

## Valuing Agricultural Land

The agricultural land assessment formula involves the identification of agricultural tracts using data from detailed soil maps, aerial photography, and local plat maps. Each variable in the land assessment formula is measured using appropriate devices to determine its size and effect on the parcel's assessment. Uniformity is maintained in the assessment of agricultural land through the proper use of soil maps, interpreted data, and unit values.

In order to apply the agricultural land assessment formula, you need to understand the following topics, which are discussed in the sections below:

- agricultural land base rate values
- assessment of agricultural land
- 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

The rest of the chapter provides instructions for completing the "Land Data and Computations" section of the agricultural property record card.

## Agricultural Land Base Rate Value

The 2002 general reassessment 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.

$$\text{Market value in use} = \text{Net Income} \div \text{Capitalization Rate}$$

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 State Board of Tax Commissioners utilized a four-year rolling average (1995 to 1998) 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 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 in use.

**Table 2-18. Agricultural Land market value in use**

YEAR	NET INCOMES		CAP. RATE	MARKET VALUE IN USE		Average
	Cash Rent	Operating		Cash Rent	Operating	
1995	\$88	\$56	9.92%	\$887	\$565	\$ 726
1996	\$94	\$131	9.29%	\$1012	\$1410	\$1,211
1997	\$100	\$124	9.31%	\$1074	\$1332	\$1,203
1998	\$102	\$91	9.10%	\$1121	\$1000	\$1,060
				Average Market Value		\$1,050
				in Use =		

The statewide agricultural land base rate value for the 2002 general reassessment will be the average market value in use calculated as shown above or \$1,050 per acre.

### 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. Some commercial and industrial zoned acreage tracts devote a portion of the parcel to an agricultural use. The assessor classifies these parcels as either commercial or industrial. However, the portion of land devoted to agricultural use should be valued using the agricultural land assessment formula. Portions not used for agricultural purposes would be valued using the commercial and industrial acreage guidelines described in this chapter.

### Converting Units of Measurement for Agricultural Land

Figure 2-23 shows the units of measurement commonly used to measure agricultural land. Table 2-19 describes equivalencies for these units of measurement.

MAP OF SECTION OF LAND SHOWING ACREAGE AND DISTANCE

SEC. = 1 SQ. MILE = 640 ACRES

4 furlongs 40 ch. 160 rds. 2,640 feet				2 furlongs		20 chains	
4 furlongs	<b>NW<sup>1</sup>/<sub>4</sub></b> 160 ACRES		40 chains	160 rds	<b>NE<sup>1</sup>/<sub>4</sub></b> 80 ACRES		2,640 feet
	160 rods				80 rods		
10 chains	2 furlongs 20 ACRES 1,320 feet		20 chains	40 rods 20 AC.	20 chains		80 rods
	660 ft. 20 AC.				40 ACRES		
1 furlong	20 chains 20 ACRES 80 rods		20 chains	80 rods	<b>N.W.S.E.</b>		20 chains
	<b>SW<sup>1</sup>/<sub>4</sub></b>				<b>SE<sup>1</sup>/<sub>4</sub></b>		
40 rods 5 ACRES	20 rods	330 feet	1 furlong	10 chains	20 chains		1,320 feet
660 feet 5 ACRES	5A	5A	10A	10A	<b>S.W.S.E.</b> 40 ACRES		
10A	10A		10A	10A	<b>S.E.S.E.</b> 40 ACRES		2 furlongs
1 fur.	10 ch.		40 rds.	660 ft.			

1 MILE = 8 FURLONGS

320 RODS = 5,280 FEET

1 LINK = 7.92 inches  
1 FOOT = 12 inches

1 SQUARE FOOT = 144 sq. inches  
1 SQUARE YARD = 9 sq. feet

1 YARD = 36 in. or 3 ft.

1 SQUARE ROD = 272.25 sq. feet  
30.25 sq. yards

1 ROD OR POLE = 16.5 ft.  
5.5 yds.  
25 links

1 ACRE = 43,560 sq. feet  
160 sq. rods  
10 sq. chains

1 CHAIN = 66 ft.  
100 links  
4 rods

1 ACRE is about 208.7 ft. sq. or 8 rods wide by 20 rods long or any two numbers of rods whose product is 160 (25 x 125 ft.) = .0717 of an acre.

1 FURLONG = 40 rods  
660 ft.

1 SQUARE MILE OR  
1 SECTION EQUALS 640 ACRES

1 MILE = 5,280 ft.  
320 rods  
80 chains  
8 furlongs

1 TOWNSHIP = 36 sq. miles  
OR 36 sections

1 TOWNSHIP = 6 MILES SQ.

Figure 2-23. Example of Agricultural Land Measurements

**Table 2-19. Agricultural Land Measurement Equivalencies**

This linear measurement	Equals	This area measurement	Equals
1 link	7.92 inches	1 sq. foot	144 sq. inches
1 foot	12 inches	1 sq. yard	9 sq. feet
1 yard	36 inches 3 feet	1 sq. rod	272.25 sq. feet 30.25 sq. yards
1 rod or 1 pole	25 links 16.5 feet 5.5 yards	1 acre	43, 560 sq. feet 160 sq. rods 10 sq. chains
1 chain	100 links 4 rods 16.5 feet	1 sq. mile or 1 section	640 acres
1 furlong	40 rods 660 feet	1 township	36 sq. miles 36 sections
1 mile	320 rods 80 chains 8 furlongs 5,280 feet		

**Note:** One acre is equivalent to an area of about 208.7 feet by 208.7 feet, 8 rods by 20 rods, or X rods by Y rods where  $X \times Y = 160$ . One township is equivalent to an area of 6 miles by 6 miles.

## Classifying Agricultural Land into Land Use Types

Agricultural land is categorized according to its land use type and soil identification. The following land use types, described in the sections below, apply to agricultural acreage:

- Type 2—classified land
- Type 4—tillable land
- Type 5—nontillable land
- Type 6—woodland
- Type 7—other farmland
- Type 8—agricultural support land
- Type 9—homesite.

**Note:** Agricultural land use types usually are measured from aerial photographs.

### Type 2—Classified Land

Classified land is land that has been applied for and approved for specific programs administered by the Indiana Department of Natural Resources or the

county surveyor. A 100% influence factor deduction applies to classified land. Table 2-20 describes the subtypes of classified land.

**Table 2-20. Classified Land Subtypes**

<b>This subtype</b>	<b>Indicates</b>
Type 21	Classified forest
Type 22	Wildlife habitat
Type 23	Riparian land
Type 24	Windbreak
Type 25	Filter strip

### **Type 4—Tillable Land**

Tillable land is land used for cropland or pasture that has no impediments to routine tillage. Cropland is:

- land used for production of grain or horticultural crops such as:
  - corn
  - soybeans
  - wheat
  - rotation pasture
  - hay
  - vegetables
  - orchard crops
- land used for cover crops
- land in summer fallow
- idle cropland
- land used for Christmas tree plantations
- land used for nursery plantings.

If tillable land is classified as farmed wetlands or experiences flooding from a nearby river or stream causing substantial damage or loss of crops between April and November, it is classified by subtype. Table 2-21 describes the subtypes of tillable land.

**Table 2-21. Tillable Land Subtypes**

<b>This subtype</b>	<b>Indicates</b>
Type 41	Land flooded occasionally—damaging floods occur two to four times in a ten-year period. A 30% influence factor deduction applies to this land use type.
Type 42	Land flooded severely—damaging floods occur five times or more in a ten-year period. A 50% influence factor deduction applies to this land use type.
Type 43	Farmed wetlands—land that the U.S. Department of Agriculture has designated as farmed wetlands. This land type applies only to areas of contiguous land measuring 2.5 acres or more. This land use type must be verified through records obtained from the U.S. Department of Agriculture, Farm Service Agency. A 50% influence factor deduction applies to this land use type.

**Type 5—Nontillable Land**

Nontillable land is land covered with brush or scattered trees with less than 50% canopy cover, or permanent pasture land with natural impediments that deter the use of the land for crop production. A 60% influence factor deduction applies to nontillable land.

**Type 6—Woodland**

Woodland is land supporting trees capable of producing timber or other wood products. This land has 50% or more canopy cover or is a permanently planted reforested area. This land use type includes land accepted and certified by the Indiana Department of Natural Resources as forest plantation under guidelines established to minimize soil erosion. An 80% influence factor deduction applies to woodland.

**Type 7—Other Farmland**

Land assigned to the “other farmland” land use type is categorized into subtypes. Table 2-22 describes the subtypes.

**Table 2-22. Other Farmland Subtypes**

This subtype	Indicates
Type 71	Land used for farm buildings and barn lots. This land use subtype does not include homesites. The value is determined using the appropriate soil map productivity factor and a 40% influence factor deduction.
Type 72	Land covered by a farm pond or running water. The value is determined using a productivity factor of .50 and a 40% influence factor deduction.
Type 73	2.5 contiguous acres of land designated by the U.S. Department of Agriculture as wetlands. This land use type must be verified through records obtained from the U.S. Department of Agriculture, Farm Service Agency. The value is determined using a productivity factor of .50 and a 40% influence factor deduction.

### Type 8—Agricultural Support Land

Agricultural support land is categorized into subtypes. Table 2-23 describes the subtypes.

**Table 2-23. Agricultural Support Land Subtypes**

This subtype	Indicates
Type 81	A legal ditch. The area used and occupied as part of a legal drainage ditch is considered to have no value and is deducted from the total parcel acreage. This area also includes the area adjacent to the ditch that cannot be farmed because of the need for access to the ditch.
Type 82	A public road. The right-of-way area dedicated for public roads is deducted from the total parcel acreage.
Type 83	Land on which public utility transmission towers are situated. The area of .125 (1/8) acre is deducted from the parcel acreage. The transmission line right-of-way is assessed according to the land use of the acreage and is not deducted from the parcel acreage.

### Type 9—Homesite

One acre per dwelling on an agricultural property is classified as agricultural homesite land. The base rate for an agricultural homesite acre is a flat rate determined by the township assessor and approved by the Property Tax Assessment Board of Appeals. A soil map productivity factor is **not** applied. Information about valuing an agricultural homesite is provided in the section **Valuing Residential Acreage and Agricultural Homesites** in this chapter. Type 92 is a subtype of Type 9.

Type 92 indicates agricultural excess acres. This land area is presently dedicated to a non-agricultural use normally associated with the homesite. Areas

containing a large manicured yard over and above the accepted one acre homesite would qualify for the agricultural excess acre designation. The agricultural excess acre rate is the same rate that is established for the residential excess acre category. These rates are determined by the township assessor and approved by the Property Tax Assessment Board of Appeals.

## Using Soil Maps

The agricultural land assessment formula values farmland, in part, based on the productivity of each parcel's soil resources. More productive land is rated higher than less productive land. Therefore, more productive land has a higher value. To evaluate and categorize land according to its productivity, measurements are calculated from detailed soil maps published by the U.S. Department of Agriculture.

Soil maps show where different soils are located within the landscape and narrative text describes the various soil characteristics. Soils are classified based on soil series and soil map units.

## Soil Series

A soil series is a basic classification of soils. A soil series is a group of soil units that are similar according to such characteristics as:

- horizons (soil layering)
- drainage class
- water holding capacity
- organic matter content
- various other soil characteristics.

Soil series are named with names such as Miami, Crosby, Fox, and Brookston. Each soil series is formed in a type of parent material and is generally found in a particular type of location in landscapes. For example, the poorly drained Brookston series generally is found in depressions or wide, flat areas. The soil series classification system used in the United States is national in scope. Therefore, the soil categorized in a particular soil series, such as Miami, is the same across counties throughout the state.

Soil properties, such as depth, water holding capacity, and organic matter content, are used to help estimate the productivity of the soil. Because soils are naturally occurring, not all soils categorized in a particular soil series are exactly alike. When defining a soil series, a range is defined for the characteristics noted above to account for variations. However, these variations do not greatly affect the productivity of the soil.

## Soil Map Units

Each soil series is further subdivided into soil map units. After soil scientists identify a soil series, they further subdivide the series by identifying soil map units based on variations in:

- surface texture, such as silt loam or sandy loam

- slope class
- amount of previous erosion.

Soil scientists draw lines around each soil map unit on aerial photographs based on their best estimate of where the soil series or soil map unit changes. In reality, the change from one soil map unit to another is gradual.

### Soil Complexes

The amount of information that can be shown on a soil map is related to the scale of the map. Soil maps in Indiana are published at a scale of 1 : 15,840 feet or 1 : 20,000 feet. The smallest map unit delineated by a soil scientist generally is about 3 to 4 acres.

Since soil map unit locations often are smaller than 3 to 4 acres, a delineation on a soil map often consists of more than one soil unit. The soil properties of these soil map units may be similar or dissimilar. Each dissimilar component that makes up 15% or more of the delineation is identified. The soil map unit is named as a complex, such as the Miami-Xenia complex.

If a dissimilar component makes up less than 15% of the delineation, it is referred to as an inclusion and is not included in the name of the complex. Inclusions are a normal characteristic of soil maps and do not affect the usefulness of the maps for assessment purposes.

Because each component would likely have a different productivity index, the productivity index of a complex is the weighted average of the productivity indexes of its identified components. Inclusions are not considered when determining the productivity index for a delineation.

### Understanding the Calculation of the Soil Productivity Index

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For the purpose of defining the agricultural land assessment formula, each of the approximately 2,400 soil map units in Indiana is assigned a productivity rating. This rating is based on average estimated crop yields, which in turn are based on the physical properties of the soil, such as:

- slope
- moisture holding capacity
- natural drainage class
- depth of rooting
- amount of surface soil remaining
- organic matter content
- various other soil characteristics.

Soil productivity ratings in Indiana are based on corn yield estimates. Estimated corn yields are the most convenient and reliable yield estimates since no other crop is grown on a wider range of soils or over a larger area in the state.

Estimated corn yields are based on an average level of crop management and reflect a 10-year average. Estimates of corn yields for particular soil map units

are tested using data collected by Purdue University and the U.S. Department of Agriculture, Natural Resource Conservation Service from field trials, yield tests, and producer experiences. An average level of crop management is assumed to account for variations in the amount of fertilizer used, time of planting, hybrid performance, and tillage systems—crop management factors that can cause yield differences. Thus, the soil productivity ratings reflect the yield differences caused by the properties of the soil, not the crop management decisions made by agricultural producers.

The productivity factor for a soil map unit is calculated by dividing the estimated 10-year average corn yield (calculated in bushels per acre) by 100. Productivity factors do not accurately predict the actual yields for a particular year since weather has a great influence on actual yields. However, you can think of the soil productivity index as a relative ranking of soil map units. The more productive the soil, the higher the rating. The best soil in the state has a productivity factor of approximately 1.28; the poorest soil has a productivity factor of .50.

### **Valuing Strip Mined Agricultural Land**

If coal has been strip mined from agricultural land subsequent to the creation of the detailed soil map for the area, the assessor must apply a special productivity factor to that land:

- For land strip mined on or before December 31, 1977, identify the “Soil I.D.” as “SBD7” and apply a productivity factor of .50.
- For land strip mined after December 31, 1977, identify the “Soil I.D.” as “SAD7” and apply a productivity factor of .68.

### **Valuation of Oil and Gas Interests**

Oil or gas interests include, but are not limited to; royalties, overriding royalties, mineral rights, or working interests in any oil or gas located on or beneath the surface of the land.

An oil or gas interest is subject to assessment and taxation as real property annually by the township assessor. This interest is assessed to the person who owns or operates each oil or gas interest. The total assessed value of interest in oil located on or beneath the surface or of interest in gas located beneath the surface of a particular tract of land equals the product of the following:

- The average daily production of the oil
- Three hundred and sixty-five (365)
- One hundred percent (100%) of the posted price of oil on the assessment date

A piece of equipment is an appurtenance to the land and assessable as real property annually by the township assessor if it is incidental to and necessary for the production of oil and gas from the land covered by the oil or gas interest. Each of the appurtenances is assessed to the person who owns or operates the working interest in the oil or gas interest. This equipment includes, but is not

limited to, the following: wells, pumping units, lines, treaters, separators, tanks, and secondary recovery facilities.

The township assessor must apportion the total assessed value of all interests in the oil or gas among the owners of those interests.

### **Completing the Land Data and Computations Section of the Property Record Card for Agricultural Acreage**

The valuation of agricultural land is recorded in the “Land Data and Computations” section of the property record card, shown in Figure 2-24. Space is provided in the table to itemize areas of land categorized as Type 2 through Type 7. Each row corresponds to one area of land based on soil map unit delineations. Acreage categorized as Type 8 or Type 9, and adjustments, are recorded in the area to the right of the table.

**Note:** If the property has more areas of land than there are rows in this section of the property record card, use an additional card (or cards) to describe those areas.

The steps for completing the property record card for agricultural acreage are grouped into the following tasks, described in the sections below:

- Task 1—Record information for each land area, calculate the land value for each land area, and calculate the land value for all of the land areas.
- Task 2—Record information about special acreage and calculate the total number of acres of farmland.
- Task 3—Calculate the land value of farmland.
- Task 4—Calculate the land value of classified land.
- Task 5—Calculate the total farmland/classified land value.
- Task 6—Calculate the land value of homesite(s) and agricultural excess acres.



**Task 1—Determining the Land Value for the Land Areas**

In this task, you record information about each agricultural land area that is categorized as Type 2 through Type 7, and calculate the land value for the area. Each row corresponds to a land area. A land area is an area delineated on a detailed soil map and identified by its soil map unit. After you have calculated the land value for each land area, you sum these values to determine the land value for all of the land areas listed.

Figure 2-25 shows an example of the data provided and calculations performed in this task.

Ownership		Transfer of Ownership				Card No. _____ of _____	
Parcel number		Date	Grantee	Rec. #	Sale Price	Owner Occupied	
County						<input type="checkbox"/> Yes <input type="checkbox"/> No	
Township						<input type="checkbox"/> Yes <input type="checkbox"/> No	
Corporation						<input type="checkbox"/> Yes <input type="checkbox"/> No	
District						<input type="checkbox"/> Yes <input type="checkbox"/> No	

  

VALUATION RECORD	
Assessment Year	20____ 20____ 20____ 20____
Reason for Change	Revaluation
Neighborhood code	
Property class	Res Land (Homesite)
Property address	

  

TRUE TAX VALUE	
Res Imp	
Shelter Allowance (-)	
Adj. Res. Land	
Adj. Res. Imp. (+)	
Ag. Excess Land (+)	
Non-Res Imp (+)	
Farm / Classified Land (+)	
Total TTV	

  

ASSESSED VALUE	
Adj. Res Land	
Adj. Res Imp (+)	
Ag. Excess Land (+)	
Non-Res Imp (+)	
Farm / Classified Land (+)	
Total AV	

  

LAND DATA AND COMPUTATIONS									
Land Type	Soil I.D.	Measured Acreage	Productivity Factor	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Land Value	Parcel/Acreage
4 EV		1.0	1.23	1050	1292	1290		1290	81 Legal Drain NV [-]
4 GE		10.4	1.02	1050	1071	11140		11140	82 Public Roads NV [-]
4 MNB2		6.4	.94	1050	935	5980		5980	83 UT Towers NV [-]
4 OCA		10.2	.94	1050	987	10070		10070	9 Homesite(s) [-]
4 PRA		22.8	1.02	1050	1071	24420		24420	92 Ag. Excess Acres [-]
4 VDA		12.2	.94	1050	987	12040	-30%	8430	TOTAL ACRES FARMLAND
6 RD		1.0	1.15	1050	1208	1210	-80%	240	Farmland Value
6 RUB		4.2	1.02	1050	1071	4500	-80%	900	Measured Acreage
6 ZAB		10.2	.81	1050	851	8680	-80%	1740	Average Farmland Value/Acre
71 ZAC		2.1	.72	1050	756	1590	-40%	950	VALUE OF FARMLAND
									Classified Land Total
									Total Farmland / Classified Land Value
									Homesite(s) Value [+]
									92 Ag. Excess Acres [+]

  

Supplemental Card	
Measured Acreage	80.5
Supplemental Card LAND VALUE	65160

  

LAND TYPE	
3 - Undeveloped Land	8 - Ag. Support Land
4 - Tillable Land	81 Legal Ditch
5 - Non-Tillable Land	82 Public Road
6 - Woodland	83 Utility Trns.
7 - Other Farmland	Towers
21 - Classified Forest	9 - Homesite
22 - Wildlife Habitat	71 - Farm Buildings
23 - Wetlands	72 - Water
24 - Wetlands	73 - Wetlands
25 - Filter Strip	91 Res. Excess
	92 Ag. Excess Acres

Figure 2-25. Determining the Land Value for the Land Areas

To record information about each land area, perform these steps:

Step 1 In the “Land Type” column, enter the land use type for the land area. Table 2-24 describes the land use types. Detailed descriptions of each land use type are provided in the section ***Classifying Agricultural Land into Land Use Types*** in this chapter.

**Note:** Acreage classified as Type 8 (agricultural support land) or Type 9 (agricultural homesite) is not valued in this part of the “Land Data and Computations” section.

**Table 2-24. Agricultural Land Use Types**

This type	Indicates
21	Classified forest land
22	Classified wildlife habitat
23	Classified riparian land
24	Classified windbreak land
25	Classified filter strip land
4	Tillable land
41	Tillable land that floods occasionally
42	Tillable land that floods severely
43	Designated farmed wetlands
5	Nontillable land
6	Woodland
71	Other farmland: land used for farm buildings and barn lots
72	Other farmland: land covered with a farm pond or running water
73	Other farmland: designated wetlands
81	Agricultural support land: legal ditch
82	Agricultural support land: public road right-of-way
83	Agricultural support land: land on which public utility transmission towers are situated
9	One-acre homesite
92	Agricultural excess acres

Step 2 In the “Soil I.D.” column, enter the letter code that identifies the soil map unit (or complex) for the land area and is found on the detailed soil survey map. Information about soil map units is provided in the section ***Soil Map Units*** and the section ***Soil Complexes*** in this chapter.

Step 3 In the “Measured Acreage” column, enter the area (in acres) of the land area.

**Note:** An agricultural parcel of less than 2.5 acres does not require delineation of soil types.

- Step 4 In the “Productivity Factor” column, enter the productivity factor corresponding to the land area’s soil map unit (recorded in the “Soil I.D.” column). Information about soil productivity factors is provided in the section ***Understanding the Calculation of the Soil Productivity Index*** in this chapter.

**Note:** For the Type 72 (land covered with a farm pond or running water) and the Type 73 (designated wetlands) land use types, use a productivity factor of .50 instead of the productivity factor associated with the soil map unit.

- Step 5 In the “Base Rate” column, record the state-wide base rate established for valuing farmland soil productivity—\$1,050.
- Step 6 Calculate the adjusted rate for the land area by multiplying the base rate (entered in the “Base Rate” column) by the productivity factor (entered in the “Productivity Factor” column):

$$\text{Adjusted rate} = \text{Base rate} \times \text{Productivity factor}$$

Round the adjusted rate to the nearest \$1 and enter it in the “Adjusted Rate” column.

**Example:** The adjusted rate for the land area described in the first row in Figure 2-25 is:  $\$1,050 \times 1.23 = \$1,292$ .

- Step 7 Calculate the estimated value of the land area by multiplying the adjusted rate (entered in the “Adjusted Rate” column) by the measured acreage (entered in the “Measured Acreage” column):

$$\text{Estimated value} = \text{Adjusted rate} \times \text{Measured acreage}$$

Round the estimated value to the nearest \$10 and enter it in the “Estimated Value” column.

**Example:** The estimated value of the land area described in the first row in Figure 2-25 is:  $\$1,292 \times 1.0 \text{ acres} = \$1,292 = \$1,290$ .

- Step 8 In the “Influence Factor” column, indicate the influence factor, if any, applicable to the land area based on its land use type. Enter a minus sign (“-”), the influence factor, and a percent sign (“%”). Table 2-25 lists the automatic influence factor associated with each land use type.

Table 2-25. Influence Factors for Agricultural Acreage

For this land use type	Use this influence factor deduction
21	– 100%
22	– 100%
23	– 100%
24	– 100%
25	– 100%
4	None
41	– 30%
42	– 50%
43	– 50%
5	– 60%
6	– 80%
71	– 40%
72	– 40%
73	– 40%

Step 9 *If an influence factor does **not** apply to the land area, enter the estimated value (entered in the “Estimated Value” column) in the “Land Value” column.*

*If an influence factor applies to the land area, calculate the land value for the land area by adjusting the estimated value (entered in the “Estimated Value” column) by the influence factor (entered in the “Influence Factor” column):*

$$\text{Land value} = \text{Estimated value} \times (1.00 - \text{influence factor percentage})$$

Round the land value to the nearest \$10 and enter it in the “Land Value” column.

Step 10 Perform Step 1 through Step 8 for each land area identified for the property. If you run out of rows in the “Land Data and Computations” section of the property record card, use an additional card (or cards).

Step 11 *If you used **only one** property record card to describe the land areas for the property, sum the entries in the “Measured Acreage” column and enter the total in the “Measured Acreage” cell at the bottom of the column.*

*If you used **more than one** property record card to describe the land areas for the property:*

- a. On each card except Card 001, sum the entries in the “Measured Acreage” column and enter the total in the “Measured Acreage” cell at the bottom of the column.

- b. Sum the entries in the “Measured Acreage” cell of all of the property record cards except Card 001. Enter the total in the “Supplemental Card” cell at the bottom of the “Measured Acreage” column on Card 001.
- c. On Card 001, sum the entries in the “Measured Acreage” column, including the entry in the “Supplemental Card” cell. Enter the grand total in the “Measured Acreage” cell at the bottom of the column on Card 001.

Step 12 *If you used **only one** property record card to describe the land areas for the property, sum the entries in the “Land Value” column and enter the total in the “Land Value” cell at the bottom of the column.*

*If you used **more than one** property record card to describe the land areas for the property:*

- a. On each card except Card 001, sum the entries in the “Land Value” column and enter the total in the “Land Value” cell at the bottom of the column.
- b. Sum the entries in the “Land Value” cell of all of the property record cards except Card 001. Enter the total in the “Supplemental Card” cell at the bottom of the “Land Value” column on Card 001.
- c. On Card 001, sum the entries in the “Land Value” column, including the entry in the “Supplemental Card” cell. Enter the grand total in the “Land Value” cell at the bottom of the column on Card 001.

## Task 2—Calculating the Total Farmland Acreage

In this task, you record information about agricultural acreage that is categorized as Type 8 (agricultural support land) or Type 9 (agricultural homesite), and calculate the total number of acres of farmland for the property.

Figure 2-26 shows an example of the data provided and calculations performed in Task 2 through Task 4.

Ownership		Transfer of Ownership				Card No. _____ of _____			
Parcel number		Date	Grantee	Rec. #	Sale Price	Owner Occupied			
County						<input type="checkbox"/> Yes <input type="checkbox"/> No			
Township						<input type="checkbox"/> Yes <input type="checkbox"/> No			
Corporation						<input type="checkbox"/> Yes <input type="checkbox"/> No			
District						<input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>VALUATION RECORD</b>									
Section and Plat		20	20	20	20	20	20		
Routing number									
Neighborhood code									
Property class									
Property address									
Assessment Year		20	20	20	20	20	20		
Reason for Change									
TRUE TAX VALUE									
Res Land (Homesite)									
Res Imp									
Shelter Allowance (-)									
Adj. Res. Land									
Adj. Res. Imp. (+)									
Ag. Excess Land (+)									
Non-Res Imp (+)									
Farm / Classified Land (+)									
Total ITV									
ASSESSED VALUE									
Adj. Res Land (+)									
Ag. Excess Land (+)									
Non-Res Imp (+)									
Farm / Classified Land (+)									
Total AV									
<b>LAND DATA AND COMPUTATIONS</b>									
Land Type	Soil I.D.	Measured Acreage	Productivity Factor	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Land Value	Parcel/Acreage
4 BN	BN	11.3	1.28	1050	1344	15190		15190	81 Legal Drain NV [-]
4 CMA	CMA	12.4	1.06	1050	1113	13800		13800	82 Public Roads NV [-]
43 MLB	MLB	5.6	1.15	1050	1808	6760	-50%	3380	83 UT Towers NV [-]
4 MLB	MLB	12.3	.72	1050	756	9300		9300	9 Homesite(s) [-]
6 MLB	MLB	8.0	.68	1050	714	5710	-80%	1140	92 Ag. Excess Acres [-]
21 OMA	OMA	7.0	.68	1050	714	5000	-100%	0	TOTAL ACRES FARMLAND
21 PAB2	PAB2	13.0	.98	1050	1029	13380	-100%	0	Farmland Value
									Measured Acreage
									Average Farmland Value/Acre
									VALUE OF FARMLAND
									Classified Land Total
									<b>Total Farmland / Classified Land Value</b>
									Homesite(s) Value [+]
									92 Ag. Excess Acres [+]
									<b>LAND TYPE</b>
									F. - Fertil Lot
									R. - Res. Lot
									3 - Undeveloped Land
									4 - Tillable
									5 - Non-Tillable Land
									6 - Woodland
									7 - Other Farmland Towers
									21 - Classified Forest
									22 - Wildlife Habitat
									71 - Farm Buildings
									23 - Riparian Land
									72 - Water
									24 - Windbreak
									73 - Wetlands
									25 - Filler Strip
									8 - Ag Support Land
									82 Public Road
									83 Utility Trans.
									91 Res. Excess Acres
									92 Ag. Excess Acres
Supplemental Card Measured Acreage		69.6						42810	
Supplemental Card LAND VALUE									

Figure 2-26. Determining the Total Land Value

To record information about special agricultural acreage and to calculate the total farmland acreage, perform these steps:

- Step 1 In the “Parcel Acreage” cell, enter the total number of acres in the parcel.
- Step 2 In the “81 Legal Drain NV” cell, enter the number of acres categorized as Type 81 (legal ditch).
- Note:** Descriptions of the Type 8 land use types are provided in the section **Type 8—Agricultural Support Land** in this chapter.
- Step 3 In the “82 Public Roads NV” cell, enter the number of acres categorized as Type 82 (public road right-of-way).
- Step 4 In the “83 UT Towers NV” cell, enter the number of acres (.125 acre per tower) categorized as Type 83 (utility transmission towers).
- Step 5 In the “Homesite (s)” cell, enter the number of acres (1 acre per dwelling) categorized as agricultural homesite acreage.
- Note:** A description of the Type 9 (agricultural homesite) land use type is provided in the section **Type 9—Homesite** in this chapter.
- Step 6 In the “92 Agricultural Excess Acres” cell, enter the number of acres categorized as Type 92 (agricultural excess acres).
- Step 7 Sum the acres entered in the following cells:
- “81 Legal Drain NV”
  - “82 Public Roads NV”
  - “83 UT Towers NV”
  - “9 Homesite(s)”
  - “92 Agricultural Excess Acres”.
- Step 8 Calculate the total farmland acreage by subtracting the sum calculated in Step 7 from the parcel acreage (entered in the “Parcel Acreage” cell):
- $$\text{Total farmland acreage} = \text{Parcel Acreage} - \text{Sum calculated in Step 7}$$
- Enter the total farmland acreage in the “Total Acres Farmland” cell.

### Task 3—Calculating the Value of Farmland

To calculate the value of farmland for the property, you use the measured acreage and land value calculated in Task 1 to determine the average farmland value per acre. Then you apply this average value to the total number of acres of farmland, calculated in Task 2.

To calculate the land value of farmland for the property, perform these steps:

- Step 1 In the “Farmland Value” cell below the “Total Acres Farmland” cell, enter the land value calculated for all of the land areas in Task 1, Step 12 (entered in the “Land Value” cell at the bottom of the “Land Value” column).

- Step 2 In the “Measured Acreage” cell, enter the total measured acreage calculated for all of the land areas in Task 1, Step 11 (entered in the “Measured Acreage” cell at the bottom of the “Measured Acreage” column).
- Step 3 Calculate the average farmland value per acre by dividing the farmland value (entered in the “Farmland Value” cell) by the measured acreage (entered in the “Measured Acreage” cell):
- $$\text{Average farmland value per acre} = \frac{\text{Farmland value}}{\text{Measured acreage}}$$
- Round the average farmland value per acre to the nearest \$1 and enter it in the “Average Farmland Value / Acre” cell.
- Step 4 Calculate the value of farmland acreage by multiplying the total farmland acreage (entered in the “Total Acres Farmland” cell) by the average farmland value per acre:
- $$\text{Value of farmland acreage} = \text{Total acres farmland} \times \text{Average farmland value per acre}$$
- Round the value of farmland acreage to the nearest \$10 and enter it in the “Value of Farmland” cell.

#### Task 4—Calculating the Value of Classified Land

To calculate the value for classified land (\$1 per acre), perform these steps:

- Step 1 Determine the total acreage of classified land by summing the measured acreage (entered in the “Measured Acreage” column) of all land areas assigned to the Type 2 land use type (entered in the “Land Type” column).
- Step 2 Calculate the classified land adjustment by multiplying the total classified land acreage (calculated in Step 1) by \$1:
- $$\text{Classified land value} = \text{Total classified land acreage} \times \$1$$
- Enter the value of classified land in the “Classified Land Total” cell

#### Task 5—Calculating the Total Farmland/Classified Land Value

To calculate the total farmland/classified land value for the property sum the value of farmland (entered in the “Value of Farmland” cell) and the value for classified land (entered in the “Classified Land Total” cell):

$$\text{Total farmland/classified land value} = \text{Value of farmland} + \text{Classified land value}$$

Round the total farmland/classified land value to the nearest \$100 and enter it in the “Total Farmland/Classified Land Value” cell.

## Task 6—Calculating the Land Value of the Homesite(s) and Agricultural Excess Acres

To calculate the land value of the homesite(s) and agricultural excess acres perform the following steps:

Step 1 Enter the value determined for all homesites on the property in the “Homesite(s) Value” cell. Information about valuing homesites is provided in the section ***Valuing Residential Acreage and Agricultural Homesites*** in this chapter.

Step 2 Enter the value determined for all agricultural excess acres on the property in the “Ag Excess Acres” cell. Information about valuing agricultural excess acres is provided in the section ***Classifying Agricultural Land into Land Use Types*** in this chapter.

Round the land values determined in Steps 1 and 2 to the nearest \$100.