An aerial photograph of a farm complex, featuring several large buildings, silos, and a winding river or canal that curves through the landscape. The surrounding area is filled with agricultural fields.

Real Property Taxes and Farm Income in Pennsylvania

PENNSTATE



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Real property taxes often are cited as one reason for the loss of farmland. Stories of farmers forced under because of rising tax bills abound, and in several studies, people who have quit farming identified high taxes as one reason for having done so. The real property tax (sometimes called the “real estate tax”) is the most important source of tax revenue for local jurisdictions in Pennsylvania, providing 66 percent of total tax collections in 1998 to all governments and school districts in the Commonwealth (excluding Philadelphia). This included 79 percent of school district tax revenue, 97 percent of county tax revenue, and 32 percent of township, borough, and city tax revenue.

Real property taxes generally are unpopular with farmers, because the value of their business is land-based (and thus more subject to the real property tax), unlike many other local businesses. Because the size of a real property tax bill is based on the value of the land owned and not the amount of money earned on that land, it is not based on the landowners’ ability to pay. This can create special hardships for farmers and others with land but relatively low cash flow.

In response to these concerns, Pennsylvania has a major farmland protection program, Clean and Green, which is intended to save farmland by reducing taxes on that land. Clean and Green bases real property taxes on the farm income potential of the land rather than on the land’s often higher market value. All states have legislation that lowers real property taxes for farmland. Pennsylvania tax assessment rules also exempt certain structures on farms, such as silos and corn cribs, from taxation.

Despite the anecdotes and interviews with farmers who have quit, there has been little direct study of the real property tax burden on farms. Some farm management experts have suggested that if the real property tax burden is enough to drive a farm out of business, the farm likely was suffering deeper financial problems.

This extension bulletin examines the relationship between gross farm income and real property taxes in Pennsylvania, using results from a study commissioned by the Pennsylvania Department of Agriculture. It is intended to help you better understand farming in Pennsylvania, local taxes, and the impact of real property taxes on farms.

What Are Pennsylvania Farms Like?

The number and productivity of Pennsylvania’s farms make it the leading agricultural state in the northeastern United States. In 1997, there were 45,457 farms in the Commonwealth, with almost 7.2 million acres of land devoted to farming. Cash receipts from all crops and livestock production were just about \$4 billion in 1997, exceeding the next state (New York) by more than \$1.1 billion. Farming is an integral part of Pennsylvania’s economy, communities, and history.

Pennsylvania’s farms produce a variety of crops and animal products. Dairy farms produce about 36 percent of Pennsylvania’s cash receipts from farming, while poultry farms (including eggs, broilers, and turkeys) account for another 19 percent of total receipts. Greenhouses, nurseries, and mushroom farms produce about 16 percent of total receipts from farming, while beef farms, hog farms, and cash grain farms each account for 6 percent.

Farm size varies significantly in Pennsylvania. Almost one-fourth of the farms (22.6 percent) have less than \$2,500 in annual sales, while 45.9 percent have less than \$10,000 in annual sales. These small farms are predominantly part-time or hobby farms, and of the approximately 21,000 such farms, only about 22 percent made a profit in 1997 (U.S. Census of Agriculture). Although they are the most numerous, these small farms account for only 7.8 percent of the value of annual sales of agricultural products.

About one-third of Pennsylvania farms (31.3 percent) have \$50,000 or more in sales per year. Farms with more than \$250,000 in annual sales account for only 7.1 percent of all Pennsylvania farms, yet they produce 59.4 percent of the total value of Pennsylvania’s agricultural products.

How Can Residential Development Affect Farmers’ Tax Bills?

Residential development can increase farmers’ tax bills in two ways. First, development can increase the demand for land, raising its price. When the assessed value of that land for tax purposes is increased because of the higher land prices, tax bills will increase. Note, however, that assessed values are changed only during reassessments, which generally occur infrequently in Pennsylvania counties. Except during the year a reassessment occurs, rising land prices by themselves thus have little direct impact on farm tax bills. Second, development can increase farm taxes if it forces the local government or school district to increase spending on public services and raise tax rates to pay for these new expenditures. In Pennsylvania, tax pressures on farms from development usually result from

a community's need to provide new or expanding public services such as schools, roads, sewerage, and police.

Real Property Taxes and Farm Income

Real property taxes averaged about 6 percent of gross farm income in Pennsylvania between 1995 and 1999 (see the Appendix for calculation methods). Of this amount, five percent went to school districts, 0.2 percent went to townships and boroughs, and about 0.8 percent to county governments. The average farm with \$10,000 or more in gross farm revenue averaged \$172,030 in gross income during this time period (gross farm income includes money from the sale of agricultural products, rental of agricultural land, and custom farm work). These calculations do not include other sources of farm household income such as off-farm jobs, which are very important to many Pennsylvania farm families. If off-farm sources of income were included, the percentage of total farm household income going to real property taxes would be lower than the estimates presented here.

Table 1 illustrates that the impact of real property taxes varied across farm types in Pennsylvania. (Note that these are farms with \$10,000 or more in annual sales.) Horse farms had the largest burden, with property taxes averaging 15 percent of their gross farm income. Poultry farms had the smallest burden, with property taxes averaging 1.3 percent of their gross income. Even though the amount of real property tax paid by the average poultry farm was larger than that paid by the average horse farm (\$5,477 compared to \$4,458), the average poultry farm's gross income was much higher (\$745,596 compared to \$84,408), making the real property tax burden relatively smaller. (Note that these are averages, so the results for any individual farm will vary from these.)

Farms with higher gross incomes generally faced a smaller relative real property tax burden (Table 2). This shouldn't be surprising, because the real property tax in Pennsylvania is based on the value of the land and not on the value of the farmer's production. (Remember that the real property tax is a fixed cost to farmers, unaffected by the income of the farm—in other words, it is not based on the farmer's "ability to pay.") Here again, because smaller farms are more likely to rely on off-farm income, the percentage of their household income going to the real property tax generally will be lower than these estimates, which are based solely on gross farm income.

Because the size and type of Pennsylvania's farms vary across counties, as do the quantity and quality of public services (which affect tax rates), the average proportion of gross farm income going to the real property tax also varied across counties (Table 3). In counties with a high average gross income or low average property tax, this proportion tended to be lower. The average farm in Bradford County, for example, had \$185,195 in gross income and a property tax bill of \$2,655, so had a proportion of 3.3 percent. The average farm in Elk County, in contrast, had a lower property tax bill of \$2,540 but a much higher ratio of 9.3 percent, because it had only \$56,056 in gross income. (More detailed county-level results are available on-line at <http://cax.aers.psu.edu/farmtaxes/>).

It is interesting to note that there was no statistical difference between the counties with farms enrolled in Clean and Green and those without.

There were regional differences in the relation between farm income and real property taxes (Figure 1 and Table 4). Farms in the southeast (Bucks, Chester, Delaware, Montgomery, and Philadelphia counties) generally had the highest average proportion of income going to real property taxes. This resulted from the generally higher real property tax bills in this region. Farms in the central and northwestern parts of Pennsylvania generally faced smaller tax burdens, though this varied by farm type.

Table 1. Average gross farm income,* property taxes paid, and property taxes as a percentage of gross farm income, by farm type in Pennsylvania (farms with \$10,000 or more in farm income).

Farm type	Average gross farm income	Average property taxes paid	Property taxes as a % of gross farm income	Number of farms
Animal specialities (e.g., fur-bearing animals, rabbits, bees)	\$304,086	\$7,248	10.5%	157
Beef	91,400	2,909	8.0	2,566
Cash grains (e.g., wheat, corn, soybeans, oats, other small grains)	75,421	3,743	10.5	2,831
Dairy	185,486	3,819	2.5	8,018
Field crops (e.g., alfalfa, clover, potatoes)	44,032	2,835	10.6	2,302
Forestry	67,941	3,129	8.4	436
Fruits	165,994	3,851	4.5	603
General crops (crop-based, but less than 50% of income from any one type)	59,078	3,235	9.0	687
General livestock (livestock-based, but less than 50% of income from any one type)	175,483	4,127	4.4	237
Horses	84,408	4,458	15.0	272
Mushrooms	1,887,439	13,733	2.5	134
Ornamentals (e.g., bedding plants, bulbs, flowers, nursery stock)	209,427	3,689	5.1	1,197
Other livestock (e.g., hogs, sheep, goats)	251,042	3,474	6.1	1,099
Poultry (e.g., eggs, chickens, turkeys)	745,596	5,477	1.3	855
Vegetables	75,156	2,743	7.8	576

*Gross farm income includes market value of sales, farm rent, government payments, and custom farm work. Does not include non-farm sources of household income.

Summaries were derived by the authors using data collected in the 1997 Census of Agriculture by the National Agricultural Statistics Service, United States Department of Agriculture.

Table 2. Average property taxes paid in Pennsylvania as a percentage of gross farm income,* by farm type and gross income level (farms with \$10,000 or more in farm income).

Farm type	Gross farm income				
	<\$25,000	\$25,000– 49,999	\$50,000– 99,999	\$100,000– 249,999	≥\$250,000
Animal specialities	21.5%	9.8%	(D)	4.1%	0.8%
Beef	10.8	6.4	4.9	2.9	1.2
Cash grains	15.7	9.6	5.3	3.3	2.1
Dairy	5.7	3.2	2.5	2.3	1.7
Field crops	13.9	8.5	6.0	2.8	2.1
Forestry	12.5	6.8	5.8	2.5	1.9
Fruits	6.9	5.3	3.1	3.1	2.0
General crops	10.6	8.6	7.1	5.5	2.1
General livestock	14.9	4.1	4.0	2.8	1.8
Horses	21.5	9.1	5.4	3.2	4.6
Mushrooms	11.1	(D)	(D)	2.4	1.2
Ornamentals	10.0	5.1	3.5	2.6	1.4
Other livestock	11.4	10.3	2.6	2.1	1.1
Poultry	3.0	5.0	2.3	2.3	0.8
Vegetables	10.5	5.9	5.1	1.4	1.7

*Gross farm income includes market value of sales, farm rent, government payments, and custom farm work. Does not include non-farm sources of household income.

(D) Data is based upon such a small number of farms that release of the information would violate NASS confidentiality and disclosure rules.

Summaries were derived by the authors using data collected in the 1997 Census of Agriculture by the National Agricultural Statistics Service, United States Department of Agriculture.

Table 3. Average gross farm income,* property taxes paid, and property taxes as a percentage of gross farm income, by county in Pennsylvania (farms with \$10,000 or more in farm income).

County	Average gross farm income	Average property taxes paid	Property taxes as a % of gross farm income	Number of farms
Adams*	\$ 263,834	\$ 4,053	4.8%	477
Allegheny	50,016	2,712	10.7	105
Armstrong+	77,087	2,654	7.0	228
Beaver+	68,063	3,761	12.4	146
Bedford	136,114	3,275	5.1	410
Berks*	262,645	5,186	7.2	913
Blair	184,618	3,387	3.7	252
Bradford+	185,195	2,655	3.3	672
Bucks*	173,732	5,483	10.7	338
Butler+	63,852	2,789	7.5	371
Cambria*	103,811	2,878	6.4	191
Cameron+	48,694	1,157	4.5	5
Carbon	99,643	2,985	9.7	72
Centre*	122,225	3,618	6.5	428
Chester*	414,655	7,041	8.2	732
Clarion	76,442	2,919	9.5	173
Clearfield+	74,222	2,176	4.9	126
Clinton+	145,863	4,820	5.8	114
Columbia+	126,588	2,727	5.3	296
Crawford	122,695	2,883	4.2	512
Cumberland+	167,113	3,246	5.3	477
Dauphin+	150,087	4,094	7.5	316
Delaware*	285,795	5,830	9.8	25
Elk+	56,056	2,540	9.3	39
Erie*	134,080	3,752	5.1	569
Fayette+	78,783	2,252	4.9	243
Forest	76,477	2,323	6.6	14
Franklin	269,296	3,816	2.9	736
Fulton+	123,551	2,892	6.1	164
Greene*	58,102	3,231	9.6	115
Huntingdon+	146,928	2,755	4.3	271
Indiana	125,042	3,639	7.8	363
Jefferson	81,531	2,305	5.6	149
Juniata*	175,608	2,244	3.5	353
Lackawanna	92,897	3,666	11.3	106

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Table 3, continued.

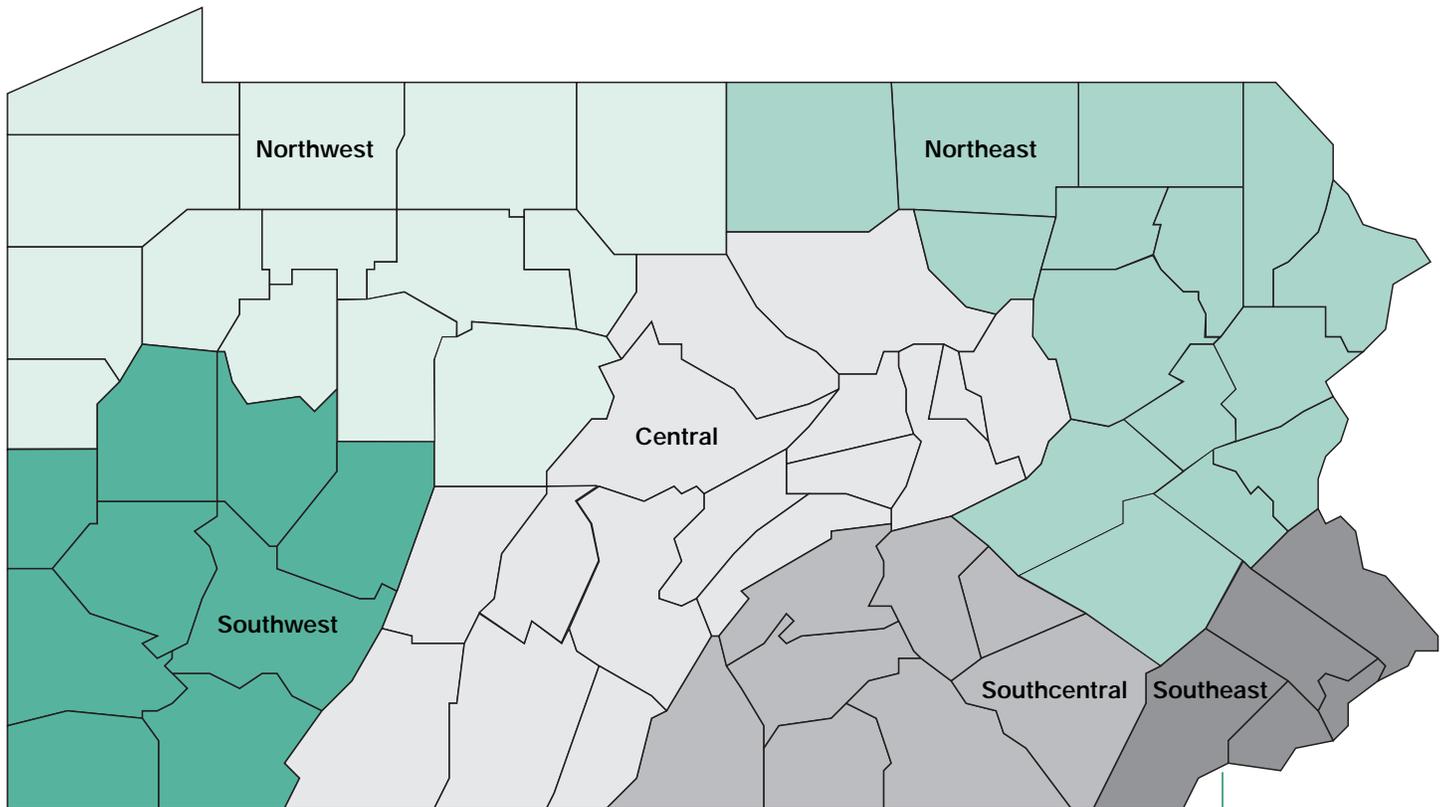
County	Average gross farm income	Average property taxes paid	Property taxes as a % of gross farm income	Number of farms
Lancaster ⁺	\$ 231,445	\$ 4,297	4.9%	3,056
Lawrence	103,988	2,894	5.7	260
Lebanon	291,899	5,678	8.8	517
Lehigh ⁺	223,145	5,046	8.6	216
Luzerne	91,986	2,881	8.7	193
Lycoming ⁺	111,495	3,018	7.8	411
Mckean ⁺	67,367	2,435	6.1	67
Mercer	106,350	2,702	5.9	479
Mifflin	140,876	2,718	3.5	335
Monroe ⁺	74,743	4,683	18.4	67
Montgomery ⁺	122,109	4,295	8.9	217
Montour	110,615	2,321	5.1	136
Northampton ⁺	132,294	5,997	12.8	186
Northumberland	189,703	2,938	4.3	332
Perry ⁺	171,785	3,910	8.0	318
Philadelphia	125,093	7,915	7.6	5
Pike ⁺	100,585	3,766	7.6	17
Potter ⁺	145,903	2,906	4.1	131
Schuylkill ⁺	160,250	3,136	6.8	301
Snyder ⁺	165,135	2,514	3.9	399
Somerset	127,479	2,778	4.2	515
Sullivan ⁺	130,940	3,007	5.4	61
Susquehanna ⁺	148,381	2,503	4.5	385
Tioga ⁺	129,909	3,016	5.5	421
Union ⁺	155,963	2,928	3.7	296
Venango	68,125	2,463	5.5	110
Warren ⁺	107,468	2,134	4.1	143
Washington ⁺	75,680	3,183	9.2	367
Wayne ⁺	113,121	3,294	5.7	246
Westmoreland ⁺	85,578	3,436	9.0	399
Wyoming ⁺	227,472	6,231	5.0	144
York ⁺	163,742	3,708	6.4	739

* Gross farm income includes market value of sales, farm rent, government payments, and custom farm work. Does not include non-farm sources of household income.

+ County had at least one farm participating in Clean and Green.

Summaries were derived by the authors using data collected in the 1997 Census of Agriculture by the National Agricultural Statistics Service, United States Department of Agriculture.

Figure 1. Pennsylvania counties grouped by region.



Northwest

Cameron
 Clarion
 Clearfield
 Crawford
 Elk
 Erie
 Forest
 Jefferson
 Lawrence
 McKean
 Mercer
 Potter
 Venango
 Warren

Southwest

Allegheny
 Armstrong
 Beaver
 Butler
 Fayette
 Greene
 Indiana
 Washington
 Westmoreland

Central

Bedford
 Blair
 Cambria
 Centre
 Clinton
 Columbia
 Fulton
 Huntingdon
 Juniata
 Lycoming
 Mifflin
 Montour
 Northumberland
 Snyder
 Somerset
 Union

Northeast

Berks
 Bradford
 Carbon
 Lackawanna
 Lehigh
 Luzerne
 Monroe
 Northampton
 Pike
 Schuylkill
 Sullivan
 Susquehanna
 Tioga
 Wayne
 Wyoming

Southcentral

Adams
 Cumberland
 Dauphin
 Franklin
 Lancaster
 Lebanon
 Perry
 York

Southeast

Bucks
 Chester
 Delaware
 Montgomery
 Philadelphia

Table 4. Average property taxes as a percentage of gross farm income,* by region and farm type in Pennsylvania (farms with \$10,000 or more in farm income).

Farm type	Southeast	Northeast	Southcentral	Central	Southwest	Northwest
Animal specialities	13.8%	5.5%	4.8%	4.3%	66.3%	4.4%
Beef	4.2	6.9	8.0	6.2	11.1	8.4
Cash grains	16.7	11.3	10.4	7.4	10.8	9.5
Dairy	3.1	2.5	2.5	2.2	3.1	2.5
Field crops	18.4	12.7	8.9	10.2	11.2	8.9
Forestry	8.0	13.8	9.7	6.2	4.8	5.8
Fruits	10.0	3.8	4.4	2.1	2.0	5.8
General crops	7.2	9.3	11.4	6.5	8.7	6.1
General livestock	2.5	4.3	5.4	3.0	3.5	2.3
Horses	19.6	20.3	7.9	7.5	13.8	13.0
Mushrooms	1.5	3.6	2.9	(D)	9.4	na
Ornamentals	5.5	5.4	5.4	4.2	6.1	2.9
Other livestock	16.8	7.5	3.9	8.1	7.8	7.4
Poultry	2.5	1.4	1.3	1.0	1.7	0.8
Vegetables	9.2	10.2	11.1	5.3	5.9	5.2

(D) Data is based upon such a small number of farms that release of the information would violate NASS confidentiality and disclosure rules.

* Gross farm income includes market value of sales, farm rent, government payments, custom farm work. Does not include non-farm sources of household income.

Summaries were derived by the authors using data collected in the 1997 Census of Agriculture by the National Agricultural Statistics Service, United States Department of Agriculture.

Real Property Taxes Versus Other Farm Expenses

Statewide, real property taxes averaged 2.7 percent of total production expenses on all farms with \$10,000 or more in annual sales (Table 5). Feed for livestock and poultry was the largest single production expense, accounting for about one-third of total farm expenses. Other large expenses included hired farm labor (12.2 percent), livestock and poultry purchased (9.6 percent), and repair and maintenance expenses (9.6 percent). Real property taxes were higher than cash rents (2.6 percent), electricity (2.5 percent), agricultural chemicals (2.5 percent), custom work and machinery hire (1.3 percent), and contract labor (0.9 percent).

Table 5. Farm production expenses in Pennsylvania (farms with \$10,000 or more in annual sales).

Expense	Percent of total expenses
Feed for livestock and poultry	32.5%
All other farm production expenses	12.2
Hired farm labor	12.2
Livestock and poultry purchased	9.6
Repair and maintenance	6.1
Interest	4.6
Commercial fertilizer	3.5
Petroleum	3.4
Seeds, bulbs, plants, and trees	3.3
Property taxes	2.7
Cash rent	2.6
Electricity	2.5
Agricultural chemicals	2.5
Custom work, machine hire	1.3
Contract labor	0.9

Source: 1997 Census of Agriculture, United States Department of Agriculture.

Discussion

These results suggest several important implications about the real property tax and farming in Pennsylvania. Farm types with less farm-based income tend to pay proportionally more in real property tax than do farms with greater farm income. This occurs because the amount farmers owe in real property tax is based on the value of their land, rather than on the amount of income they can generate on that land. When all sources of household income such as off-farm jobs are considered, however, the differences are likely to level out somewhat because smaller farms tend to earn a higher percentage of their income from off-farm sources.

The results suggest that the real property tax is more burdensome to farmers in some counties than in others. Also, although property taxes can be significant for some farms, they generally are not large relative to other farm expenses. It is important to note that the real property tax is a business expense for farms, deductible from self-employment and income taxes. It is not subject to federal, state, and local income tax.

It also is important to recognize that the analysis in this bulletin is based on averages. Individual farms may have gross farm incomes and tax bills that are higher or lower than these averages, and they may be affected very differently by the real property tax. In addition, the analysis focuses on gross farm income, not net farm income (which includes the impact of real property taxes on farm profits). Calculating the impact of property taxes on net farm income was not possible because of data limitations in the 1997 Census of Agriculture.

Appendix: Calculation Methods

The information in Tables 1 through 4 was calculated using individual farm-level data reported by Pennsylvania farmers in the 1997 U.S. Census of Agriculture, combined with a five-year average of yield and price information from Pennsylvania. A five-year average was used to even out seasonal fluctuations caused by weather and market conditions. The farm-level estimates included separate calculations for all principal commodities produced in Pennsylvania including 16 grains and oilseeds, 13 vegetables, 13 fruits, and 10 types of livestock and poultry. These calculations were made for each individual farm, and then the farm-specific results were averaged at the county, region, and state levels.

Because the analysis was conducted using primary farm-level data from the Census, which is subject to confidentiality concerns, the researchers conducted the analysis under special authorization at the National Agricultural Statistics Service (NASS) data lab in Washington, D.C. Any interpretations and conclusions derived from the data represent the author's views and not necessarily those of NASS. Farms with less than \$10,000 in annual sales were omitted from the analysis.

The results include taxes paid on the farmer's home, which often are difficult to separate from taxes on the farm operation itself. Because farm homes are included, the proportions calculated here are not directly comparable to the amount paid by other businesses in which the owner lives off the business location.

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Prepared by Timothy W. Kelsey and Jayson K. Harper, associate professors of agricultural economics, with financial support from the Pennsylvania Department of Agriculture.

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