

found that the rates varied from year to year but when averaged out over the four-year period were comparable.

Summary of the January 1, 2025, Base Rate:
The Department first calculated the Table 2-18 Base Rate with data for the years 2019, 2020, 2021, 2022, 2023, and 2024. Current data was used and last year's worksheets were updated for this year's calculation when needed. Next, the highest market value-in-use for one of the years (2021) in the six-year rolling average was eliminated from the calculation. Then the implementation of Senate Enrolled Act 308-2016 and Senate Enrolled Act 1-2025 determined the capitalization rate of 9% which lowered the Preliminary Table 2-18 Base Rate of $3,090 to a Final Base Rate of $2,120. (Refer to Page 16 of this packet for a detailed comparison.)

Note: A simple explanation for the increase from last year's base rate of $2,280 to this year's rate of $2,120 is that the data for 2018 dropped off of the six-year rolling average this year and the data for 2024 was added. The 2018 data used in last year's calculation was lower than the 2024 data used in this year's calculation. The market value in use per acre for 2018 was $2,079 and was replaced with the 2024 market value in use per acre of $2,207.

- units of measurement for agricultural land
- classification of agricultural land into land use types
- use of soil maps
- calculating the soil productivity index
- valuation of strip mined agricultural land
- valuation of oil and gas interests

Agricultural Land Base Rate Value

The 2019 general reassessment agricultural land value utilizes the land's current market value, which is based on the productive capacity of the land, regardless of the land's potential or highest and best use. The most frequently used valuation method for use-value assessment is the income capitalization approach. In this approach, use-value is based on the residual or net income that will accrue to the land from agricultural production.

As illustrated in the following equation, the market value of agricultural land is calculated by dividing the net income of each acre by the appropriate capitalization rate.

Market value = Net Income ÷ Capitalization Rate

The net income of agricultural land can be based on either the net operating income or the net cash rent. Net operating income is the gross income received from the sale of crops less the variable costs (i.e. seed and fertilizer) and fixed costs (i.e. machinery, labor, property taxes) of producing crops. The net cash rent income is the gross cash rent of an acre of farmland less the property taxes on the acre. Both methods assume the net income will continue to be earned into perpetuity.

The capitalization rate converts the net income into an estimate of value. The capitalization rate reflects, in percentage terms, the annual income relative to the value of an asset; in this case agricultural land. Conceptually, this capitalization rate incorporates the required returns to various forms of capital, associated risks, and the anticipated changes over time.

Since agricultural land in Indiana is nearly evenly divided between cash rent and owner-occupied production, the Department utilized a six-year rolling average of both methods in determining the market value of agricultural land. The capitalization rate applied to both types of net income was based on the annual average interest rate on agricultural real estate and operating loans in Indiana for this same period. The table below summarizes the data used in developing the average market value.

Table 2-18 Agricultural Land Value

	NET INCOMES			MARKET VALUE IN USE		
Year	Cash Rent	Operating	Cap. Rate	Cash Rent	Operating	Average
2013	204	341	8.00%	2,550	4,263	3,406
2014	205	171	8.00%	2,563	2,138	2,350
2015	198	-39	8.00%	2,475	-488	994
2016	173	75	8.00%	2,163	938	1,550
2017	175	30	8.00%	2,188	375	1,281
2018	181	79	8.00%	2,263	988	1,625

Assessing Agricultural Land

The agricultural land assessment formula involves identifying agricultural tracts using data from a detailed soil map, aerial photography, and local plat maps. Each variable of the land assessment formula is measured using various devices to determine its size and effect on the parcel's assessment. The proper use of the soil maps, interpreted data, and unit values results in greater uniformity in the assessment process of agricultural lands.

Indiana Code section 6-1.1-4-13(a) declares, **"In assessing or reassessing land, the land shall be assessed as agricultural land *only when it is devoted to agricultural use*"** [emphasis added]. Indiana Code section 6-1.1-4-13(e) states, "This section does not apply to land purchased for industrial or commercial uses."

Pursuant to Indiana Code section 6-1.1-4-13, land "devoted to agricultural use" shall be assessed as agricultural land. However, land "***purchased for***" an industrial or commercial uses shall not be assessed as agricultural land. Additionally, all land ***utilized*** for agricultural purposes is valued as agricultural land -- using a statewide base rate and a soil productivity index system. Unless provided elsewhere in the law, the Manual, or Guidelines, the parcel's size does not determine the property classification or pricing method for the parcel. Rather, the property classification and pricing method are determined by the property's use or zoning. For example, some commercial and industrial zoned acreage tracts devote a portion of the parcel to an agricultural use. The assessing official must classify these parcels as either commercial or industrial. However, the portions of land devoted to agricultural use are to be valued using the agricultural land assessment formula. Portions not used for agricultural purposes are to be valued using the commercial and industrial acreage guidelines. To illustrate:

(1) A major industrial corporation purchased a 40 acre cornfield to locate a corn processing facility in Indiana. After undergoing the local zoning process, the entire parcel was re-zoned from agricultural zoning to industrial zoning. The corporation has utilized 15 acres of the parcel by constructing a manufacturing and warehouse facility with the idea that the remaining 25 acres would be

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Certification of Agricultural Land Base Rate Value for Assessment Year 2025

This REVISED memorandum hereby serves to notify assessing officials of the agricultural base rate to be used for the January 1, 2025, assessment date: **$2,120 per acre**.

This revision is due to the passage of Senate Enrolled Act 1 (P.L.68-2025), which amended a capitalization rate percentage under the statewide agricultural land base rate determination contained in Ind. Code § 6-1.1-4-4.5. Please also note that, under House Enrolled Act 1427 (P.L.230-2025), the base rate calculated herein shall not apply to land that is assessed under Ind. Code § 6-1.1-4-12 (developer's discount for land held in inventory) for the January 1, 2025, assessment date only.

Land used for agricultural purposes shall be adjusted consistent with the guideline methodology that was in effect on January 1, 2005, except, in determining the annual base rate, the Department of Local Government Finance ("Department") shall adjust the methodology to use the lowest five years of a six-year rolling average. Senate Enrolled Act 1 (P.L.68-2025) and Senate Enrolled Act 308 (P.L.180-2016) require a comparison of the preliminary Table 2-18 base rate to the prior year's Table 2-18 base rate in order to determine the statutory capitalization rate to be used to calculate the final base rate for this assessment date.

Those portions of agricultural parcels that include land and buildings not used agriculturally, such as homes, homesites, excess land, and commercial or industrial land and buildings, shall be adjusted by the factor or factors developed for other similar properties within the geographic stratification. The residence portion of agricultural properties will be adjusted by the factors applied to similar residential properties (50 IAC 27-6-1 (b)).

The 2025 assessment year agricultural land value utilizes the land's current market value in use, which is based on the productive capacity of the land, regardless of the land's potential or highest and best use. The most frequently used valuation method for use value assessment is the income capitalization approach. In this approach, use value is based on the residual or net income that will accrue to the land from agricultural production.

As illustrated in the following equation, the market value in use of agricultural land is calculated by dividing the net income of each acre by the appropriate capitalization rate.

Market value in use = Net Income ÷ Capitalization Rate

The net income of agricultural land can be based on either the net operating income or the net cash rent. Net operating income is the gross income received from the sale of crops less the variable costs (i.e. seed and fertilizer) and fixed costs (i.e. machinery, labor, property taxes) of

producing crops. The net cash rent income is the gross cash rent of an acre of farmland less the property taxes on the acre. Both methods assume the net income will continue to be earned into perpetuity.

The capitalization rate converts the net income into an estimate of value. The capitalization rate reflects, in percentage terms, the annual income relative to the value of an asset; in this case agricultural land. Conceptually, this capitalization rate incorporates the required returns to various forms of capital, associated risks, and the anticipated changes over time.

Since agricultural land in Indiana is nearly evenly divided between cash rent and owner-occupied production, the Department utilized a six-year rolling average (2019 to 2024) of both methods in determining the market value in use of agricultural land. The capitalization rate applied to both types of net income was based on the language contained in SEA 1 (2025) and SEA 308 (2016).

The table below summarizes the data used in developing the average market value in use:

SEA 1 (2025) & SEA 308 (2016) – Final Agricultural Land Base Rate

	NET INCOMES			MARKET VALUE IN USE		
Year	Cash Rent	Operating	Cap. Rate	Cash Rent	Operating	Average
2019	181	6	9.00%	2,011	67	1,039
2020	192	141	9.00%	2,133	1,567	1,850
~~2021~~	~~206~~	~~343~~	~~9.00%~~	~~2,289~~	~~3,811~~	~~3,050~~
2022	230	319	9.00%	2,556	3,544	3,050
2023	233	262	9.00%	2,589	2,911	2,750
2024	230	116	9.00%	2,556	1,289	1,922
				Average Market Value in Use		**$2,120**

The statewide agricultural land base rate value for the 2025 assessment year will be $2,120 per acre.

Dated this 9 day of May, 2025.

Jason Cockerill, Commissioner
Department of Local Government Finance

A Method for Assessing Indiana Cropland
An Income Approach to Value

D. Howard Doster & John M. Huie, Purdue Ag Economists
June 24, 1999

Summary

A method for taxing agricultural cropland based on the income potential of the land can be developed. The method is illustrated below. Data components of this method include detailed soil maps, estimated yields and production costs by soil type, reported average yields by county, reported average Indiana November corn and soybean prices, USDA corn and soybean loan prices by county, and the interest rate on new Farm Credit Bank loans in the St Paul district.

Using this information, a land value can be calculated for each soil type in each county in Indiana. Using detailed soil maps, county staff can then calculate income, land value, and tax due for each ownership parcel.

Using state yields, prices, and costs for 1996, 1997, 1998, and estimates for 1999, income and land values are calculated below for average and high yield soil types. As shown in Table 1, the average land value is calculated to be $971. In Table 2, the high yield land is valued at $1510.

As shown in the tables, incomes for 1996 and 1997 are much higher than incomes for 1998 and projected 1999. Though not shown, income for 1995 was much higher than projected income for 1999.

Detailed soil maps

Maps from The Natural Resource and Conservation Service (NRCS) are now available for all counties indicating the soil type of all land in the state. County staff have used this information in past years. For five counties, this soil type information has been transferred to a GIS data base. In these counties, county staff could identify land ownership units in the GIS data base and with appropriate computer software, calculate the real estate tax on cropland.

In 1998, computer software was developed by Purdue Ag Economists for calculating income for user entered ownership parcels in Tippecanoe County. This program was shown at the July, 1998 Purdue Top Farmer Crop Workshop and the September, 1998 Prairie Farmer Farm Progress Show. The purpose of these demonstrations was to show prospective landowners, prospective tenants, and professional appraisers a way to estimate income potential of an ownership parcel.

Estimated yield and production cost by soil type

Purdue agronomists and NRCS staff have estimated crop yields for each soil type in Indiana. (These yield estimates may need to be updated, and possible differences considered for the same soil type in different counties.) Purdue staff annually estimate crop production costs for low, average, and high yielding soil types. The process could be computerized and budgets could be prepared for all Indiana soils.

Reported average yield by county

The Indiana Agricultural Statistics Service reports average yield for each county in May each year for the preceding year's crops. An expected trend yield could be calculated for each soil in each county. Each year, these trend yields could be adjusted by the same percentage change as the difference between the county expected and reported average yields.

Reported average Indiana November corn and soybean prices

The Indiana Agricultural Statistics Service reports average Indiana crop prices for each month. Prices for November[1/] are used in calculating per acre corn and soybean income.

USDA com and soybean loan price

USDA has determined corn and soybean loan prices for each Indiana county. These prices reflect crop price differences because of the location of the county. Therefore, the November state average prices for com and soybeans could be adjusted by the price location differences in loan prices to obtain an estimate of November prices by county.

St Paul Farm Credit Bank interest rate

For each year, the Internal Revenue Service issues a listing of the average annual effective interest rates charged on new loans under the Farm Credit Bank system. These rates are used in computing the special use value of real property used as a farm for which an election is made under section 2032A of the Internal Revenue Code. Indiana is in the St Paul district. For 1999, the reported interest rate is .0821.

Weighted annual incomes and estimated land values

As shown in Table 1, the 4-year average annual income is $80 and the estimated land value is $971. As shown in Table 2, for high yield land the average income is $124 and the land value is $1510.

Annual incomes could be weighted with income from the most recent year being weighted the most. One option would be a percentage weight of 40 - 30 - 20 - 10 with the most recent year at 40% and the most distant year at 10%. Using this criteria, the weighted average annual income is $71.10 and the estimated average land value is $866. A weighting of 33 - 27 - 22 - 18 with the most recent year at 33% and the most distant year at 18% produces a weighted average annual income of $75.27 and an estimated average land value of $917.

For high yield soil, the 40 - 30 - 20 - 10 optimal weights give an average income of $113 and a land value of $1379. The 33 - 27 - 22 - 18 weights give an average income of $118 and a land value of $1442.

This approach - discounting the potential agricultural income - to valuing farm land is reasonable so long as the income estimates and the discount rates are defensible. There is also logic to using a four year average with the most recent years being weighted higher, especially if the state were to go to annual assessments. So long as they stay with a four year assessment cycle it becomes more of a judgement call.

[1/] Prices tend to increase throughout the year. November, a month close to the end of the harvest season was chosen. If prices later than November are chosen then a storage cost would also need to be included.

Income and land value estimates

As illustrated in Tables 1 and 2, income from a com/soybean rotation on average and high yield soils is calculated for 1996-99.

State average yields for each soil are multiplied by November prices to obtain per acre sales.

Variable costs as found in the Purdue Crop Guide for average and high yield soils are subtracted to obtain per acre contribution margin from crops.

Corn contribution margin plus soybean contribution margin plus government payment is added and the sum is divided by 2 to get per acre total contribution margin.

Overhead costs from the Purdue Crop Guide for a com/soybean farm are subtracted from the contribution margin to get per acre income.

Incomes for the four years are averaged.

The average income is divided by the St Paul interest rate to get estimated land value.

Table 1. Indiana Land Value Calculation
Based on an Income Approach, 1996-99
Average Yield Soil

	1996		1997		1998		1999	
	Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans
Yield[1/]	123	38	122	43.5	132	42	134.1	42.9
Price (November)[1/]	$2.69	$6.90	$2.60	$6.88	$2.06	$5.49	$2.04	$5.40
Sales	$331	$262	$317	$299	$282	$231	$274	$232
Less variable costs[2/]	134	94	137	96	148	85	145	86
Crops contribution margin	$197	$168	$180	$203	$134	$146	$129	$146
Plus government payment[3/]	$23		$45		$53		$34	
Total contribution margin	$194		$214		$167		$154	
Less overhead:								
Annual machinery[2/]	48		50		49		49	
Drying/handling	6		6		7		7	
Family/hired labor[2/]	37		37		37		37	
Real estate tax[3/]	10		10		10		10	
Equals:								
Income	$93		$111		$64		$51	

4-year average income = $80
1999 St Paul interest rate[4/] = .0821
Estimated land value = $971

[1/] State average yield, state average November price as reported by Indiana Agricultural Statistics Service.
[2/] Costs are taken from annual Purdue Crop Guide, ID-166.
[3/] Government payments and real estate tax are estimated by the author.
[4/] Average annual effective interest rate on new loans under the Farm Credit Bank System, St Paul district.

Table 2. Indiana Land Value Calculation
Based on an Income Approach, 1996-99
High Yield Soil

	1996		1997		1998		1999	
	Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans
Yield[1/]	151.3	46.8	49.9	53.6	169	51	165	52.8
Price (November)[1/]	$2.69	$6.90	$2.60	$6.88	$2.06	$5.49	$2.04	$5.40
Sales	$407	$323	$390	$369	$348	$280	$337	$285
Less variable costs[2/]	153	103	157	106	170	91	167	92
Crops contribution margin	$254	$220	$233	$263	$178	$189	$170	$193
Plus government payment[3/]	$29		$56		$64		$42	
Total contribution margin	$252		$276		$216		$202	
Less overhead:								
Annual machinery[2/]	53		55		54		54	
Drying/handling	7		7		8		8	
Family/hired labor[2/]	37		37		37		37	
Real estate tax[3/]	14		14		14		14	
Equals:								
Income	$141		$163		$103		$89	

4-year average income= $124
1999 St Paul interest rate[4/] = .0821
Estimated land value= $1510

[1/] State average yield, state average November price as reported by Indiana Agricultural Statistics Service.
[2/] Costs are taken from annual Purdue Crop Guide, ID-166.
[3/] Government payments and real estate tax are estimated by the author.
[4/] Average annual effective interest rate on new loans under the Farm Credit Bank System, St Paul district.

January 1, 2025
Senate Enrolled Act 308 / Senate Enrolled Act 1 - Assignment of Capitalization Rate To Determine Final Base Rate Per IC 6-1.1-4-4.5 (f)

Department of Local Government Finance's Table 2-18 Calculation of Agricultural Land Base Rate

	NET INCOMES PER ACRE		RATE	MARKET VALUE IN USE PER ACRE		AVERAGE MARKET VALUE IN USE
Year	Cash Rent	Owner-Operated	Cap. Rate	Cash Rent	Owner-Operated	PER ACRE
2019	181	6	5.53%	3,273	108	1,691
2020	192	141	4.50%	4,267	3,133	3,700
~~2021~~	~~206~~	~~343~~	~~4.21%~~	~~4,893~~	~~8,147~~	~~6,520~~
2022	230	319	5.83%	3,945	5,472	4,708
2023	233	262	7.88%	2,957	3,325	3,141
2024	230	116	7.84%	2,934	1,480	2,207

Preliminary Table 2-18 Base Rate (Average - 5 Lowest Years): 3,090

Determination of SEA 308 Capitalization Rate:

Prior Year's Final Base Rate	2,280
Current Year's Preliminary Base Rate	3,090
Percent Difference	35.5%
SEA 1 Capitalization Rate To Use:	9%

IC 6-1.1-4-4.5 (f) (4) (A) (See statute for exact language)
(i) for purposes of determining the preliminary base rate for the January 1, 2025, and the January 1, 2026, assessment dates, nine percent (9%); and
(ii) for purposes of determining the preliminary base rate for assessment dates before January 1, 2025, and for the assessment dates after December 31, 2026, eight percent (8%).

Department of Local Government Finance's SEA 1 Calculation of Final Agricultural Land Base Rate

	NET INCOMES PER ACRE		RATE	MARKET VALUE IN USE PER ACRE		AVERAGE MARKET VALUE IN USE
Year	Cash Rent	Owner-Operated	Cap. Rate	Cash Rent	Owner-Operated	PER ACRE
2019	181	6	9.00%	2,011	67	1,039
2020	192	141	9.00%	2,133	1,567	1,850
~~2021~~	~~206~~	~~343~~	~~9.00%~~	~~2,289~~	~~3,811~~	~~3,050~~
2022	230	319	9.00%	2,556	3,544	3,050
2023	233	262	9.00%	2,589	2,911	2,750
2024	230	116	9.00%	2,556	1,289	1,922

SEA 308/SEA 1 Final Base Rate (Average - 5 Lowest Years): 2,120

Table 2-18 - Updated for January 1, 2025
Source: Real Property Assessment Guidelines

	Column A		Column B		Column C		Column D	Column E	Column F	
	NET INCOMES PER ACRE				**RATE**		**MARKET VALUE IN USE PER ACRE**		**AVERAGE MARKET VALUE IN USE PER ACRE**	
Year	Cash Rent		Owner-Operated		Cap. Rate		Cash Rent	Owner-Operated		
2019	181	P-17	6	P-33	5.53%	P-26	3,273	108	1,691	(1)
2020	192	P-17	141	P-33	4.50%	P-26	4,267	3,133	3,700	(1)
2021	~~206~~	P-17	~~343~~	P-33	~~4.21%~~	P-26	~~4,893~~	~~8,147~~	~~6,520~~	(1)
2022	230	P-17	319	P-33	5.83%	P-26	3,945	5,472	4,708	(1)
2023	233	P-17	262	P-33	7.88%	P-26	2,957	3,325	3,141	(1)
2024	230	P-17	116	P-33	7.84%	P-26	2,934	1,480	2,207	(1)
								Base Rate (Average - 5 Lowest Years)	3,090	(2)
Formula:	Gross Cash Rent Less Property Taxes		Gross Income Less Expenses		Average of Qtly. Farm Loan Rates		Column A divided by Column C	Column B divided by Column C	The average of Columns D and E	(1)
Source:	Purdue Ag. Econ. Reports (PAER)		Indiana Ag. Statistics Service and Purdue Crop Guide		Federal Reserve Bank of Chicago				The base rate is the average of the 5 lowest averages above rounded to the nearest $10. [IC 6-1.1-4-4.5 (f) (2)]	(2)

As illustrated in the following equation, the market value in use of agricultural land is calculated by dividing the net income of each acre by the appropriate capitalization rate.

Market Value In Use = Net Income Divided By The Capitalization Rate

Table 2-18 - Updated for January 1, 2025
Calculation for Net Income-Cash Rent Column

Year	Gross Cash Rent		Less Property Taxes		Net Cash Rent	Cap. Rate		Cash Rent Value
2019	207	P-19	-26	P-25	181	5.53%	P-26	3,273
2020	217	P-19	-25	P-25	192	4.50%	P-26	4,267
2021	227	P-21	-21	P-25	206	4.21%	P-26	4,893
2022	252	P-21	-22	P-25	230	5.83%	P-26	3,945
2023	257	P-23	-24	P-25	233	7.88%	P-26	2,957
2024	260	P-23	-30	P-25	230	7.84%	P-26	2,934

JULY 2020

PURDUE AGRICULTURAL ECONOMICS REPORT

your source for in-depth agricultural news straight from the experts

Contents:

Indiana farmland values increase but signal concern of potential COVID-19 slump

Todd H. Kuethe, Associate Professor and Schrader Endowed Chair in Farmland Economics

Craig L. Dobbins, Professor of Agricultural Economics

The COVID-19 pandemic will be the defining economic event of 2020. As documented in the previous *Purdue Agricultural Economics Report*, the pandemic has had a profound impact on the Indiana food and agriculture sector. Land is the farm sector's largest input, and as a result, farmland values generally reflect broad trends in the costs and returns of agricultural production. The 2020 *Purdue Land Values and Cash Rents Survey* suggests that farmland prices across the State generally improved on a year-to-year basis. However, the survey suggests that these gains primarily occurred between June and December 2019, and since December, farmland prices have declined modestly. Survey respondents expect these recent declines to continue throughout the remainder of 2020 and expressed concern over the long-run impacts of COVID-19 on Indiana farmland markets.

One survey respondent stated, "Fear of long-term COVID-19 market impacts are real among Southeast Indiana farmers. Despite good economic conditions prior to March 2020, with other factors (trade, policy, etc.), there is little optimism." However, at least one respondent reported "land prices high during this COVID-19 pandemic, at levels not seen for several years, which was not expected." While another stated that "sales in March were higher than we expected them to be, but due to the pandemic, we feel like they have decreased to levels similar to last year."

Statewide, the strongest year-to-year increase was for poor quality land which increased by 6.3% to $5,746 (Table 1). Top quality land increased by 4.5% to $8,579, and average quality land increased by 3.2% to $7,236. The year-to-year increases were driven by positive price movements between June and December 2019. Over this period, top, average,

Cash Rents

Statewide cash rental rates increased across all land quality classes in 2020. The largest increase was in low quality land which increased by 5.4% to $175 per acre. This was followed by a 4.8% and 4.0% increase in average and top quality land, respectively. The rental rate increases offset the reduction in rents that occurred between 2018 and 2019.

At the regional level, cash rental rates increased across all land qualities and regions, with the exception of low quality land in the North region which fell by 2.9%. Similar to farmland values, the West Central region had the highest cash rental rates for top ($293), average ($252), and poor ($212) quality land. The largest price increases for each quality class were found in the Southwest region. Top quality land increased by 15.5% to $269. Average quality land increased by 19.3% to $216, and poor quality land increased by 20.1% to $161. The West Central region also had the highest cash rental rates in a per bushel of corn basis, ranging from $1.30 to $1.35 per bushel.

Table 4. Average estimated Indiana cash rent per acre, (tillable, bare land) 2019 and 2020, Purdue Land Value Survey, June 2020

			Rent/Acre		Change	Rent/bu. of Corn		Rent as % of June Land Value	
Area	Land Class	Corn bu./A	2019 $/A	2020 $/A	'19-'20 %	2019 $/bu.	2020 $/bu.	2019 %	2020 %
North	Top	208	263	272	3.4%	1.25	1.31	3.3	3.2
	Average	179	214	219	2.3%	1.18	1.22	3.1	3.3
	Poor	150	170	165	-2.9%	1.13	1.10	3.4	3.4
Northeast	Top	201	226	242	7.1%	1.12	1.20	3.0	2.8
	Average	176	189	205	8.5%	1.07	1.16	2.8	2.7
	Poor	152	152	174	14.5%	1.00	1.14	2.9	2.7
W. Central	Top	217	284	293	3.2%	1.31	1.35	3.1	3.1
	Average	189	241	252	4.6%	1.28	1.33	3.1	3.1
	Poor	163	195	212	8.7%	1.20	1.30	3.1	3.2
Central	Top	211	251	261	4.0%	1.21	1.24	2.9	3.0
	Average	184	219	222	1.4%	1.19	1.21	2.9	2.9
	Poor	157	180	185	2.8%	1.15	1.18	2.9	3.0
Southwest	Top	211	233	269	15.5%	1.10	1.27	2.9	2.9
	Average	179	181	216	19.3%	1.01	1.21	2.7	3.0
	Poor	148	134	161	20.1%	0.91	1.09	3.0	3.2
Southeast	Top	188	189	200	5.8%	1.01	1.06	3.2	3.3
	Average	162	151	171	13.2%	0.93	1.06	3.3	3.5
	Poor	132	116	131	12.9%	0.88	0.99	3.5	3.6
Indiana	Top	204	249	259	4.0%	1.22	1.27	3.0	3.0
	Average	175	207	217	4.8%	1.18	1.24	3.0	3.0
	Poor	147	166	175	5.4%	1.13	1.19	3.1	3.0

The cash rent reported in this summary represents averages over several different locations and soil types. Determining an appropriate cash rent for a specific property requires more information than is contained in this report. You may also want to obtain advice from a professional that manages agricultural properties.

PURDUE AGRICULTURAL ECONOMICS REPORT

Article title:	Indiana Farmland Prices Grow at Record Pace in 2022
Author:	Todd H. Kuethe
Article ID:	PAER-2022-22
Publication date:	August 10, 2022

Indiana farmland prices grew at a record pace between June 2021 and June 2022, according to the recent *Indiana Farmland Value and Cash Rent Survey*. Statewide, the average per acre price for top quality farmland increased by 30.9% to $12,808 (Table 1). The average per acre price of average quality farmland similarly increased by 30.1% to $10,598. Poor quality farmland prices exhibited the largest increase of 34.0% to $8,631. Across all quality grades, farmland prices exceeded the previous highs set in 2021. In addition, the price appreciation rates surpassed the previous record growth rates observed in 2011.

High farmland price growth was observed in almost all regions across Indiana (Figure 1). The average price for top quality farmland in the North region grew by 39.3%. In the Northeast region, average quality farmland prices increased by 38.5%, and in the Southeast region poor quality farmland prices increased by 41.9%. The highest average prices by land quality class included top quality land in the Southwest region ($13,825 per acre), average quality land in the Central region ($11,278 per acre), and poor quality land in the Northeast region ($9,418 per acre).

Respondents generally expect continued price growth through the remainder of 2022 but at a more muted pace. Statewide, respondents expect prices to increase by 1.1 to 2.7% through December 2022. However, respondents expect prices to decline by about one percentage point across some regions and quality grades.

The survey also found very high appreciation rates for farmland transitioning out of agricultural production or sold for recreational purposes. Statewide, the average price of transitional land was up 36.5% from June 2021, with an average price per acre of $24,240. Recreational land prices grew by 21.8% to an average per acre price of $9,121. For the remainder of 2022, respondents expect transitional land to increase modestly by 2.3%, while the value of recreational land is expected to hold relatively stable.

Table 3: Average estimated Indiana cash rent per acre, (tillable, bare land) 2021 and 2022, Purdue Land Value Survey, June 2022

			Rent/Acre		Change	Rent/bu. of corn		Rent as % of June Land Value	
Area	Land Class	Corn bu/A	2021 $/A	2022 $/A	21-22 %	2021 $/bu	2022 $/bu	2021 %	2022 %
North	Top	225	273	280	2.4	1.28	1.24	3.0	2.2
	Average	185	222	225	1.5	1.25	1.22	3.1	2.3
	Poor	152	174	179	3.0	1.19	1.18	3.1	2.4
Northeast	Top	215	242	293	21.3	1.18	1.36	2.6	2.3
	Average	187	211	239	13.2	1.19	1.27	2.6	2.1
	Poor	157	181	190	5.1	1.19	1.21	2.7	2.0
W. Central	Top	229	302	329	9.0	1.39	1.44	2.8	2.5
	Average	200	262	289	10.3	1.36	1.44	2.8	2.6
	Poor	170	222	247	11.4	1.35	1.45	2.8	2.7
Central	Top	212	272	295	8.4	1.28	1.39	2.7	2.2
	Average	187	235	249	6.1	1.26	1.34	2.6	2.2
	Poor	162	192	211	10.0	1.20	1.30	2.6	2.3
Southwest	Top	236	288	309	7.3	1.32	1.31	2.5	2.2
	Average	199	225	244	8.6	1.25	1.23	2.6	2.4
	Poor	164	164	194	18.6	1.13	1.19	2.7	2.4
Southeast	Top	204	223	225	0.9	1.13	1.10	3.3	2.5
	Average	179	182	179	-1.5	1.09	1.00	3.6	2.6
	Poor	137	133	141	6.3	1.00	1.03	3.6	2.7
Indiana	Top	221	269	300	11.5	1.27	1.36	2.7	2.3
	Average	191	227	252	10.8	1.25	1.32	2.8	2.4
	Poor	161	183	207	13.2	1.20	1.29	2.8	2.4

Looking Ahead

Statewide farmland prices have risen at an increasing rate over the last three years. In 2022, Indiana farmland prices recorded both record high levels and record high growth rates. The pronounced growth in farmland prices has been supported by a combination of high incomes and high farm liquidity. While respondents of the *Purdue Farmland Value and Cash Rent Survey* are optimistic for continued growth for the remainder of 2022, broader economic uncertainty dampens expectations for continued record growth. Respondents are particularly concerned with the potential for high inflation and high interest rates, and the two economic forces are not independent of one another.

Farmland market participants who experienced the 1980s Farm Financial Crisis are reminded of an era when the Federal Reserve increased interest rates rapidly to fight inflationary pressure. The rising interest rates coincided with decrease in commodity prices and farm returns. As one respondent notes, “as a lender in the 1970s, we thought we were making 50% loan to value mortgages which turned out to be 90% in short time because income fell and interest rates spiked.” The respondent adds, “Hold on to your hat!”

Purdue Farmland Value and Cash Rent Survey

The Purdue Farmland Value and Cash Rent Survey is conducted each June. The survey is possible through the cooperation and contribution of numerous professionals knowledgable of Indiana’s farmland market. These professionals include farm managers, rural appraisers, land

AUGUST 2024

PURDUE AGRICULTURAL ECONOMICS REPORT

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Farmland Values Survey 2024

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Farmland Prices Increase Despite Downward Pressure

Todd Kuethe, Professor, Schrader Endowed Chair in Farmland Economics

State-wide farmland prices once again hit a new record in 2024, according to the recent Purdue Farmland Value and Cash Rent Survey. The average price of top-quality farmland is $14,392, up 4.8% from June 2023 (Table 1). Average and poor-quality farmland also hit new highs at $11,630 and $9,071 per acre, with an annual increase of 3.7% and 4.4%, respectively. Survey respondents suggest that this price growth principally occurred during the second half of 2023, with prices retreating a bit in the first half of 2024.

Similar to the pattern observed in the previous year, the change in farmland prices from 2023 to 2024 varied substantially across regions and quality grades. The Southwest region experienced particularly high appreciation rates for top and average-quality land. The Southeast region, in contrast, experienced the most pronounced declines across all three quality grades. Traditionally, the Central region is home to the highest per acre prices across all three quality grades, yet, in 2024, the average price per acre for top-quality land in the Southwest now exceeds those in the Central region. The Central region still exhibits the highest value per acre for average and poor-quality land.

Respondents generally expect farmland prices to decline modestly through the remainder of 2024. At the state level, prices in December 2024 are expected to remain just above those observed in June of 2023.

The value of land transitioning out of agricultural production exhibited a 21.6% gain from 2023, reaching a new high of $30,666 per acre. Several survey respondents note the influence of large-scale public or private land development projects in their area. One respondent notes that “production agriculture cannot compete with those economic forces,” and other respondents mention that farmers who sell their land to develop typically “reinvest” in farmland. In contrast, the state-wide average price for recreational land dipped slightly in 2024 to $8,089 (a 1% decline from 2023. The average price, however, likely masks the high variability of recreational land, which was characterized by one respondent as “nutty.”

Table 3: Average estimated Indiana cash rent per acre, (tillable, bare land) 2023 and 2024, Purdue Land Value Survey, June 2024

			Rent/Acre		Change	Rent/bu. of corn		Rent as % of June Land Value	
Area	Land Class	Corn Bu/A	2023 $/A	2024 $/A	23-24 %	2023 $/bu	2024 $/bu	2023 %	2024 %
North	Top	222	289	297	2.93	1.30	1.34	2.2	2.1
	Average	191	233	239	2.59	1.22	1.25	2.3	2.1
	Poor	160	185	180	–2.46	1.15	1.13	2.5	2.1
Northeast	Top	219	291	289	–0.55	1.33	1.32	2.1	2.0
	Average	187	239	239	0.32	1.27	1.28	2.1	2.0
	Poor	157	191	188	–1.56	1.22	1.20	2.2	2.0
W. Central	Top	233	327	339	3.55	1.41	1.46	2.3	2.4
	Average	204	278	284	2.10	1.36	1.39	2.4	2.5
	Poor	179	243	231	–5.02	1.36	1.29	2.6	2.4
Central	Top	225	310	306	–1.31	1.37	1.36	2.1	2.1
	Average	199	275	263	–4.17	1.38	1.32	2.2	2.1
	Poor	172	238	213	–10.83	1.38	1.23	2.5	2.2
Southwest	Top	226	296	323	8.89	1.31	1.43	2.3	2.0
	Average	191	239	251	5.02	1.25	1.31	2.5	2.2
	Poor	149	173	182	4.88	1.16	1.22	2.4	2.4
Southeast	Top	203	299	263	–11.85	1.48	1.30	2.4	2.4
	Average	183	246	218	–11.11	1.35	1.20	2.4	2.4
	Poor	158	208	177	–14.86	1.32	1.12	2.6	2.7
Indiana	Top	226	306	313	2.29	1.36	1.39	2.2	2.2
	Average	196	257	260	0.91	1.31	1.32	2.3	2.2
	Poor	167	212	204	–3.73	1.27	1.22	2.4	2.3

Purdue Farmland Value and Cash Rent Survey

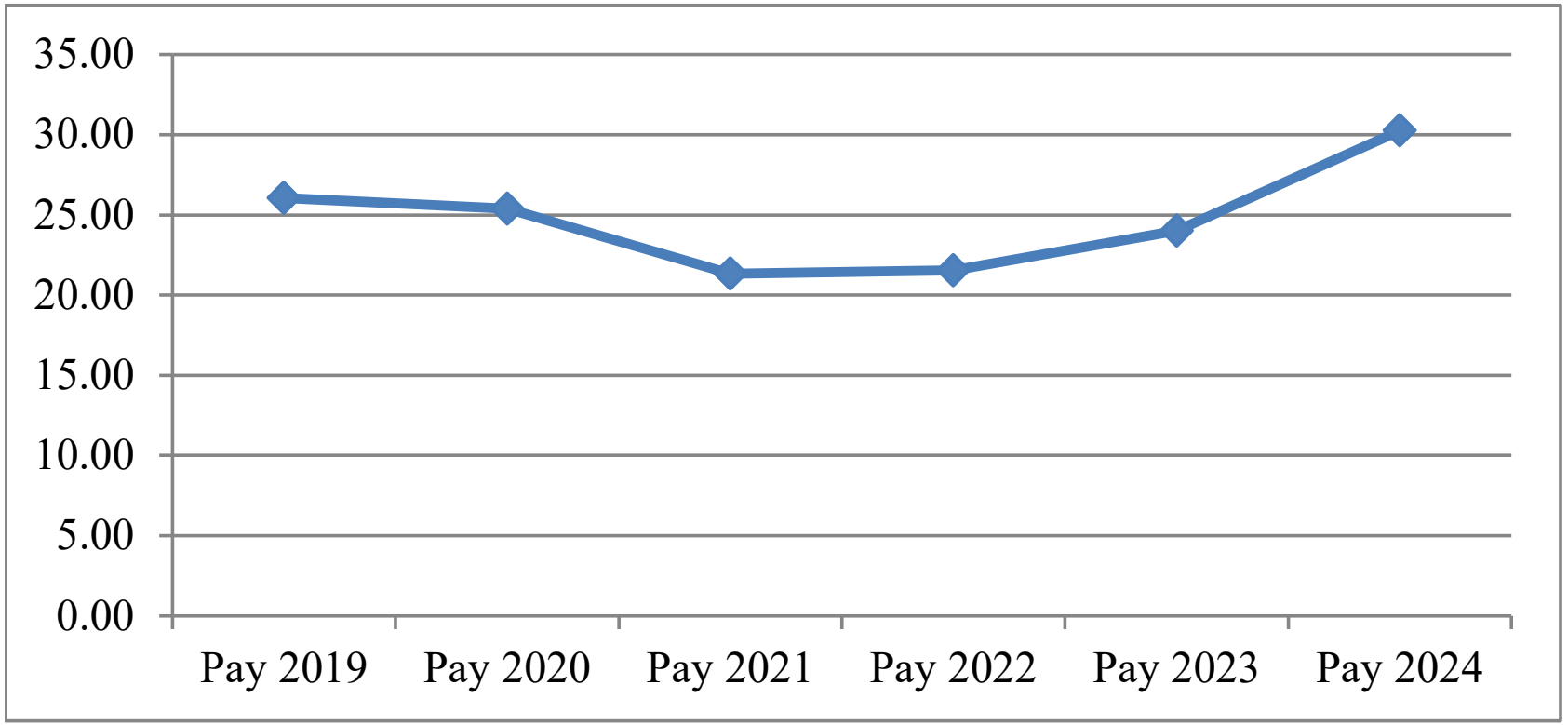
The Purdue Farmland Value and Cash Rent Survey is conducted each June. The survey is possible through the cooperation and contribution of numerous professionals knowledgeable of Indiana's farmland market. These professionals include farm managers, rural appraisers, land brokers, agricultural loan officers, farmers, and Farm Service Agency (FSA) county office directors.

These professionals were selected because their daily work requires they stay well-informed about farmland values and cash rents. These professionals provide an estimate of the market value for bare poor, average, and top-quality farmland in December 2023, June 2024, and a forecast for December 2024. To assess productivity of the farmland, respondents provide an estimate of long-term corn yield for top, average, and poor productivity farmland. Respondents also provide a market value estimate for land transitioning out of agriculture and recreational land.

The data reported here provide general guidelines regarding farmland values and cash rent. To obtain a more precise value of an individual tract, contact a professional appraiser or farm manager who has a good understanding of the local market.

Prior reports are located at: https://purdue.ag/paer_archive

Average Net Tax Bill/Acre of Farmland



January 1, 2025
Average Net Tax Bill/Acre of Farmland

Pay 2019	26.05
Pay 2020	25.40
Pay 2021	21.33
Pay 2022	21.55
Pay 2023	24.00
Pay 2024	30.25

January 1, 2025			Real Estate Loans	Operating Loans	Avg.	Source:
2019	Jan-Mar		5.53	6.04		P-28
	Apr-June		5.39	5.98		P-28
	July-Sept		5.08	5.71		P-28
	Oct-Dec		4.97	5.49		P-28
	Average		5.24	5.81	5.53	
2020	Jan-Mar		4.51	4.83		P-28
	Apr-June		4.40	4.77		P-28
	July-Sept		4.24	4.65		P-28
	Oct-Dec		4.10	4.49		P-28
	Average		4.31	4.69	4.50	
2021	Jan-Mar		4.08	4.42		P-30
	Apr-June		4.02	4.40		P-30
	July-Sept		4.01	4.34		P-30
	Oct-Dec		4.03	4.34		P-30
	Average		4.04	4.38	4.21	
2022	Jan-Mar		4.44	4.64		P-30
	Apr-June		5.17	5.42		P-30
	July-Sept		6.13	6.52		P-30
	Oct-Dec		6.80	7.50		P-30
	Average		5.64	6.02	5.83	
2023	Jan-Mar		7.14	7.97		P-32
	Apr-June		7.33	8.24		P-32
	July-Sept		7.70	8.50		P-32
	Oct-Dec		7.60	8.51		P-32
	Average		7.44	8.31	7.88	
2024	Jan-Mar		7.57	8.44		P-32
	Apr-June		7.55	8.47		P-32
	July-Sept		7.19	8.12		P-32
	Oct-Dec	(1)	7.19	8.12		P-32
	Average		7.38	8.29	7.84	

Source: Federal Reserve Bank of Chicago.
AgLetter (a quarterly newsletter)

(1) - The information for the fourth quarter of 2024 was not available at the time of this publication so the 3rd quarter of 2024 was used.

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AgLetter

FARMLAND VALUES AND CREDIT CONDITIONS

Summary
Despite the lingering impacts of the Covid-19 pandemic, there was an annual increase of 6 percent in the Seventh Federal Reserve District's agricultural land values in 2020—the largest such gain since 2012. Moreover, values for "good" farmland in the District were up 4 percent in the fourth quarter of 2020 from the third quarter, according to 137 agricultural bankers who responded to the survey. Fifty-eight percent of the survey respondents expected farmland values to rise during the January through March period of 2021, and 42 percent expected them to be stable; notably, none expected them to decline.

The District also experienced positive changes in its agricultural credit conditions during the fourth quarter of 2020. In the final quarter of 2020, repayment rates for non-real-estate farm loans were higher than a year ago, and loan renewals and extensions were lower than a year earlier. Neither of these farm credit indicators had recorded year-over-year improvements since the third quarter of 2013. Meanwhile, non-real-estate farm loan demand relative to a year ago was lower for the second quarter in a row. Funds available for lending by survey respondents' banks were significantly higher than a year earlier. So, the average loan-to-deposit ratio for the District drifted down to 73.6 percent in the fourth quarter of 2020—its lowest reading since the second quarter of 2016. The District's average interest rates on farm operating, feeder cattle, and farm real estate loans had decreased by the end of 2020 to all-time lows. A smaller share (just 1.4 percent) of current agricultural borrowers were not likely to qualify for operating credit at the survey respondents' banks in 2021 than in 2020.

Farmland values

For 2020, the District saw a steep annual increase of 6 percent in its farmland values (see table and map below). In the fourth quarter of 2020, Indiana and Wisconsin experienced even larger year-over-year increases in their agricultural land values than the District did overall, whereas Iowa and Michigan experienced slightly smaller increases. (Illinois's year-over-year gain in farmland values was on par with the District's.) The District's farmland values rose 4 percent in the fourth quarter of 2020 relative to the third quarter.

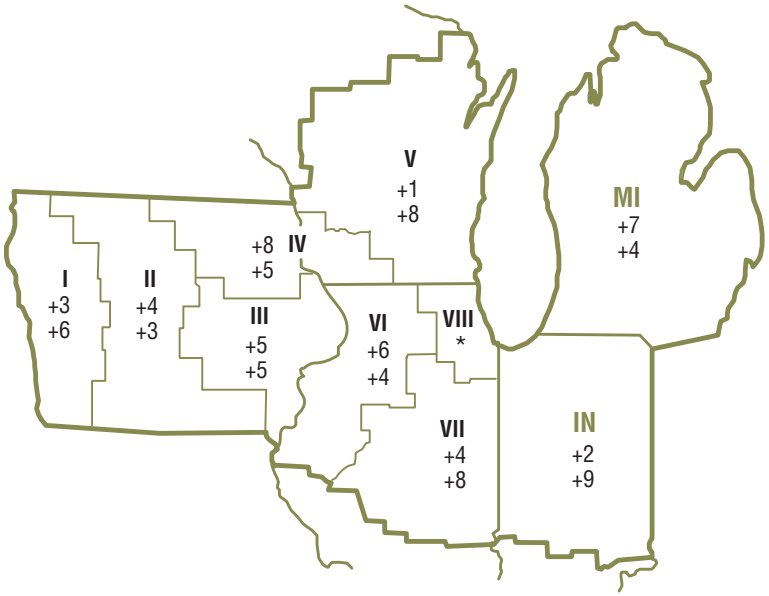
Even with inflation taken into account, District farmland values had an annual increase of almost 5 percent in 2020; this increase in real terms was the first one since 2013 (see chart 1 on next page). In both real and nominal terms, District farmland values peaked in 2013. At the end of 2020, District farmland values were still down 9 percent from their peak in real terms, yet they were nearly back to it in nominal terms (see chart 2 on next page).

Percent change in dollar value of "good" farmland

Top: October 1, 2020 to January 1, 2021
Bottom: January 1, 2020 to January 1, 2021

	October 1, 2020 to January 1, 2021	January 1, 2020 to January 1, 2021
Illinois	+4	+6
Indiana	+2	+9
Iowa	+6	+5
Michigan	+7	+4
Wisconsin	+2	+7
Seventh District	+4	+6

*Insufficient response.



Credit conditions at Seventh District agricultural banks

	Loan demand	Funds availability	Loan repayment rates	Average loan-to-deposit ratio	Interest rates on farm loans: Operating loans[a]	Interest rates on farm loans: Feeder cattle[a]	Interest rates on farm loans: Real estate[a]
	(index)[b]	*(index)*[b]	*(index)*[b]	*(percent)*	*(percent)*	*(percent)*	*(percent)*
2019							
Jan–Mar	141	86	52	78.6	6.04	6.11	5.53
Apr–June	119	93	74	80.2	5.98	6.14	5.39
July–Sept	115	103	70	78.8	5.71	5.77	5.08
Oct–Dec	117	107	79	78.9	5.49	5.61	4.97
2020							
Jan–Mar	117	107	59	78.9	4.83	5.01	4.51
Apr–June	103	119	64	77.6	4.77	4.94	4.40
July–Sept	85	131	93	75.0	4.65	4.79	4.24
Oct–Dec	91	148	133	73.6	4.49	4.66	4.10

[a]At end of period.
[b]Bankers responded to each item by indicating whether conditions in the current quarter were higher or lower than (or the same as) in the year-earlier quarter. The index numbers are computed by subtracting the percentage of bankers who responded "lower" from the percentage who responded "higher" and adding 100.
Note: Historical data on Seventh District agricultural credit conditions are available online, https://www.chicagofed.org/publications/agletter/index.

tightened credit standards for agricultural loans in the fourth quarter of 2020 from a year ago, while 2 percent reported their banks eased them. Similarly, 6 percent of responding bankers noted their banks required larger amounts of collateral for customers to qualify for non-real-estate farm loans during the final quarter of 2020 relative to a year ago, while 1 percent noted their banks required smaller amounts.

Demand for non-real-estate farm borrowing was lower during the October through December period of 2020 relative to the same period of 2019. With 17 percent of survey respondents reporting an increase in the demand for non-real-estate farm loans from a year ago and 26 percent reporting a decrease, the index of loan demand was 91 in the fourth quarter of 2020 (close to its value of 85 in the third quarter). Funds availability was above the level of a year ago for the sixth quarter in a row. In the final quarter of 2020, the index of funds availability moved up to 148 (its highest value since the first quarter of 2013), with funds availability higher than a year ago at 49 percent of the survey respondents' banks and lower at 1 percent. Moreover, the District's average loan-to-deposit ratio kept slipping from its peak in the second quarter of 2019; at 73.6 percent for the fourth quarter of 2020, this ratio was 9.3 percentage points below the average level desired by the responding bankers.

Looking forward

Survey respondents indicated that at the beginning of 2021, only 1.4 percent of their farm customers with operating credit in the year just past were not likely to qualify for new operating credit in the year ahead—this was an improvement from the percentage reported at the start of 2020. Farm real estate and non-real-estate loan volumes were projected to be larger in the first three months of 2021 compared with the same three months of a year ago. Yet the mix of agricultural loan types was expected to change: Farm machinery and grain storage construction loan volumes were anticipated to increase, while the volume for operating loans was anticipated to be flat. At the start of 2021, survey respondents who forecasted capital expenditures by farmers would be higher in the year ahead compared with the year just ended outnumbered survey respondents who forecasted lower capital expenditures, reversing a trend of the past few years. An Illinois banker stated, "With the surge in commodity prices, I expect increased farmer spending on equipment upgrades." In addition, responding bankers anticipated higher expenditures by farmers for land purchases and improvements, as well as for buildings and facilities.

For the first time since the first quarter of 2011, a majority of responding bankers (58 percent) predicted farmland values to go up in the next quarter (in this case, the first quarter of 2021). Notably, none of the survey respondents predicted farmland values to go down. The rest of the respondents (42 percent) predicted them to be stable. According to the survey results, the agricultural outlook seemed to be the rosiest in years.

David B. Oppedahl, *senior business economist*

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FARMLAND VALUES AND CREDIT CONDITIONS

Summary

There was an annual increase of 12 percent in the Seventh Federal Reserve District's agricultural land values in 2022—which helped them reach a new peak, even though the yearly gain was smaller than that of 2021. Values for "good" farmland in the District were unchanged in the fourth quarter of 2022 from the third quarter, according to 147 agricultural bankers who responded to the January survey. Sixteen percent of the survey respondents expected farmland values to rise during the January through March period of 2023, 10 percent expected them to fall, and 74 percent expected them to be stable.

District agricultural credit conditions during the fourth quarter of 2022 remained healthy. In the final quarter of 2022, repayment rates for non-real-estate farm loans were again higher than a year ago, plus loan renewals and extensions were lower than a year ago once more. Less than 1 percent of agricultural borrowers were not likely to qualify for operating credit at the survey respondents' banks in 2023 after qualifying in the previous year. That said, non-real-estate farm loan demand relative to a year ago was lower for the tenth consecutive quarter. There were again more funds available for lending than in the same quarter of the prior year at survey respondents' banks in the final quarter of 2022, after the streak of 12 quarters with more funds available had been interrupted in the third quarter of 2022. The average loan-to-deposit ratio for the District rose to 70.6 percent in the fourth quarter of 2022—its highest reading since the fourth quarter of 2020. At the end of 2022, the District's average nominal interest rates on farm operating, feeder cattle, and farm real estate loans were at their highest levels in 15 years, whereas average real rates for all three were last higher at the end of the first quarter of 2021.

Farmland values

In 2022, the District saw a strong annual increase of 12 percent in its farmland values (see table and map below). Although this result may seem like a letdown after the even larger increase in 2021, 2022's annual gain was the second largest in the past ten years. In the final quarter of 2022, Illinois, Indiana, Iowa, and Wisconsin still had double-digit year-over-year increases in their agricultural land values, but Indiana was the only District state to have an increase that was larger than in the fourth quarter of 2021. On the whole, the District's farmland values were unchanged in the fourth quarter of 2022 from the third quarter, ending a string of eight consecutive quarterly increases.

Adjusted for inflation by the Personal Consumption Expenditures Price Index (PCEPI), District farmland values experienced an annual increase of around 5 percent in 2022—the second-largest real increase of the past ten years (see chart 1 on the next page). District farmland values climbed to a new peak in 2022. At the end of 2022, District farmland values were up 12 percent from their prior peak (in 2013) in real terms; they were up 36 percent from their 2013 peak in nominal terms (see chart 2 on the next page).

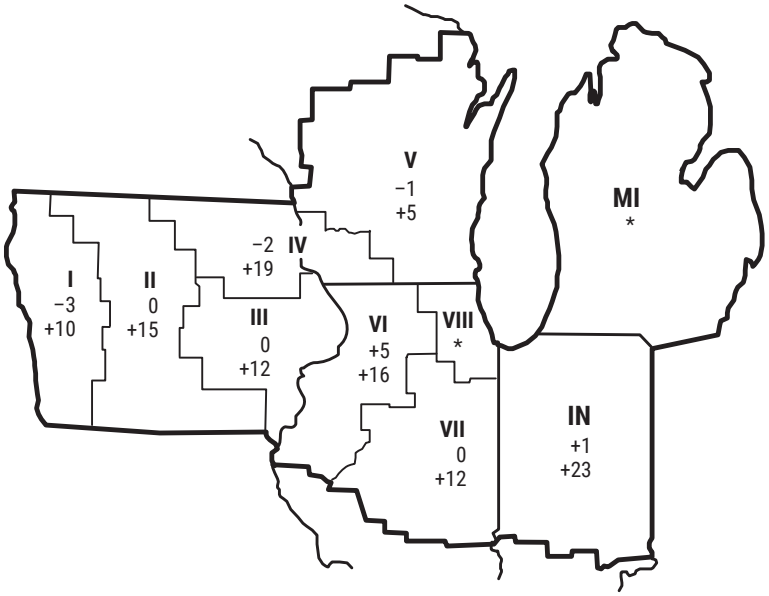
District farmland values got a boost from a record year for crop revenues. Even though District output of corn and soybeans was down from 2021, revenues for these crops

Percent change in dollar value of "good" farmland

Top: October 1, 2022 to January 1, 2023
Bottom: January 1, 2022 to January 1, 2023

	October 1, 2022 to January 1, 2023	January 1, 2022 to January 1, 2023
Illinois	+2	+14
Indiana	+1	+23
Iowa	−2	+11
Michigan	*	*
Wisconsin	−1	+11
Seventh District	0	+12

*Insufficient response.



Credit conditions at Seventh District agricultural banks

	Loan demand	Funds availability	Loan repayment rates	Average loan-to-deposit ratio	Interest rates on farm loans: Operating loans[a]	Feeder cattle[a]	Real estate[a]
	(index)[b]	*(index)*[b]	*(index)*[b]	*(percent)*	*(percent)*	*(percent)*	*(percent)*
2021							
Jan–Mar	79	162	146	69.7	4.42	4.58	4.08
Apr–June	63	160	146	67.5	4.40	4.55	4.02
July–Sept	78	161	143	68.8	4.34	4.51	4.01
Oct–Dec	76	152	153	67.2	4.34	4.53	4.03
2022							
Jan–Mar	83	148	159	65.0	4.64	4.74	4.44
Apr–June	82	129	133	67.0	5.42	5.53	5.17
July–Sept	91	96	121	68.2	6.52	6.58	6.13
Oct–Dec	82	102	131	70.6	7.50	7.54	6.80

[a]At end of period.
[b]Bankers responded to each item by indicating whether conditions in the current quarter were higher or lower than (or the same as) in the year-earlier quarter. The index numbers are computed by subtracting the percentage of bankers who responded "lower" from the percentage who responded "higher" and adding 100.
Note: Historical data on Seventh District agricultural credit conditions are available online, https://www.chicagofed.org/publications/agletter/index.

farm loans during the final quarter of 2022 relative to a year ago; 3 percent noted their banks required larger amounts, while 1 percent noted their banks required smaller amounts.

Agricultural interest rates—in both nominal and real terms—jumped higher during the fourth quarter of 2022. As of January 1, 2023, the District's average nominal interest rates on new operating loans (7.50 percent), feeder cattle loans (7.54 percent), and farm real estate loans (6.80 percent) were the highest since the fourth quarter of 2007. In real terms (after being adjusted for inflation with the PCEPI), the average interest rate on farm real estate loans moved into positive territory in the fourth quarter of 2022, after the average real interest rates on operating and feeder cattle loans had done so in the previous quarter. In real terms, all of these loan rates were last higher at the end of the first quarter of 2021. According to an Illinois banker, "The higher interest rates have not yet discouraged borrowing for real estate."

During the October through December period of 2022, demand for non-real-estate farm borrowing was once again lower relative to the same period of a year ago: With 17 percent of survey respondents reporting an increase in the demand for non-real-estate farm loans from a year earlier and 35 percent reporting a decrease, the index of loan demand was 82 in the fourth quarter of 2022. At 102 in the final quarter of 2022, the index of funds availability indicated little change in the level of funds available for lending from a year ago; funds availability was higher than a year earlier at 21 percent of the survey respondents' banks and lower at 19 percent. The District's average loan-to-deposit ratio increased to 70.6 percent in the fourth quarter of 2022; this ratio was nearly 10 percentage points below the average level desired by the responding bankers.

Looking forward

According to survey respondents at the beginning of 2023, only 0.9 percent of their farm customers with operating credit in the year just past were not likely to qualify for new operating credit in the year ahead (slightly above the survey's record low). Both farm real estate loan and non-real-estate loan volumes (except for the volume of operating loans) were projected to be smaller in the first three months of 2023 compared with the same three months of a year earlier. At the start of 2023, survey respondents forecasted capital expenditures by farmers would be higher in the year ahead than in the year just ended for machinery, equipment, trucks, and autos, but not for land purchases or improvements nor for buildings and facilities.

There were more responding bankers (16 percent) who predicted farmland values to go up in the next quarter (in this case, the first quarter of 2023) than those who predicted farmland values to go down (10 percent); 74 percent of the respondents predicted them to be stable. Given the trends reported here, slower growth in agricultural land values would seem likely for the first quarter of 2023.

David B. Oppedahl, *policy advisor*

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FARMLAND VALUES AND CREDIT CONDITIONS

The Changing Landscape for Agricultural Inputs

On December 3, 2024, the Federal Reserve Bank of Chicago will hold a hybrid event to evaluate impacts from changes related to agricultural inputs for Midwest farming. Registration is available online.

Summary

With no change in the third quarter of 2024 from a year ago, agricultural land values for the Seventh Federal Reserve District stalled after 18 quarters of year-over-year increases. Moreover, values for "good" farmland in the District overall were 2 percent lower in the third quarter of 2024 than in the second quarter, according to the respondents from 119 banks who completed the October 1 survey. While 64 percent of the survey respondents anticipated District farmland values to be stable during the fourth quarter of 2024, just 2 percent anticipated them to move up in the final quarter of this year and 34 percent anticipated them to move down.

The District's agricultural credit conditions weakened on balance in the third quarter of 2024 relative to a year earlier, although average interest rates on agricultural loans decreased from the second quarter of this year. Repayment rates for non-real-estate farm loans compared with the same quarter of the previous year were down once more. In addition, renewals and extensions of such loans were above the level of a year ago. In the third quarter of this year, demand for non-real-estate farm loans was up relative to a year ago for the fourth consecutive quarter, while the availability of funds for lending by agricultural banks was down relative to a year ago for the sixth consecutive quarter. Lastly, the average loan-to-deposit ratio for the District dipped to 75.7 percent in the third quarter of 2024.

Farmland values

The District had no year-over-year change in its agricultural land values in the third quarter of 2024. This was the first period without a year-over-year increase in District farmland values since the fourth quarter of 2019. Wisconsin had another year-over-year gain in farmland values (but of only 4 percent); Illinois, Indiana, and Iowa had year-over-year decreases in farmland values (see map and table below). According to an Indiana respondent, "Inventory of farmland for sale in the area is still low." After being adjusted for inflation with the Personal Consumption Expenditures Price Index (PCEPI), District farmland values were down 2 percent in the third quarter of 2024 relative to a year ago. In nominal terms, the District's agricultural land values in the third quarter of 2024 were 2 percent lower than in the second quarter.

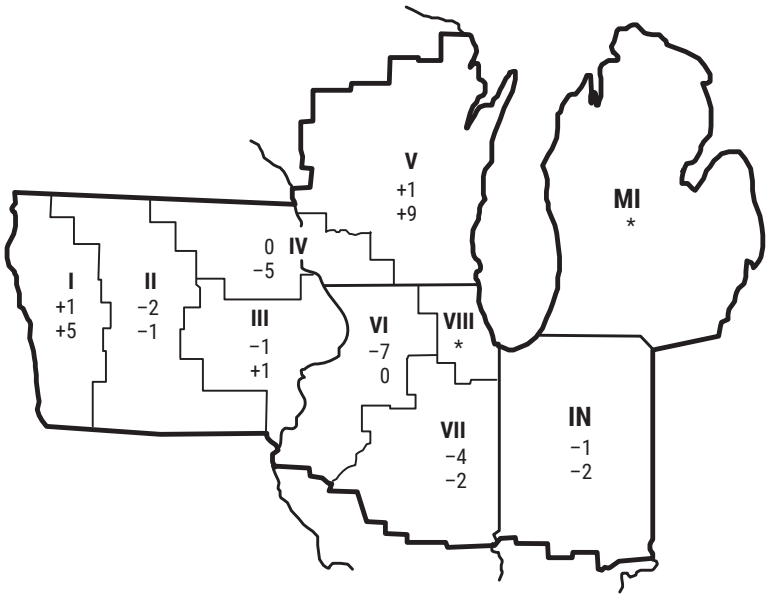
Although dryness spread across the District for much of the latter half of the growing season, timely rains pushed corn and soybean production to record highs for the five states in the District in 2024, based on U.S. Department of Agriculture (USDA) data (see chart 1 on next page). The USDA forecasted the five District states' harvests of corn

Percent change in dollar value of "good" farmland

Top: July 1, 2024 to October 1, 2024
Bottom: October 1, 2023 to October 1, 2024

	July 1, 2024 to October 1, 2024	October 1, 2023 to October 1, 2024
Illinois	−5	−1
Indiana	−1	−2
Iowa	+1	−1
Michigan	*	*
Wisconsin	−3	+4
Seventh District	−2	0

*Insufficient response.



Credit conditions at Seventh District agricultural banks

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	(index)[b]	*(index)*[b]	*(index)*[b]	*(percent)*	*(percent)*	*(percent)*	*(percent)*
2023							
Jan–Mar	78	102	123	70.3	7.97	7.93	7.14
Apr–June	77	83	105	72.8	8.24	8.19	7.33
July–Sept	81	72	100	74.3	8.50	8.47	7.70
Oct–Dec	106	69	92	74.0	8.51	8.49	7.60
2024							
Jan–Mar	136	78	78	76.1	8.44	8.45	7.57
Apr–June	104	74	85	76.9	8.47	8.44	7.55
July–Sept	120	92	76	75.7	8.12	8.09	7.19

[a]At end of period.
[b]Bankers responded to each item by indicating whether conditions in the current quarter were higher or lower than (or the same as) in the year-earlier quarter. The index numbers are computed by subtracting the percentage of bankers who responded "lower" from the percentage who responded "higher" and adding 100.
Note: Historical data on Seventh District agricultural credit conditions are available online.

of 2024, as just 8 percent of the survey respondents indicated their banks had more funds available to lend than a year earlier and 16 percent indicated their banks had less. Even so, the District's average loan-to-deposit ratio softened to 75.7 percent in the third quarter of 2024. The gap between the average loan-to-deposit ratio and the average level desired by the responding bankers narrowed from a year ago to around 5 percentage points, with 58 percent of the survey respondents stating that their respective banks were below their targeted levels.

Looking forward

Another respondent from Illinois remarked that "lower net farm income and cash flow difficulties will affect land values." In the third quarter of 2024, 55 percent of survey respondents considered farmland to be overvalued and 45 percent of them considered farmland to be appropriately valued (none viewed farmland as undervalued). A decline was expected for District farmland values in the final quarter of 2024 by 34 percent of survey respondents (2 percent expected them to rise and 64 percent expected them to be stable). In line with these survey results, softer demand for agricultural land will likely extend into 2025: 45 percent and 35 percent of survey respondents expected farmers and nonfarm investors, respectively, to have weaker demand to acquire farmland this fall and winter compared with a year earlier (less than 20 percent expected these groups to have stronger demand). Overall, respondents anticipated a drop in the volume of farmland transfers during this fall and winter relative to a year ago.

Net cash earnings (which include government payments) for crop and livestock farmers were expected to be lower during the fall and winter from their levels of a year earlier, according to the responding bankers. For crop farmers, 3 percent of survey respondents forecasted net cash earnings to rise over the next three to six months relative to a year ago, while 91 percent forecasted these earnings to fall. For dairy farmers, 14 percent of survey respondents expected net cash earnings to increase over the next three to six months relative to a year ago, while 22 percent expected these earnings to decrease. The District's cattle and hog operations were expected to do roughly the same, with 22 percent of responding bankers forecasting higher net cash earnings for cattle and hog farmers over the next three to six months relative to a year earlier and 31 percent forecasting lower such earnings. The livestock sector faced dim prospects for income growth, but nothing like the slump facing the crop sector.

Forty-two percent of the responding bankers predicted a lower volume of farm loan repayments over the next three to six months compared with a year earlier, while just 1 percent predicted a higher volume. Unsurprisingly, given income expectations, forced sales or liquidations of farm assets owned by financially distressed farmers were anticipated to rise in the next three to six months relative to a year ago, as 38 percent of the responding bankers anticipated them to increase and 2 percent anticipated them to decrease. Non-real-estate loan volumes (specifically for operating loans, feeder cattle loans, and loans guaranteed through the USDA's Farm Service Agency) were forecasted to be larger in the last three months of 2024 compared with the same three months of 2023. Farm real estate loan volumes were forecasted to be smaller in the last three months of 2024 compared with the same three months of a year earlier. Though dipping farm interest rates could help some, agricultural credit conditions were expected to keep weakening as farm incomes, for the most part, keep shrinking.

David B. Oppedahl, *policy advisor,* and
Elizabeth Kepner, *senior research analyst*

Income Approach: November, Annual Average, & Marketing Year Average Prices **January 1, 2025**

Line #		Column	A	B	C	D	E	F	G	H	I	J	K	L	
			2019		2020		2021		2022		2023		2024		Source or Formula:
			Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans	
1	Yield		169	51	187	59	195	60	190	57.5	203	61	209	62	IASS - Crop Summary
2	Price - November		3.92	8.94	3.82	10.30	5.37	12.20	6.41	14.10	4.52	13.10	3.96	10.20	IASS - Crop Prices
3	Price - Annual Avg.		3.98	8.78	3.75	9.27	5.45	13.08	6.74	15.02	5.90	14.26	4.24	11.51	DLGF Calculation
4	Price - Market Avg.		3.78	8.73	3.84	8.92	4.65	11.10	6.07	13.30	6.48	14.40	4.70	12.80	IASS - Crop Prices
5	GI - November		662.48	455.94	714.34	607.70	1047.15	732.00	1217.90	810.75	917.56	799.10	827.64	632.40	Line 1 times Line 2
6	GI -Annual Avg.		672.62	447.78	701.25	546.93	1062.75	784.80	1280.60	863.65	1197.70	869.86	886.16	713.62	Line 1 times Line 3
7	GI - Market Avg.		638.82	445.23	718.08	526.28	906.75	666.00	1153.30	764.75	1315.44	878.40	982.30	793.60	Line 1 times Line 4
8	AA v Nov		10.14	-8.16	-13.09	-60.77	15.60	52.80	62.70	52.90	280.14	70.76	58.52	81.22	Line 6 minus Line 5
9	MA v Nov		-23.66	-10.71	3.74	-81.42	-140.40	-66.00	-64.60	-46.00	397.88	79.30	154.66	161.20	Line 7 minus Line 5
10	NRTL - November		11		166		366		318		124		40		DLGF Calculation
11	NRTL - Annual Avg		12		129		400		376		299		110		Line 10 + or - Avg. Line 8
12	NRTL - Market Avg		-6		127		263		263		363		198		Line 10 + or - Avg. Line 9
13	NRTL Average		6		141		343		319		262		116		Average Lines 10, 11, & 12
14	FRBC RE Rate		0.0524		0.0431		0.0404		0.0564		0.0744		0.0738		Fed. Res. Bank of Chicago
15	FRBC OP Rate		0.0581		0.0469		0.0438		0.0602		0.0831		0.0829		Fed. Res. Bank of Chicago
16	Avg. FRBC Rate		0.0553		0.0450		0.0421		0.0583		0.0788		0.0784		Average Lines 14 & 15
17	Operating Market Value In Use		108		3,133		8,147		5,472		3,325		1,480		Line 13 / Line 16

NRTL = Net Return To Land
FRBC = Federal Reserve Bank of Chicago

Sources: (pages references within this packet)

		2019	2020	2021	2022	2023	2024
1	Yield	P-35	P-35	P-35	P-35	P-35	P-35
2	Price - November	P-40 & 41	P-40 & 41	P-40 & 41	P-40 & 41	P-40 & 41	P-40 & 41
3	Price - Annual Avg.	P-40 & 41	P-40 & 41	P-40 & 41	P-40 & 41	P-40 & 41	P-40 & 41
4	Price - Market Avg.	P-40 & 41	P-40 & 41	P-40 & 41	P-40 & 41	P-40 & 41	P-40 & 41
10	NRTL - November	P-34 Line 12	P-34 Line 12	P-34 Line 12	P-34 Line 12	P-34 Line 12	P-34 Line 12
14	FRBC RE Rate	P-26	P-26	P-26	P-26	P-26	P-26
15	FRBC OP Rate	P-26	P-26	P-26	P-26	P-26	P-26
16	Avg. FRBC Rate	P-26	P-26	P-26	P-26	P-26	P-26

	Doster/Huie -Table 1	A	B	C	D	E	F	G	H	I	J	K	L	Source of
	Updated - December, 2024	2019		2020		2021		2022		2023		2024		Information
Line #		Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans	Corn	Beans	
1	Yield per Acre	169	51	187	59	195	60	190	57.5	203	61	209	62	IN Ag. Stats. Service
2	Price per Bu. - November	3.92	8.94	3.82	10.30	5.37	12.20	6.41	14.10	4.52	13.10	3.96	10.20	IN Ag. Stats. Service
3	Sales	662	456	714	608	1047	732	1218	811	918	799	828	632	Line 1 X Line 2
4	Less Variable Costs	447	245	418	235	424	243	660	329	683	345	627	337	Purdue Crop Guide
5	Contribution Margin	215	211	296	373	623	489	558	482	235	454	201	295	Line 3 - Line 4
6	Plus Government Pymt.	68		102		49		13		13		50		IN Ag. Stats. Service
7	Total Contribution Margin	247		386		581		526		351		273		Lines 5 + 6 / 2
	Less Overhead:													
8	Annual Machinery	130		130		130		130		139		139		Purdue Crop Guide
9	Drying/Handling													Purdue Crop Guide
10	Family/Hired Labor	80		65		64		56		64		64		Purdue Crop Guide
11	Real Estate Tax	26		25		21		22		24		30		DLGF Study
12	Net ReturnTo Land - Nov.	11		166		366		318		124		40		Line 7 - 8,9,10, 11

Sources: (pages references within this packet)

		2019	2020	2021	2022	2023	2024	
1	Yield per Acre	P-35	P-35	P-35	P-35	P-35	P-35	IN Ag. Stats. Service
2	Price per Bu. - November	P- 40 & 41	P- 40 & 41	P- 40 & 41	P- 40 & 41	P- 40 & 41	P- 40 & 41	IN Ag. Stats. Service
4	Less Variable Costs	P-45	P-48	P-51	P-54	P-57	P-60	Purdue Crop Guide
6	Plus Government Pymt.	P-63	P-63	P-63	P-63	P-63	P-63	IN Ag. Stats. Service
8	Annual Machinery	P-47	P-50	P-53	P-56	P-59	P-62	Purdue Crop Guide
9	Drying/Handling	N/A	N/A	N/A	N/A	N/A	N/A	Purdue Crop Guide
10	Family/Hired Labor	P-47	P-50	P-53	P-56	P-59	P-62	Purdue Crop Guide
11	Real Estate Tax	P-25	P-25	P-25	P-25	P-25	P-25	DLGF Study

Foundation for Calculation: Doster/Huie Publication titled "A Method for Assessing Indiana Cropland-An Income Approach to Value" dated June 24, 1999
(See P-10 thru P-14 with emphasis on Table 1 found on P-13)

Indiana Corn Yields:

1985	123	
1986	122	
1987	135	
1988	83	
1989	133	
1990	129	
1991	92	
1992	147	
1993	132	
1994	144	
1995	113	
1996	123	
1997	122	
1998	137	
1999	132	
2000	146	
2001	156	
2002	121	
2003	146	
2004	168	
2005	154	
2006	157	
2007	154	
2008	160	
2009	171	
2010	157	
2011	146	
2012	99	
2013	177	
2014	188	
2015	150	
2016	173	
2017	180	
2018	189	
2019	169	P-36
2020	187	P-36
2021	195	P-36
2022	190	P-36
2023	203	P-36
2024	209	P-37

Indiana Soybean Yields:

1985	41.5	
1986	37	
1987	40	
1988	27.5	
1989	36.5	
1990	41	
1991	39	
1992	43	
1993	46	
1994	47	
1995	39.5	
1996	38	
1997	43.5	
1998	42	
1999	39	
2000	46	
2001	49	
2002	41.5	
2003	38	
2004	51.5	
2005	49	
2006	50	
2007	46	
2008	45	
2009	49	
2010	48.5	
2011	45.5	
2012	44	
2013	51.5	
2014	55.5	
2015	50	
2016	57.5	
2017	54	
2018	57.5	
2019	51	P-38
2020	59	P-38
2021	60	P-38
2022	57.5	P-38
2023	61	P-38
2024	62	P-39

Source: Indiana Agricultural Statistics Service

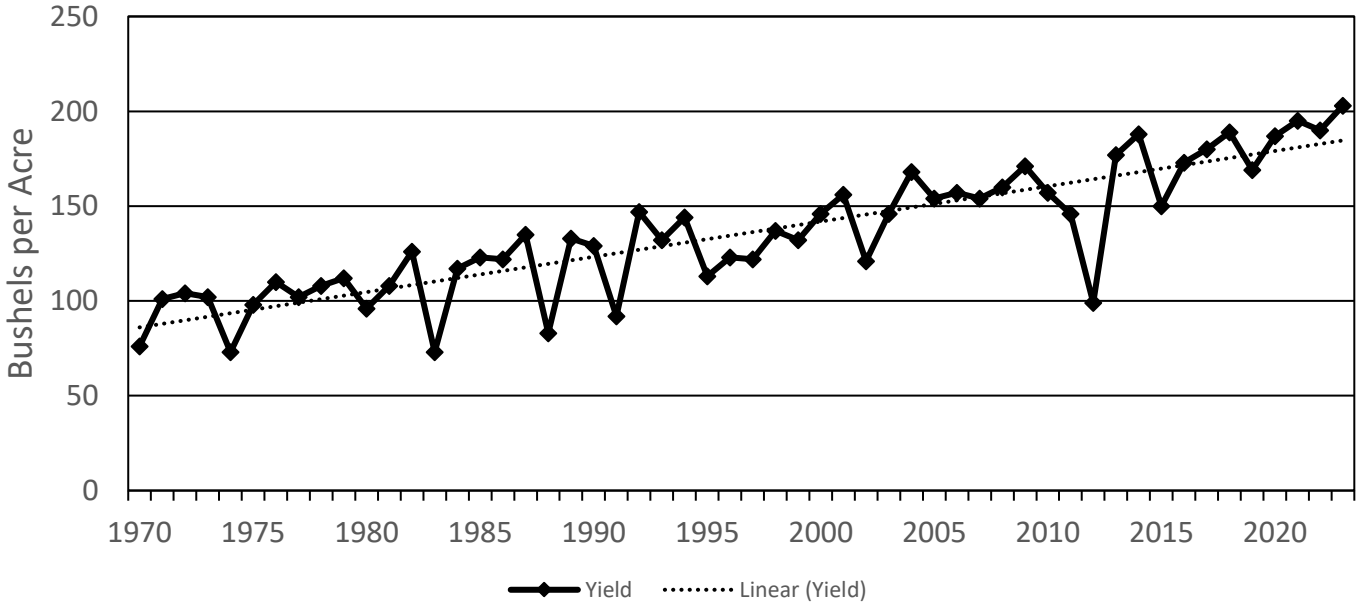
CROP SUMMARY

CORN FORECAST AND FINAL YIELD
INDIANA, 2000-2023

Year	August Forecast	September Forecast	October Forecast	November Forecast	Final Yield Per Acre
	Yield (Bu)	Yield (Bu)	Yield (Bu)	Yield (Bu)	(Bushels)
2000	155	155	151	147	146
2001	147	152	160	160	156
2002	124	119	117	117	121
2003	144	145	148	150	146
2004	156	157	167	169	168
2005	145	149	149	151	154
2006	167	167	165	159	157
2007	157	160	158	158	154
2008	164	162	160	160	160
2009	163	163	166	166	171
2010	176	170	160	160	157
2011	150	145	145	145	146
2012	100	100	100	100	99
2013	166	166	(1)	174	177
2014	179	184	186	186	188
2015	158	156	156	156	150
2016	187	185	177	177	173
2017	173	171	173	181	180
2018	186	192	194	194	189
2019	166	161	162	165	169
2020	188	186	189	189	187
2021	194	197	194	189	195
2022	189	186	187	191	190
2023	**195**	**194**	**197**	**200**	**203**

[1] Data not available due to sequestration.

Corn Yield Trend
Indiana, 1970-2023



Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2024	YEAR		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	209	
SURVEY	2024	YEAR - AUG FORECAST		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	207	
SURVEY	2024	YEAR - NOV FORECAST		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	209	
SURVEY	2024	YEAR - OCT FORECAST		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	202	
SURVEY	2024	YEAR - SEP FORECAST		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	210	

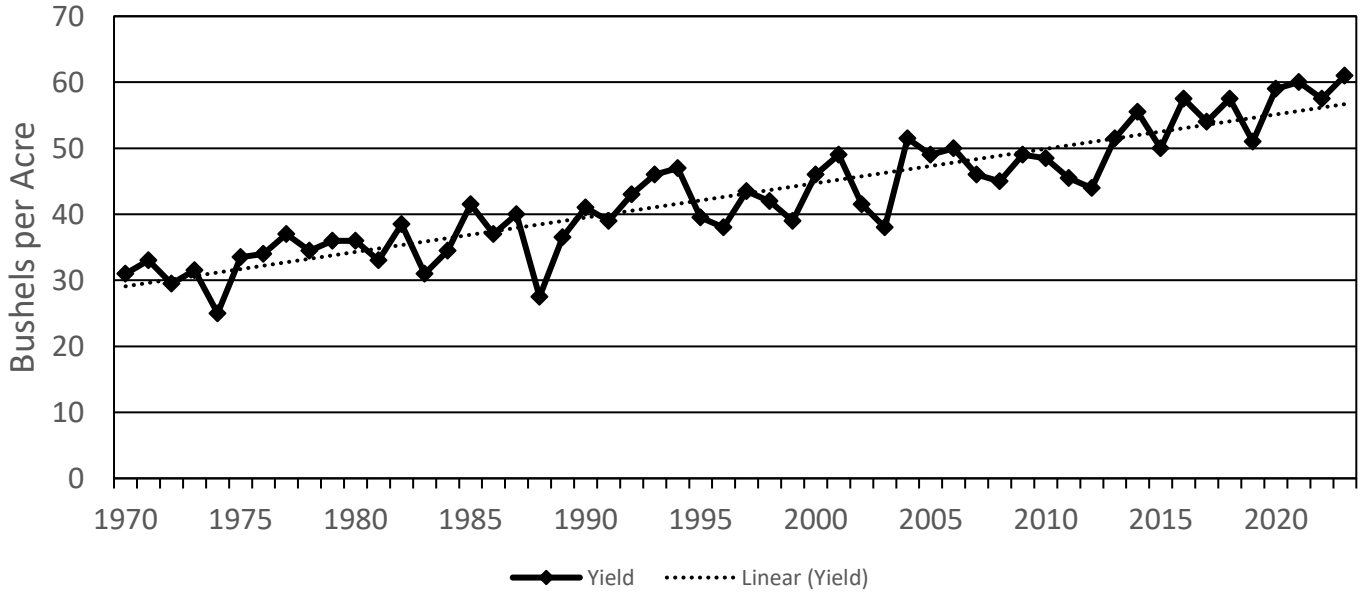
CROP SUMMARY

SOYBEAN FORECAST AND FINAL YIELD
INDIANA, 2000-2023

Year	August Forecast	September Forecast	October Forecast	November Forecast	Final Yield Per Acre
	Yield (Bu)	Yield (Bu)	Yield (Bu)	Yield (Bu)	(Bushels)
2000	46.0	46.0	46.0	46.0	46.0
2001	46.0	48.0	49.0	49.0	49.0
2002	41.0	41.0	40.0	41.0	41.5
2003	43.0	43.0	40.0	38.0	38.0
2004	45.0	45.0	51.0	53.0	51.5
2005	46.0	45.0	46.0	48.0	49.0
2006	49.0	50.0	51.0	51.0	50.0
2007	47.0	43.0	43.0	44.0	46.0
2008	46.0	43.0	42.0	44.0	45.0
2009	45.0	43.0	43.0	46.0	49.0
2010	49.0	50.0	50.0	50.0	48.5
2011	43.0	42.0	42.0	42.0	45.5
2012	37.0	37.0	41.0	44.0	44.0
2013	50.0	48.0	[1]	50.0	51.5
2014	51.0	52.0	54.0	54.0	55.5
2015	49.0	50.0	51.0	51.0	50.0
2016	55.0	58.0	59.0	59.0	57.5
2017	55.0	56.0	55.0	55.0	54.0
2018	58.0	60.0	60.0	60.0	57.5
2019	50.0	49.0	48.0	49.0	51.0
2020	61.0	60.0	60.0	58.0	59.0
2021	60.0	60.0	60.0	57.0	60.0
2022	60.0	60.0	59.0	59.0	57.5
2023	**60.0**	**60.0**	**61.0**	**61.0**	**61.0**

[1] Data not available due to sequestration.

Soybean Yield Trend
Indiana, 1970-2023



Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2024	YEAR		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	62	
SURVEY	2024	YEAR - AUG FORECAST		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	62	
SURVEY	2024	YEAR - NOV FORECAST		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	62	
SURVEY	2024	YEAR - OCT FORECAST		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	60	
SURVEY	2024	YEAR - SEP FORECAST		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - YIELD, MEASURED IN BU / ACRE	TOTAL	NOT SPECIFIED	63	

Corn Prices
Source: Indiana Agricultural Statistics

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average	Marketing Average *
2005	2.09	2.01	2.01	1.96	2.02	2.07	2.20	1.97	1.80	1.72	1.71	2.04	1.97	1.99
2006	2.09	2.07	2.15	2.20	2.26	2.21	2.31	2.08	2.32	2.70	3.03	3.23	2.39	2.00
2007	3.16	3.53	3.64	3.54	3.65	3.73	3.36	3.27	3.32	3.34	3.68	4.07	3.52	3.17
2008	4.23	4.67	4.96	5.49	5.82	5.89	5.92	5.67	4.73	4.15	4.04	4.14	4.98	4.39
2009	4.46	4.06	3.92	4.11	4.12	4.14	3.64	3.45	3.31	3.70	3.66	3.62	3.85	4.10
2010	3.79	3.69	3.62	3.51	3.65	3.55	3.69	3.80	4.24	4.50	4.82	4.94	3.98	3.66
2011	4.95	5.78	5.80	6.71	6.62	6.82	7.04	7.18	6.14	5.89	5.94	6.02	6.24	5.38
2012	6.21	6.46	6.59	6.56	6.52	6.55	7.43	7.92	7.37	7.22	7.43	7.27	6.96	6.31
2013	7.26	7.38	7.48	7.12	7.16	7.15	6.71	6.38	5.11	4.34	4.17	4.37	6.22	7.23
2014	4.49	4.48	4.68	4.86	4.91	4.63	4.07	3.88	3.59	3.48	3.54	3.80	4.20	4.47
2015	3.86	3.93	3.94	3.84	3.74	3.67	4.03	3.90	3.85	3.87	3.97	3.88	3.87	3.75
2016	3.97	3.92	3.93	3.97	4.09	4.26	3.89	3.54	3.41	3.40	3.44	3.57	3.78	3.92
2017	3.64	3.73	3.77	3.77	3.79	3.84	3.86	3.64	3.42	3.38	3.32	3.42	3.63	3.63
2018	3.54	3.59	3.72	3.80	3.92	3.81	3.60	3.54	3.45	3.44	3.49	3.70	3.63	3.56
2019	3.76	3.79	3.75	3.68	3.81	4.28	4.55	4.27	3.96	4.01	3.92	4.00	3.98	3.78
2020	4.10	4.04	4.03	3.61	3.43	3.41	3.51	3.48	3.77	3.73	3.82	4.06	3.75	3.84
2021	4.32	4.74	4.95	5.39	5.87	6.32	6.22	6.39	5.32	4.97	5.37	5.58	5.45	4.65
2022	5.59	6.14	6.59	7.07	7.03	7.47	7.14	7.30	7.05	6.46	6.41	6.58	6.74	6.07
2023	6.50	6.69	6.57	6.63	6.49	6.54	6.14	5.79	5.36	4.85	4.52	4.74	5.90	6.48
2024	4.74	4.57	4.46	4.42	4.60	4.42	4.18	3.71	3.86	3.96	3.96	3.96	4.24	4.70

*Marketing average is September of the previous year to August in the current year.

Source: Pages 42 & 43 of this packet
Note: November & December 2024 prices were not available at the time this calculation was made so the October 2024 price was carried over.

Soybean Prices
Source: Indiana Agricultural Statistics

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average	Marketing Average *
2005	5.57	5.46	6.02	5.99	6.32	6.76	6.93	6.29	5.76	5.60	5.58	6.01	6.02	5.66
2006	6.06	5.83	5.76	5.69	5.83	5.80	5.85	5.53	5.40	5.63	6.13	6.38	5.82	5.78
2007	6.44	6.95	7.17	7.13	7.36	7.83	7.97	8.03	8.49	8.81	9.65	10.30	8.01	6.53
2008	10.10	12.30	11.70	12.30	12.80	14.50	14.50	13.50	11.00	9.78	9.47	9.70	11.80	10.20
2009	10.30	9.88	9.49	10.10	11.10	11.90	11.10	11.00	9.97	9.49	9.63	10.20	10.35	10.20
2010	10.00	9.82	9.70	9.79	9.77	9.79	10.10	10.50	10.10	10.60	11.50	12.20	10.32	9.80
2011	11.70	13.00	12.80	13.30	13.70	13.40	13.70	13.70	12.90	11.80	11.80	11.90	12.81	11.50
2012	12.20	12.50	13.10	14.00	14.10	14.10	15.90	16.40	14.80	14.50	14.60	14.50	14.23	12.70
2013	14.60	14.80	15.00	14.70	15.10	15.60	15.80	14.90	13.40	12.60	12.70	13.10	14.36	14.70
2014	13.20	13.40	13.90	14.60	14.80	14.70	13.70	12.90	11.00	10.00	10.20	10.50	12.74	13.20
2015	10.50	10.20	10.10	9.94	9.91	9.91	10.30	10.00	9.00	8.80	8.84	8.94	9.70	10.20
2016	8.93	8.80	8.90	9.29	10.10	10.90	10.70	10.30	9.62	9.45	9.64	9.91	9.71	9.16
2017	9.96	10.10	9.97	9.51	9.58	9.27	9.77	9.47	9.50	9.42	9.41	9.56	9.63	9.69
2018	9.61	9.79	10.10	10.30	10.50	10.20	8.94	8.85	8.75	8.64	8.60	8.94	9.44	9.61
2019	8.94	8.91	8.83	8.57	8.39	8.71	8.80	8.60	8.60	8.93	8.94	9.17	8.78	8.73
2020	9.22	9.04	9.01	8.64	8.62	8.70	8.87	8.80	9.44	9.81	10.30	10.80	9.27	8.92
2021	10.90	12.60	13.00	14.00	15.00	14.40	14.30	13.60	12.40	11.90	12.20	12.70	13.08	11.10
2022	12.90	14.60	15.50	15.90	16.00	17.00	16.00	15.40	14.50	13.60	14.10	14.70	15.02	13.30
2023	14.40	15.10	15.10	15.10	14.80	14.50	15.10	14.50	13.20	12.80	13.10	13.40	14.26	14.40
2024	13.20	12.40	12.50	12.10	12.20	12.40	11.80	10.40	10.50	10.20	10.20	10.20	11.51	12.80

*Marketing average is September of the previous year to August in the current year.

Source: Page 42 & 44 of this packet
Note: November & December 2024 prices were not available at the time this calculation was made so the October 2024 price was carried over.

CROP PRICES

MONTHLY PRICES RECEIVED BY FARMERS
CROPS, INDIANA, 2017-2024 [1]

Year	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Marketing Year Avg.
Corn (Dollars per Bushel)													
2017-18	3.42	3.38	3.32	3.42	3.54	3.59	3.72	3.80	3.92	3.81	3.60	3.54	3.56
2018-19	3.45	3.44	3.49	3.70	3.76	3.79	3.75	3.68	3.81	4.28	4.55	4.27	3.78
2019-20	3.96	4.01	3.92	4.00	4.10	4.04	4.03	3.61	3.43	3.41	3.51	3.48	3.84
2020-21	3.77	3.73	3.82	4.06	4.32	4.74	4.95	5.39	5.87	6.32	6.22	6.39	4.65
2021-22	5.32	4.97	5.37	5.58	5.59	6.14	6.59	7.07	7.03	7.47	7.14	7.30	6.07
2022-23	7.05	6.46	6.41	6.58	6.50	6.69	6.57	6.63	6.49	6.54	6.14	5.79	6.48
2023-24	**5.36**	**4.85**	**4.52**	**4.74**	**4.74**	**4.57**	**4.46**	**4.42**	**4.60**	**4.42**	**4.18**	(2)	**4.70**
Soybeans (Dollars per Bushel)													
2017-18	9.50	9.42	9.41	9.56	9.61	9.79	10.10	10.30	10.50	10.20	8.94	8.85	9.61
2018-19	8.75	8.64	8.60	8.94	8.94	8.91	8.83	8.57	8.39	8.71	8.80	8.60	8.73
2019-20	8.60	8.93	8.94	9.17	9.22	9.04	9.01	8.64	8.62	8.70	8.87	8.80	8.92
2020-21	9.44	9.81	10.30	10.80	10.90	12.60	13.00	14.00	15.00	14.40	14.30	13.60	11.10
2021-22	12.40	11.90	12.20	12.70	12.90	14.60	15.50	15.90	16.00	17.00	16.00	15.40	13.30
2022-23	14.50	13.60	14.10	14.80	14.40	15.10	15.10	15.10	14.80	14.50	15.10	14.50	14.40
2023-24	**13.20**	**12.80**	**13.10**	**13.40**	**13.20**	**12.40**	**12.50**	**12.10**	**12.20**	**12.40**	**11.80**	(2)	**12.80**

Year	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Marketing Year Avg.
Wheat (Dollars per Bushel)													
2017-18	4.62	5.01	4.56	4.34	4.25	4.48	(2)	4.62	4.79	4.97	4.66	4.97	4.78
2018-19	4.83	4.83	5.25	4.95	4.40	5.19	5.37	5.46	5.56	5.21	4.14	5.01	4.90
2019-20	5.08	4.91	4.62	5.00	5.28	5.27	5.26	5.48	5.32	5.43	5.47	5.44	4.95
2020-21	5.23	5.18	5.34	5.62	5.78	5.95	6.15	5.75	5.93	(2)	(2)	(2)	5.28
2021-22	(2)	6.18	6.63	6.51	6.42	7.45	6.84	6.83	7.89	8.92	7.63	6.88	6.42
2022-23	8.50	7.99	7.71	8.13	8.84	7.64	8.28	7.90	7.73	7.55	7.31	7.00	8.01
2023-24	(2)	**6.45**	**6.23**	**5.92**	**6.12**	**5.26**	**6.56**	**6.70**	**5.83**	**5.53**	**5.47**	**6.03**	**6.38**

[1] Weighted monthly average for market year. 2022 and 2023 are preliminary.
[2] Data not available.

Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2024	APR		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	4.42	
SURVEY	2024	AUG		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	3.71	
SURVEY	2024	FEB		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	4.57	
SURVEY	2024	JAN		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	4.74	
SURVEY	2024	JUL		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	4.18	
SURVEY	2024	JUN		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	4.42	
SURVEY	2024	MAR		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	4.46	
SURVEY	2024	MAY		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	4.6	
SURVEY	2024	OCT		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	3.96	
SURVEY	2024	SEP		STATE	INDIANA	18							00000000		CORN	CORN, GRAIN - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	3.86	

Program	Year	Period	Week Ending	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County ANSI	Zip Code	Region	watershed_code	Watershed	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
SURVEY	2024	APR		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	12.1	
SURVEY	2024	AUG		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	10.4	
SURVEY	2024	FEB		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	12.4	
SURVEY	2024	JAN		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	13.2	
SURVEY	2024	JUL		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	11.8	
SURVEY	2024	JUN		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	12.4	
SURVEY	2024	MAR		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	12.5	
SURVEY	2024	MAY		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	12.2	
SURVEY	2024	OCT		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	10.2	
SURVEY	2024	SEP		STATE	INDIANA	18							00000000		SOYBEANS	SOYBEANS - PRICE RECEIVED, MEASURED IN $ / BU	TOTAL	NOT SPECIFIED	10.5	

2019 Purdue Crop Cost & Return Guide

March 2019 Estimates

Both product prices and input prices may have significantly changed since these estimates were prepared.

Table 1. Estimated per Acre Crop Budgets for Low, Average, and High Productivity Indiana Soils

	Crop Budgets for Three Yield Levels[1]														
	Low Productivity Soil					Average Productivity Soil					High Productivity Soil				
	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans
Expected yield per acre[2]	131	139	43	61	30	164	174	54	77	38	196	209	65	92	46
Harvest price[3]	$3.70	$3.70	$8.90	$4.40	$8.90	$3.70	$3.70	$8.90	$4.40	$8.90	$3.70	$3.70	$8.90	$4.40	$8.90
Market revenue	$485	$514	$383	$268	$267	$607	$644	$481	$339	$338	$725	$773	$579	$405	$409
Less variable costs[4]															
Fertilizer[5]	$143	$128	$43	$60	$32	$152	$138	$53	$80	$39	$160	$147	$62	$98	$46
Seed[6]	91	91	67	44	78	111	111	67	44	78	111	111	67	44	78
Pesticides[7]	58	58	50	30	45	58	58	50	30	45	58	58	50	30	45
Dryer fuel[8]	32	26	N/A	N/A	4	40	32	N/A	N/A	5	48	39	N/A	N/A	6
Machinery fuel @ $2.52	19	19	11	11	8	19	19	11	11	8	19	19	11	11	8
Machinery repairs[9]	22	22	18	18	15	22	22	18	18	15	22	22	18	18	15
Hauling[10]	13	14	4	6	3	16	17	5	8	4	20	21	7	9	5
Interest[11]	12	11	7	6	6	13	12	7	6	7	13	13	8	7	7
Insurance/misc.[12]	36	36	31	9	9	38	38	34	9	9	40	40	34	9	9
Total variable cost	$426	$405	$231	$184	$200	$469	$447	$245	$206	$210	$491	$470	$257	$226	$219
Contribution margin[13] (Revenue - variable costs) per acre	$59	$109	$152	$84	$67	$138	$197	$236	$133	$128	$234	$303	$322	$179	$190

[1]Estimated yields and costs are for yields with average management for three different soils representing low, average, and high productivity. The high productivity soils represent soils capable of producing corn and soybeans with yields about 20% higher than average soils. Low productivity soils represent soils capable of producing corn and soybeans with yields about 20% lower than the average soils.

[2]These yields assume average weather conditions and timely plant/harvest dates, except soybean double-crop yield, which is based on a July 1 planting date. Rotation corn, rotation soybean, and wheat yields for average soils are based on the long-run trends in state average yields reported by the Indiana office of the National Agricultural Statistics Service. Continuous corn yields are 94% of rotation corn yields. Double-crop soybean yields are 70% of full-season soybean yields. Continuous corn yields assume a chisel plow tillage system. Double-crop soybean yields apply to central and southern Indiana.

[3]Harvest corn price is December 2019 CME Group futures price less $0.25 basis. Harvest soybean price is November 2019 CME Group futures price less $0.35 basis. Harvest wheat price is July 2019 CME Group futures price less $.35 basis. Harvest prices were based on opening prices on March 28, 2019. These prices will change.

Table 1 (Continued)

[4]Input prices for variable costs reflect expected prices for 2018. These prices will vary by location and time of the year. Users need to adjust these prices to reflect their own expectations and price situation.

[5]Phosphate, potash, and lime applications are based on Tri-State Fertilizer Recommendations (Source: Michigan Extension Bulletin E-2567, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Nitrogen application rate for corn is based on research from the Department of Agronomy, Purdue University. Anhydrous ammonia is used as the nitrogen source for corn. Urea is used as the nitrogen source for wheat. Pounds of N, P_20_5, K_20, and lime by crop and soil were as follows: continuous corn, 240-47-55-720, 240-59-63-720, 240-71-72-720; rotation corn, 200-50-57-600, 200-63-66-600, 200-75-75-600; rotation beans, 0-34-79-0, 0-42-93-0, 0-50-107-0; wheat, 58-38-42-172, 84-47-48-251, 110-57-53-330; double crop beans, 0-23-61-0, 0-29-70-0, 0-34-80-0. Fertilizer prices per lb.: NH_3 @ $0.38; urea @ $0.43; P_20_5 @ $0.49; K_20 @ $0.33; lime @ $19.00/ton spread on the field. For very poorly drained soils, consider increasing N rates by 5-10%. For well-drained soils, consider reducing N rates by 5-10%. All soil tests for phosphorus and potassium are assumed to be in the maintenance range, and the pH is in the recommended range.

[6]Corn seed prices assume a biotech variety with multiple traits. A 20%-refuge is planted with varieties that do not contain insect resistant traits, but do include herbicide tolerance. Seeding rates for corn are 27,000 seeds per acre on low productivity soils and 33,000 seeds per acre on average and high productivity soils. Soybean seed prices include Round-Up Ready® varieties. Rotation soybeans are drilled with a seeding rate of 169,000 seeds per acre with a 90% germination rate. Double-crop soybeans are drilled with a seeding rate of 195,000 seeds per acre. The seeding rate for wheat is two bushels per acre.

[7]Includes insecticides and herbicides. For corn, rootworm insecticide is applied to the refuge acres. In some areas of Indiana, this may not be required. These costs do not include the application of fungicide to corn. If fungicide is applied, this will add an additional $28 to $32 per acre for material and application. Pesticide costs can vary widely based on herbicides selected, required rate of application, and product pricing.

[8]Fuel used to dry crop to a safe moisture level for storage. For double-crop soybeans, the drying charge represents the drying of wheat in order to allow an earlier planting of soybeans.

[9]Repairs are based on approximately 5-year-old machinery. For older machinery, per acre repairs and downtime cost will be higher.

[10]Hauling charge represents moving grain from field to storage.

[11]Interest is based on 5% annual rate for 9 months for seed, fertilizer, and chemicals, and for 6 months for half the machinery fuel and repairs, and all miscellaneous expenses.

[12]Includes crop insurance, general farm insurance, and miscellaneous cost. The cost of crop insurance represents the premium projected for a Revenue Protection (RP) policy at the 80% coverage level. Crop insurance is included in budgets for corn and full-season soybeans, but is not included for wheat and double-crop soybeans.

[13]Contribution margin is the return to labor and management, machinery services, land resources, and risk.

Table 2. Estimated per Acre Government Payments, Overhead Costs & Earnings for Low, Average, and High Productivity Indiana Soils

	Low Productivity Soil				Average Productivity Soil				High Productivity Soil			
Farm Acres	900	1000	2700	3000	900	1000	2700	3000	900	1000	2700	3000
Rotation[1]	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b
Crop contribution margin[2]	$59	$131	$59	$131	$138	$217	$138	$217	$234	$313	$234	$313
Government payment[3]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total contribution margin	$59	$131	$59	$131	$138	$217	$138	$217	$234	$313	$234	$313
Annual overhead costs:												
Machinery ownership[4]	$138	$130	$85	$80	$138	$130	$85	$80	$138	$130	$85	$80
Family and hired labor[5]	$89	$80	$48	$43	$89	$80	$48	$43	$89	$80	$48	$43
Land[6]	$164	$164	$164	$164	$208	$208	$208	$208	$264	$264	$264	$264
Earnings or (losses)	-$333	-$243	-$238	-$156	-$297	-$201	-$203	-$114	-$257	-$161	-$163	-$74

[1]Rotations are as follows: c-c = all of the farm acres in continuous corn; c-b = one-half of the farm acres in rotation corn and one-half in rotation soybeans.

[2]Crop's contribution margin is the per acre contribution margin from Table 1.

[3]It is assumed that the current farm bill will not provide ARC-County or PLC payments in 2019.

[4]The same basic machinery set, which is timely for each rotation, is used for both the c-c and c-b rotation. The larger farm size requires larger, more expensive machinery. Corn production utilizes a chisel plow tillage system, and soybeans utilize no-till. Average annual replacement costs for the larger farm size were calculated using the Purdue Machinery Cost Calculator for a timely machinery set. Seven-year trading policy is assumed for combine and planter, 10-year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well-drained soils where more days are suitable for spring field work, machinery costs could be lower. A 10-year trading policy was assumed for all machinery on the smaller acreages. Machinery ownership costs are likely to vary widely from farm to farm.

[5]For the larger acreages, labor expense includes a family living withdrawal of $78,106 ($90,356 of family living expenses less $42,285 in net nonfarm income plus $30,035 in income and self-employment taxes); a full-time employee with total compensation of $44,071; and a part-time employee with compensation of $3,802. Family living withdrawal information is based on Illinois FBFM summary information. Employee compensation is based on Employee Wage Rates and Compensation Packages on Kansas Farms, Kansas State University, August 2012. For the smaller acreages, labor expense includes the same family living withdrawal and no hired labor. Labor costs are likely to vary widely from farm to farm.

[6]Based on 2018 cash rent per bushel of corn yield reported in the article entitled "Indiana Farmland Values - Up, Down, and Sideways," Purdue Agricultural Economics Report, August, 2018. The relatively tight margins expected in 2019 will likely dampen increases in cash rents, thus 2019 cash rents are assumed to be the same as 2018 cash rents.

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Date: 3/28/19

2020 Purdue Crop Cost & Return Guide

March 2020 Estimates

Both product prices and input prices may have significantly changed since these estimates were prepared.

Table 1. Estimated per Acre Crop Budgets for Low, Average, and High Productivity Indiana Soils

	Crop Budgets for Three Yield Levels[1]														
	Low Productivity Soil					Average Productivity Soil					High Productivity Soil				
	Cont. Corn	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**	**Cont. Corn**	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**	**Cont. Corn**	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**
Expected yield per acre[2]	133	141	44	62	31	165	176	54	77	38	198	211	65	93	46
Harvest price[3]	$3.40	$3.40	$8.35	$5.20	$8.35	$3.40	$3.40	$8.35	$5.20	$8.35	$3.40	$3.40	$8.35	$5.20	$8.35
Market revenue	$452	$479	$367	$322	$259	$561	$598	$451	$400	$317	$673	$717	$543	$484	$384
Less variable costs[4]															
Fertilizer[5]	$119	$107	$38	$53	$28	$126	$115	$45	$70	$34	$133	$123	$53	$87	$39
Seed[6]	91	91	67	44	78	111	111	67	44	78	111	111	67	44	78
Pesticides[7]	58	58	50	30	45	58	58	50	30	45	58	58	50	30	45
Dryer fuel[8]	29	23	N/A	N/A	4	36	29	N/A	N/A	5	43	34	N/A	N/A	6
Machinery fuel @ $2.07	15	15	9	9	7	15	15	9	9	7	15	15	9	9	7
Machinery repairs[9]	22	22	18	18	15	22	22	18	18	15	22	22	18	18	15
Hauling[10]	13	14	4	6	3	17	18	5	8	4	20	21	7	9	5
Interest[11]	11	11	7	5	6	12	12	7	6	6	12	12	7	7	7
Insurance/misc.[12]	36	36	31	9	9	38	38	34	9	9	40	40	34	9	9
Total variable cost	$394	$377	$224	$174	$195	$435	$418	$235	$194	$203	$454	$436	$245	$213	$211
Contribution margin[13] (Revenue - variable costs) per acre	$58	$102	$143	$148	$64	$126	$180	$216	$206	$114	$219	$281	$298	$271	$173

[1]Estimated yields and costs are for yields with average management for three different soils representing low, average, and high productivity. The high productivity soils represent soils capable of producing corn and soybeans with yields about 20% higher than average soils. Low productivity soils represent soils capable of producing corn and soybeans with yields about 20% lower than the average soils.

[2]These yields assume average weather conditions and timely plant/harvest dates, except soybean double-crop yield, which is based on a July 1 planting date. Rotation corn, rotation soybean, and wheat yields for average soils are based on the long-run trends in state average yields reported by the Indiana office of the National Agricultural Statistics Service. Continuous corn yields are 94% of rotation corn yields. Double-crop soybean yields are 70% of full-season soybean yields. Continuous corn yields assume a chisel plow tillage system. Double-crop soybean yields apply to central and southern Indiana.

[3]Harvest corn price is December 2020 CME Group futures price less $0.25 basis. Harvest soybean price is November 2020 CME Group futures price less $0.35 basis. Harvest wheat price is July 2020 CME Group futures price less $.35 basis. Harvest prices were based on opening prices on March 24, 2020. These prices will change.

Table 1 (Continued)

[4]Input prices for variable costs reflect expected prices for 2020. These prices will vary by location and time of the year. Users need to adjust these prices to reflect their own expectations and price situation.

[5]Phosphate, potash, and lime applications are based on Tri-State Fertilizer Recommendations (Source: Purdue Extension Bulletin, AY-9-32, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Nitrogen application rate for corn is based on research from the Department of Agronomy, Purdue University. Anhydrous ammonia is used as the nitrogen source for corn. Urea is used as the nitrogen source for wheat. Pounds of N, P_20_5, K_20, and lime by crop and soil were as follows: continuous corn, 240-47-55-720, 240-59-63-720, 240-71-72-720; rotation corn, 200-50-57-600, 200-63-66-600, 200-75-75-600; rotation beans, 0-34-79-0, 0-42-93-0, 0-50-107-0; wheat, 58-38-42-172, 84-47-48-251, 110-57-53-330; double crop beans, 0-23-61-0, 0-29-70-0, 0-34-80-0. Fertilizer prices per lb.: NH_3 @ $0.31; urea @ $0.39; P_20_5 @ $0.38; K_20 @ $0.30; lime @ $19.00/ton spread on the field. For very poorly drained soils, consider increasing N rates by 5-10%. For well-drained soils, consider reducing N rates by 5-10%. All soil tests for phosphorus and potassium are assumed to be in the maintenance range, and the pH is in the recommended range.

[6]Corn seed prices assume a biotech variety with multiple traits. A 20%-refuge is planted with varieties that do not contain insect resistant traits, but do include herbicide tolerance. Seeding rates for corn are 27,000 seeds per acre on low productivity soils and 33,000 seeds per acre on average and high productivity soils. Soybean seed prices include Round-Up Ready® varieties. Rotation soybeans are drilled with a seeding rate of 169,000 seeds per acre with a 90% germination rate. Double-crop soybeans are drilled with a seeding rate of 195,000 seeds per acre. The seeding rate for wheat is two bushels per acre.

[7]Includes insecticides and herbicides. For corn, rootworm insecticide is applied to the refuge acres. In some areas of Indiana, this may not be required. These costs do not include the application of fungicide to corn. If fungicide is applied, this will add an additional $28 to $32 per acre for material and application. Pesticide costs can vary widely based on herbicides selected, required rate of application, and product pricing.

[8]Fuel used to dry crop to a safe moisture level for storage. For double-crop soybeans, the drying charge represents the drying of wheat in order to allow an earlier planting of soybeans.

[9]Repairs are based on approximately 5-year-old machinery. For older machinery, per acre repairs and downtime cost will be higher.

[10]Hauling charge represents moving grain from field to storage.

[11]Interest is based on 5% annual rate for 9 months for seed, fertilizer, and chemicals, and for 6 months for half the machinery fuel and repairs, and all miscellaneous expenses.

[12]Includes crop insurance, general farm insurance, and miscellaneous cost. The cost of crop insurance represents the premium projected for a Revenue Protection (RP) policy at the 80% coverage level. Crop insurance is included in budgets for corn and full-season soybeans, but is not included for wheat and double-crop soybeans.

[13]Contribution margin is the return to labor and management, machinery ownership, land resources, and risk.

Table 2. Estimated per Acre Government Payments, Overhead Costs & Earnings for Low, Average, and High Productivity Indiana Soils

	Low Productivity Soil				Average Productivity Soil				High Productivity Soil			
Farm Acres	900	1000	2700	3000	900	1000	2700	3000	900	1000	2700	3000
Rotation[1]	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b
Crop contribution margin[2]	$58	$123	$58	$123	$126	$198	$126	$198	$219	$290	$219	$290
Government payment[3]	$23	$23	$23	$23	$23	$23	$23	$23	$23	$23	$23	$23
Total contribution margin	$81	$146	$81	$146	$149	$221	$149	$221	$242	$313	$242	$313
Annual overhead costs:												
Machinery ownership[4]	$138	$130	$85	$80	$138	$130	$85	$80	$138	$130	$85	$80
Family and hired labor[5]	$72	$65	$43	$39	$72	$65	$43	$39	$72	$65	$43	$39
Land[6]	$159	$159	$159	$159	$208	$208	$208	$208	$257	$257	$257	$257
Earnings or (losses)	-$288	-$208	-$206	-$132	-$269	-$182	-$187	-$106	-$225	-$139	-$143	-$63

[1]Rotations are as follows: c-c = all of the farm acres in continuous corn; c-b = one-half of the farm acres in rotation corn and one-half in rotation soybeans.

[2]Crop's contribution margin is the per acre contribution margin from Table 1.

[3]It is assumed that the current farm bill will provide PLC payments for corn base acres in 2020.

[4]The same basic machinery set, which is timely for each rotation, is used for both the c-c and c-b rotation. The larger farm size requires larger, more expensive machinery. Corn production utilizes a chisel plow tillage system, and soybeans utilize no-till. Average annual replacement costs for the larger farm size were calculated using the Purdue Machinery Cost Calculator for a timely machinery set. Seven-year trading policy is assumed for combine and planter, 10-year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well-drained soils where more days are suitable for spring field work, machinery costs could be lower. A 10-year trading policy was assumed for all machinery on the smaller acreages. Machinery ownership costs are likely to vary widely from farm to farm.

[5]For the larger acreages, labor expense includes a family living withdrawal of $78,106 ($90,356 of family living expenses less $42,285 in net nonfarm income plus $30,035 in income and self-employment taxes); a full-time employee with total compensation of $44,071; and a part-time employee with compensation of $3,802. Family living withdrawal information is based on Illinois FBFM summary information. Employee compensation is based on Employee Wage Rates and Compensation Packages on Kansas Farms, Kansas State University, August 2012. For the smaller acreages, labor expense includes the same family living withdrawal and no hired labor. Labor costs are likely to vary widely from farm to farm.

[6]Based on 2019 cash rent per bushel of corn yield reported in the article entitled "2019 Indiana Farmland Values and Cash Rents Slide Lower," Purdue Agricultural Economics Report, August, 2019. The relatively tight margins expected in 2020 will likely dampen increases in cash rents, thus 2020 cash rents are assumed to be the same as 2019 cash rents.

Prepared by: Michael R. Langemeier and Craig L. Dobbins, Department of Agricultural Economics; Bob Nielsen, Tony J. Vyn, and Shaun Casteel, Department of Agronomy; and Bill Johnson, Department of Botany and Plant Pathology, Purdue University.

Date: 3/24/20

2021 Purdue Crop Cost & Return Guide

February 2021 Estimates

Both product prices and input prices may have significantly changed since these estimates were prepared.

Table 1. Estimated per Acre Crop Budgets for Low, Average, and High Productivity Indiana Soils

	Crop Budgets for Three Yield Levels[1]														
	Low Productivity Soil					Average Productivity Soil					High Productivity Soil				
	Cont. Corn	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**	**Cont. Corn**	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**	**Cont. Corn**	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**
Expected yield per acre[2]	135	144	44	62	31	169	180	55	77	39	203	216	66	93	46
Harvest price[3]	$4.30	$4.30	$11.50	$6.10	$11.50	$4.30	$4.30	$11.50	$6.10	$11.50	$4.30	$4.30	$11.50	$6.10	$11.50
Market revenue	$581	$619	$506	$378	$357	$727	$774	$633	$470	$449	$873	$929	$759	$567	$529
Less variable costs[4]															
Fertilizer[5]	$123	$111	$43	$59	$32	$132	$121	$52	$76	$38	$141	$131	$61	$95	$44
Seed[6]	91	91	67	44	78	111	111	67	44	78	111	111	67	44	78
Pesticides[7]	58	58	50	30	45	58	58	50	30	45	58	58	50	30	45
Dryer fuel[8]	29	23	N/A	N/A	4	36	29	N/A	N/A	5	44	35	N/A	N/A	6
Machinery fuel @ $2.09	15	15	9	9	7	15	15	9	9	7	15	15	9	9	7
Machinery repairs[9]	22	22	18	18	15	22	22	18	18	15	22	22	18	18	15
Hauling[10]	14	14	4	6	3	17	18	6	8	4	20	22	7	9	5
Interest[11]	11	11	7	6	6	12	12	7	6	7	13	12	7	7	7
Insurance/misc.[12]	36	36	31	9	9	38	38	34	9	9	40	40	34	9	9
Total variable cost	$399	$381	$229	$181	$199	$441	$424	$243	$200	$208	$464	$446	$253	$221	$216
Contribution margin[13] (Revenue - variable costs) per acre	$182	$238	$277	$197	$158	$286	$350	$390	$270	$241	$409	$483	$506	$346	$313

[1]Estimated yields and costs are for yields with average management for three different soils representing low, average, and high productivity. The high productivity soils represent soils capable of producing corn and soybeans with yields about 20% higher than average soils. Low productivity soils represent soils capable of producing corn and soybeans with yields about 20% lower than the average soils.

[2]These yields assume average weather conditions and timely plant/harvest dates, except soybean double-crop yield, which is based on a July 1 planting date. Rotation corn, rotation soybean, and wheat yields for average soils are based on the long-run trends in state average yields reported by the Indiana office of the National Agricultural Statistics Service. Continuous corn yields are 94% of rotation corn yields. Double-crop soybean yields are 70% of full-season soybean yields. Continuous corn yields assume a chisel plow tillage system. Double-crop soybean yields apply to central and southern Indiana.

[3]Harvest corn price is December 2021 CME Group futures price less $0.25 basis. Harvest soybean price is November 2021 CME Group futures price less $0.35 basis. Harvest wheat price is July 2021 CME Group futures price less $.35 basis. Harvest prices were based on opening prices on February 9, 2021. These prices will change.

Table 1 (Continued)

[4]Input prices for variable costs reflect expected prices for 2021. These prices will vary by location and time of the year. Users need to adjust these prices to reflect their own expectations and price situation.

[5]Phosphate, potash, and lime applications are based on Tri-State Fertilizer Recommendations (Source: Purdue Extension Bulletin, AY-9-32, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Nitrogen application rate for corn is based on research from the Department of Agronomy, Purdue University. Anhydrous ammonia is used as the nitrogen source for corn. Urea is used as the nitrogen source for wheat. Pounds of N, P_20_5, K_20, and lime by crop and soil were as follows: continuous corn, 240-47-55-720, 240-59-63-720, 240-71-72-720; rotation corn, 200-50-57-600, 200-63-66-600, 200-75-75-600; rotation beans, 0-34-79-0, 0-42-93-0, 0-50-107-0; wheat, 58-38-42-172, 84-47-48-251, 110-57-53-330; double crop beans, 0-23-61-0, 0-29-70-0, 0-34-80-0. Fertilizer prices per lb.: NH_3 @ $0.31; urea @ $0.40; P_20_5 @ $0.49; K_20 @ $0.31; lime @ $19.00/ton spread on the field. For very poorly drained soils, consider increasing N rates by 5-10%. For well-drained soils, consider reducing N rates by 5-10%. All soil tests for phosphorus and potassium are assumed to be in the maintenance range, and the pH is in the recommended range.

[6]Corn seed prices assume a biotech variety with multiple traits. A 20%-refuge is planted with varieties that do not contain insect resistant traits, but do include herbicide tolerance. Seeding rates for corn are 27,000 seeds per acre on low productivity soils and 33,000 seeds per acre on average and high productivity soils. Soybean seed prices include Round-Up Ready® varieties. Rotation soybeans are drilled with a seeding rate of 169,000 seeds per acre with a 90% germination rate. Double-crop soybeans are drilled with a seeding rate of 195,000 seeds per acre. The seeding rate for wheat is two bushels per acre.

[7]Includes insecticides and herbicides. For corn, rootworm insecticide is applied to the refuge acres. In some areas of Indiana, this may not be required. These costs do not include the application of fungicide to corn. If fungicide is applied, this will add an additional $28 to $32 per acre for material and application. Pesticide costs can vary widely based on herbicides selected, required rate of application, and product pricing.

[8]Fuel used to dry crop to a safe moisture level for storage. For double-crop soybeans, the drying charge represents the drying of wheat in order to allow an earlier planting of soybeans.

[9]Repairs are based on approximately 5-year-old machinery. For older machinery, per acre repairs and downtime cost will be higher.

[10]Hauling charge represents moving grain from field to storage.

[11]Interest is based on 5% annual rate for 9 months for seed, fertilizer, and chemicals, and for 6 months for half the machinery fuel and repairs, and all miscellaneous expenses.

[12]Includes crop insurance, general farm insurance, and miscellaneous cost. The cost of crop insurance represents the premium projected for a Revenue Protection (RP) policy at the 80% coverage level. Crop insurance is included in budgets for corn and full-season soybeans, but is not included for wheat and double-crop soybeans.

[13]Contribution margin is the return to labor and management, machinery ownership, land resources, and risk.

Table 2. Estimated per Acre Government Payments, Overhead Costs & Earnings for Low, Average, and High Productivity Indiana Soils

	Low Productivity Soil				Average Productivity Soil				High Productivity Soil			
Farm Acres	900	1000	2700	3000	900	1000	2700	3000	900	1000	2700	3000
Rotation[1]	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b
Crop contribution margin[2]	$182	$258	$182	$258	$286	$370	$286	$370	$409	$495	$409	$495
Government payment[3]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total contribution margin	$182	$258	$182	$258	$286	$370	$286	$370	$409	$495	$409	$495
Annual overhead costs:												
Machinery ownership[4]	$138	$130	$85	$80	$138	$130	$85	$80	$138	$130	$85	$80
Family and hired labor[5]	$72	$64	$43	$39	$72	$64	$43	$39	$72	$64	$43	$39
Land[6]	$171	$171	$171	$171	$223	$223	$223	$223	$274	$274	$274	$274
Earnings or (losses)	-$199	-$107	-$117	-$32	-$147	-$47	-$65	$28	-$75	$27	$7	$102

[1]Rotations are as follows: c-c = all of the farm acres in continuous corn; c-b = one-half of the farm acres in rotation corn and one-half in rotation soybeans.

[2]Crop's contribution margin is the per acre contribution margin from Table 1.

[3]It is assumed that the current farm bill will not provide ARC-CO or PLC payments for base acres in 2021.

[4]The same basic machinery set, which is timely for each rotation, is used for both the c-c and c-b rotation. The larger farm size requires larger, more expensive machinery. Corn production utilizes a chisel plow tillage system, and soybeans utilize no-till. Average annual replacement costs for the larger farm size were calculated using the Purdue Machinery Cost Calculator for a timely machinery set. Seven-year trading policy is assumed for combine and planter, 10-year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well-drained soils where more days are suitable for spring field work, machinery costs could be lower. A 10-year trading policy was assumed for all machinery on the smaller acreages. Machinery ownership costs are likely to vary widely from farm to farm.

[5]For the larger acreages, labor expense includes a family living withdrawal of $64,488 ($84,991 of family living expenses less $45,217 in net nonfarm income plus $24,714 in income and self-employment taxes); a full-time employee with total compensation of $47,141; and a part-time employee with compensation of $4,066. Family living withdrawal information is based on Illinois FBFM summary information. Employee compensation is based on Employee Wage Rates and Compensation Packages on Kansas Farms, Kansas State University, August 2012. For the smaller acreages, labor expense includes the same family living withdrawal and no hired labor. Labor costs are likely to vary widely from farm to farm.

[6]Based on 2020 cash rent per bushel of corn yield reported in the article entitled "Indiana Farmland Values Increase but Signal Concern of Potential COVID-19 Slump," Purdue Agricultural Economics Report, July, 2020. The relatively tight margins expected in 2020 will likely dampen increases in cash rents, thus 2021 cash rents are assumed to be the same as 2020 cash rents.

Prepared by: Michael R. Langemeier and Craig L. Dobbins, Department of Agricultural Economics; Bob Nielsen, Tony J. Vyn, and Shaun Casteel, Department of Agronomy; and Bill Johnson, Department of Botany and Plant Pathology, Purdue University.

Date: 2/9/21

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2022 Purdue Crop Cost & Return Guide

March 2022 Estimates

Both product prices and input prices may have significantly changed since these estimates were prepared.

Table 1. Estimated per Acre Crop Budgets for Low, Average, and High Productivity Indiana Soils

	Crop Budgets for Three Yield Levels[1]														
	Low Productivity Soil					Average Productivity Soil					High Productivity Soil				
	Cont. Corn	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**	**Cont. Corn**	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**	**Cont. Corn**	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**
Expected yield per acre[2]	141	150	45	65	32	171	182	55	78	39	201	214	65	92	46
Harvest price[3]	$6.25	$6.25	$14.35	$10.50	$14.35	$6.25	$6.25	$14.35	$10.50	$14.35	$6.25	$6.25	$14.35	$10.50	$14.35
Market revenue	$881	$938	$646	$683	$459	$1,069	$1,138	$789	$819	$560	$1,256	$1,338	$933	$966	$660
Less variable costs[4]															
Fertilizer[5]	$305	$271	$85	$128	$64	$319	$286	$100	$160	$75	$333	$301	$116	$195	$86
Seed[6]	97	97	71	44	82	118	118	71	44	82	118	118	71	44	82
Pesticides[7]	73	73	63	38	56	73	73	63	38	56	73	73	63	38	56
Dryer fuel[8]	45	36	N/A	N/A	4	54	43	N/A	N/A	5	64	51	N/A	N/A	6
Machinery fuel @ $4.40	33	33	20	20	14	33	33	20	20	14	33	33	20	20	14
Machinery repairs[9]	22	22	18	18	15	22	22	18	18	15	22	22	18	18	15
Hauling[10]	14	15	5	7	3	17	18	6	8	4	20	21	7	9	5
Interest[11]	19	18	9	9	8	20	19	10	10	9	21	20	10	11	9
Insurance/misc.[12]	43	43	38	9	9	48	48	41	9	9	53	53	43	9	9
Total variable cost	$651	$608	$309	$273	$255	$704	$660	$329	$307	$269	$737	$692	$348	$344	$282
Contribution margin[13] (Revenue - variable costs) per acre	$230	$330	$337	$410	$204	$365	$478	$460	$512	$291	$519	$646	$585	$622	$378

[1]Estimated yields and costs are for yields with average management for three different soils representing low, average, and high productivity. The high productivity soils represent soils capable of producing corn and soybeans with yields about 20% higher than average soils. Low productivity soils represent soils capable of producing corn and soybeans with yields about 20% lower than the average soils.

[2]These yields assume average weather conditions and timely plant/harvest dates, except soybean double-crop yield, which is based on a July 1 planting date. Rotation corn, rotation soybean, and wheat yields for average soils are based on the long-run trends in state average yields reported by the Indiana office of the National Agricultural Statistics Service. Continuous corn yields are 94% of rotation corn yields. Double-crop soybean yields are 70% of full-season soybean yields. Continuous corn yields assume a chisel plow tillage system. Double-crop soybean yields apply to central and southern Indiana.

[3]Harvest corn price is December 2022 CME Group futures price less $0.25 basis. Harvest soybean price is November 2022 CME Group futures price less $0.35 basis. Harvest wheat price is July 2022 CME Group futures price less $.35 basis. Harvest prices were based on opening prices on March 21, 2022. These prices will change.

Table 1 (Continued)

[4]Input prices for variable costs reflect expected prices for 2022. These prices will vary by location and time of the year. Users need to adjust these prices to reflect their own expectations and price situation.

[5]Phosphate, potash, and lime applications are based on Tri-State Fertilizer Recommendations (Source: Purdue Extension Bulletin, AY-9-32, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Nitrogen application rate for corn is based on research from the Department of Agronomy, Purdue University. Anhydrous ammonia is used as the nitrogen source for corn. Urea is used as the nitrogen source for wheat. Pounds of N, P_20_5, K_20, and lime by crop and soil were as follows: continuous corn, 240-47-55-720, 240-59-63-720, 240-71-72-720; rotation corn, 200-50-57-600, 200-63-66-600, 200-75-75-600; rotation beans, 0-34-79-0, 0-42-93-0, 0-50-107-0; wheat, 58-38-42-172, 84-47-48-251, 110-57-53-330; double crop beans, 0-23-61-0, 0-29-70-0, 0-34-80-0. Fertilizer prices per lb.: NH_3 @ $0.92; urea @ $0.97; P_20_5 @ $0.76; K_20 @ $0.69; lime @ $19.00/ton spread on the field. For very poorly drained soils, consider increasing N rates by 5-10%. For well-drained soils, consider reducing N rates by 5-10%. All soil tests for phosphorus and potassium are assumed to be in the maintenance range, and the pH is in the recommended range.

[6]Corn seed prices assume a biotech variety with multiple traits. A 20%-refuge is planted with varieties that do not contain insect resistant traits, but do include herbicide tolerance. Seeding rates for corn are 27,000 seeds per acre on low productivity soils and 33,000 seeds per acre on average and high productivity soils. Soybean seed prices include Round-Up Ready® varieties. Rotation soybeans are drilled with a seeding rate of 169,000 seeds per acre with a 90% germination rate. Double-crop soybeans are drilled with a seeding rate of 195,000 seeds per acre. The seeding rate for wheat is two bushels per acre.

[7]Includes insecticides and herbicides. For corn, rootworm insecticide is applied to the refuge acres. In some areas of Indiana, this may not be required. These costs do not include the application of fungicide to corn. If fungicide is applied, this will add an additional $28 to $32 per acre for material and application. Pesticide costs can vary widely based on herbicides selected, required rate of application, and product pricing.

[8]Fuel used to dry crop to a safe moisture level for storage. For double-crop soybeans, the drying charge represents the drying of wheat in order to allow an earlier planting of soybeans.

[9]Repairs are based on approximately 5-year-old machinery. For older machinery, per acre repairs and downtime cost will be higher.

[10]Hauling charge represents moving grain from field to storage.

[11]Interest is based on 5% annual rate for 9 months for seed, fertilizer, and chemicals, and for 6 months for half the machinery fuel and repairs, and all miscellaneous expenses.

[12]Includes crop insurance, general farm insurance, and miscellaneous cost. The cost of crop insurance represents the premium projected for a Revenue Protection (RP) policy at the 80% coverage level. Crop insurance is included in budgets for corn and full-season soybeans, but is not included for wheat and double-crop soybeans.

[13]Contribution margin is the return to labor and management, machinery ownership, land resources, and risk.

Table 2. Estimated per Acre Government Payments, Overhead Costs & Earnings for Low, Average, and High Productivity Indiana Soils

	Low Productivity Soil				Average Productivity Soil				High Productivity Soil			
Farm Acres	900	1000	2700	3000	900	1000	2700	3000	900	1000	2700	3000
Rotation[1]	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b
Crop contribution margin[2]	$230	$334	$230	$334	$365	$469	$365	$469	$519	$616	$519	$616
Government payment[3]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total contribution margin	$230	$334	$230	$334	$365	$469	$365	$469	$519	$616	$519	$616
Annual overhead costs:												
Machinery ownership[4]	$138	$130	$92	$86	$138	$130	$92	$86	$138	$130	$92	$86
Family and hired labor[5]	$63	$56	$39	$35	$63	$56	$39	$35	$63	$56	$39	$35
Land[6]	$189	$189	$189	$189	$239	$239	$239	$239	$285	$285	$285	$285
Earnings or (losses)	-$159	-$41	-$90	$23	-$74	$44	-$5	$108	$34	$145	$103	$209

[1]Rotations are as follows: c-c = all of the farm acres in continuous corn; c-b = one-half of the farm acres in rotation corn and one-half in rotation soybeans.

[2]Crop's contribution margin is the per acre contribution margin from Table 1.

[3]It is assumed that the current farm bill will not provide ARC-CO or PLC payments for base acres in 2022.

[4]The same basic machinery set, which is timely for each rotation, is used for both the c-c and c-b rotation. The larger farm size requires larger, more expensive machinery. Corn production utilizes a chisel plow tillage system, and soybeans utilize no-till. Average annual replacement costs for the larger farm size were calculated using the Purdue Machinery Cost Calculator for a timely machinery set. Seven-year trading policy is assumed for combine and planter, 10-year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well-drained soils where more days are suitable for spring field work, machinery costs could be lower. A 10-year trading policy was assumed for all machinery on the smaller acreages. Machinery ownership costs are likely to vary widely from farm to farm.

[5]For the larger acreages, operator labor expense incoroporates information pertaining to total family living, net nonfarm income, and income and self-employment taxes obtained from FINBIN, Center for Farm Financial Management, University of Minnesota. The larger acreages also included hired labor. FINBIN data was used to compute hourly hired labor wages. For the smaller acreages, labor expense includes the same family living withdrawal and no hired labor. Labor costs are likely to vary widely from farm to farm.

[6]Based on 2021 cash rent per bushel of corn yield reported in the article entitled "Indiana Farmland Prices Hit New Record High in 2021," Purdue Agricultural Economics Report, July, 2021. The relatively strong crop prices in 2021 will likely create upward pressure on cash rents, thus 2022 cash rents are assumed to be 5% higher than 2021 cash rents.

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Date: 3/21/22

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ID-166-W

2023 Purdue Crop Cost & Return Guide

March 2023 Estimates

Both product prices and input prices may have significantly changed since these estimates were prepared.

Table 1. Estimated per Acre Crop Budgets for Low, Average, and High Productivity Indiana Soils

	Crop Budgets for Three Yield Levels[1]														
	Low Productivity Soil					Average Productivity Soil					High Productivity Soil				
	Cont. Corn	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**	**Cont. Corn**	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**	**Cont. Corn**	**Rot. Corn**	**Rot. Beans**	**Wheat**	**DC Beans**
Expected yield per acre[2]	143	152	46	65	32	173	184	56	79	39	203	216	66	93	46
Harvest price[3]	$5.25	$5.25	$12.40	$6.40	$12.40	$5.25	$5.25	$12.40	$6.40	$12.40	$5.25	$5.25	$12.40	$6.40	$12.40
Market revenue	$751	$798	$570	$416	$397	$908	$966	$694	$506	$484	$1,066	$1,134	$818	$595	$570
Less variable costs[4]															
Fertilizer[5]	$247	$221	$73	$105	$54	$260	$235	$86	$133	$63	$272	$248	$100	$161	$73
Seed[6]	102	102	74	44	86	124	124	74	44	86	124	124	74	44	86
Pesticides[7]	126	119	75	45	65	126	119	75	45	65	126	119	75	45	65
Dryer fuel[8]	45	36	N/A	N/A	4	54	43	N/A	N/A	5	63	51	N/A	N/A	6
Machinery fuel @ $3.61	27	27	16	16	12	27	27	16	16	12	27	27	16	16	12
Machinery repairs[9]	34	34	29	29	24	34	34	29	29	24	34	34	29	29	24
Hauling[10]	15	16	5	7	3	18	19	6	8	4	21	23	7	10	5
Interest[11]	34	32	17	15	15	37	34	18	16	16	37	35	19	18	16
Insurance/misc.[12]	43	43	38	9	9	48	48	41	9	9	53	53	43	9	9
Total variable cost	$673	$630	$327	$270	$272	$728	$683	$345	$300	$284	$757	$714	$363	$332	$296
Contribution margin[13] (Revenue - variable costs) per acre	$78	$168	$243	$146	$125	$180	$283	$349	$206	$200	$309	$420	$455	$263	$274

[1]Estimated yields and costs are for yields with average management for three different soils representing low, average, and high productivity. The high productivity soils represent soils capable of producing corn and soybeans with yields about 20% higher than average soils. Low productivity soils represent soils capable of producing corn and soybeans with yields about 20% lower than the average soils.

[2]These yields assume average weather conditions and timely plant/harvest dates, except soybean double-crop yield, which is based on a July 1 planting date. Rotation corn, rotation soybean, and wheat yields for average soils are based on the long-run trends in state average yields reported by the Indiana office of the National Agricultural Statistics Service. Continuous corn yields are 94% of rotation corn yields. Double-crop soybean yields are 70% of full-season soybean yields. Continuous corn yields assume a chisel plow tillage system. Double-crop soybean yields apply to central and southern Indiana.

[3]Harvest corn price is December 2023 CME Group futures price less $0.25 basis. Harvest soybean price is November 2023 CME Group futures price less $0.35 basis. Harvest wheat price is July 2023 CME Group futures price less $.35 basis. Harvest prices were based on opening prices on March 23, 2023. These prices will change.

Table 1 (Continued)

[4]Input prices for variable costs reflect expected prices for 2023. These prices will vary by location and time of the year. Users need to adjust these prices to reflect their own expectations and price situation.

[5]Phosphate, potash, and lime applications are based on Tri-State Fertilizer Recommendations (Source: Purdue Extension Bulletin, AY-9-32, July 1995). Lime amounts represent the pounds of standard ag lime needed to neutralize the acidity from the nitrogen supplied from sources other than ammonium sulfate. Nitrogen application rate for corn is based on research from the Department of Agronomy, Purdue University. Anhydrous ammonia is used as the nitrogen source for corn. Urea is used as the nitrogen source for wheat. Pounds of N, P_20_5, K_20, and lime by crop and soil were as follows: continuous corn, 240-47-55-720, 240-59-63-720, 240-71-72-720; rotation corn, 200-50-57-600, 200-63-66-600, 200-75-75-600; rotation beans, 0-34-79-0, 0-42-93-0, 0-50-107-0; wheat, 58-38-42-172, 84-47-48-251, 110-57-53-330; double crop beans, 0-23-61-0, 0-29-70-0, 0-34-80-0. Fertilizer prices per lb.: NH_3 @ $0.73; urea @ $0.71; P_20_5 @ $0.76; K_20 @ $0.53; lime @ $19.95/ton spread on the field. For very poorly drained soils, consider increasing N rates by 5-10%. For well-drained soils, consider reducing N rates by 5-10%. All soil tests for phosphorus and potassium are assumed to be in the maintenance range, and the pH is in the recommended range.

[6]Corn seed prices assume a biotech variety with multiple traits. A 20%-refuge is planted with varieties that do not contain insect resistant traits, but do include herbicide tolerance. Seeding rates for corn are 27,000 seeds per acre on low productivity soils and 33,000 seeds per acre on average and high productivity soils. Soybean seed prices include Round-Up Ready® varieties. Rotation soybeans are drilled with a seeding rate of 169,000 seeds per acre with a 90% germination rate. Double-crop soybeans are drilled with a seeding rate of 195,000 seeds per acre. The seeding rate for wheat is two bushels per acre.

[7]Includes insecticides and herbicides. For corn, rootworm insecticide is applied to the refuge acres. In some areas of Indiana, this may not be required. Cost projections include the application of fungicide to corn every other year. Fungicide applications are assumed to cost $28 to $32 per acre for material and application. Pesticide costs can vary widely based on herbicides selected, required rate of application, and product pricing.

[8]Fuel used to dry crop to a safe moisture level for storage. For double-crop soybeans, the drying charge represents the drying of wheat in order to allow an earlier planting of soybeans.

[9]Repairs are based on approximately 5-year-old machinery. For older machinery, per acre repairs and downtime cost will be higher.

[10]Hauling charge represents moving grain from field to storage.

[11]Interest is based on 9.0% annual rate for 9 months for seed, fertilizer, and chemicals, and for 6 months for half the machinery fuel and repairs, and all miscellaneous expenses.

[12]Includes crop insurance, general farm insurance, and miscellaneous cost. The cost of crop insurance represents the premium projected for a Revenue Protection (RP) policy at the 80% coverage level. Crop insurance is included in budgets for corn and full-season soybeans, but is not included for wheat and double-crop soybeans.

[13]Contribution margin is the return to labor and management, machinery ownership, land resources, and risk.

Table 2. Estimated per Acre Government Payments, Overhead Costs & Earnings for Low, Average, and High Productivity Indiana Soils

	Low Productivity Soil				Average Productivity Soil				High Productivity Soil			
Farm Acres	900	1000	2700	3000	900	1000	2700	3000	900	1000	2700	3000
Rotation[1]	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b	c-c	c-b
Crop contribution margin[2]	$78	$206	$78	$206	$180	$316	$180	$316	$309	$438	$309	$438
Government payment[3]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total contribution margin	$78	$206	$78	$206	$180	$316	$180	$316	$309	$438	$309	$438
Annual overhead costs:												
Machinery ownership[4]	$147	$139	$98	$92	$147	$139	$98	$92	$147	$139	$98	$92
Family and hired labor[5]	$71	$64	$44	$40	$71	$64	$44	$40	$71	$64	$44	$40
Land[6]	$206	$206	$206	$206	$255	$255	$255	$255	$308	$308	$308	$308
Earnings or (losses)	-$346	-$202	-$271	-$132	-$293	-$141	-$218	-$71	-$217	-$72	-$142	-$2

[1]Rotations are as follows: c-c = all of the farm acres in continuous corn; c-b = one-half of the farm acres in rotation corn and one-half in rotation soybeans.

[2]Crop's contribution margin is the per acre contribution margin from Table 1.

[3]It is assumed that the current farm bill will not provide ARC-CO or PLC payments for base acres in 2023.

[4]The same basic machinery set, which is timely for each rotation, is used for both the c-c and c-b rotation. The larger farm size requires larger, more expensive machinery. Corn production utilizes a chisel plow tillage system, and soybeans utilize no-till. Average annual replacement costs for the larger farm size were calculated using the Purdue Machinery Cost Calculator for a timely machinery set. Seven-year trading policy is assumed for combine and planter, 10-year policy for other field machinery. On livestock farms where fewer hours each day are available for crops, or on small farms, machinery costs and/or labor costs will be higher. On well-drained soils where more days are suitable for spring field work, machinery costs could be lower. A 10-year trading policy was assumed for all machinery on the smaller acreages. Machinery ownership costs are likely to vary widely from farm to farm.

[5]For the larger acreages, operator labor expense incoroporates information pertaining to total family living, net nonfarm income, and income and self-employment taxes obtained from FINBIN, Center for Farm Financial Management, University of Minnesota. The larger acreages also included hired labor. FINBIN data was used to compute hourly hired labor wages. For the smaller acreages, labor expense includes the same family living withdrawal and no hired labor. Labor costs are likely to vary widely from farm to farm.

[6]Based on 2022 cash rent per bushel of corn yield reported in the article entitled "Indiana Farmland Prices Grow at Record Pace in 2022," Purdue Agricultural Economics Report, August, 2022. The relatively strong crop prices in 2021 and 2022 will likely create upward pressure on cash rents, thus 2023 cash rents are assumed to be 5% higher than 2022 cash rents.

Prepared by: Michael R. Langemeier, Department of Agricultural Economics; Shaun Casteel, Dan Quinn, and Tony Vyn, Department of Agronomy; and Bill Johnson, Department of Botany and Plant Pathology, Purdue University.

Date: 3/23/23

PURDUE UNIVERSITY

PURDUE EXTENSION
ID-166-W

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March 2024 Estimates

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	Low Productivity Soil					Average Productivity Soil					High Productivity Soil				
	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans	Cont. Corn	Rot. Corn	Rot. Beans	Wheat	DC Beans
Expected yield per acre[2]	152	162	49	68	34	179	190	58	80	41	208	221	67	93	47
Harvest price[3]	$4.50	$4.50	$11.55	$5.25	$11.55	$4.50	$4.50	$11.55	$5.25	$11.55	$4.50	$4.50	$11.55	$5.25	$11.55
Market revenue	$684	$729	$566	$357	$393	$806	$855	$670	$420	$474	$936	$995	$774	$488	$543
Less variable costs[4]															
Fertilizer[5]	$195	$177	$67	$95	$49	$205	$188	$78	$116	$58	$216	$200	$89	$138	$65
Seed[6]	102	102	74	44	86	124	124	74	44	86	124	124	74	44	86
Pesticides[7]	111	105	66	40	57	111	105	66	40	57	111	105	66	40	57
Dryer fuel[8]	44	35	N/A	N/A	4	52	41	N/A	N/A	5	60	48	N/A	N/A	6
Machinery fuel @ $3.44	25	25	15	16	11	25	25	15	16	11	25	25	15	16	11
Machinery repairs[9]	45	45	40	40	25	45	45	40	40	25	45	45	40	40	25
Hauling[10]	16	17	5	7	4	19	20	6	8	4	22	23	7	10	5
Interest[11]	30	28	16	14	14	32	31	17	15	15	33	31	18	17	15
Insurance/misc.[12]	43	43	38	9	9	48	48	41	9	9	53	53	43	9	9
Total variable cost	$611	$577	$321	$265	$259	$661	$627	$337	$288	$270	$689	$654	$352	$314	$279
Contribution margin[13] (Revenue - variable costs) per acre	$73	$152	$245	$92	$134	$145	$228	$333	$132	$204	$247	$341	$422	$174	$264

[1]Estimated yields and costs are for yields with average management for three different soils representing low, average, and high productivity. The high productivity soils represent soils capable of producing corn and soybeans with yields about 20% higher than average soils. Low productivity soils represent soils capable of producing corn and soybeans with yields about 20% lower than the average soils.

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Crop contribution margin[2]	$73	$199	$73	$199	$145	$281	$145	$281	$247	$382	$247	$382
Government payment[3]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total contribution margin	$73	$199	$73	$199	$145	$281	$145	$281	$247	$382	$247	$382
Annual overhead costs:												
Machinery ownership[4]	$147	$139	$98	$92	$147	$139	$98	$92	$147	$139	$98	$92
Family and hired labor[5]	$71	$64	$44	$40	$71	$64	$44	$40	$71	$64	$44	$40
Land[6]	$207	$207	$207	$207	$253	$253	$253	$253	$305	$305	$305	$305
Earnings or (losses)	-$352	-$210	-$277	-$140	-$326	-$174	-$251	-$104	-$276	-$125	-$201	-$55

[1]Rotations are as follows: c-c = all of the farm acres in continuous corn; c-b = one-half of the farm acres in rotation corn and one-half in rotation soybeans.

[2]Crop's contribution margin is the per acre contribution margin from Table 1.

[3]It is assumed that the current farm bill will not provide ARC-CO or PLC payments for base acres in 2024.

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[6]Based on 2023 cash rent per bushel of corn yield reported in the article entitled "Indiana Farmland Prices Continue to Rise in 2023," Purdue Agricultural Economics Report, August, 2023. Cash rents are expected to remain stable through 2024.

Prepared by: Michael R. Langemeier, Department of Agricultural Economics; Shaun Casteel, Dan Quinn, and Tony Vyn, Department of Agronomy; and Bill Johnson, Department of Botany and Plant Pathology, Purdue University.

Date: 3/22/24

Calculation of Average Government Payments per Acre January 1, 2025

Line #		2019	2020	2021	2022	2023
1	Total Government Payment	878,992,000	1,322,282,000	653,426,000	166,825,000	140,032,000
2	Less Milk Income Loss Payment	0	0	0	0	0
3	Less Dairy Margin Protection	-3,787,000	-2,648,000	-15,761,000	-1,645,000	17,429,000
4	Net Government Payment	875,205,000	1,319,634,000	637,665,000	165,180,000	157,461,000
5	Cropland Acres	12,909,673	12,909,673	12,909,673	12,909,673	12,531,737
6	Pymt Per Acre	67.79	102.22	49.39	12.80	12.56

Source: USDA-Indiana Ag Statistics Service

		2019	2020	2021	2022	2023
1	Total Government Payment	P-65	P-65	P-65	P-65	P-65
2	Milk Income Loss Payment	P-65	P-65	P-65	P-65	P-65
3	Dairy Margin Protection Program	P-65	P-65	P-65	P-65	P-65
5	Cropland Acres	P-68	P-68	P-68	P-68	P-66

Data for 2024 is not currently available. The Department has estimated the Government Payment per Acre for 2024 in the following way.

Average Total Government Payment (2019-2023)	632,311,400
Average Milk Income Loss Payment (2019-2023)	0
Average Dairy Margin Protection Pymt (2019-2023)	-1,282,400
Estimated Net Government Payment for 2024	631,029,000
Cropland Acres (P-66)	12,531,737
Estimated Payment Per Acre for 2024	50.35

INDIANA

AGRICULTURAL STATISTICS

2023-2024

FARM INCOME

FARM PRODUCTION EXPENSES, BY CATEGORY, INDIANA, 2019-2023 [1]

Item	2019	2020	2021	2022	**2023**
			Thousand Dollars		
Total Production Expenses	10,097,465	10,220,898	10,240,629	13,047,114	**13,062,560**
Intermediate Product Expenses					
Farm-origin Expenses	2,734,996	2,658,709	2,294,920	3,197,169	**3,232,329**
Feed Purchases	1,380,000	1,350,000	910,000	1,690,000	**1,560,000**
Livestock and Poultry	394,996	328,709	384,920	457,169	**552,329**
Seed Purchases	960,000	980,000	1,000,000	1,050,000	**1,120,000**
Manufactured Inputs	1,994,537	2,069,321	2,700,149	3,520,881	**3,256,877**
Pesticide Expenditures	560,000	580,000	780,000	980,000	**880,000**
Fertilizer, Lime, and Soil Conditioner	950,000	1,050,000	1,420,000	1,860,000	**1,700,000**
Fuels and Oils	381,843	339,497	387,716	550,180	**522,057**
Electricity	102,694	99,824	112,433	130,700	**154,820**
Other Intermediate Inputs	1,649,710	1,730,422	1,690,065	2,227,603	**2,306,279**
Labor Expenses					
Cash Expenses	431,996	464,448	356,877	547,463	**734,986**
Contract Labor	11,094	16,314	32,296	34,449	**19,826**
Hired Labor and Employee Compensation	420,902	448,134	324,581	513,014	**715,160**
Non-cash Employee Compensation	3,004	5,552	8,123	22,537	**15,014**
Interest Expenses	688,094	644,954	650,935	824,869	**961,562**
Net Rent, Including Landlord Capital Consumption	1,122,664	1,157,032	1,188,731	1,007,675	**896,472**
Property Taxes and Fees	506,316	490,948	534,853	539,645	**514,440**
Personal Property Taxes	34,510	33,148	32,607	26,336	**35,030**
Motor Vehicle Registration and Licensing Fees	26,316	25,948	24,853	29,645	**34,440**
Real Estate	445,490	431,852	477,393	483,664	**444,970**
Capital Consumption	966,148	999,513	815,977	1,159,272	**1,144,602**

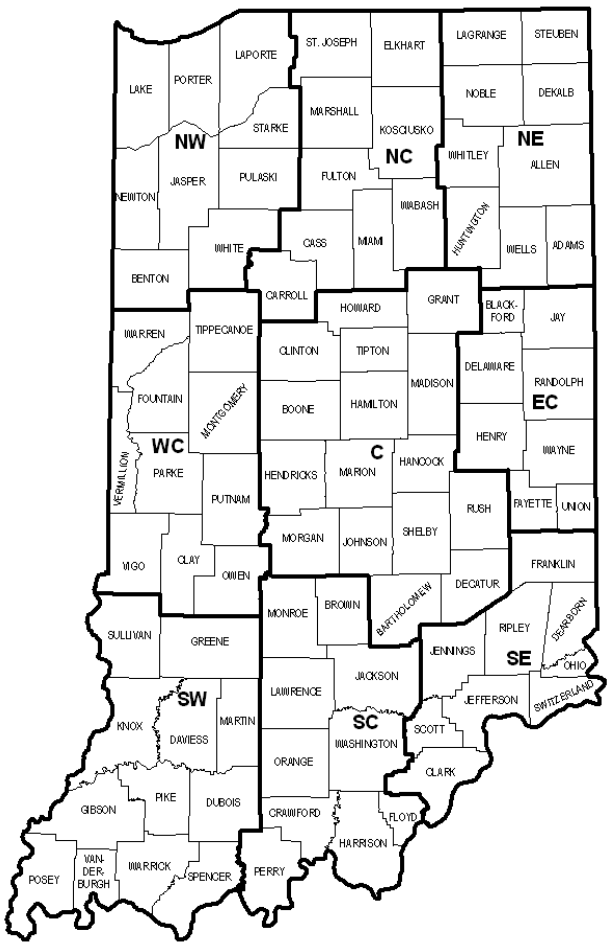
Data as of September 5, 2024
[1] All data includes Operator Dwellings
Source: Economic Research Service

U.S. GOVERNMENT DIRECT FARM PROGRAM PAYMENTS BY PROGRAM, INDIANA, 2019-2023 [1 2 3]

Program	2019	2020	2021	2022	**2023**
			Thousand Dollars		
Fixed Direct Payments	(19)	(142)	(295)	0	**0**
Average Crop Revenue Election Program (ACRE)	0	0	(3)	0	**0**
Price Loss Coverage (PLC)	2,453	91,778	7,153	64	**4**
Agricultural Risk Coverage (ARC)	4,453	117,924	2,516	305	**151**
Loan Deficiency Payments	(1)	2	(75)	7	**13**
Dairy Margin Protection Program	3,787	2,648	15,761	1,645	**17,429**
Conservation	78,290	83,342	76,202	77,020	**80,567**
Supplemental and ad hoc disaster assistance	37,201	841,761	551,754	87,585	**41,582**
USDA pandemic assistance	0	666,697	253,818	6,685	**17,944**
Non-USDA pandemic assistance	0	113,148	210,379	0	**0**
Other disaster assistance	0	61,917	87,558	80,901	**23,638**
Market Facilitation Program	752,586	184,776	455	13	**0**
Miscellaneous Programs	241	192	188	185	**286**
Total	878,992	1,322,282	653,655	166,825	**140,032**

Data as of September 5, 2024
[1] Gross payments from the U.S. government to the farm sector
[2] Payments returned to the U.S. government by the farm sector
[3] Accounting adjustments. A negative value indicates payments returned exceeded gross payments during the calendar year.
Source: Economic Research Service

COUNTY HIGHLIGHTS



COUNTY HIGHLIGHTS

The following pages of county statistics represent the results of a survey of over 15,000 farm operators following the 2023 harvest season. In addition to these data are selected items of interest from the U.S. Population Census, 2022 Census of Agriculture, and 2022 Cash Receipts information from the Bureau of Economic Analysis. The County Highlights section summarizes the importance of agriculture to each and every Indiana County while comparing the magnitude of importance across counties.

Planted acreage and yield for both hay and popcorn are represented by three dashes because this category is not surveyed; in all other places the three dashes represent zero for that county. An asterisk signifies that the county has data for this item, but it cannot be disclosed for confidentiality purposes. The 2022 chicken data from Census includes only layers twenty weeks old and older. County level data from the 2022 Census was used for hay, popcorn, hogs, sheep, chickens and turkeys.

Below is a list of comparable items at the state level.

STATE DATA

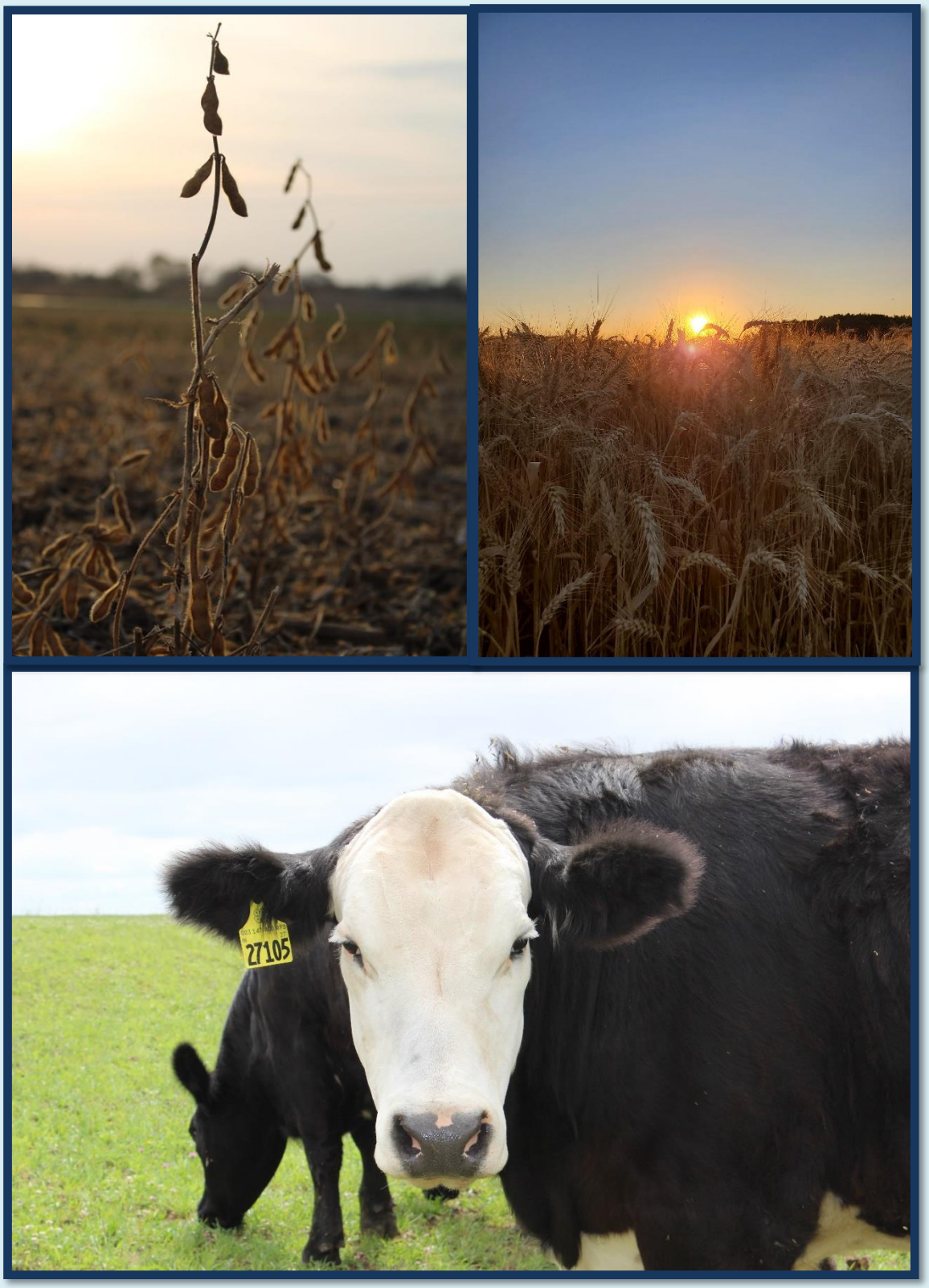
2023 Census Population	6,862,199
2022 Total Land Area (acres)	22,928,355
2022 Number of Farms	53,599
2022 Land in Farms (acres)	14,602,240
2022 Average Size of Farm (acres)	272
2022 Value of Land & Bldgs (avg/acre)	$8,259
2022 Cropland (acres)	12,531,737
2022 Harvested Cropland (acres)	11,955,458
2022 Pastureland, all types (acres)	632,796
2022 Woodland (acres)	1,038,481

2022 Cash Receipts	$18,928,457,000
Crop Receipts	$12,251,773,000
Livestock Receipts	$6,676,684,000
2022 Other Income	$940,991,000
Government Payments	$142,215,000
Imputed Income/Rent Received	$798,776,000
2022 Total Income	$19,869,448,000
Less: Production Expenses	$13,901,074,000
Realized Net Income	$5,968,374,000

2023 CROPS	PLTD	HARV	YLD	UNIT	PROD
Corn	5,450,000	5,310,000	203.0	Bu	1,077,930,000
Soybeans	5,500,000	5,480,000	61.0	Bu	334,280,000
Wheat	405,000	335,000	92.0	Bu	30,820,000
2022 Alf. Hay	---	203,050	---	Ton	571,706
2022 Oth. Hay	---	219,122	---	Ton	468,663
2022 Popcorn	---	83,038	---	Lbs	400,110,354

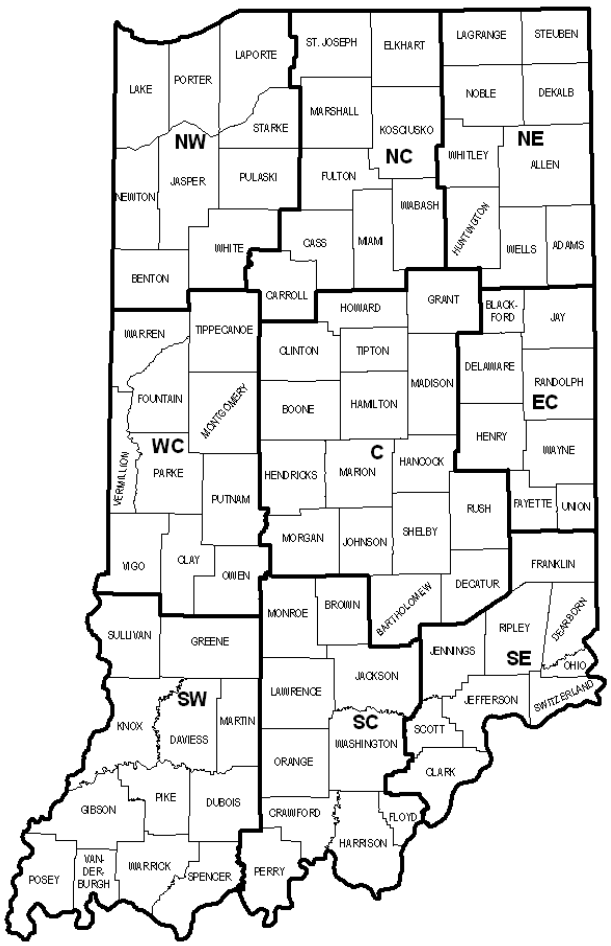
LIVESTOCK	NUMBER HEAD
Jan 2024 All Cattle	790,000
Beef Cows	180,000
Milk Cows	190,000
2022 All Hogs	4,372,121
2022 All Sheep	79,185
2022 Chickens	35,924,482
2022 Turkeys	8,486,069

INDIANA



AGRICULTURAL STATISTICS 2022-2023

COUNTY HIGHLIGHTS



COUNTY HIGHLIGHTS

The following pages of county statistics represent the results of a survey of over 15,000 farm operators following the 2022 harvest season. In addition to these data are selected items of interest from the U.S. Population Census, 2017 Census of Agriculture, and 2021 Cash Receipts information from the Bureau of Economic Analysis. The County Highlights section summarizes the importance of agriculture to each and every Indiana County while comparing the magnitude of importance across counties.

Planted acreage for hay is represented by three dashes because this category is not estimated, planted acreage and yield for popcorn are represented by three dashes because these categories are not surveyed; in all other places the three dashes represent zero for that county. An asterisk signifies that the county has data for this item, but it cannot be disclosed for confidentiality purposes. The 2017 Chicken data from Census includes only layers twenty weeks old and older.

Below is a list of comparable items at the state level.

STATE DATA

2022 Census Population	6,833,037
2017 Total Land Area (acres)	22,928,355
2017 Number of Farms	56,649
2017 Land in Farms (acres)	14,969,996
2017 Average Size of Farm (acres)	264
2017 Value of Land & Bldgs (avg/acre)	$6,576
2017 Cropland (acres)	12,909,673
2017 Harvested Cropland (acres)	12,345,774
2017 Pastureland, all types (acres)	716,911
2017 Woodland (acres)	1,034,784

2021 Cash Receipts	$14,634,975,000
Crop Receipts	$9,844,958,000
Livestock Receipts	$4,790,017,000
2021 Other Income	$1,231,381,000
Government Payments	$643,600,000
Imputed Income/Rent Received	$587,781,000
2021 Total Income	$15,866,356,000
Less: Production Expenses	$10,937,297,000
Realized Net Income	$4,929,059,000

2022 CROPS	PLTD	HARV	YLD	UNIT	PROD
Corn	5,250,000	5,130,000	190.0	Bu	974,700,000
Soybeans	5,850,000	5,830,000	57.5	Bu	335,225,000
Wheat	290,000	240,000	81.0	Bu	19,440,000
Alfalfa Hay	---	260,000	3.50	Ton	910,000
Other Hay	---	260,000	2.60	Ton	676,000
2017 Popcorn	---	79,222	---	Lbs	352,386,717

LIVESTOCK	NUMBER HEAD
Jan 2023 All Cattle	790,000
Beef Cows	173,000
Milk Cows	187,000
2017 All Hogs	4,004,388
2017 All Sheep	62,085
2017 Chickens	26,354,377
2017 Turkeys	7,350,556

AN OVERVIEW OF HOW THE CALENDAR IS USED IN CALCULATING THE AG LAND BASE RATE

SPRING, 2023	SUMMER, 2023	FALL, 2023	WINTER, 2023	SPRING, 2024	SUMMER, 2024
Planting 2023 crops	Care for 2023 crops	Harvest 2023 crops	Prep equipment for storage	Planting 2024 crops	Care for 2024 crops
Sell a portion of the 2022 crops	Sell remainder of the 2022 crops	Sell a portion of the 2023 crops	Sell a portion of the 2023 crops	Sell a portion of the 2022 crops	Sell remainder of the 2023 crops
Paying 1/1/22 Property Taxes		Paying 1/1/22 Property Taxes		Paying 1/1/23 Property Taxes	
Collect all or a portion of 2023 Cash Rent		Collect remainder of 2023 Cash Rent, if any due		Collect all or a portion of 2024 Cash Rent	

CASH RENT INCOME - CALENDAR YEAR

OPER. INCOME - 1/3 NOVEMBER GRAIN PRICES

OPERATING INCOME - 1/3 MARKET YEAR AVERAGE OF GRAIN PRICES

OPERATING INCOME - 1/3 CALENDAR YEAR AVERAGE OF GRAIN PRICES

STATE OF INDIANA

DEPARTMENT OF LOCAL GOVERNMENT FINANCE

INDIANA GOVERNMENT CENTER NORTH
100 NORTH SENATE AVENUE N1058(B)
INDIANAPOLIS, IN 46204
PHONE (317) 232-3777
FAX (317) 974-1629

Agricultural Land Base Rates For The Assessment Dates: January 1, 2021 – 2025

Data Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Tax Year										
25 Pay 26					$2,120					
24 Pay 25				$2,280						
23 Pay 24			$1,900							
22 Pay 23		$1,500								
21 Pay 22	$1,290									

The Agricultural Land Base Rate calculation was first established for the 2002 general reassessment and was developed in compliance with the St. John's court case. The statute related to the base rate calculation can be found at Indiana Code 6-1.1-4-4.5(f).

The base rates shown above are made for the January 1 assessment dates of 2021 payable in 2022 through 2025 payable in 2026. They are based on a rolling six-year average of the market value in use. Once each of the market values is determined, the highest value for that six-year period is eliminated and the remaining five years are averaged. The statute then provides instructions to determine the capitalization rate used to calculate the final base rate.

Indiana Code 6-1.1-4-13(a) provides that "the land shall be assessed as agricultural land only when it is devoted to agricultural use". This means that a parcel or a portion of the parcel is eligible for this base rate when it qualifies for it. Once the base rate is applied to land classified as agricultural land, the assessor then applies soil productivity factors and influence factors when appropriate.

As illustrated in the following equation, the market value in use of agricultural land is calculated by dividing the net income of each acre by the appropriate capitalization rate.

Market value in use = Net Income / Capitalization Rate

The change in market value in use from year to year is based on changes in cash rent, yields, production costs, market prices, and interest rates for each of the six years involved.

For example, the change for 2025 pay 2026 was the result of the removal of the 2018 data and the addition of the 2024 data.