AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

A.E. FILE COPY

# CORNELL AGRICULTURAL ECONOMICS STAFF PAPER

## INFORMATION FOR EVALUATING LAND RETENTION PROGRAMS: THE AGRICULTURAL DISTRICT APPROACH

by

Nelson L. Bills
Richard N. Boisvert

July 1988 No. 88-15

Department of Agricultural Economics
Cornell University Agricultural Experiment Station
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York, 14853

It is the policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

# INFORMATION FOR EVALUATING LAND RETENTION PROGRAMS: THE AGRICULTURAL DISTRICT APPROACH

by

Nelson L. Bills
Richard N. Boisvert*

Programs designed to influence the timing and rate of farmland conversion near cities have been an increasingly conspicuous element of state and local land policy since the early 1960s. According to the National Association of State Departments of Agriculture (NASDA), all states have programs for use-value assessment of farmland, 44 states have right-to-farm laws, 24 have agricultural zoning, 15 provide for purchase or transfer of farmland development rights, and 12 states have now legislated provisions for the creation of agricultural districts. This paper focuses on initiatives to create agricultural districts and the steps economic analysts might take to enrich the ongoing public debate over the merits of such programs. The specific objective is to develop a better understanding of the research questions that ought to be asked regarding agricultural districts, and to outline the kinds of information needed to facilitate the analyses. To this end, the discussion of the need for information is prefaced by some background on the district approach. Contrasts in the design and scope of legislation and efforts to implement district programs are also mentioned.

## Background

The concept of an agricultural district is firmly rooted in early attempts to create institutional arrangements for reduced property tax

* Associate professor and professor, respectively, in the Department of Agricultural Economics at Cornell University, Ithaca, New York 14853.
Paper presented at an ERS conference on Land Use Transition in Urbanizing Areas: Research and Information Needs, Washington, DC, June 6-7, 1987.

liabilities on farm real estate. In 1965, the California legislature enacted the California Land Conservation Act (see appendix for references to state laws related to agricultural districts). Popularly known as the Williamson Act, this legislation provided the legal framework for property tax relief under contracts between local governments and owners of agricultural land. Local governments were authorized to create or designate "agricultural preserves" and enter into contracts with owners who were willing to restrict the use of their land for an annually renewable ten-year period. In return, owners were allowed to pay property taxes based on use value rather than market value of their land.[1]

At about the same time, the Governor of New York vetoed legislation which would have granted preferential property tax treatment to New York farmland. He did respond to the problems posed for agriculture by urban expansion, however, by appointing a Commission on the Preservation of Agricultural Land. The Commission's work led to the development of legislative proposals for the creation of agricultural districts. New York's agricultural district law was enacted in 1971.

Since that time, legislatures in ten additional states have enacted laws which make reference to the creation of agricultural "districts," "areas," or "preserves". Four states are situated in the densely populated Northeast; the others are in the Appalachian region and the upper Midwest (figure 1).

To date, about 25.8 million acres are enrolled in agricultural districts in the United States. The 1982 Census of Agriculture reported 986.7

---

[1]The use-value assessment provisions in five other states -- Hawaii, Michigan, New Hampshire, Pennsylvania, and Wisconsin -- currently require a restrictive agreement on the use of a farmland parcel in return for preferential property tax treatment (Grillo and Seid).

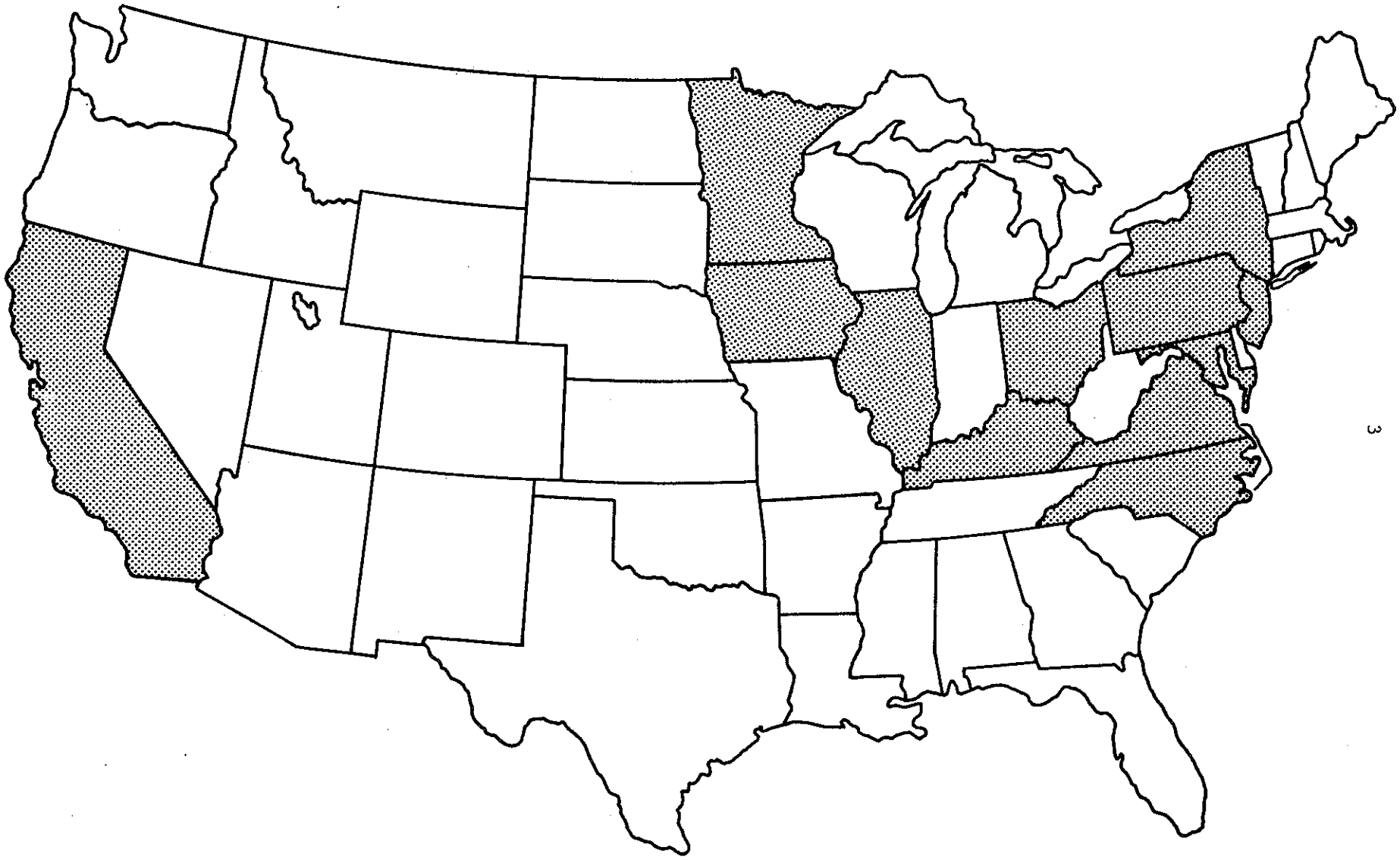

**Figure 1. States with agricultural district legislation, 1987**

million acres of land in farms (U.S. Department of Commerce).[2] Districted acreage accounts for about 2.5 percent of total land in farms for the U.S. and 14 percent of land in farms in the twelve states with district programs. California and New York implemented district legislation many years ago, and dominate the acreage totals (table 1). Together, these two states account for 89 percent of all districted acreage. At the other extreme, no acreage has been enrolled in districts under North Carolina's recent legislation, and less than 19 thousand acres are enrolled in Iowa's program.

Due to limited availability of chronological data or the recent vintage of some state programs, it is impossible to discern any national trend in district formation. Acreage enrolled under California's Williamson Act increased systematically to 16.2 million acres in calendar 1981, but has declined by more than a million acres since that time (California Department of Conservation).[3] New York's districted acreage has remained between 7 and 8 million acres since the late 1970s; most changes in acreage during the 1980s in New York trace to efforts at the local level to consolidate districts during the course of a mandatory eight-year review (Boisvert and Bills).

---

[2]Direct comparisons of district acreage and farmland acreage are dangerous in at least one case. New York districts are often contiguous and encompass land in a nonfarm use. For 51 Upstate counties for which data are available, an estimated 54 percent of farmland and 51 percent of cropland in farms with sales of $2,500 or more were in agricultural districts in 1982 (unpublished data from the New York State Department of Agriculture and Markets).

[3]Although there have been substantial increases in nonrenewals of contracts during the 1980s, the bulk of the acreage reductions are due to a switch from agricultural preserves to timber preserves under more recent legislation (California Department of Conservation).

Table 1. Total farmland and districted acreage in the United States

| State | Agricultural districts: Year enacted | Estimated area: Year[a] | Estimated area: Area | Land in farms: Total | Land in farms: Percent land area |
|---|---|---|---|---|---|
| | | | Ac. (1,000) | Ac. (1,000) | Percent |
| California | 1965 | 1985 | 15,174.4 | 32,156.9 | 32.1 |
| Illinois | 1979 | 1987 | 72.9 | 28,225.1 | 80.7 |
| Iowa | 1981 | 1983 | 18.6 | 32,612.0 | 91.0 |
| Kentucky | 1982 | 1987 | 104.3 | 14,179.3 | 55.8 |
| Maryland | 1977 | 1987 | 142.5 | 2,557.7 | 40.6 |
| Minnesota[b] | 1980 | 1987 | 178.1 | 27,708.5 | 54.4 |
| New Jersey | 1983 | 1987 | 21.7 | 915.3 | 19.2 |
| New York | 1971 | 1986 | 7,864.0 | 9,189.6 | 30.3 |
| North Carolina | 1986 | 1987 | 0.0 | 10,320.8 | 33.0 |
| Ohio | 1982 | 1984 | 1,640.0 | 15,404.1 | 58.7 |
| Pennsylvania | 1981 | 1987 | 257.9 | 8,297.7 | 28.9 |
| Virginia | 1977 | 1986 | 466.8 | 9,436.9 | 37.1 |

[a]Latest year for which data are available.
[b]1980 Metropolitan Agricultural Preserve Act; the 1984 Agricultural Land Preservation Policy Act is now being implemented.

Source: Data on districted area were compiled from contacts in each state; land in farms is reported in the 1982 Census of Agriculture (U.S. Department of Commerce).

## Program Features

Expressing district activity in simple acreage terms gives a useful impression of program scope but masks fundamental state-to-state differences in program design. These programs are undoubtedly the result of political compromises in each of the states, and program features are a reflection of the social commitment to farmland retention. Understanding these differences yields some insight into the prospects districts hold for protecting farmland or at least enhancing the possibilities for continued farming in urbanizing situations.

One common feature of the states' enabling laws, with the exception of Iowa, is that they spell out factors to be considered in creating a

district (table 2).[4] Eight factors, often interrelated, are mentioned explicitly in these laws. An overriding consideration is farm viability -- districts are to be comprised of predominantly viable farmland. Most of the other factors mentioned are closely aligned with the viability idea. Several state laws, for example, require that land quality be considered. The Maryland law makes reference to critical mass -- the need for agricultural operations at a level sufficient to support related services from the agri-business sector of the local economy. The Ohio law specifies a gross sales requirement for farms enrolled in a district. Four states make reference to the availability of nearby idle land, which could provide possibilities for future expansion in the level of agricultural activity in a district.

States also prescribe that current and future patterns of all land use -- future needs for development, in particular -- should be taken under consideration before an agricultural district is created. These factors undoubtedly take inherently incompatible nonfarm uses of land into account. Beyond this, consideration of future patterns of development is probably a tacit recognition of the need to balance farmland protection objectives with the land use requirements of the community at large.

The major differences in the design of the programs of greatest concern when considering their effectiveness relate to: district formulation; financial incentives to farmland owners; restrictions placed on land use within a district; and required modification in agency policy. Table 3 lists a number of the provisions that are common to one or more of the state laws. It is difficult to classify or rank each state's program

[4]And, of course, all states grant local governments and individual landowners the luxury of also considering "all other relevant factors."

Table 2. Factors to be considered in the creation of an agricultural district

| State | Land quality | Viability | Gross receipts | Critical mass | Nearby idle land | Approved conservation plan | Current land use | Development needs |
|---|---|---|---|---|---|---|---|---|
| California | X | | | | | | | |
| Illinois | | X | | | X | X | X | X |
| Iowa[a] | | | | | | | | X |
| Kentucky | X | X | | | | | | |
| Maryland | | X | | X | | | | X |
| Minnesota | | | | | | | X | X |
| New Jersey | X | X | | | X | | X | X |
| New York | | X | | | X | | X | X |
| North Carolina | X | | | | | X | X | |
| Ohio | | | X | | | | X | X |
| Pennsylvania | | X | | | | | | X |
| Virginia | X | X | | | X | | X | X |

[a]Iowa law specifies that farmland should be enrolled in an agricultural district.

Source: Compiled from state legislation -- see appendix.

Table 3. Principal provisions of state agricultural district laws

| State | Reduced property tax[a] | Alter state agency policy | Modify or limit: Local regulation | Eminent domain | Development assessments | Annexation | Nuisance claims | Enable PDR |
|---|---|---|---|---|---|---|---|---|
| California | X | | | X | | | | |
| Illinois | | X | X | | X | | | |
| Iowa | | X | | | X | | X | |
| Kentucky | | X | | X | | X | | |
| Maryland | | | X | | | | | X |
| Minnesota | | X | X | X | X | X | | |
| New Jersey | | | X | X | | | X | X |
| New York | X | X | X | X | X | | | |
| North Carolina | | | | X | X | | | |
| Ohio | | | | X | X | | X | |
| Pennsylvania | | X | X | X | | | | X |
| Virginia | | X | X | X | X | | | |

[a]States with use-value or agricultural assessments specified in district legislation; all 50 states currently make legislated provisions for preferential assessments on agricutural land (NASDA).

Source: Compiled from state legislation -- see appendix.

unambiguously in terms of the significance of these provisions. Despite our careful reading of the legislative documents, limited contacts with state officials, and reviews of published research, we will have undoubtedly missed some of the subtleties in the legislation, particularly as they are reflected through the program's implementation and administration.

Regardless, one useful distinction about early experimentation with districts (e.g., in California and New York) is their evolution out of efforts to legislate property tax relief measures for farmland. California's Williamson Act, for example, is widely interpreted solely as a use-value assessment law (Carman and Polson; Gustafson and Wallace; Schwartz, Hansen and Foin, 1973; Schwartz, Hansen and Foin, 1976). This interpretation is a direct result of the law's implementation. County governments must elect to participate in the program and are authorized to establish eligibility for a use-value assessment. This latter step is accomplished either by designating "agricultural preserves" or accepting individual applications from landowners to create a district. To date, 49 of 58 California counties participate in the program, but few preserves have been established (Gustafson and Wallace). Rather, the spatial pattern of district formation in California has typically involved single tracts of land owned by individuals or corporations who are willing to enter into contractual arrangements to restrict use in return for a reduced property tax bill.

In New York, the impetus for creating a district comes from landowners who petition the county legislative body. The New York State Commissioner of Agriculture and Markets also has authority to create a district encompassing any land defined as "unique and irreplaceable." To date, these state authorities have not been exercised.

Although the agricultural district law in New York contains provisions for use-value assessment of farmland and these tangible monetary benefits are viewed as important in promoting farmland retention, the link between district formation and use-value assessment is less direct than in California. That is, owners of land in districts may apply for use-value assessment, but they need not. The district law also allows owners of land outside a district to apply for use-value assessment provided that they meet the laws' acreage and gross sales eligibility requirements and are willing to renew annually an eight-year commitment to maintain their land in its current farm use.

The California and New York laws also contain provisions which modify but do not preclude eminent domain proceedings on land enrolled in an agricultural preserve (table 3). In addition, the New York law contains provisions to modify local regulations on farming operations and limit special assessments on farm property, either on a front foot or ad valorem basis, to fund investments in development infrastructure. State agencies are directed to modify their policies and procedures, to the extent possible, to promote commercial farming operations within district boundaries. Proponents of the New York law have argued that these provisions, in combination, represent an integrated package which, on balance, encourages the continuance of farming operations situated near urban areas (Bryant and Conklin; Conklin and Bryant).

In contrast to New York and California, district legislation in the remaining ten states has followed in the wake of legislation which grants farmland owners a reduced property tax bill via use-value assessment. However, most of these states incorporate provisions found in the New York law to one degree or another, and promote farmland retention only indirectly

through alterations in agency policy and limits on local government activity (table 3).

State laws uniformly stress that landowners' decisions to participate in districts are strictly voluntary; only North Carolina and Virginia, however, follow the California approach and specify that counties must adopt the state enabling law before landowners can petition for the creation of a district. In New Jersey and Minnesota, county legislative bodies must designate areas which are candidates for voluntary formation of an agricultural district. These regulations clearly have an important effect on the scope of district programs. For example, a 1984 study showed that, seven years after the law's inception, only 18 of 96 Virginia counties had adopted an agricultural district ordinance; more importantly, 17 counties had rejected such an ordinance, while 61 counties had not formally considered one (Luzar and Batie).

In a fashion not unlike coupling the district program with use-value assessment under California and New York law, other states have also tailored the legislation to deal specifically with other dimensions of the farmland protection issue. Most notably, laws in Maryland, New Jersey, and Pennsylvania make district formation a precondition for public purchases of farmland development rights. Funding arrangements are still under review in Pennsylvania (NASDA), but New Jersey and Maryland have thus far separated the development rights on 6 and 42 percent, respectively, of the acreage in agricultural districts (Derr; NASDA).

Legislation in Kentucky and Minnesota modifies or limits annexation of farmland by municipalities if it is situated within the boundaries of an agricultural district. The laws in Iowa, New Jersey, and Ohio make reference to limitations on nuisance claims stemming from farming operations.

These provisions are related to more generic "right-to-farm" laws now prevalent across the county (Centner; NASDA). All states with agricultural district laws have enacted right-to-farm laws; but only the three states mentioned above have integrated any protection from nuisance suits directly into an agricultural district program.

## The Need for Information

Despite the common label given to the "district" legislation in these twelve states, this discussion highlights the substantial diversity in the programs themselves. These differences probably affect the ability and willingness of farmland owners to participate in the programs, and also affect the rate of farmland retention in the face of nonfarm development pressure. Measured against this single indicator of performance, one might well expect greater success from those districting programs that are directly linked to other policies that provide direct financial incentives to landowners or place specific restrictions on future use of the land. Coupling districts with public purchase of development rights and use-value assessment clearly arms several states with a more decisive set of policy instruments. In states where these linkages do not exist, the legislative intent may well have been only to affect farmland retention more indirectly in much the same way as so-called right-to-farm laws. To our knowledge, the impact of these indirect measures, e.g., modification of eminent domain or state agency procedures, on farm viability or rates of land conversion in districts has not been documented.

Agricultural district programs in some states are also directly tied to other environmental objectives, such as maintenance of long-term soil productivity and enhanced water quality, through cross-compliance with soil and water conservation plans -- see table 2. These developments are very

much in step with Federal policy. The 1985 Food Security Act has provisions for denying Federal farm program benefits to landowners who crop highly erodible cropland but do not comply with an approved soil and water conservation plan for the 1990 crop year and beyond (U.S. Department of Agriculture).

Tying district participation to multiple objectives, while perhaps exemplary from a broad land use planning perspective, compounds the problems surrounding the collection of information needed to assess program performance. Evaluative research accumulates more rapidly around public initiatives with narrowly defined purposes.

With two or three important exceptions, there has been little formal analysis of the performance of agricultural district programs to date. Our contacts with knowledgeable individuals in the various states revealed that some states do not even maintain up-to-date information on program implementation; annual summaries of district enrollment, distributed by county, are not always available at the state level. On the one hand, this situation partially reflects the inherent problems of monitoring at the state level programs that are implemented at the local level. On the other hand, these states are also the ones where district legislation has few direct regulatory and financial implications for either landowners or local governments.

For those several states where district legislation is tied to use-value assessment or the purchase of development rights, there is a more immediate need for data and analysis of the district programs. At a minimum, an attempt should be made to document on a regular basis changes in enrollment in the program. However, effective evaluations also require information on the geographic configuration of districts and estimates of

current land use (e.g., cropland, woodland, nonagricultural land, etc.) within districts. This additional information helps set the stage for predicting future land use changes within districts, and framing realistic expectations about districts' ability to protect high quality farmland from the normal checkerboard pattern of nonfarm development at the rural-urban fringe.

A second need for information evolves around incentives for participation and the ability to forecast participation into the future. Most of the economic literature on agricultural districts has evolved around this theme, particularly in the states where district laws trigger use-value farmland assessment and generate direct financial repercussions for farmland owners and state and local governments. In these states, there is the need to estimate any direct budgetary outlays associated with districts; the indirect effects on local governments through reductions in local property tax base; the shift in property taxes to nonfarm taxpayers; and the effect of tax relief on decisions to convert farmland to a new use.

To our knowledge, there has not been a comprehensive study surrounding these issues, but some partial attempts have been made. Evaluations of the California law were conducted in the early 1970s and focused on provisions for use-value assessment under a ten-year restrictive agreement. The initial research involved comparisons of the present value of property tax benefits with the land's current market value (Gustafson; Schwartz, Hansen, and Foin, 1975). Later studies involved landowners' assessments of their future intentions for the use of their land, expectations about future land conversion, and opinions on the Williamson Act (Schwartz, Hansen, and Foin, 1976). Luzar and Batie made similar inquiries among landowners in a single Virginia county. In the California study, the authors tested possibilities

for increasing participation by altering benefits of the program, and concluded that the major effect on enrollment could be achieved only through measures that affect land values or development expectations of landowners.

Boisvert et al. have used aggregate county-level data to determine factors affecting the decision to enroll land in an agricultural district and to apply for a farmland use-value assessment. Results suggest that the district law is consistent with preserving the best farmland near urban areas. Enrollment in districts is directly related to land productivity, urban pressure, the importance of nonfarm activity in the area, and efforts by local governments to encourage district formation. It also appears that the decision to enroll one's land in a district affects the decision to request a use-value assessment in a recursive fashion, but short-term monetary gains are the overriding consideration in applying for use-value exemption.

We are in the process of validating these results through application of similar models to farm-level data. Such an analysis will require (for farms within and outside of districts) detailed data on farms and nonfarm activities, the farm business, land use and quality, the proximity to urban areas, and characteristics of the local governments. Pitt et al. have used such farm-level models to analyze landowner participation in agricultural districts and development rights acquisition programs under Maryland's Agricultural Land Preservation Foundation Act.

In those states where counties need not adopt the enabling state laws, little is known about the collective decision process by which some counties participate and why others do not. This obviously adds a level of complexity to any attempt to explain statewide participation in districts. The explanation might be as simple as a lack of urban pressure in the

county or a fear of the implications for local government finance; or it could be more complex.

Up to this point, this discussion of the need for information has focused primarily on documenting enrollment in the program and explaining why landowners participate in these voluntary programs. Little has been said about district performance (e.g., the extent to which districts have promoted farmland retention or other objectives implied in the legislation). Research on these questions is extremely difficult, partly because there is no objective way of specifying an appropriate set of performance criteria. We will probably never know whether the legislative intent was to help preserve agricultural land indefinitely, to promote environmental objectives, or merely to help foster the coexistence of farm and nonfarm activities and a more orderly transition of the land to nonfarm uses. Regardless of which of these objectives is most appropriate, measuring the long-term performance of district legislation is still confounded by the nature of the programs themselves. These programs are voluntary, and in many states participation in a district does not preclude converting some districted land to nonagricultural uses. In other instances, there may be a financial penalty for conversion, but it is unlikely that these are sufficient to discourage conversion when the land is wanted for development purposes. Only those programs where an agricultural district is a precondition for the purchase of development rights generate high expectations that the land will remain in an extensive use for a substantial period of time.

## Concluding Comments

Institutional arrangements for creating districts or preserves to maintain farmland in its current use have attracted the attention of public

officials at the state and local levels for more than two decades. Our reviews of the statutes in twelve states help demonstrate the diversity of legislation currently in place and identify instances where such initiatives intersect other commonly-recognized farmland retention techniques. Further, we show that state legislatures, in some cases, are attempting to promote broader environmental objectives by specifying compliance with soil and water conservation plans as a precondition for district participation.

With these considerations in mind, we have discussed information needed to support two general lines of inquiry. The first has to do with information that allows routine monitoring of program implementation; at a minimum, districts and districted acreage must be counted on an annual basis and arranged along county lines. Second, information is needed to support analyses of factors which govern a landowner's decision to enroll farmland in an agricultural district and to underpin evaluations of district performance. Based on research to date, work on participation and performance is best accomplished with micro or farm-level data which are tailored to the unique parameters of programs in each state.

We have also stressed that district initiatives often cannot be disentangled from efforts to generate more direct pecuniary benefits for landowners via property tax relief or separation of farmland development rights. Viewed in this light, issues surrounding district participation and performance are often most correctly subsumed under research designed to sort out the effect of such pecuniary benefits on the behavior of farmland owners. Conversely, one of the more arresting features of the district approach is that it can be a mechanism for achieving a more comprehensive line of attack on land use conflicts near the urban fringe.

## References

Boisvert, R.N. and N.L. Bills. "Farmland Protection in New York State." In Toward a Long-term Strategy for Farmland Protection and Soil and Water Conservation in New York, A New York Agriculture 2000 Report, Published for Mario Cuomo, Governor, New York State, Albany. No date.

Boisvert, R.N., N.L. Bills, and E. Bailey. "A Model to Explain Participation in New York's Agricultural Districts and Use-Value Assessment Program." Northeastern Journal of Agricultural and Resource Economics (in press). 1988.

Bryant, W.R. and H.E. Conklin. "New Farmland Preservation Programs in New York." Journal of the American Institute of Planners, Vol. 41. November 1975.

California Department of Conservation, Land Conservation Unit. Williamson Act Task Force Consensus for Action: An Interim Report to the Secretary for Resources. Publication No. WA86-01, The Resources Agency of California, Sacramento, CA. 1986.

Carman, H.F. and J.G. Polson. The California Land Conservation Act of 1965: Landowner Participation and Estimated Tax Benefits. Information Series in Agricultural Economics, No. 71-4, University of California. September 1971.

Centner, T.J. "Agricultural Nuisances and Right to Farm Laws." Selected paper presented at the 1986 American Agricultural Economics Association's annual meeting, Reno, Nevada.

Conklin, H.E. and W.R. Bryant. "Agricultural Districts: A Compromise Approach to Agricultural Preservation." American Journal of Agricultural Economics, Vol. 56. August 1974.

Derr, D.A. "Historical Overview of PDR Programs in the Northeast." Paper presented at the Northeast Agricultural and Resource Economics Association Annual Meeting, University of Rhode Island, Kingston. June 23, 1987.

Grillo, K.A. and D.A. Seid. State Laws Relating to Preferential Assessment of Farmland. Staff Report No. AGES870326, USDA-ERS-NRED, Washington, DC. June 1987.

Gustafson, G.C. "The California Land Conservation Act of 1965: Economic Analysis of a New Tool of Land Use Policy." Ph.D. dissertation, University of California, Berkeley. 1973.

Gustafson, G.C. and L.T. Wallace. "Differential Assessment as Land Use Policy: The California Case." Journal of the American Institute of Planners, Vol. 41. November 1975.

Luzar, E.J. and S.S. Batie. Improving Land Use Policy Analysis in the Southeast: Lessons from Virginia's Agricultural and Forestal District Act. Southern Rural Development Center, Mississippi State University, Mississippi State, MS. April 1986.

NASDA (National Association of State Departments of Agriculture) Research Foundation Farmland Project. Farmland Notes, Vol. 7, No. 1. January 1988.

Pitt, D.J., T. Phipps, and B.V. Lessley. "Participation in Maryland's Agricultural Land Preservation Program: The Adoption of an Innovative Agricultural Land Policy." Landscape Journal (in press). 1988.

Schwartz, S.I., D.E. Hansen, and T.C. Foin. "Landowner Benefits from Use-Value Assessment Under the California Land Conservation Act." American Journal of Agricultural Economics, Vol. 58, No. 2. May 1976.

Schwartz, S.I., D.E. Hansen, and T.C. Foin. "Preferential Taxation and the Control of Urban Sprawl: An Analysis of the California Land Conservation Act of 1965." Journal of Environmental Economics and Management, Vol. 2. 1975.

Schwartz, S.I., D.E. Hansen, and T.C. Foin. "An Economic Analysis of the Benefits of Use-Value Assessment under the California Land Conservation Act." Prepared for the Joint Meeting of the American and Canadian Agricultural Economics Associations. 1973.

U.S. Department of Agriculture, Office of the Secretary. "Highly Erodible Land and Wetland Conservation; Final Rule and Notice of Finding of No Significant Impact." Federal Register, Vol. 52, No. 180. Thursday, September 17, 1987.

U.S. Department of Commerce, Bureau of the Census. 1982 Census of Agriculture: New York. Vol. 1, Part 32, U.S. Government Printing Office, Washington, DC. 1983.

Appendix: Agricultural District Laws in the United States

| State | Statute | Title |
|---|---|---|
| California | CA Gov. Code §51230 to §51298 | California Land Conservation Act |
| Illinois | IL Ann. Stat. §1001 to §1020.3 | Agricultural Areas Conservation and Preservation Act |
| Iowa | IA Code Ann. §176B.1 to §176B.13 | Land Preservation and Use Act |
| Kentucky | KY Ch. §262.850 | The Agricultural District and Conservation Act |
| Maryland | MD Ann. Code §2-509 to §2-515 | Agricultural Land Preservation Foundation Act |
| Minnesota | MN Stat. Ann. §473H.01 to §473H.18 | Metropolitan Agricultural Preserves Act |
| New Jersey | NJ Stat. Ann. §4:1B-1 to §4:1B-15 | Agricultural Preserve Demonstration Program Act |
| New York | NY Code Art. 25AA §300 to §309 | Agriculture and Markets Law -- Agricultural Districts |
| North Carolina | NC Gen. Stat. §106-735 to §106-743 | Farmland Preservation Enabling Act |
| Ohio | Ohio Rev. Code Ann. §929.01 to §929.05 | Agricultural Districts Act |
| Pennyslvania | PA Code § 901 to §915 | The Agricultural Area Security Law |
| Virginia | VA Code § 15.1-1507 to § 15.1-1513 | Agriculture and Forestal Districts Act |