

Land Taxes in Agriculture: *Preferential Rate and Assessment Effects*

By GENE WUNDERLICH*

ABSTRACT. *Farmland*, which occupies two thirds of America's privately owned territory, provides more than food and fiber. Agricultural uses of land preserve open space, filter and store water, support wildlife, conserve rural resources, enlarge life style opportunities for an urban society. One instrument for preserving agricultural land from urban developmental pressures is the preferential *assessment* for *real property tax*, essentially a two rate tax favoring *farming* as a land use. Preferential assessment, administered typically at small, nonrollback differentials, has not deterred intensive land use changes. Indeed, it may have had the opposite effect. Changes in the tax on land and buildings are recommended as improvements in the *preferential assessment* of agricultural land.

Tax Revenue

The real property tax reflects a public interest in land and its improvements.¹ Because agriculture occupies a vast amount of land, the tax on that land represents a broad public interest in its value and use.

Over 60 percent of the private land in the 48 contiguous states of the U.S. is in farms and ranches.² On average in the United States, 75 percent of assets in a farm are land. What happens to agricultural land matters to a vital sector of the economy and to a significant feature of the American landscape. Farm and ranch land is important not just because it supplies food, fiber, and shelter but because agricultural land supplies open space, scenic vistas, and room for competing uses. The concern about uses and ownership of agricultural land is not limited to farmers and ranchers. A general concern about agricultural land use has resulted in widespread political support for laws and regulations to protect agricultural land use. A body of such measures is incorporated in the real property tax laws of all the states.

The proportion of returns to farm real estate that goes to pay real property taxes is substantial. If cash rentals are a reasonable proxy for a pure return on investment in farm real estate against which to compare property taxes,³ then approximately one-fifth of the agricultural return to agricultural land is paid in real property taxes.⁴

Although farming and ranching cover a lot of territory, since agriculture is an

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extensive land use, agricultural real estate represents only 5 percent of all real estate value in the U.S., according to the National Realty Committee.⁵ Because farmland value is a small proportion of the value of all real estate and the property tax is *ad valorem*, the \$5 billion of agricultural real property taxes is only about 3 percent of total real property taxes in the U.S.⁶

As currently applied, two contrasting features of the real property tax in agriculture are notable: 1) agriculture pays a relatively small part of America's total real property taxes, so, in terms of revenue, agriculture's real property tax is not critical to fiscal policy; and 2) the real property tax does represent a substantial claim on the returns to agricultural land. The real property tax is more important fiscally at the local level, constituting 76 percent of the tax revenue, 48 percent of the own revenue,⁷ and 30 percent of all local government revenue.⁸ At the local level also, many policies on land use regulation are made and implemented.

Let us turn, then, to the real property tax as land use policy instrument, and a feature of the property system in agriculture.

Constitutional Basis

THE REAL PROPERTY TAX is considered a direct tax. Article 1 of the U.S. Constitution requires that direct taxes must be levied by the rule of apportionment, and this means that, short of constitutional amendment, the Federal government is precluded from the real property tax.⁹

The authority to legislate and administer the real property tax law rests with the States. States usually define very specifically, and in detail, the scope and requirements of real property tax law that is administered at the local (county, parish, municipality) level of government.

Because the scope, character, and management of the real property tax is based on State law, there are 50 varieties of programs to collect revenue based on the value of land and its improvements. The tax actually levied on a parcel of land is based on its assessed value and a rate, often specified in mills.¹⁰ The millage rate is often a sum of several revenue requirements decided by local government, within the limits of State law.

The assessed value is usually based on market value or a percentage of market value.¹¹ Real property is assessed at full market value or its equivalent in 20 states, and a single percentage of market value in 15 states.¹² Other states have schedules of land use classes for which differential assessment market value percentages or differential tax rates apply. In most states, some classes of property are fully or partially exempt from taxes (educational, religious, governmental). Exemptions for homesteads, and elderly, disabled, low income, or veteran taxpayers add to the complexity of tax administration and decrease from the revenue collections. The

final, effective rate of taxation on a parcel of land may depend more on its ownership than its underlying value.

Preferential Assessment for Agricultural Land Use

AGRICULTURAL LAND USES¹³ receive some preferential treatment in assessment in all 50 states. The level and form vary among states but, generally, the preference is in the form of assessment of value in current use, rather than at some feasible alternative higher-valued use. Under the pressure of residential development, for example, the assessed market value of a farmland tract might be multiples of its value for farming, but under preferential assessment law the tract would be taxed only for its value for farming. In 19 states, taxes are paid on the basis of the agricultural (or preferred) use only, with no penalty if use of the land is changed. In 27 states, some penalty is paid, usually a recapture or "rollback" based on the new, higher rate for a period of years. In 6 states special contractual agreements for land use are incorporated into, or are added to preferential assessment laws. Some penalties exist in the form of fee or tax for land use change.¹⁴

Do preferential assessments for farmland make a difference in taxes? USDA, Economic Research Service, in its annual survey of taxes levied, determined whether a parcel of land received preferential treatment in assessment. In general, the survey found that, as expected, higher taxes were levied on farmland that lacked a preferential assessment than on those with a preferential assessment.

In 1992 and 1993 farmland with preferential assessment taxes averaged \$5.12 and \$5.39 per acre, respectively. Without preference, they averaged \$5.93 and \$5.94.

The USDA survey further noted that parcels going from a preferred to nonpreferred status received an increased levy, and parcels going from nonpreferred to preferred status received a lower levy, both changes being in the expected directions in both years.

The changes in property taxes levied due to change in preference status, 1992-93 were as follows:

Preferential assessment in 1991?	Preferential assessment in 1992?		Preferential assessment in 1992?	Preferential assessment in 1993?	
	YES	NO		YES	NO
	(\$ Change, 1991-92)			(\$ Change, 1992-93)	
YES	0.18	2.29	YES	0.19	0.79
NO	-2.72	0.19	NO	-5.17	0.21

The small differences in taxes on preferential and nonpreferential land, and the relatively large change in taxes when a change in preferential status is made, suggest that the preferential assessments, in aggregate, do not make much difference in tax rates. However, in those places and for those parcels where land use is shifting from farm to nonfarm use, taxes change markedly.

Farmland areas impacted by intensive, urban, development represent a small fraction of all farmland area. The effect of tax increases in these small areas is diluted in national statistics. Has the preferential assessment affected changes in land use from agriculture to more intensive uses? According to Malme, who surveyed the literature on preferential assessment:

There is general consensus from extensive research over a twenty year period that the economic incentive offered by lower property taxes has had minimal effect in preventing conversion of farmland to more intensive uses. In urbanizing areas, the tax reductions have not matched the profits available from subdivision and development, and in some areas may have fueled land speculation.¹⁵

The bulk of agricultural land does not encounter competition from urbanization, so the overall effect that preferential assessment could have on land use changes is small. In those areas faced with urban pressure and land value speculation, the effect of the preference is so slight, compared to value increments for more intensive uses, that it is no effective deterrent. Many states have no recapture of the tax advantages conferred and already built into land prices. Many other states rollback taxes for only a few years. The preferences, in the main, are voluntary being granted after application for them so those contemplating immediate land use change may not apply. Only where landowners and local government have a long term contract agreement, with severe penalties for breaking the contract, are tax preference programs likely to have some effect. A capture of all the increase in land value due to a change in land use likewise could be a deterrent to land use change.

Taxes and the Return to Land

THE TAX CLAIM OF GOVERNMENT for a portion of the return to a specific unit of real estate is a unique interest. State Codes contain special language about classes of real estate that are taxable, methods of administering the tax, and exemptions. Coverage of the real property tax is extensive and complex, perhaps excessively complex. Although the ever-present purpose of the real property tax is to collect revenue, public policy often reveals an intention for other effects such as the preservation of open space, forests, or farms. Presumably property tax policy, through partial exemptions, preferential assessment, and level of rates could influence the use of land. Exercised differently and more vigorously than at present, the real property tax might complement other land use policies or become a strong policy instrument in its own right, but without the concerns about "takings" under eminent

domain or regulation.¹⁶ Its influence would be reflected in land values and land prices. The value of land, therefore, is the key ingredient in tax policy pertaining to resource use.

"Market price" is taken as a standard for administering the property tax, and as a standard of value generally. But what is market price? Presumably, market prices derive from rational investor's estimates of the worth of a unit of property, either as an asset item to yield a flow of returns or as lessor to gain a bundle of services for a term.¹⁷ In its basic form: $\text{Market Price} = \text{Net income} / \text{Capitalization rate}$. To the landowner, taxes are an expense that must be covered (or lose the land), so the market price is determined net of taxes. To the public collection through government, the tax is a return on land. Full value of land, public and private, therefore would be represented by the sum of market price and the value represented by the capitalized value of the tax. Lowering the tax raises market price, raising the tax lowers the market price, but the full value remains the same. Whatever the division between public and private portions of value, the quantity of land remains unchanged.

Appendix tables show agricultural land values, gross rents, taxes, and rents net of taxes. Ratios of taxes to gross rents show that in some areas of the country, where urban pressures heavily impact agricultural land, taxes consume virtually all of the agricultural returns to agricultural land (as estimated by cash rents on farmland). Rational investors would hold such land only because they believed that nonagricultural potential was sufficient to warrant holding it.

But real property taxes are variously levied on real property, assets composed of both land and improvement (capital items). The laws of 18 states exempt all homesteads, dwellings of resident owners, and most states exempt residences of elderly or disabled. For agricultural, open space, and forest land, the preferential assessment usually applies only to land, not to buildings and improvements.¹⁸ Unless otherwise exempted, then, the preferential tax laws for agriculture will tend to favor land and penalize buildings which, for lack of preference, must carry a larger share of the tax burden. If higher rates of taxation are applied to capital investments such as buildings, the economic incentive is to produce fewer of them and maintain them less. Farm buildings are discouraged. Yet erecting farm buildings and maintaining farm building value, by raising conversion costs may do more to discourage land conversion than subsidizing land values.

As a measure to preserve agricultural land use, the real property tax is weak, although on average the tax is a substantial percentage, about one fifth, of the return to agricultural land. The preferential assessment is shallow: vast areas of agricultural land are not value-impacted by intensive nonagricultural uses; therefore, the differential between preferential and nonpreferential value is small. In the small area of agriculture under urban development pressures, the taxes carry little or no penalty

for land use change. The administration of the real property tax is burdened with multiple classifications, special classes of land and special classes of owners. Before the real property tax can become an effective instrument of land policy, some of its administrative shortcomings must be addressed. In concept, the real property tax is a proportional levy on the value of the property. As administered, the real property tax appears to be regressive in terms of the value of holdings. Data from the Agricultural Economics and Land Ownership Survey showed that landowners whose value of farmland was \$5 million or more paid one third the rate of landowners with farmland holdings valued at less than \$70 thousand.¹⁹ Exemptions, partial and total, based on features of the owners distort the incidence of the tax. Multiple classes and rates further complicate the legal structure and administration. Reform of the real property tax to effectively support land use policy requires changes in law and management.

Notes

1. The real property tax represents an obligation of the landowner to pay to government a portion of the rent of land and return to capital imbedded in, or attached to, land. In exchange, government acknowledges and protects the property interest of the owner. Payment of property taxes is a primary responsibility of a property owner. Failure to pay the tax can result in forfeiture of the landowner's property interest.
2. Over 90 percent if agriculture includes forestry. USDA, Economic Research Service, *Major Land Uses in the United States, 1992*, ERS AER 723, 1995.
3. Results from a USDA, Economic Research Service, survey of farm costs and returns shows that 98 percent of landlord costs in cash leases is property tax.
4. Based on: U.S. Dept. of Commerce, *Agricultural Economics and Land Ownership Survey, 1988, AC87-RS-2 Vol. 3, Part 2*, 1990. The U.S. ratio of tax to cash rent was .22. Other partial (26 state) series in USDA showed recent ratios from .16 to .21. State ratios range widely; see the appendix tables.
5. The Federal Reserve Bulletin reports the 1994 farm business *real estate* at \$772, which is 6 percent of U.S. real estate value. Farm business *land* was estimated at \$593 billion which is 14 percent of U.S. land value.
6. U.S. Dept. of Agriculture, Economic Research Service, *Agricultural Real Estate Taxes*, AREI Update No. 9 (1995).
7. "Own revenue" is taxes, fees, charges generated within the fiscal unit, that is, including no funds transferred from other jurisdictions.
8. Advisory Commission on Intergovernmental Relations, *Significant Features of Fiscal Federalism*, Vol. 2, 1994, p. 66, 67.
9. *Hylton v. United States (1796)* or *Pollock v. Farmers Loan and Trust (1895)* for the case history of the ambiguous direct tax idea that any federal direct tax must be apportioned among the states according to their population. For now, at least, it appears that the authority to tax real property lies with the States and their jurisdictions.
10. A mill is one thousandth of a dollar, or one tenth of a cent.
11. Terms such as "fair cash value" "just value" "estimated market value," and "true value" are used in the statutes as variations of the market value idea.
12. U.S. Dept. of Commerce, Census of Governments, *Taxable Property Values, op. cit., p.xi*.
13. Preferential laws for farmland frequently include open space and forest uses.

14. See: David Aiken, *State Farmland Preferential Assessment Statutes*, University of Nebraska RB 310, Sept, 1989; Census of Governments, *Taxable Property Values*, op. Cit. Appendix C.

15. Jane Malme, *Preferential Property Tax Treatment of Land*, Cambridge: Lincoln Institute of Land Policy, 1993, p. 22.

16. For more detail on the takings argument see my paper, *Property in, Taxes on, Agricultural Land*, Discussion Paper 153, Madison WI: Land Tenure Center, 1995.

17. Another perspective of land is that of consumption or final good. Owners may want to hold or lease land for its own sake, not for income yield. Pricing, however, will be strongly influenced, if not driven, by the investor, so for evaluation, the income approach appears reasonable for valuing (pricing) land. International Association of Assessing Officers. *Property Appraisal and Assessment Administration*, Eckert, Gloudemans, Almy (eds) Chicago: IAAO, chpt. 9.

18. The Commonwealth of Virginia annually assesses every parcel of land, enters the description of the parcel, size, values of land with and without land use (preferential) assessment and transmits the information to the State Department of Taxation. From this information, the effective net tax deferrals, cumulative 1976-93, is reported to be \$666 billion. In 1993, the deferral was \$66 million of a total real property tax levy of \$2.3 billion. Data from James Folmar and J. Paxton Marshall, Dept. of Agricultural Economics, Virginia Tech, Blacksburg, VA, June, 1995.

19. The owners whose estimated market value of farmland holdings was less than \$70 thousand paid \$1.45 of real property tax per \$100 of real property owned and owners of \$5 million or more paid \$0.47 per \$100. Holdings between these extremes graded regressively. Distributive features are detailed in Gene Wunderlich and John Blackledge, *Taxing Farmland in the United States*, USDA ERS Agr. Econ Report 679, March, 1994.

Appendix, Data Sources

Several sources of information are available on farmland taxes. Methods of collection, definitions, level of reliability, frequency, and form of reporting vary widely. Sources of data are described briefly below:

1. USDA Economic Research Service. USDA produces an annual series on real property taxes levied, with estimates of total taxes, taxes per acre and per \$100 of farmland value. The series runs from 1890. The current survey contacts by mail the principal financial officer in all counties (parishes, other local) jurisdictions. The survey collects data on 10 or less parcels per jurisdiction. The questionnaire currently obtains on each parcel the area of parcel, tax levied, whether buildings, and whether preferential assessment, all for current and most recent past years. Advantages: consistent methods over time, response by a tax official from official records, fairly reliable estimates (esp. tax per acre) to state level. Disadvantages: reports taxes levied, not necessarily paid, and does not address final incidence, but then neither do other sources. Methods of estimation are described in J. P. DeBaal, *Taxes on U.S. Agricultural Real Estate, 1890-1991, and Methods of Estimation*, USDA ERS Statistical Bull 866, 1993.
2. Census of Agriculture. The Census of Agriculture is a quinquennial survey of farm operators, the latest of which is 1992. It collects property taxes paid as an expense item for farm operators (but does not include the taxes paid by landlords). Advantage: large sample, consistency for recent years, incorporated in Census of Agriculture enabling useful cross runs. Disadvantage: Tax data do not distinguish real from personal property, include only on taxes paid by the operator and do not specify

- exactly on how many acres (real property) taxes are paid. The survey could easily be modified to be useful but in present form, the tax data are almost useless.
3. AELOS. Census of Agriculture's Agricultural Economics and Land Ownership Survey (1988), follow on of the 1987 Ag Census. Report contains rich detail on many items including taxes paid by both operators and landlords connected to number of acres and value of the land taxed, thus yielding effective taxes paid by value (not, of course, final incidence and net effective taxes). Contains the value of cash rentals and cash rented land. Advantage: Substantial detail on items related through ownership, tied to the 1987 Census of Agriculture. An estimate of the market value of the real estate and the taxes thereon by the same respondent, the owner/taxpayer. Disadvantage: The survey was taken only in 1988 and not repeated in 1993. A USDA/Census bulletin contains data and interpretation of tax data. See: Gene Wunderlich and John Blackledge, *Taxing Farmland in the United States*, USDA Economic Research Service, AER No. 679, Mar, 1994.
 4. Census of Governments. Quinquennially the Census of Governments reports on finance, state and local revenue, government organization, employment. Of particular interest is Volume 2 on assessed valuations for local general property tax and assessment/sales price ratios. The survey, hence reports, are urban oriented. Some data before 1992 were reported on "farms and vacant lots". However, the definition of agricultural land was not comparable to definitions in other agencies. Advantage: Scope of coverage, good data for perspective. An appendix on preferential assessment for agriculture contains a good quick summary of state statutes. See also the appendix on exemptions and other features by state. Disadvantage: No direct application to agriculture, special details are for selected cities.
 5. USDA, Economic Research Service. Farm Costs and Returns Survey. The FCRS is an annual enumerative survey of a sample of farm operators to produce great detail on farm and ranch operations and farm household income valid generally at the regional level (10 regions). Advantage: annual reporting, connected to type of farm and other detail. Disadvantage: Like Census, FCRS reports taxes as an operator expense, does not distinguish real and personal property, and does not collect data from landlords.
 6. Other sources: See Advisory Commission on Intergovernmental Relations, especially the annual report *Significant Features of Fiscal Federalism*.

Appendix Tables

Some additional state detail on agricultural taxes are provided in the following tables. Appendix table 1 contains data from the USDA annual survey of agricultural real property taxes. Data are requested from 4000 jurisdictions whose fiscal year varies widely. In general, the reporting period designated 1993 is the year July 1993 to July 1994.

Appendix table 2 shows estimates of the portion of agricultural return to land (proxied by cash rents) that is paid in real property taxes (e.g., 0.22 for U.S.). The table also shows the ratio of net rental (gross cash rental-taxes) to value. These data are from the 1988 AELOS survey described above. Where the value of agricultural land is strongly influenced by nonagricultural forces (e.g., Northeast) net rents are completely absorbed by taxes. As an investment one would only hold such land for nonagricultural purposes or capital gains.

Appendix table 3a shows essentially the same type of relationship as table 2, but for

1994, with USDA data. However, the USDA sources allow such comparisons only for 26 states. Table 3b from the same USDA sources, makes comparisons for 1988. Table 3c is derived from AELOS, the source of data for table 2, but only for the 26 states reported for USDA data. From these tables, one can observe wide variation in the percentage of agricultural return taken by real property taxes. Regional differences are noteworthy.

Appendix Table 1
Taxes levied on agricultural real estate, by State, 1992-93

State	Total taxes		Average tax per acre		Taxes per \$100 of full market value	
	1992	1993	1992	1993	1992	1993
	Million dollars		Dollars		Dollars	
Alabama	10.9	11.1	1.32	1.32	0.16	0.15
Arizona	49.2	50.7	5.85	6.02	1.94	1.97
Arkansas	38.0	38.6	2.76	2.83	0.38	0.37
California	314.1	338.7	12.87	13.93	0.73	0.81
Colorado	81.2	83.2	2.83	2.90	0.77	0.76
Connecticut	10.0	9.9	27.46	27.85	0.68	0.65
Delaware	1.2	1.2	2.17	2.24	0.10	0.09
Florida	143.8	140.7	14.75	14.71	0.72	0.71
Georgia	53.4	52.4	5.39	5.29	0.60	0.55
Hawaii	42.3	42.9	24.92	25.33	0.69	0.74
Idaho	40.4	39.8	3.64	3.58	0.53	0.52
Illinois	428.6	431.2	15.18	15.32	1.01	1.02
Indiana	131.0	138.6	8.23	8.71	0.63	0.64
Iowa	350.2	358.9	11.13	11.44	0.95	0.92
Kansas	102.7	107.1	2.22	2.32	0.46	0.47
Kentucky	41.6	43.6	3.04	3.19	0.31	0.29
Louisiana	19.4	18.2	2.61	2.48	0.29	0.26
Maine	13.5	13.7	10.37	10.77	1.11	1.09
Maryland	22.7	23.8	10.64	11.14	0.47	0.44
Massachusetts	15.3	14.7	26.31	26.87	0.77	0.73
Michigan	359.5	359.4	35.65	35.97	3.23	3.18
Minnesota	196.1	198.2	7.45	7.56	0.85	0.84
Mississippi	22.7	22.3	2.33	2.29	0.32	0.30
Missouri	75.9	78.4	2.63	2.73	0.38	0.38
Montana	80.5	86.1	1.66	1.78	0.66	0.66
Nebraska	352.8	398.0	8.06	9.10	1.42	1.57
Nevada	4.1	4.1	0.78	0.76	0.34	0.36
New Hampshire	8.3	9.2	21.18	23.80	1.04	1.09
New Jersey	35.0	36.0	40.83	42.40	0.86	0.93
New Mexico	12.5	12.5	0.41	0.41	0.17	0.18
New York	165.4	160.3	20.98	20.33	2.00	1.82
North Carolina	58.5	59.8	6.90	7.12	0.55	0.54
North Dakota	87.0	90.2	2.33	2.42	0.65	0.62
Ohio	155.9	167.0	10.52	11.42	0.84	0.90
Oklahoma	63.6	64.6	2.04	2.07	0.41	0.41

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Taxes levied on agricultural real estate, by State, 1992-93

State	Total taxes		Average tax per acre		Taxes per \$100 of full market value	
	1992	1993	1992	1993	1992	1993
	Million dollars		Dollars		Dollars	
Oregon	86.2	77.8	5.45	4.91	0.90	0.75
Pennsylvania	131.8	132.8	17.79	18.13	0.98	1.04
Rhode Island	2.9	3.0	54.38	58.51	1.18	1.20
South Carolina	19.5	19.8	4.23	4.33	0.45	0.50
South Dakota	133.4	152.0	3.61	4.11	0.99	1.11
Tennessee	52.3	53.2	4.50	4.65	0.46	0.44
Texas	367.5	379.3	2.93	3.02	0.63	0.64
Utah	11.7	12.1	1.66	1.74	0.39	0.38
Vermont	20.8	21.3	14.98	15.77	1.38	1.36
Virginia	59.0	61.7	7.15	7.57	0.52	0.58
Washington	72.3	74.2	5.63	5.78	0.71	0.74
West Virginia	4.6	4.5	1.37	1.34	0.19	0.19
Wisconsin	302.2	308.2	18.68	19.27	2.15	2.07
Wyoming	17.5	18.5	0.74	0.78	0.54	0.52
United States 1/	4,869.2	5,023.3	5.78	5.98	0.84	0.85

1/ Excludes Alaska.

Source: Economic Research Service, Agricultural Real Estate Tax Survey.

Appendix Table 2
Value of Cash Rented Farmland, Cash Rentals, and Real Property Taxes, by States, 1988, AELOS Data

State	Value per acre	Gross cash rent/acre	Tax per acre	Net cash rent/acre	Ratio of tax to cash rent	Ratio of net rent to value
Alabama	643	20.65	2.84	17.81	0.14	0.03
Alaska	132	3.76	2.71	1.05	0.72	0.01
Arizona	523	11.95	2.38	9.57	0.20	0.02
Arkansas	730	49.87	6.27	43.60	0.13	0.06
California	1,265	45.00	12.61	32.39	0.28	0.03
Colorado	321	8.14	2.49	5.65	0.31	0.02
Connecticut	6,732	47.56	31.67	15.89	0.67	0.00
Delaware	1,452	58.33	9.12	49.21	0.16	0.03
Florida	1,605	41.46	9.93	31.53	0.24	0.02
Georgia	742	37.94	6.89	31.05	0.18	0.04
Hawaii	2,758	106.17	8.88	97.29	0.08	0.04
Idaho	622	40.37	6.57	33.80	0.16	0.05
Illinois	1,465	68.96	15.21	53.75	0.22	0.04
Indiana	1,136	65.46	11.53	53.93	0.18	0.05
Iowa	1,129	79.68	14.53	65.15	0.18	0.06

Appendix Table 2
Value of Cash Rented Farmland, Cash Rentals, and
Real Property Taxes, by States, 1988, AEL05 Data

State	Value per acre	Gross cash rent/acre	Tax per acre	Net cash rent/acre	Ratio of tax to cash rent	Ratio of net rent to value
Kansas	325	16.81	5.55	11.26	0.33	0.03
Kentucky	993	46.64	3.53	43.11	0.08	0.04
Louisiana	670	39.39	4.09	35.30	0.10	0.05
Maine	918	43.18	10.88	32.30	0.25	0.04
Maryland	2,390	54.80	13.42	41.38	0.24	0.02
Massachusetts	3,705	41.85	38.85	3.00	0.93	0.00
Michigan	956	42.61	21.61	21.00	0.51	0.02
Minnesota	729	47.61	7.89	39.72	0.17	0.05
Mississippi	650	39.02	3.19	35.83	0.08	0.06
Missouri	569	27.53	3.11	24.42	0.11	0.04
Montana	162	10.58	1.92	8.66	0.18	0.05
Nebraska	358	21.09	6.36	14.73	0.30	0.04
Nevada	127	2.82	2.17	0.65	0.77	0.01
New Hampshire	2,804	51.38	24.41	26.97	0.48	0.01
New Jersey	6,626	64.43	39.51	24.92	0.61	0.00
New Mexico	122	3.56	0.55	3.01	0.15	0.02
New York	1,273	30.75	19.18	11.57	0.62	0.01
North Carolina	1,009	53.58	9.21	44.37	0.17	0.04
North Dakota	244	19.68	3.22	16.46	0.16	0.07
Ohio	1,172	57.61	11.35	46.26	0.20	0.04
Oklahoma	346	15.69	2.77	12.92	0.18	0.04
Oregon	664	29.75	7.81	21.94	0.26	0.03
Pennsylvania	2,357	41.18	14.49	26.69	0.35	0.01
Rhode Island	5,702	52.13	44.91	7.22	0.86	0.00
South Carolina	793	35.39	4.58	30.81	0.13	0.04
South Dakota	226	14.41	3.57	10.84	0.25	0.05
Tennessee	883	44.04	4.99	39.05	0.11	0.04
Texas	402	14.67	3.20	11.47	0.22	0.03
Utah	371	11.23	2.59	8.64	0.23	0.02
Vermont	1,104	32.56	13.82	18.74	0.42	0.02
Virginia	1,006	34.04	6.95	27.09	0.20	0.03
Washington	404	24.71	6.57	18.14	0.27	0.04
West Virginia	651	19.28	2.28	17.00	0.12	0.03
Wisconsin	743	40.64	17.50	23.14	0.43	0.03
Wyoming	122	4.94	1.15	3.79	0.23	0.03
United States	594	27.30	6.08	21.22	0.22	0.04

Source: U.S. Department of Commerce, Bureau of Census. 1990. Agricultural economics and land ownership survey (1988). 1987 Census of Agriculture. AC87-RS-2. Vol. 3, part 2.

Appendix Table 3a
 Value of Cash Rented Farmland, Cash Rentals, and
 Real Property Taxes, by States, 1994

State	Value per acre	Gross cash rent/acre	Tax per acre	Net cash rent/acre	Ratio of tax to cash rent	Ratio of net rent to value
Alabama	703	28.90	1.32	27.58	0.05	0.04
Arkansas	598	46.80	2.83	43.77	0.06	0.07
Delaware	2,177	66.50	2.24	64.26	0.03	0.03
Georgia	934	29.80	5.29	24.51	0.18	0.03
Illinois	2,012	102.30	15.32	86.98	0.15	0.04
Indiana	1,354	89.00	8.71	80.29	0.10	0.06
Iowa	1,382	100.00	11.44	88.56	0.11	0.06
Kentucky	885	46.90	3.19	43.71	0.07	0.04
Louisiana	819	46.80	2.48	44.32	0.05	0.05
Maine	624	38.60	10.77	27.83	0.28	0.04
Maryland	3,596	61.00	11.14	49.86	0.18	0.01
Michigan	800	45.40	35.97	9.43	0.79	0.01
Minnesota	794	62.20	7.56	54.64	0.12	0.07
Mississippi	602	31.80	2.29	29.51	0.07	0.05
Missouri	651	47.40	2.73	44.67	0.06	0.07
New York	1,095	38.40	20.33	18.07	0.53	0.02
North Carolina	1,414	34.20	7.12	27.08	0.21	0.02
North Dakota	314	25.50	2.42	23.08	0.09	0.07
Ohio	1,411	68.40	11.42	56.98	0.17	0.04
Pennsylvania	2,863	44.50	18.13	26.37	0.41	0.01
South Carolina	928	22.00	4.33	17.67	0.20	0.02
South Dakota	274	23.00	4.11	18.89	0.18	0.07
Tennessee	808	41.30	4.65	36.65	0.11	0.05
Vermont	1,781	28.00	15.77	12.23	0.56	0.01
Virginia	1,372	27.90	7.57	20.33	0.27	0.01
Wisconsin	734	57.10	19.27	37.83	0.34	0.05
26 States	949	51.67	8.16	43.52	0.16	0.05

USDA, Economic Research Service data

Appendix Table 3b
Value of Cash Rented Farmland, Cash Rentals, and
Real Property Taxes, by States, 1988

State	Value per acre	Gross cash rent/acre	Tax per acre	Net cash rent/acre	Ratio of tax to cash rent	Ratio of net rent to value
Alabama	598	29.30	1.23	28.07	0.04	0.05
Arkansas	597	35.80	2.83	32.97	0.08	0.06
Delaware	1,903	55.20	1.37	53.83	0.02	0.03
Georgia	766	26.80	4.93	21.87	0.18	0.03
Illinois	1,224	83.20	16.69	66.51	0.20	0.05
Indiana	1,026	73.90	7.17	66.73	0.10	0.07
Iowa	977	82.10	10.24	71.86	0.12	0.07
Kentucky	876	28.40	2.84	25.56	0.10	0.03
Louisiana	973	36.00	2.47	33.53	0.07	0.03
Maine	585	30.40	8.53	21.87	0.28	0.04
Maryland	2,786	58.50	9.37	49.13	0.16	0.02
Michigan	700	39.20	30.94	8.26	0.79	0.01
Minnesota	613	52.10	5.86	46.24	0.11	0.08
Mississippi	543	30.40	1.93	28.47	0.06	0.05
Missouri	539	44.70	2.37	42.33	0.05	0.08
New York	717	29.40	17.14	12.26	0.58	0.02
North Carolina	1,183	21.40	5.62	15.78	0.26	0.01
North Dakota	314	25.40	2.07	23.33	0.08	0.07
Ohio	1,016	62.00	9.95	52.05	0.16	0.05
Pennsylvania	1,752	43.80	14.57	29.23	0.33	0.02
South Carolina	827	21.50	3.06	18.44	0.14	0.02
South Dakota	215	18.90	2.85	16.05	0.15	0.07
Tennessee	913	42.90	4.06	38.84	0.09	0.04
Vermont	1,115	30.10	12.38	17.72	0.41	0.02
Virginia	1,063	28.70	5.83	22.87	0.20	0.02
Wisconsin	645	50.30	15.59	34.71	0.31	0.05
26 States	736	44.11	7.09	37.02	0.16	0.05

USDA, Economic Research Service data

Appendix Table 3c
 Value of Cash Rented Farmland, Cash Rentals, and
 Real Property Taxes, by States, 1988 AELOS Data

State	Value per acre	Gross cash rent/acre	Tax per acre	Net cash rent/acre	Ratio of tax to cash rent	Ratio of net rent to value
Alabama	643	20.65	2.84	17.81	0.14	0.03
Arkansas	730	49.87	6.27	43.60	0.13	0.06
Delaware	1,452	58.33	9.12	49.21	0.16	0.03
Georgia	742	37.94	6.89	31.05	0.18	0.04
Illinois	1,465	68.96	15.21	53.75	0.22	0.04
Indiana	1,136	65.46	11.53	53.93	0.18	0.05
Iowa	1,129	79.68	14.53	65.15	0.18	0.06
Kentucky	993	46.64	3.53	43.11	0.08	0.04
Louisiana	670	39.39	4.09	35.30	0.10	0.05
Maine	918	43.18	10.88	32.30	0.25	0.04
Maryland	2,390	54.80	13.42	41.38	0.24	0.02
Michigan	956	42.61	21.61	21.00	0.51	0.02
Minnesota	729	47.61	7.89	39.72	0.17	0.05
Mississippi	650	39.02	3.19	35.83	0.08	0.06
Missouri	569	27.53	3.11	24.42	0.11	0.04
New York	1,273	30.75	19.18	11.57	0.62	0.01
North Carolina	1,009	53.58	9.21	44.37	0.17	0.04
North Dakota	244	19.68	3.22	16.46	0.16	0.07
Ohio	1,172	57.61	11.35	46.26	0.20	0.04
Pennsylvania	2,357	41.18	14.49	26.69	0.35	0.01
South Carolina	793	35.39	4.58	30.81	0.13	0.04
South Dakota	226	14.41	3.57	10.84	0.25	0.05
Tennessee	883	44.04	4.99	39.05	0.11	0.04
Vermont	1,104	32.56	13.82	18.74	0.42	0.02
Virginia	1,006	34.04	6.95	27.09	0.20	0.03
Wisconsin	743	40.64	17.50	23.14	0.43	0.03
26 States	815	42.08	8.40	33.69	0.20	0.04

USDC, Agricultural Economics and Land Ownership Survey (AELOS) Data

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Ronald Meek on the Physiocrats

"IT SEEMS SAFE to say that [the Physiocrat's] identification of the net product with rent was due at least in part to their desire that the agricultural entrepreneur should escape taxation" (in R. Meek, *The Economics of Physiocracy* [London: Allen & Unwin, 1962, p. 392]).