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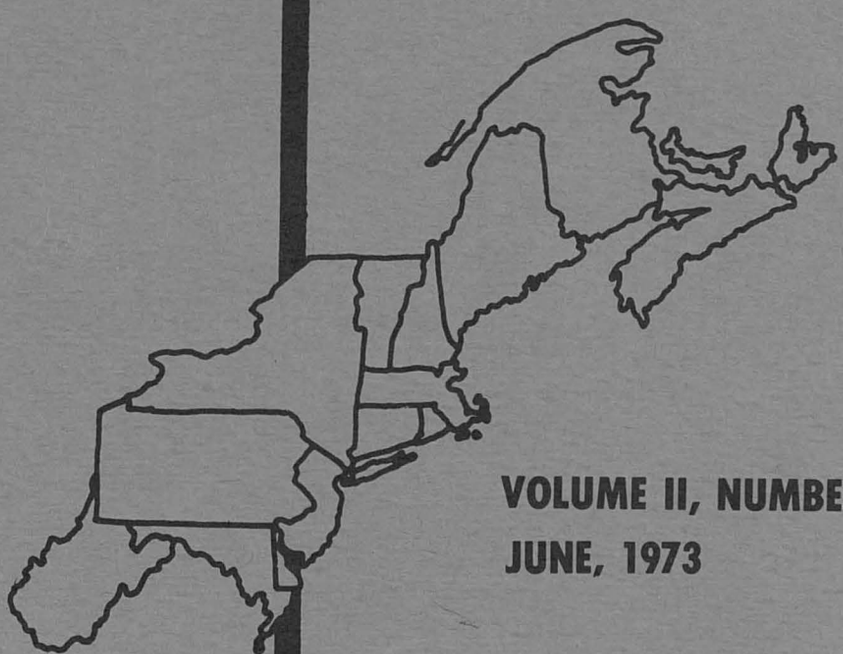

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Urban Growth and the Taxation of Agricultural Land in the Northeast*/

Donald J. Epp
Associate Professor
Department of Agricultural Economics and Rural Sociology
Pennsylvania State University

The rapid population growth of the United States and the well documented concentration of that population into a few major metropolitan areas has caused significant amounts of land to shift from agricultural to urban uses. Since World War II, the shifts in land use have caused considerable concern in the Northeast, particularly in those states containing parts of the BosWash megolopolis. Concern over the loss of open space land and the rapid decline in agricultural firms led several state legislatures to consider methods of halting, or at least controlling, the spread of cities into the rural hinterland. Maryland was the first state to pass legislation to protect open space and agriculture, enacting its law in 1955. Connecticut followed with its law in 1963 and New Jersey in 1964. All of these legislative acts declare that it is in the public interest to preserve open space lands, including farms and forests. The wording may vary from state to state but the intent is clear. These legislatures were trying to hold land in open space uses, or at least to avoid forcing their conversion because of high taxes.

Three major reasons apparently underlie the attempts to secure some form of use-value assessment for urbanizing areas. First, there is a desire to preserve open space in close proximity to urban centers. Second, many people want to preserve agricultural operations near cities. This reason is particularly strong in states like Connecticut and Pennsylvania where much of the best agricultural land in the state is in an area of rapid urban growth. Third, some people wish to obtain higher incomes for farmers by lowering the taxes they pay. The third reason mentioned -- to give farmers a higher income -- is not included in the preamble of any tax bill, and it is not likely to receive

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prominent mention. Nevertheless, as will be shown below, the policies adopted accomplish this objective better than they do the first two objectives.

Effects of Use-Value Assessment

The objective of this paper is to examine use-value assessment of farmland as a method for accomplishing the goals set forth. The technique will be examined first from a theoretical basis. The empirical evidence will then be examined to see how the technique has worked in those states in the Northeast where it has been tried.

A Priori

It is doubtful that significant acreage will remain in active agricultural use in the long run simply because it is assessed at less than market value. The assessment of farmland according to its use-value presents the farmer with two alternatives: He can continue to farm the land and receive an income that is enhanced by the lower tax burden, or he can sell his land and receive the capital gains from the increased value of the land. Advocates of use-value assessment contend that the additional income to the farmer from lowered taxes will be sufficient to offset the incentive to sell the land. Some quick arithmetic shows the weakness of this argument. Let us assume Farmer Jones owns 100 acres of land near the city that is worth $2,000 per acre for urban uses and $500 per acre for agricultural purposes. Jones is a good manager, so we will assume he has a net return of $30 per acre after taxes. The taxes would be about $60 per acre in the Philadelphia area based on the true market value of $2,000 per acre. The two alternatives of this case are as follows: (1) Jones may receive a $3,000 net income from farming plus an additional $4,500 if the tax rate remains the same but is applied to the agricultural value of the land rather than market value. This give an annual cash income of $7,500 -- which is a good income for many farmers these days. (2) Jones could sell the farm, put the $200,000 he receives into savings certificates at 6 percent interest and receive $12,000 cash income annually from interest payments.1/ In this hypothetical, but realistic case, the farmer receives $4,500 more cash income due to use-value assessment of his land. Yet if he continues farming rather than selling out, he foregoes about $4,500 in cash income and one year of leisure time.

1/ The amount available for investment would be less than the total market value of the farm real estate. Selling costs, taxes and other expenses must be deducted from the gross sale price. These expenses will vary depending on applicable state and federal laws and the particular arrangements under which the farm is sold.

The emphasis in the preceeding analysis is on cash income. It is, of course, true that capital gains income may also accrue to the individual, but cannot be used for current expenses unless the asset is sold. Capital gains may accrue to owners of either real estate or other financial assets with a market price. To relate this to the example above, the alternatives for Farmer Jones would be (1) to continue farming with $7,500 per year in cash income and $200,000 worth of real estate or (2) sell the farm, use the proceeds of the sale (about $200,000; see footnote 1) to buy financial assets that return some cash income as well as have a market and the potential of capital gains (not savings certificates in this case). Farmer Jones must now decide which combination of cash income and capital gains is preferred. If he chooses to continue farming, his land need appreciate at only 2¼ percent annually to generate the $4,500 income difference between the farming alternative and the savings certificate alternative discussed above. This rate of appreciation should be achieved in most growing suburban areas today.2/ If the alternative to owning farmland is owning financial assets which also have a rate of appreciation in value, then the rate of increase in farmland value needs to be greater to provide an equivalent net worth position. Jones is still faced with a choice of income streams that differ in terms of cash income, long-term capital gains, and labor expended.

In all cases, the opportunity cost of staying in agriculture is high and many farmers will eventually harvest the capital gains. Even if the present farmer is willing to forego the higher cash income that accompanies leaving the farm, his heirs are very likely to choose the higher cash income. Thus, while use-value assessment may provide an incentive for a farmer to continue farming for a short time, in the longer run the land will eventually convert to other uses.

The difficulty of farming in an increasingly urbanized area may also hasten the day when land use changes. As adjacent land is sold for residential development and people accustomed to an urban way of life move in, the farmer must adjust his operations. Noisy field operations cannot be performed during certain hours without receiving a storm of protest, even though crop and weather conditions would not permit postponing work. Barnyard odors are criticized and the increased traffic makes it more hazardous to move farm machinery from one field to another. In some cases local governments may pass ordnances that make farming more difficult.

2/ I am indebted to an anonymous reviewer for pointing out the high probability of capital gains exceeding the additional cash income to be received from savings certificates.

In other cases no legal action may be taken, but the neighbors' objections to farm noise, odors and insects may cause a farmer to seriously question the personal satisfactions from continued farming.

Even more serious than the loss of good will and reputation is the potential loss of suppliers and product outlets. As more and more land is converted to urban uses and fewer and fewer farms remain, many farm supply firms find they cannot continue in business. One by one the implement dealers, seed and feed dealers, livestock auctions, and milk processors close their doors. The remaining farmers face longer trips for purchased inputs or to market their products which means higher costs.

Granting a lower tax assessment to farms cannot alter the problem of increased costs due to the lack of nearby suppliers of purchased inputs or product outlets. Even though the tax reduction may be sufficient to keep a particular farmer on the land, the difficulty in obtaining parts for his equipment, feed and veterinary supplies for his livestock, and sending his products to market may eventually convince the farmer to sell out to the developer.

Thus, it can be expected that real estate assessments to hold land in agricultural use will face two major obstacles. First, the capital gains from selling yields a better income than continued farming and second, the loss of neighboring farms to urban uses results in higher costs and reduced personal satisfactions from farming. The effect of both of these forces is to expect land to move out of agriculture even when agricultural land is assessed at its use-value.

Although the objective of giving farmers an increased income is seldom indicated explicitly, it is an objective which might be achieved through use-value assessment of farmland. The income of farmers might be enhanced directly by reducing one of the fixed costs of farm operations and by enabling farmers to receive a greater share of the capital gains that result when farmland is converted to an urban use.

The reduction in taxes obviously means more income (or smaller losses) for those farmers still operating in areas of rising land value. It is not so obvious how use-value assessment enhances the capital gains received by farmers. One frequently hears of farmers being "forced out" by the higher taxes on real estate. What is usually meant by this expression is that rising taxes and other cash expenses exceed the farm business' ability to generate cash income. Even though the rising value of the land exceeds the rising costs, the cash expenses, including taxes, must be paid from current income. This cash flow problem could be met with borrowed capital, but internal capital rationing (and perhaps external rationing in some areas) prevents farmers from borrowing the money to pay their taxes.

In some cases the farmer believes that his only alternative is to sell out. This sale is frequently accompanied by feelings of failure for his inability to make the farm return a profit and a sense of frustration that his failure was due to forces over which he had no control. His frustration is further compounded when he observes that the buyer of his farm, who usually has some source of income other than farming the land, is able to reap a sizable capital gain over a relatively short time.

In such a situation, use-value assessment, by lowering the cash costs of farming can permit the farm owner to retain possession of his land until near the time when it is ready to be used for urban purposes. With use-value assessment the land is put to active farm use, rather than lying idle, until very close to actual urban use. It also permits the farmer to receive more of the total capital gains, rather than a person with other sources of income who became an intermediate owner for purely speculative reasons.

Another effect which can be anticipated from use-value assessment of farmland is the impact on tax revenues of local governments and schools and on owners of non-farm land in the area. Since use-value assessment of farmland is assumed to reduce the tax base in a given taxing jurisdiction, either the gross tax receipts will be reduced or the tax rate must be increased to make up the lost reveue. In the first case the amount of services or the quality of services provided by the government or schools must be reduced. In the second (and more likely) case where the tax rate rises to offset the reduced base, a larger portion of the burden of providing governmental services shifts to the other tax payers in the district.

One method of use-value assessment (partially deferring the tax payment until such time as the land changes use) may help solve both the farmers' cash flow problems discussed above and provide needed revenue for local governments and schools when the land changes to urban use. Under a deferred tax plan the farm is assessed according to its use-value so long as it qualifies as a farm. When the use changes, the owner must pay a roll-back tax based on a portion of the tax previously deferred. Such a plan has been tried in several states, including New Jersey. The experience with this plan in New Jersey is reported in the next section on empirical evidence.

Empirical Evidence

For the past three years researchers at eight agricultural experiment stations have examined the effects of use-value assessment of agricultural land under the auspices of a Northeast regional research

project.3/ Four of the states represented on this research project had enacted laws providing some type of use-value assessment for farmland. These states were Maryland, New Jersey, Connecticut and Rhode Island. The research effort in these four states was directed primarily at determining the effects of those laws. The research in the other four states examined the possible impact of several alternative use-value assessment plans. The results of these studies give some empirical "flesh" to the theoretical "bones" discussed in the preceeding section.

Effect on Farms

In New Jersey, where participation in the use-value assessment program is voluntary, most of the participants were bona fide farmers. Nearly 40 percent of the participants listed farming as their primary occupation and over 60 percent of the participants with non-farm occupations received some income from farming. The participating land owners operated significantly larger farms and made significantly more capital investments than did non-participating land owners. About 40 percent of the participants indicated that the use-value assessment act had some influence on their decision not to sell their farmland, but that they would sell if the price offered were high enough.4/

Maryland makes use-value assessment automatic for any qualified land. The research in Maryland reveals a pattern similar to that found in New Jersey. Conversion of farmland to urban uses has slowed down since implementation of the use-value assessment act. There may be reasons for this other than use-value assessment, however, such as a very small amount of farmland remaining in some counties and a shift of population growth to other counties. Ishee does conclude, however, that if farmland assessments had risen at the same rate as land prices, more land would likely have been taken out of agriculture.5/

In Connecticut, the use-value assessment act has been applied to much of the forest and farmland in the central valley and areas adjacent to New York City. Research evidence and the impressions of local

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3/ The experiment stations participating actively in this project were: Connecticut, Cornell, Maryland, Michigan, New Jersey, Pennsylvania, Rhode Island, and Vermont.

4/ Koch, A. Robert, Harriet H. Morrill and Arthur Hausamann, Implementation and Early Effects of the New Jersey Farmland Assessment Act, Rutgers Experiment Station Bulletin 830, n.d.

5/ Ishee, Sidney, "The Maryland Farmland Use-Value Assessment Law," in Proceedings of the Seminar on Taxation of Agricultural and Other Open Land, Michigan State University, April 1-2, 1971, p. 32.

officials agree that use-value assessment has removed much of the pressure to convert farmland to urban use. Here is, however, indication that such land will not remain in open space use forever. When the price is right, the owner will sell to a developer.6/

Evidence from all three of these states supports the general conclusions developed from theory. First, use-value assessment is not likely to hold land out of urban uses permanently. As the value of the land for other uses rises, it is increasingly likely that a farmland owner will sell out. Second, there is some indirect evidence that farmers are able to acquire more of the capital gains from shifting land use. The ability and willingness to withhold their land from the market until the price increases further, seems to be enhanced by use-value assessment.

None of the studies gave explicit attention to a third problem developed above -- that being, the loss of farm supply sources and product outlets. The continuation of farm operations adjacent to metropolitan centers and the capital investments made by participants in New Jersey's use-value assessment program indicates indirectly that farmers don't anticipate severe difficulty in obtaining needed support services.

There is one effect of use-value assessment on farms that frequnetly remains hidden. Some farmland owners may pay higher taxes if a use-value assessment program is adopted than under their present assessments. This effect was shown most dramatically in the Pennsylvania study which analyzed the possible effect of a use-value assessment plan similar to that used in New Jersey. A sample of 71 farms in five different counties outside of the Philadelphia metropolitan area showed that such a use-value assessment plan would reduce taxes on only fourteen of these farms with the largest reduction being 59 percent of the present tax bill. The other 57 farms would pay higher taxes under a use-value assessment than they currently pay, assuming that tax rates remained the same. The increase ranged from 9 percent to 582 percent of the present tax bill. In three of the five counties, the county average increase in real estate taxes per farm ranged from a low of $762 to a high of $1,042. There was one county where the average decrease was only $36 and the fifth county had an average decrease of $127. It is evident that in at least three of the five Pennsylvania counties studied, farmland is already receiving a preferential assessment.7/

6/ Fellows, Irving F., "The Impact of Public Act 490 on Agriculture and Open Space in Connecticut," in Proceedings of the Seminar on Taxation of Agricultural and Other Open Land, Michigan State University, April 1-2, 1971, p. 52.

7/ Epp, Donald J., "Assessment of Farmland According to Use," Farm Economics, Cooperative Extension Service, Pennsylvania State University, October, 1972, 4 pp.

The de facto preferential assessment of farmland under current assessment methods is not unique to Pennsylvania. Evidence from New Jersey suggests that a similar situation existed in parts of that state prior to enactment of their use-value assessment act. In such cases, there was very little participation in the use-value assessment program. As assessments rose to and above the agricultural use-value, more farmers signed up for use-value assessment.8/

This observation shows one of the unexpected results of use-value assessment of farmland. If a uniform system is used to determine agricultural value, it will cause a more uniform assessment of farmland across the state. This means that areas where farmland was already receiving a very low assessment, may have farm assessment rise rather than fall. It is this author's opinion that achieving uniformity in the basis of assessment is desirable. It is, however, a surprise to some farmers to find that their farms are already below the agricultural value of the land.

Effect on Government

One of the major criticisms of use-value assessment is that it reduces the tax base upon which local government and schools depend. In order to obtain the needed revenue from property taxes, these local taxing authorities, frequently raise tax rates. This shifts the burden of paying for local government and schools more heavily to non-farm properties.

The evidence from research supports this criticism for those areas where use-value assessment lowers farm tax bills. In one township in New Jersey with large amounts of eligible farmland, the tax rates increased an average of 33 percent.9/ Maryland also experienced some increases in tax rates due to a lowered tax base, although the effect varied greatly from one county to another. The county most greatly affected by use-value assessment is Montgomery County, a substantial part of which contains suburbs of Washington, D.C. A recent newspaper article reported a study by the State of Maryland estimating that in Montgomery County there are about 6,000 acres assessed as farmland at $749,000 but this land has been rezoned for higher use and is worth $88 million. The Michigan study of potential impacts of use-value assessment showed that property taxes would be

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8/ Koch, A. Robert, Harriet H. Morrill and Arthur Hausamann, op. cit., p. 15.

9/ Annual Report of Cooperative Regional Project NE-67, January 1 to December 31, 1971, and James Beierlein, "Impact of the farmland Assessment Act on Freehold Township, New Jersey." Unpublished Masters' thesis, Rutgers University, 1971.

reduced significantly for farmers located near cities with a resulting additional tax burden shifted to nonfarmers.10/

While use-value assessment of farmland may shift some tax burden to owners of other types of land, it is possible that the burden may be less than what might be imposed by converting land from agricultural to urban uses. It has been widely recognized that residential use of land may not generate sufficient tax revenue to pay all the costs associated with local government and schools.11/ Commercial agriculture and industrial property in the taxing district help to offset this deficit by contributing more tax dollars than the services required consume. If such is the case, any move to convert land use from agricultural to residential use would impose additional tax burdens on other property owners. Such added burdens might be greater than the added tax cost associated with use-value assessment of farmland.

The major exception to this is, of course, those areas of Pennsylvania where use-value assessment would increase the tax base. If such an assessment method were enacted, the tax rate could be decreased and still raise the same revenue as before. Partly because of the perverse effect on farmland and partly because of the need for reassessment of other types of property in many counties of Pennsylvania, it is unlikely that use-value assessment would be adopted except as part of a total reassessment program.

Summary

Use-value assessment of agricultural and other open space land is a popular idea. Many states have enacted some type of legislation to help reduce the tax burden on farmland in the urban fringe. Several other states have considered such legislation but either have not been able to pass the legislation or have run into problems concerning its constitutionality. In most cases the reason stated for wanting such legislation is to preserve open space and agriculture in the areas adjacent to large cities.

Theoretically, it is doubtful that use-value assessment can do much to hold land in agriculture. The capital gains from selling for urban uses more than offset the increased income due to lower taxes on farmland. There may be some effect on land use in the short run

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10/ Annual Report of Cooperative Regional Project NE-67, January 1 to December 31, 1971.

11/ For example, see Dick Netzer, "Financing Suburban Development" in Dieter K. Zschock, ed., Economic Aspects of Suburban Growth, Economic Research Bureau, State University of New York at Stony Brook, 1969, pp. 89-94.

as farmers can better meet the cash costs of farming from current income if taxes do not rise with increasing land values. This ability to keep farming the land until nearer the time it is ready for converting to urban use means that farmers may reap more of the capital gains. Along with the lowered taxes on farmland, it can be expected that local taxing authorities which depend on the real estate tax will increase tax rates to make up for a lowered tax base, thus shifting the burden of supporting these services more heavily onto non-farm properties.

The empirical evidence supports most of the theoretical conclusions. In states that have use-value assessment in the Northeast, farmers have benefited from lower tax bills and have in turn made investments that indicate an intention to continue farming, at least for the short run. Available evidence indicates that these farmers are willing to sell their land when the price is right, but with use-value assessment they feel less pressure to sell. Local governments and school districts in areas having use-value assessment could lower tax rates if the tax base had not been reduced.

There are exceptions to this pattern of effects from use-value assessment. In many parts of Pennsylvania, and probably in other states as well, present farmland assessments are less than agricultural value. In such a case, use-value assessment would increase the tax base and shift more of the burden of supporting local government and schools to farmland.

The experience to date suggests that use-value assessment can, in certain circumstances, help to hold some farmland and other open space land out of urban use in the short run. It is very unlikely that this technique can do the job over the long run. At best, use-value assessment can buy some time in which to develop techniques and public support for the rational development of our fringe areas.