# Supplemental Document for Valuing Agricultural Land Assessment March 1, 2010 Base Rate $1,290

The base rate is the starting point for assessing farm land. It is recalculated each year as a part of the assessment "trending" process. The calculation includes data on land rents, corn and soybean yields, corn and soybean prices, variable and overhead costs, and interest rates. Increases in rents, yields, and especially prices, and decreases in interest rates, account for the increase in the base rate.

The base rate per acre was $1,250 for taxes in 2010, and $1,400 for taxes in 2011. The 12% increase in the 2011 calculations from the previous year is due to the removal of the 2001 data and the addition of the 2007 data in the six year average. Net Cash Rents increased from $102 in 2001 to $122 on 2007. Yields for corn changed slightly from 156 bushels in 2001 to 155 bushels in 2007 and yields for soybeans decreased from 49 bushels in 2001 to 45 bushels in 2007. Prices for corn increased considerably from $1.90 in 2001 to $3.17 in 2007 (market year average) and prices for soybeans also increased considerably from $4.61 in 2001 to $6.53 in 2007 (market year average). Variable costs (seed, fertilizer, chemicals, etc.) also increased as costs to produce corn increased from $155 in 2001 to $239 in 2007 and from $93 in 2001 to $120 in 2007 for soybeans. Interest rates dropped slightly from 8.01% in 2001 to 7.94% in 2007 which would slightly increase market value under the income approach.

In the 2010 legislative session, SEA 396 was passed. This bill contained a code provision that instructed the Department of Local Government Finance ("Department") to 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. Since 2007 has the highest market value, it was deleted from the calculation. Thus, only 2002, 2003, 2004, 2005 and 2006 were included in the calculations that resulted in a base rate of $1,290 (for 2011 taxes).

Table 2-18(a) shows the calculation of the $1,400 base rate done for 2010 pay 2011 (which means the assessed value in 2010, on which taxes in 2011 are based). The method capitalizes cash rent net incomes and operating net incomes for each year, averages the two results to get an average market value in use, then averages these results over six years.

| Table 2-18(a) - Old calculation using the average of the six (6) rolling years | | | | | | | |
|---|---|---|---|---|---|---|---|
| Source: | Real Property Assessment Guidelines, Book 1, Chapter 2, Page 100 | | | | | | |
| | 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 | |
| Year | Cash Rent | Owner-Operated | Cap. Rate | Cash Rent | Owner-Operated | PER ACRE | |
| 2002 | 105 | 20 | 7.02% | 1,496 | 285 | 890 | (1) |
| 2003 | 106 | 71 | 6.29% | 1,685 | 1,129 | 1,407 | (1) |
| 2004 | 104 | 135 | 6.35% | 1,638 | 2,126 | 1,882 | (1) |
| 2005 | 110 | 59 | 7.22% | 1,524 | 817 | 1,170 | (1) |
| 2006 | 110 | 74 | 8.18% | 1,345 | 905 | 1,125 | (1) |
| 2007 | 122 | 182 | 7.94% | 1,537 | 2,292 | 1,914 | (1) |
| | | | | | Base Rate (6 Yr. Average) | 1,400 | (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 six averages above rounded to the nearest $10. | (2) |
| As illustrated in the following equation, the market value in use of agricultural land is calculated by dividing the 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(b) shows the calculation of the $1,290 base rate done for 2010 pay 2011. The method capitalizes cash rent net incomes and operating net incomes for each year, averages the two results to get an average market value in use, deletes the year with the highest average market value and then averages these results over five years.

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Table 2-18(b) - New calculations using the five (5) lowest averages among the six (6) rolling years** | | | | | | | | | | | | | |
| **Source:** | **Real Property Assessment Guidelines, Book 1, Chapter 2, Page 100** | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | **Column A** | | **Column B** | | **Column C** | | **Column D** | | **Column E** | | **Column F** | | |
| | | | | | | | | | | | | | |
| | **NET INCOMES** | | | | **RATE** | | **MARKET VALUE IN USE** | | | | **AVERAGE** | | |
| | **PER ACRE** | | | | | | **PER ACRE** | | | | **MARKET VALUE** | | |
| | | | | | | | | | | | **IN USE** | | |
| **Year** | **Cash Rent** | | **Owner-Operated** | | **Cap. Rate** | | **Cash Rent** | | **Owner-Operated** | | **PER ACRE** | | |
| **2002** | **105** | | **20** | | **7.02%** | | **1,496** | | **285** | | **890** | (1) | |
| **2003** | **106** | | **71** | | **6.29%** | | **1,685** | | **1,129** | | **1,407** | (1) | |
| **2004** | **104** | | **135** | | **6.35%** | | **1,638** | | **2,126** | | **1,882** | (1) | |
| **2005** | **110** | | **59** | | **7.22%** | | **1,524** | | **817** | | **1,170** | (1) | |
| **2006** | **110** | | **74** | | **8.18%** | | **1,345** | | **905** | | **1,125** | (1) | |
| ~~**2007**~~ | ~~**122**~~ | | ~~**182**~~ | | ~~**7.94%**~~ | | ~~**1,537**~~ | | ~~**2,292**~~ | | ~~**1,914**~~ | (1) | |
| | | | | | | | | | | | | | |
| | | | | | | | | | **Base Rate** | | **1,290** | (2) | |
| | | | | | | | | | **(5 Yr. Average)** | | | | |
| | | | | | | | | | | | | | |
| **Formula:** | **Gross Cash** | | **Gross Income** | | **Average of** | | **Column A** | | **Column B** | | **The average of** | (1) | |
| | **Rent Less** | | **Less Expenses** | | **Qtly. Farm** | | **divided by** | | **divided by** | | **Columns D and E** | | |
| | **Property Taxes** | | | | **Loan Rates** | | **Column C** | | **Column C** | | | | |
| | | | | | | | | | | | | | |
| **Source:** | **Purdue Ag.** | | **Indiana Ag.** | | **Federal** | | | | | | **The base rate is** | (2) | |
| | **Econ. Reports** | | **Statistics** | | **Reserve** | | | | | | **the average of the** | | |
| | **(PAER)** | | **Service and** | | **Bank of** | | | | | | **five lowest averages above** | | |
| | | | **Purdue Crop** | | **Chicago** | | | | | | **rounded to the** | | |
| | | | **Guide** | | | | | | | | **nearest $10.** | | |
| | | | | | | | | | | | | | |
| **As illustrated in the following equation, the market value in use of agricultural land is calculated by dividing the the net income of each acre by the appropriate capitalization rate.** | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | **Market Value In Use = Net Income Divided By The Capitalization Rate** | | | | | | | | | | |