



# FARM CREDIT EAST

## **The Value of Agricultural Land in Connecticut: PA490 Survey Report-Revised**

### **Valuation by the Capitalization of Agricultural Land Rents**

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## Introduction

PA490 provides a legislative method to assess farmland for taxation by Connecticut's municipalities. The State of Connecticut through its Office of Policy and Management periodically prepares a list of the recommended assessment values for the land classes of farmland eligible under PA490. The recommended assessment values are determined by the capitalization of the typical rental rate for each PA490 land class. These are use values and are not market values.

The rental rates are determined by rent surveys for each land class throughout Connecticut. The PA490 land classes are divided into two regions to reflect differences in rental rates due to location. The two regions are River Valley and Statewide. The River Valley area is centered on the Connecticut River Valley. This area of Connecticut has the most favorable soil and climatic conditions for agricultural production. There are twenty-one municipalities in this area. The remaining municipalities are placed in the Statewide category.

The recommended PA490 values for this survey period, effective as of October 1, 2025, are based upon a current rent survey prepared by the Agricultural and Resource Economics Department, in the College of Agriculture, Health and Natural Resources at the University of Connecticut. The results of the survey have been sent to the Connecticut Department of Agriculture.

The recommended value for each PA490 class has been determined by the capitalization of each land class rent by an appropriate capitalization rate. The formula for determining the recommended value is.

$$I/Ro = V$$

*Where I is income (annual rent), Ro is the overall capitalization rate and V is value.*

This approach has been used in one form or another since the program began to determine the recommended PA490 values.

The capitalization rate that will be used for the current period has been developed in a manner that is like that done in the 2010 and 2015 surveys that developed recommended PA490 values. Several rates have been developed and from these a single rate has been selected to determine the specific land class values.

The original PA490 capitalization rate formula required the use of interest rates for farm loans from the Federal Land Bank. The Federal Land Bank was a network of regional agricultural banks and no longer exists. Farm Credit East, ACA is the primary agricultural lender for Connecticut. Farm Credit East, ACA is one of multiple Farm Credit associations that are part of CoBank. CoBank is the successor to the Federal Land Bank that includes Connecticut.

The finance rate used in developing the capitalization rate for this period utilizes the CoBank average annual loan rates. These rates considered loans from the Farm Credit Associations within its territory, including Farm Credit East, ACA. These average annual loan rates are provided to the United States Treasury's Internal Revenue Service (IRS). These rates are published by the IRS for use in determining agricultural use values by income capitalization.

### **Developing Capitalization Rates**

Past surveys have considered multiple capitalization rates. All required a finance rate. The finance rate determined for this study will rely on rates obtained from CoBank and that have been published by the IRS for use in determining agricultural use values. The annual rates have been obtained on-line from the IRS. They are summarized in the following table.

Year	Cobank Rate (%)
2024	5.30%
2023	4.57%
2022	3.94%
2021	4.03%
2020	4.59%
<b>5-Year Average</b>	<b>4.49%</b>

\*Obtained from the IRS – ‘Tables of Interest Rates for the years of 2020, 2021, 2022, 2023 and 2024 for the Farm Credit System Bank Serving State in Which Property Is Located’. Connecticut is serviced by Farm Credit East, ACA which is part of the CoBank Farm Credit Bank service area. The rates are for CoBank and are applicable for this survey. CoBank provided the interest data to the IRS.

The finance rate that will be used in developing all capitalization rates is 4.49%.

### **Traditional PA490 Rate Development**

This rate is developed by adding the effective finance rate for the period considered to the statewide effective real property tax rate for the same period. The annual effective real property tax rate has been provided by the Office of Policy and Management (OPM). The following table provides the annual mil rates and their five-year average. These are the effective real property tax rates.

Year	Cobank Rate (%)	Statewide Effective Property Tax Rate (%)	Combined Rate
2024	5.30%	2.973%	8.27%
2023	4.57%	3.046%	7.62%
2022	3.94%	3.125%	7.07%
2021	4.03%	3.136%	7.17%
2020	4.59%	3.135%	7.73%
<b>5-Year Average</b>	<b>4.49%</b>	<b>3.08%</b>	<b>7.57%</b>

\*Tax Rate Obtained from the Office of the Undersecretary of the Office of Policy and Management for Intergovernmental Policy and Planning Division.

The effective tax rate that is used is 3.08%.

The traditional PA490 rate development is calculated with the finance rate and the effective tax rate that have been developed for this period:

<i>Finance Rate</i>	4.49%
<i>Plus</i>	<u>Effective Tax Rate</u> 3.08%
<i>Equals</i>	7.57%

The overall rate calculated using the traditional PA490 method is 7.57%. Rounded to 7.6% The rate determined by the traditional PA490 method is 7.6%.

### **Mortgage Equity Band of Investment**

This method develops an overall rate that combines rates attributed to financing and investment. The rates are weighted based upon their overall contribution. This technique was applied in the 2015 and 2020 survey. This approach is applied in a similar manner to the previous survey. The rate considers a ten-year mortgage. The finance rate of 4.49% is used. The overall rate is based upon a ten-year mortgage with a loan to value ratio of seventy five percent.

The rate used for the return on equity to the twenty five percent equity portion is ten percent. This is like the rate used in the previous study. Agricultural producers vary in their expectations for the return on investment for the equity in agricultural properties. A rate above ten percent is typical for properties that are expected to decline in value over time or are perceived as having a high risk. A lower rate is accepted when values are expected to increase over time and where the perceived risk is low. Overall market expectations for agricultural landowners are similar for this survey period as was present in the prior survey period.

The overall capitalization rate is developed using the finance and equity rates described for a ten-year mortgage period with a seventy-five percent loan to value ratio.

$0.75 \times 0.0449$ (finance rate) = 0.0337	
$0.25 \times 0.1000$ (equity rate) = 0.0250	
<i>Totals</i>	$0.0587 = 5.87\% = 5.9\% \text{ (rounded)}$

The rate is also calculated considering equity build up from debt reduction.

$0.75$ (75% loan ratio) $\times 0.1261$ loan constant	equals 0.0946(loan contribution)
$0.25$ (25% equity ratio) $\times 0.10000$ equity rate	equals <u>0.0250</u> (equity contribution)
<i>Totals</i>	0.1196

Less equity buildup from debt reduction

$0.75$ (75% loan ratio) $\times 1.0$ (100% reduced) $\times 0.0812$ (sinking fund factor)	equals 0.0609
$0.25$ (25% equity) $\times 0\%$ appreciation	equals <u>0.0000</u>
	Total 0.0609

$0.1196$   
 Minus  $0.0609$   
 Equals  $0.0587$  Equals 5.9% rounded

The overall rate determined by the Mortgage Equity Band of Investment is 5.9%.

## Buildup Rate

This method was also used in the prior survey. This approach adds the finance rate to a risk rate. The finance rate of 4.49% is applied as the finance rate in this method. A 'safe' risk rate is used. I have used the five-year average yield for ten-year U.S. Treasuries to develop a safe return rate. The following table provides the annual yield rates used to determine the overall risk rate.

Average Annual Return on Ten Year US Treasuries

Year	Average Yield
2024	4.57%
2023	3.96%
2022	2.94%
2021	1.45%
2020	0.89%
<b>5-Year Average</b>	<b>2.76%</b>

The equity yield rate is applied as the 'safe risk rate' and is 2.76%.

The overall rate is now calculated using the finance and equity rates described.

Finance Rate	4.49%
Plus Safe Risk Rate	<u>2.76%</u>
Equals Overall Rate	7.25%

I have used the approach for the buildup rate that was used in the prior survey. The effective real property tax rate is included in the rate buildup. The rate is calculated with the tax rate included.

Finance Rate	4.49%
Plus Risk Rate	2.76%
Plus Effective Tax Rate	<u>3.16%</u>
Equals	10.41%

The calculated rate is 10.41%. This is rounded to 10.4%.

## Summary of the Rates Developed

Three capitalization rates have been developed. The methods applied are the same as those developed in the prior survey that determined the current PA490 values. The three methods and rates developed are summarized:

Rate Development Method	Rate Determined
Mortgage Equity Band of Investment	5.9%
Traditional PA490 Rate Development	7.6%
Buildup Rate	10.4%

## Rate Selection

Three rates have been developed. The range set by the rates is from 5.9% to 10.4%. The rates were developed using similar approaches that were developed for the previous survey.

Each rate developed has its own strengths and weaknesses. These are described for each approach.

### *Traditional PA490 Rate Development*

This approach uses published data for finance and effective tax rates, both recognized by government agencies. The overall rate is calculated by simply adding the two rates, a method previously used in surveys to set recommended rates.

### *Mortgage Equity Band of Investment*

This approach is most often used for valuing individual properties. The finance rate is determined from the data developed in the traditional PA490 rate development. The weakness in this approach is the subjective selection of the equity yield rate. This method applied a single equity yield rate that would be applied for multiple land classes. The equity rates for specific land classes would vary upon expectations of specific buyers.

### *Buildup Rate*

This approach adds a safe risk rate to the finance rate and the effective tax rate. This results in a higher rate than developed by the traditional PA490 rate development. A 'safe' risk rate utilized yield rates from 10-year US Treasuries. This resulted in a lower equity rate than the equity rate used in the mortgage equity band of investment.

### *Rate Selected*

I have selected the capitalization rate determined by the Traditional PA490 Rate Development. It has the strongest support for its development. This rate is between the rates determined by the other two approaches. **A capitalization rate of 7.6% is the applicable rate to develop the recommended PA490 land class values utilizing the rental survey that has been prepared by the University of Connecticut.**

## Rental Survey Results

The University of Connecticut conducted a rental study for the land class categories for PA490 assessments. The survey was completed in August 2025. It was developed and conducted by Kimberly Rollins, Department Head & Professor, Charles Towe, Professor, and Ruirui Dang, Research Assistant, all in the Agricultural and Resource Economics Department, in the College of Agriculture, Health and Natural Resources at the University of Connecticut. The results of the survey were sent to me.

The survey collected and sorted rent results based upon the percentage of a specific PA490 land class in the survey responses. The results are displayed in the following chart. Four rents are reported for each class. This report assumes that the survey yields reliable responses suitable for incorporation into this valuation analysis.

The rents are grouped by the percentage of the designated land class in the rent response. The groupings in 25%, 50%, 75% and 100% are as follows:

Region	Land Class-Code	Results \$/Acre				
		Mean Rent at 25%	Mean Rent at 50%	Mean Rent at 75%	Mean Rent at 100%	Average of all Rents
River Valley	Tillable A	1	300	300	300	300
	Tillable B	2	83	83	83	83
	Tillable C	3	0	0	0	0
	Tillable D	4	0	0	0	0
	Orchard	5	0	0	0	0
	Pasture	6	0	0	0	0
	Swamp, Ledge, Scrub	7	74	74	0	74
	Woodland, Forest	8	0	0	0	0
	Maritime Heritage Land	9	0	0	0	0
Statewide	Tillable A	1	247	247	247	247
	Tillable B	2	203	160	160	144
	Tillable C	3	62	59	66	63
	Tillable D	4	165	197	80	131
	Orchard	5	175	175	175	175
	Pasture	6	159	194	62	62
	Swamp, Ledge, Scrub	7	161	74	0	117
	Woodland, Forest	8	137	164	68	109
	Maritime Heritage Land	9	0	0	0	0

There are land classes that had no responses. These are shown in the grid as 0.

The mean rent observed across the 75% to 100% land class groupings provides a reliable representation of the prevailing market rate. In the context of valuation, Land Codes 3 and 4 exhibit an inversion, which appears to result from respondents grouping multiple land types together in their survey responses. The corresponding rates present more logical outcomes when reversed. Therefore, Tillable C at \$80/acre and Tillable D at \$66/acre.

A mean rent of \$152 per acre was chosen for Land Class Code 2 (Tillable B), calculated as the average from the two separate groups. Rental data for Code 7 (Swamp, Ledge, Scrub) was very limited, so it's recommended to keep Class 7 unchanged from prior years due to the insufficient sample size for a reliable valuation.

Due to limited rental data available for the River Valley region, Statewide values have been applied for the River Valley. This allows a rental rate for each class in each area. In my assessment, the land classes in the River Valley generally reflect comparable values to those observed Statewide, except for Tillable A, which merits a premium valuation.

The rental results show an inversion for Tillable C and D in the statewide survey, likely because respondents grouped land types together.

The Maritime Heritage Land classification value was derived from rental rates collected from the Bureau of Aquaculture. The Woodland/Forest Land classification value was derived from The Bureau of Natural Resources-CT Department of Energy and Environmental Protection, based on internal calculations.

The recommended capitalization rate is 7.6%. This is applied to each of the rental rates for the PA490 land use categories described. The results are presented in the following grid. I have also included the PA490 recommended values from the last two surveys.

Region	Land Class-Code	\$/Acre						
		Mean Rent	Value Cap Rate 7.6%	2025 Value (Rounded)	Values from 2020	Values from 2015	Change from 2020	
River Valley	Tillable A	1	300	\$3,947	\$3,950	\$2,530	\$2,090	\$1,420
	Tillable B	2	152	\$2,000	\$2,000	\$1,810	\$1,860	\$190
	Tillable C	3	80	\$1,053	\$1,050	\$1,690	\$1,270	-\$640
	Tillable D	4	66	\$868	\$870	\$1,170	\$930	-\$300
	Orchard	5	175	\$2,303	\$2,300	\$990	\$2,390	\$1,310
	Pasture	6	62	\$816	\$815	\$280	\$230	\$535
	Swamp, Ledge, Scrub	7	-	-	\$40	\$40	\$40	\$0
	Woodland, Forest	8	-	-	\$200	\$390	n/a	-\$190
	Maritime Heritage Land	9	13	\$171	\$170	n/a	n/a	n/a
Statewide	Tillable A	1	247	\$3,250	\$3,250	\$1,880	\$1,960	\$1,370
	Tillable B	2	152	\$2,000	\$2,000	\$1,280	\$1,390	\$720
	Tillable C	3	80	\$1,053	\$1,050	\$1,110	\$670	-\$60
	Tillable D	4	66	\$868	\$870	\$850	\$460	\$20
	Orchard	5	175	\$2,303	\$2,300	\$990	\$1,390	\$1,310
	Pasture	6	62	\$816	\$815	\$280	\$140	\$535
	Swamp, Ledge, Scrub	7	-	-	\$40	\$40	\$40	\$0
	Woodland, Forest	8	-	-	\$200	\$390	n/a	-\$190
	Maritime Heritage Land	9	13	\$171	\$170	n/a	n/a	n/a

*Summary of Value Comparison of 2025 to 2020*

Between 2020 and 2025, land values in the River Valley region and Statewide exhibit a varied pattern of appreciation. The largest increase occurred with Tillable A, reflecting increased demand and competition for higher quality land commonly used in intensive or specialized agricultural production, such as tobacco and vegetable crops. Tillable C values decreased, as many contracts in this category involved no-cash agreements for hay production—a practice associated with rent reductions among non-farm landlords who maintain land in agriculture to obtain PA490 assessments. Orchard values rose to levels last observed in 2015, attributed to limited availability and stronger industry demand as the number of orchards in the region declined over the past decade. Overall, the majority of land values appreciated compared to 2020, consistent with changes in the economic environment during this period.

### **Recommended PA490 Values**

The recommended per acre PA490 values for assessment use have been developed from the survey data described and have been revised from the original recommended values previously released. The following revised per acre values are recommended for use by the Connecticut Department of Agriculture and the Office of Policy and Management.

Region	Land Class-Code	\$/Acre	
		2025 Value Released	2025 Value Revised
River Valley	Tillable A	1 \$3,950	\$3,950
	Tillable B	2 \$2,200	\$2,000
	Tillable C	3 \$1,280	\$1,050
	Tillable D	4 \$1,280	\$870
	Orchard	5 \$2,300	\$2,300
	Pasture	6 \$1,570	\$815
	Swamp, Ledge, Scrub	7 \$970	\$40
	Woodland, Forest	8 \$200	\$200
	Maritime Heritage Land	9 \$170	\$170
Statewide	Tillable A	1 \$3,250	\$3,250
	Tillable B	2 \$2,200	\$2,000
	Tillable C	3 \$1,280	\$1,050
	Tillable D	4 \$1,280	\$870
	Orchard	5 \$2,300	\$2,300
	Pasture	6 \$1,570	\$815
	Swamp, Ledge, Scrub	7 \$970	\$40
	Woodland, Forest	8 \$200	\$200
	Maritime Heritage Land	9 \$170	\$170