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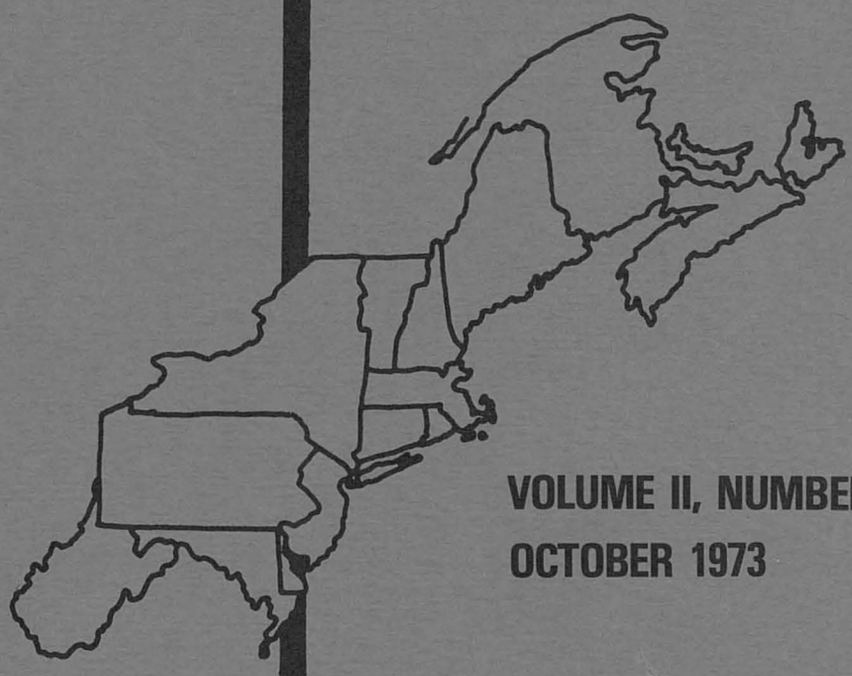

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ALTERNATIVE METHODS FOR KEEPING LAND IN AGRICULTURE*

Frederic O. Sargent
Professor and Resource Economist
Department of Resource Economics
Agricultural Experiment Station
University of Vermont

Creeping urbanization without land use controls is threatening rural areas with the loss of prime and scenic agricultural land. The operation of a relatively free land market shifts land to the highest bidder—one who believes he can make a profit, or one who judges his psychic income from ownership and/or use sufficient to make him prefer land ownership to alternative investments or consumption. As farmers retire and sell to nonfarmers, prime agricultural land adjacent to cities is transferred to more intensive, profitable, and irreversible urban uses—residences, commerce, recreation, and industry. Farmland is shifted from active farming to retirement homes and second homes, both at retail and in large developments. This land use trend is frequently cited as undesirable by municipal planners since it leads to a loss of prime agricultural land which may be needed for future food production and reduces pastoral scenery. In a recent study in Massachusetts, J. B. Wyckoff found that the process of suburbanization was consuming rural land at a very rapid rate—from two to eight times the historic rate.1/

Attitude surveys conducted to determine town and regional planning goals often show that a large percentage of respondents prefer to have large areas kept in agriculture, and to have fields kept open and free of residential or commercial buildings.2/ The problem is not one of shortage of

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* This paper focuses on keeping land in agriculture--not on the similar and overlapping problem of keeping land open.

1/ "Impact of Suburbanization on Rural Towns," by J. B. Wyckoff, Journal of the Community Development Society, Vol. 4, No. 1, Spring 1973, p. 48.

2/ See inter alia "Shelburne, Vermont, Quality Environment Plan," 1973, and "Proposal for a Quality Environment," Essex, Vermont, 1973.

any type of land but rather the need to plan land use according to determined public goals. How can agricultural land be kept in agriculture to achieve a public goal by municipal planning, zoning, and other land use controls?

Discussions of this question often focus on tax incentives for keeping land in agriculture. A survey of possible solutions to this problem discloses that a great many methods besides tax relief have been proposed and tried. The purpose of this paper is to present a hypothesis that if all alternative methods are analyzed and compared on the basis of public and private costs, political and social acceptability, and permanence, a method, or more likely a combination of methods, may be found which will be financially feasible and politically acceptable for keeping a significant amount of land in agriculture. Let us review briefly the more prominent methods for keeping land in agriculture and then discuss a systematic basis for comparison to find the most acceptable and most effective combination.

Restricting Development to Sewered Lots

The subdivision regulation of a municipality may require all future construction to be on a municipal sewer line and municipal water line. This method places control over urban expansion in the hands of the planning commission and is an effective tool for eliminating string development in the open country. It provides an effective way to control the concentration of development in urbanizing areas. Employment of this method requires a high degree of planning competence and strong public support—two conditions not often found in rural areas.

Conservation Zoning

A conservation zone prohibits building on floodplains, on steep slopes (above 15 percent), along streambanks, on wetlands, and at higher elevations. Agricultural uses may be permitted. This is a fairly new land use concept. The extent to which this method keeps land in agriculture depends upon the percentage of agricultural land which falls into one of the protected categories. In some towns it would protect all prime agricultural land from building; in others only a small percentage would be covered. The advantage of this method is that it is justified on the grounds that it protects public health by protecting water supplies. This is a strong legal basis for land use zoning.3/

3/ See "Planning and Zoning in Vermont with Soil Surveys," USDA Soil Conservation Service, Burlington, Vermont, 1973.

Clustering

Clustering allows land to be kept in agricultural use by requiring all buildings to be clustered on a specified minimum acreage of the development. This requirement, to be effective, should relate building sites to soil suitability for onsite sewage disposal. The zoning ordinance should indicate the maximum number of building units per acre in addition to the clustering requirement. As an example, the developer might be required to develop at least 50 acres at a time. He might be restricted to building on only 25 percent of the acreage and on land with soils suitable for onsite sewage disposal. He may further be required to dedicate the development rights of the remaining 75 percent to the town in perpetuity. This would keep 75 percent of the land unbuilt upon and make it possible for it to remain in agriculture or to be kept open.4/

Transferable Development Rights

Under this method, developed by State Senator William Goodman of Maryland, TDR's (Transferable Development Rights) are prorated equally to all landowners. The planning commission publishes a schedule showing how many development rights are required for each type of development throughout the municipality. Thus a person wishing to build a 200-unit condominium might be required to have 5,000 units of TDR. If he had only 1,000 units on his own land he would have to purchase 4,000 TDR units from other landowners. Hence the total amount of development is controlled and all landowners have development rights to sell or use. This plan would require a high degree of planning expertise. There is great interest in this method as it controls growth without depriving landowners of an opportunity to profit from sale of development rights. We may expect to see examples of this method soon.5/

4/ See "Cluster Development," by William H. Whyte, American Conservation Association, 1964.

5/ See "The Application and Cost of the Development Right Concept to Farmland in New Jersey," by Victor Kasper, Jr., Lee D. Schneider, and Donn A. Derr, Department of Agricultural Economics and Marketing, Pennsylvania State University, Report #19, February 1973.

The St. George Plan

The town of St. George, Vermont, proposed that the TDR system be combined with municipal ownership of the central business district land. With this combination, the municipality will control both quantity and location of development. St. George has started to implement the municipal ownership part of this scheme.6/

Scenic Easements

Scenic easements consist of the purchase of development rights at strategic locations to protect vistas. Scenic easements have been used effectively in Wisconsin to protect the scenery along the Great River Road paralleling the Mississippi River. Maine passed conservation easement enabling legislation in 1970. The chief purpose of these easements is to protect the scenery. But since they involve the purchase of development rights on wide strips of agricultural land, they, in fact, protect a considerable amount of prime agricultural land from nonagricultural use. This method, like floodplain zoning, would affect only certain agricultural land. It should be considered for scenic floodplains of major rivers where it can be justified, as in the public interest, by protecting a major aesthetic asset.7/

Agricultural Zoning

Zoning has often been used in attempts to keep agricultural land in agriculture. This method works well until economic pressures build up to the point that a zoning change is demanded by both a prospective buyer and the landowner. It can only be used effectively if it is associated with a professional tax appraisal system. This is necessary to assure that land is appraised for its legal zoned uses—not for more intensive uses. This method may be effective for

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6/ "Land Use Control that Compensates Landowners," by Armand Beliveau, Agency of Development and Community Affairs, Montpelier, Vermont, March 10, 1973.

7/ "A Market Study of Properties Covered by Scenic Easements Along the Great River Road in Vernon and Pierce Counties," Department of Transportation of Wisconsin, October 1967.

the period of time necessary to develop a more permanent procedure or in combination with clustering.8/

Farmland Assessment Contracts (Tax Stabilization Agreements, Differential Assessment, or Use Value Assessment)

Four Vermont municipalities (Springfield, Dorset, Norwich, and Stowe) now make tax stabilization contracts with farmers. Under these agreements the farmers' property taxes are based on agricultural land use. These contracts run for a period of 5 years. They are based on a state law (Title 24, Section 2741) designed to authorize towns to make tax stabilization contracts with industries and businesses.

This method is suitable in special situations; i.e., where the citizens approve the implied land tax shift from farmers to nonfarmers, and where tax appraisal and planning procedures are at such an elementary level of development that agricultural zoning is not acceptable. Like agricultural zoning, it would probably be only a temporary expedient.

Many methods have been proposed, discussed, and tested for preferential taxation of farmland. The literature concerning these methods should be studied in developing a total land use control package.9/

Public Purchase—Restricting and Resale

Land may be protected from nonagricultural demand forces by public purchase in fee simple.10/ After purchase, the government agency may restrict land used to agriculture and

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8/ See "Hawaii Pioneers With a New Zoning Law," by Frederick K. Munns, Journal of Soil and Water Conservation, Volume No. 3, May-June 1962; and "Rural New York State's Agricultural Districts," by Howard E. Conklin, New York's Food and Life Sciences, Vol. 5, No. 4, Oct.-Dec. 1972.

9/ See "Use-Value Assessment Legislation in the United States," by Raleigh Barlowe, James G. Ahl, and Gordon Bachman, Land Economics, Volume XLIX, Number 2, May 1973.

10/ See "Garden Cities of Tomorrow," by Ebenezer Howard, M.I.T. Press, 1965.

then sell the land on the open market for the permitted uses (i.e., farming). Theoretically, this appears to be a very useful and effective device to supplement other methods of maintaining land in agriculture. We will soon know more about this method since it is presently being implemented in Pennsylvania (Act 442, Senate Bill 253) and in British Columbia (Bill No. 42 of 1973 Land Commission Act) where enabling legislation has recently been passed to establish a land purchase and resale system. This method is also referred to as the "State Land Development Corporation" method.

The Institutionalized Covenant

Deed restriction has been used for many years in attempts to control land use. The principal weakness of this method is that enforcement is the obligation of adjoining property owners, not of the police power of the municipality. This problem is solved when the restrictive covenants are institutionalized and made enforceable by a homeowners' association or by a lakeshore association. The Lake George Park Commission of Lake George, New York, has successfully developed an institutionalized covenant system to control lakeshore land use.11/ This method has merit for special situations like lakeshores or river valleys where public interest is fairly uniform and focused on protection of a specific and limited area.

The Land Trust

The land trust is a private counterpart to the state land corporation. It consists of a private nonprofit corporation whose objective is to hold land in its open and natural state. The land trust concept could be adopted to protect agricultural land by purchase of development rights from farmers. The Maine Coast Heritage Trust, founded in 1971, is active in protecting Maine coastal islands. It should work well where the private interest and wealth is sufficient to support such a program but it would be difficult to implement on a large scale in moderate or low income regions.12/

11/ "Lakeshore Land Use Controls," by F. O. Sargent and W. H. Bingham, Vermont Agricultural Experiment Station Research Report 57, March 1969, pp. 14-15.

12/ See "The Community Land Trust," published by Center for Community Economic Development, Cambridge, Massachusetts, 1972.

Proprietary Community

There are a number of hypothetical methods which might be considered. The proprietary community would be a development built around an operating farm for scenic and sentimental reasons. The owner of the community would use the farm scene as a basis for selling lots and memberships in the homeowners association while the operating farmer would be subsidized sufficiently to keep him operating in an aesthetic, if not efficient, manner.

There are a number of modifications of this concept. For instance, a municipality might subsidize a few strategically located farms to keep them operating for aesthetic reasons. An agricultural commune might be supported for this purpose. A critical problem would be to develop a method for selecting the land to be protected which would be fair, nonarbitrary, and not discriminatory against other landowners.

Regional Planning

There are so many possibilities for keeping land in agriculture through imaginative regional planning that it needs to be listed as a separate alternative. An example of creative regional planning is found in the Connecticut River National Recreation Area proposal.[13/] This proposal could have been used to provide a framework for protecting Connecticut River bottomland farms. The specific method would be conservation or scenic easements. The regional plan would have provided the rationale to support the easement program by showing how it would be in the public interest.

Another example of the potential of imaginative planning is found in the Shelburne, Vermont, Quality Environment Plan. This plan proposes a national lakeshore which would include, among its objectives, the retention of lakeshore land in agriculture in perpetuity.[14/]

Regional plans may also be used to propose, justify, and implement greenbelts of agriculture around urban areas.

13/ "New England Heritage," Department of Interior, Bureau of Outdoor Recreation, July 1968.

14/ "Shelburne Quality Environment Plan," Shelburne Conservation Committee, Shelburne, Vermont, January 1973.

Comparison of Methods

The comparison of these methods of keeping land in agriculture requires judgments which must be made by social scientists familiar with the political framework; social attitudes; and agricultural, economic, and land use trends in the jurisdiction under consideration. If a number of social scientists participate in the appraisal of methods, the element of subjective bias will be reduced to a minimum and a most feasible method or combination of methods may be selected. This task of selection would be a logical assignment for a university advisory group assigned to counsel a regional planning commission.

The suitability of methods for keeping land in agriculture varies according to many factors, such as: (1) intensity of present trend toward nonagricultural land use, (2) land characteristics, (3) income level of people in the area, (4) level of understanding and expertise in planning, (5) skill and leadership of government and social decision-makers, and (6) public attitudes toward land use controls. Some methods would be applicable in an urban atmosphere (restricting development to sewered lots), others in a rural atmosphere (conservation zoning). Public purchase would be more feasible for a large, metropolitan state than for a small, rural state.

Table 1 provides a suggested framework for comparison of alternative methods. Some of the ratings assigned to each box would vary according to cases; other ratings may be indeterminate or require more research.

In rating alternative methods special emphasis should be given to columns "E" and "I" in Table 1. "Does the method protect all agricultural land? Is it acceptable?" In fact, these two questions are so important that a considerable amount of field data should be collected to permit more precise answers. Field surveys may be made to estimate the percentage of agricultural land covered by each method, and attitude surveys may be conducted to ascertain acceptability of alternate methods.

These methods, with all their variations, have one characteristic in common—they all require a high level of professional planning expertise to implement them. None can be expected to work if planning is at the do-it-yourself or itinerant-consultant quality level still found in many rural areas.

Table 1. Comparison of Methods of Keeping Land in Agriculture (see text for explanation)

Method	(A) Compensates landowner	(B) Relatively permanent	(C) Acceptable to owner and public	(D) Penalizes landowner	(E) Covers all agricultural land	(F) Public costs	(G) Private costs	(H) Special suitability	(I) Acceptability potential
1. Restricting development to sewered lots	No	Yes		Yes	No	Low		Urban	Good
2. Conservation zoning	No	Yes	Yes	No	No	Low	None	Rural	Good
3. Clustering	Yes	Yes	Yes	No	Yes	Low	None		Good
4. Transferable development rights	Yes	Yes	Yes	No	Yes	Low	None	Experimental	Good
5. The St. George Plan	Yes	Yes	Yes	No	Yes	High	None	Experimental	Fair
6. Scenic easements	Yes	Yes	Yes	No	No	Depends	None	Scenic river valley	Limited
7. Agricultural zoning	No	No	Yes	Yes	Yes	Low		Urban fringe	Limited
8. Farmland tax agreements	Yes	No	Yes	No	No	Low	None	High income area	Limited
9. Public purchase	Yes	Yes	Yes	No	No	High	None	National Park Metropolitan states	Variable
10. Institutional covenant	No	No		No	No			Lakeshore	Limited
11. The land trust	Yes	Yes	Yes	No	No	Low	High	High income area	Good
12. Proprietary community	Yes			No	No			Experimental	Low
13. Agricultural communes					No			Experimental	Low
14. Regional planning	Yes	Yes		No	No	High	Low	High priority areas	Good

Experience in Vermont suggests that in small, rural communities, as well as in urban conglomerations of 10,000 population, combinations of methods may be found that will address the problem of protecting the best land for agriculture. Conservation zoning appears to be understandable and acceptable to rural landowners. Clustering requires some educational efforts, but it also appears to landowners as a reasonable restriction that does not deprive them of their hard-earned or long-awaited capital gains. Education concerning soil limitations for onsite sewage disposal, with emphasis on water quality and health, helps explain the need for various land use controls. A planning educational program is necessary to establish the fact that valuable rights are actually gained through controls, and that these rights offset restrictions on individual landowners. In Vermont, the new method of rural planning called "Quality Environment Planning" appears to satisfy many of these conditions.15/

In order to obtain the necessary public support for whatever method to keep land in agriculture, it is indispensable to clearly establish the fact that this is a high priority, public goal. This is best accomplished by a 100 percent town attitude survey. In six pilot projects in Vermont, we found that the results of townwide attitude surveys may establish public goals not previously recognized as such by the town officials. The goal to keep land in agriculture has been discovered in this manner.

Researchers concerned with agricultural land should study and evaluate the results and potential results of all major methods of land use controls.16/ In the past, research has been overbalanced in the direction of tax incentives and has given inadequate attention to zoning, public purchase, easements, trusts, and other methods.

15/ See "Guidelines for Quality Environment Planning," by Frederic O. Sargent, Agricultural Experiment Station Pamphlet 38, University of Vermont, March 1973.

16/ See "Challenge of the Land," by Charles E. Little, Pergamon Press, 1969; "Land Use Controls in the United States," by John Delafons, M.I.T. Press, 1969; "The Zoning Game," by Richard R. Babcock, University of Wisconsin Press, 1966; "The Last Landscape," by William H. Whyte; and "New Jersey Land Use Planning Techniques and Legislation," by Lee D. Schneider, Department of Agricultural Economics and Marketing, Series No. 338, July 1972.

In conclusion, I would assert that if all known and relevant methods and their many variations for keeping land in agriculture are carefully studied and appraised; if there is a clear indication that this is a high priority public goal; and if expert planning assistance is available, then a combination of methods can be found that will satisfy the twin indispensable conditions of financial feasibility and political acceptability.