

Land Use at the Rural-Urban Fringe

**A Working Paper
for
Setting the State for Discussion
of
Public Issues Education Programs**

**Prepared by the
Land Use and Rural-Urban Interface
Task Force of the
Farm Foundation**

August 1997

Land Use and Rural-Urban Interface Task Force

Charles W. Abdalla, Co-chair, Penn State University

Walter J. Armbruster, Farm Foundation

Janet S. Ayres, Purdue University

Mark A. Edelman, Co-chair, Iowa State University

Howard H. Foster, Jr., University of Rhode Island

Jim Hite, Clemson University

Harvey Jacobs, University of Wisconsin-Madison

Jon Rye Kinghorn, Kettering Foundation

Lawrence W. Libby, The Ohio State University

David B. Patton, The Ohio State University

Alvin D. Sokolow, University of California, Davis

Bruce A. Weber, Oregon State University

Support provided by Farm Foundation, 1211 West 22nd Street, Oak Brook, IL 60521

I. INTRODUCTION

Rural communities are in the midst of unsettling change. Adjusting to change has never been easy, but the pace of change in many regions has made citizens and decision-makers anxious about and even afraid of what the future may hold. Increasingly, change in land uses at the rural-urban interface brings with it intense and divisive conflicts between and among farmers, rural residents, neighborhoods, communities, interest groups, and political jurisdictions. Citizens, business decision-makers, and policy-makers are concerned that:

- Their economic security and quality of life, personal freedoms, and property rights may be unfairly taken from them. They also worry that they are losing the ability to determine their future to forces and people outside of the traditional community or region. They may fear that these outsiders may not have their community's best interest in mind.
- Unanticipated change and unmanaged growth upsets, wastes, and sometimes destroys natural resources and the environment. Rural citizens are concerned that the processes and agents of change seem to disregard their preferences and values about natural resources and related amenities that may be in limited supply, integral to a larger ecosystem, or unique in some way.
- The economic and social costs of sprawl and unsightly patterns of growth resulting from unmanaged change are significant and often ignored. Some see additional growth as needed for progress and keeping living standards high, while others see much waste and inefficiency in certain patterns of growth that repeatedly occur.

As change has given rise to new fears about potential personal, environmental, or economic loss, people and organizations have attempted to learn more about the issues and voice their concerns through the existing institutions and policy processes. In many cases, the state and local authorities and procedures used for dealing with such concerns (e.g., public hearings) are found wanting. Local or state governments may be deemed as unresponsive, biased, and unwilling or unable to respond to citizens' concerns. Often seemingly small disputes between neighbors escalate into broader debates and, in some cases, costly litigation. Rural institutions, including those for guiding land use, public participation, education and managing conflict seem ill-equipped to resolve the complex conflicts brought about by rapid change. New institutional arrangements, both formal and informal (e.g., citizens' groups, advisory committees, regional environmental or watershed associations, coalitions, etc.), have emerged in some regions to address these concerns. In addition, governments are experimenting with new programs for public education and participation to address the problems of adjustment to change at the rural-urban interface.

In rural areas a central factor affecting the degree of interrelatedness (and conflict) among people is the amount of space between them. Obviously, the more densely people and businesses are concentrated, the greater the chance for conflict about land uses. Proximity between people and land uses is a good starting point for discussion of these issues.

Given the vast diversity in the physical and human situations related to land and its use in the U.S., it is difficult to summarize the emerging conflicts and policy issues. The specific conflicts and the interested stakeholders vary considerably by region and locale. For example, farmland preservation is a critical concern in the San Joaquin Valley in California, Northern Piedmont region (Maryland, Southeast Pennsylvania, and Northern Virginia), and parts of Wisconsin and Illinois (Sorenson, Greene, and Straus, 1997). Land use conflicts over animal agriculture, particularly large swine operations, have been intense in North Carolina, Iowa and other Midwestern states. The perceptions of individuals and groups, as to their stake in such issues (i.e., benefits and costs of changes in the policy rules) also vary as a result of differences in physical and social factors. For instance, many of the perceived benefits of farmland preservation policies in suburbanizing southeast Pennsylvania are much different than in rural parts of Iowa. Similarly, the expected impacts of siting a hog farm on the coastal plain in North Carolina are likely to be different from the impacts of a similar proposal in Utah.

The purpose of this paper is not to provide a comprehensive national review of land use and related rural-urban interface issues. Analyses of this type can be found in Sorenson, Greene, and Straus (1997), Vesterby, Heimlich, and Krupa (1994), and Heimlich and Brooks (1989). The intent here is to identify the major national patterns in land use change, underlying forces of change, emerging conflicts and policy issues, and public policy approaches and tools. Our primary contribution is to set the stage for a discussion of educational needs and begin to establish an agenda, specific topics, and questions for public issues education.

In past analysis of rural land use issues, emphasis has been placed on the encroachment of urban or suburban development upon farmland and rural open space. While rural to urban migration still continues to be important, the forces underlying current rural-urban conflicts are now more complex. Perhaps most often overlooked is the fact that agriculture itself is has been and continues to change in scale, scope, and location of farming and supporting businesses. In addition, many other important and interrelated social, economic, political, and organizational forces are at work. We provide an overview of five different forces of change that must be better understood if we are to contribute to resolution of land use issues at the rural urban fringe. These five areas of change include:

- Changes in urban-rural settlement patterns
- Industrialization of agriculture
- Changing demographics and politics of rural areas
- Changing knowledge, values, and attitudes toward the environment and property rights, and
- Changes in philosophies and operating procedures of governments.

II. SETTING THE STAGE FOR A DISCUSSION OF THE EMERGING ISSUES OVER LAND USE AT THE RURAL-URBAN INTERFACE

1. Changes in rural-urban settlement patterns.

In many regions and states, change at the rural-urban interface threatens the viability of farming. Significant acreage of farmland has been converted to residential development and other suburban and urban uses' (Sorensen, Greene, and Straus, 1997). As a result of urban to rural migration, farmers increasingly have non-farming neighbors unaccustomed to the sights, sounds, and smells of modern agriculture. Nationally, a broad pattern of non-metropolitan growth has been documented (Johnson and Beale, 1994). These demographic shifts, combined with strong public preferences for protecting the environment (discussed below), suggest that friction between farmers and neighboring residents and communities will continue and even escalate. One result will be increased costs for farmers and the potential loss of profitable agricultural land and the amenities associated with certain farm types in these areas.

2. Industrialization of agriculture.

The industrialization process is driven by the competition of firms for profits potentially available from reducing production costs through the use of new technology and knowledge about farm production, marketing, and other practices. In this process, the specialization of production has led to the substitution of on-farm inputs and labor for off-farm inputs. At the farm level, these changing technological and economic factors are telling farmers to either "get big or get out." The industrialization of U.S. agriculture is bringing about significant change and giving rise to many new concerns. For example, in animal agriculture, the concentration of animals on fewer, larger farms and increased vertical integration, contracting, and joint ventures are changing the structure of farming and creating community and regional conflicts. Smaller farms are losing their positions relative to larger ones and the locus of decision-making is shifting from farm to off-farm organizations. Larger animal production units are increasingly leading to conflicts between producers and neighbors, and communities are faced with many actual and potential environmental or nuisance threats. There also has been a tendency for animal facilities to locate in clusters to take advantage of infrastructure or marketing linkages, thereby straining the local environment's assimilative or dilution capacity for manure or nuisance odors (Pagano and Abdalla, 1994).

In addition to the potential costs associated with industrialization, there are changes in the benefits of agriculture to local communities. For example, the substitution of off-farm for on-farm inputs (e.g., feed, labor) may mean that agriculture in some areas provides less benefit to the local economy in terms of employment and farm-related purchases. Also, some of the amenities, such as open space valued by neighbors, may be lost as

agricultural production intensifies (i.e., shift from crops to confined animal production). Industrialization may raise a host of other social issues, such as conditions or earnings of workers and concerns stemming from changes in farm ownership and stewardship. While the costs of industrialized agriculture tend to be focused on the local neighborhood and community, the benefits (lower prices to consumers from new implementation of new technologies) are spread more diffusely. This uneven benefit-cost distribution is one explanation of why NIMBY (not-in-my-backyard) groups have formed to oppose the siting of large-scale animal facilities.

3. Changing demographics and politics of rural areas.

The make-up of rural communities is changing and this has ramifications for governance in rural areas. As fewer people are actively engaged in agriculture (as a result of industrialization) and as more non-farmers live in rural areas, the political balance is shifting from traditional agricultural farm-level production interests to non-farm residents. In areas where large-scale corporate farming or contracting arrangements are prevalent, farmers themselves hold different viewpoints about their communities and how farmer-nonfarmer conflicts should be addressed. Increasingly, local governments in suburbanizing regions are influenced by residents having less familiarity with and stake in farming. Consequently, these political jurisdictions are more willing than in the past to enact public policies to address the environmental, nuisance, and other undesirable external effects of an industrialized agriculture. In several states, aggressive local efforts to regulate agriculture have led to passage of laws limiting local governments' abilities to zone or pass ordinances affecting agriculture and to bring court cases to address the relative rights of states and local governments.

4. Changing knowledge, values and attitudes toward the environment and property rights.

Since the publication of *Silent Spring* by Rachel Carson in 1962 there has been an ever-increasing body of legislation implementing public policies aimed at the conservation and restoration of the natural environment and ecosystems in the United States. The values that were brought to the fore by the early actions of a few zealots have become part of the mainstream. The federal, state, and local regulations pertaining to environmental quality still cause disputes and legal challenges. However, by and large, the nation has accepted the need for environmental laws to restrict certain aspects of the use of private property. In a sense, this is an evolution of early zoning, which was based on regulation of nuisances caused by one property owner that impacted another.

Farm operations in general have been affected by environmental regulations as well as by Occupational Safety and Health Administration (OSHA) and other more recent policy initiatives. The laws that protect farming from attacks on the grounds of nuisance doctrine and environmental degradation have been strengthened in some areas of the U.S. where specific conflicts arise. In general, conflicts between farming and other land uses such as residential occur at the edges of urbanizing and developing areas. The problems that are posed beg the question as to how farming and other land uses can coexist in spite

of very different intensities and types of uses. Participants in these conflicts have difficulty finding common ground. They regard the likely outcome as either a win or a loss rather than a mutually beneficial compromise.

As these conflicts increase due to further population shifts and urbanization, several themes emerge. The first is a decline in peoples' trust that public institutions, governments, and universities can resolve these issues. People are forming their own groups ranging from informal neighborhood associations, environmental coalitions, and watershed associations to large and more formal groups such as Public Interest Research Groups (PIRGs). The expert, whether from the university, public sector, or private sector, is no longer listened to with the authority seen in earlier land use and zoning matters. The ability to obtain detailed information by electronic means has provided further resources for these groups. A remaining problem—interpretation and synthesis of data—remains to be dealt with.

There appears to be growing concern in the U.S. about property rights as related to personal freedoms and economic security. For many citizens, the concept of property ownership is tightly bound to the concept of freedom. Freedom from tyranny implies for many the ability to deny others access to and use of one's own property. Property ownership also means economic security. For others, the ownership of land or other resources implies certain responsibilities, particularly to refrain from using the property in a way that injures others.

Much of the legal discussion of property rights and responsibilities has been an attempt to clarify the limits of private use of property and the limits of governmental authority to regulate private use. The Fifth Amendment of the Constitution says that "No person shall be...deprived of life, liberty or property without due process of law; nor shall private property be taken for public use, without just compensation." Public actions that deny property owners use of their lands or that so restrict the economic use of the lands as to make the property worthless are considered "takings" and must be compensated. Much of the "takings" debate has been about the authority of state and local governments to regulate urban land uses and impose exactions on development of private land.

Concern about unjustly losing one's property rights has become an important issue for many individuals and groups. In some situations, citizens have asserted that their ownership and use of property actually takes precedence over government regulations, paying of taxes, or other public laws. Recently, landowners have mounted legal challenges to the taking of property. The Supreme Court has ruled in favor of the plaintiffs in some of these actions.

More recently, discussion has also addressed the extent to which the federal government can impose new restrictions on private landowners to achieve broad environmental objectives, and even how much government agencies can change management of public land. Owners of timberland who are prevented from cutting timber because of environmental restrictions due to, for example, the presence of an endangered species,

also have argued that these restrictions constitute a taking, subject to compensation. Recently, this issue has been extended to include attempts to prevent changes in federal management of public land. Ranchers, for example, who have had long-standing access to public land for grazing have argued that because the access to public land via grazing permits has been capitalized into their land values, any attempt to change their access is a taking subject to compensation.

Some states have passed laws that require the government to compensate landowners if a public action reduces the value of the land by a certain percentage. A Washington State law, which was subsequently defeated by voters in a referendum, would have required state and local governments to compensate landowners whenever a regulation caused any loss in property value. The issue of balancing the public interest in private land with property owner interests underlies much of the discussion of management of land at the rural-urban fringe.

Citizens' fears about loss of property rights is also expressed in the desire to look closer to home for solutions that may be tailored to specific circumstances rather than blanket regulations that may make little sense when universally applied. This is related to changes in thinking about the appropriate roles and procedures of governments at the federal, state, and local levels, a topic addressed in the next section.

5. Changes in philosophies and operating procedures of governments.

The idea that people are better equipped to solve problems than government bureaucracies or experts has increased during the past several decades. As government has intervened more in the economy and the regulation of business and private property has gained a reputation as onerous and unproductive, the US Congress has attempted to devolve government responsibility from the federal to state and local governments. This concept had its beginnings in Richard Nixon's revenue sharing programs and has recently taken the form of block grant legislation to replace federal requirements in the regulation and funding of social welfare programs. Another more problematic aspect of this devolution of government is the increase in unfunded mandates that higher levels of government pass on to their junior partners. The federal-state relationship has been marred by unfunded congressional mandates in areas such as water quality. States have also sent unfunded mandates concerning education, health, and transportation to their local government units.

The states have undertaken a number of initiatives regarding land use management that reflect this policy change. In a number of states, policies such as comprehensive growth management and comprehensive planning programs require consistency between local, county and state land use plans. The success of this effort has varied from Hawaii, which has a state land use plan, to Oregon, which is continuing to discuss the appropriateness of establishing urban growth boundaries for the state.

Rejection of so called "heavy handed" government regulation from the top, coupled with

increased initiative at the local level, creates situations where land use conflicts relating to agricultural operations in urban or suburban areas have become difficult to resolve. Significant issues of public policy include not only whether farm operations and other land uses are compatible, but also which governmental institutions are suitable to resolve the conflicts and how regulations play a role in this resolution. Differing policy approaches (in terms of the level of state versus local input and authority) are leading to questions about whose preferences count in policy-making, as well as the outcomes for farm and non-farm groups.

III. PUBLIC POLICIES FOR MANAGING LAND USE AT THE RURAL URBAN INTERFACE

1. Policy Goals and Values

A central objective of public policy in this arena is to reduce the uncertainty and unpredictability of land use changes at the rural-urban interface. Reasonably stable edges permit both governments and private parties to plan for the long run. Efforts to achieve stability must take into account the respective values and goals of varied interests. A short list of these values and goals includes:

- Protecting the farmland base to serve the broad societal interest in maintaining a stable and affordable supply of food and fiber.
- Maintaining the productivity and efficiency of agricultural operations faced with the disruptions of urban encroachment and other negative land use impacts.
- Providing orderly growth and land use change in particular regions, including community emphasis placed on re-development relative to new development.
- Housing our expanding population in an affordable and efficient fashion.
- Respecting private property rights by avoiding undue restrictions on landowner options.
- Using farmland as an urban amenity and form of environmental protection for open space, community aesthetics, habitat for wildlife, ground water recharge, etc.

By making clear the nature of these respective goals and values, we realize how easily they come into conflict with each other. There are inevitable tradeoffs in adopting particular policy solutions, principally between the unfettered operation of land markets and the interventions of government.

It is highly desirable thus to have open deliberation of these choices at the community, regional, and state levels, as much as it is desirable to fulfill the substantive objectives of predictability and long-term planning. Meaningful deliberation depends in large part on

mechanisms— information, participatory processes, governmental tools, etc.—that allow for the expression of public preferences and their translation into policies and programs.

2. Public Roles

Public sector responsibilities for guiding land use developments at the rural-urban interface rest almost exclusively with state and local governments, a consequence of the generally highly decentralized nature of policy making on land use and urban growth matters. Federal policies and programs play only an indirect role in this arena, although one that influences certain kinds of private and public actions. Most significant are estate and capital gains tax policies that influence the transfer of land. Farm profitability also is affected by tax depreciation schedules and deductions, and federal programs such as endangered species and wetlands protection impact agricultural operations and land use changes. A new direction for federal policy was signaled by the 1995 Farm Bill, which authorized fiscal support for state and local programs that protect farmland from urbanization by purchasing conservation easements. The legislation projected an initial modest expenditure of federal funds—only \$35 million for six years.

With policy discretion at sub-national levels, it is not surprising to find a wide difference among states in the degree of attention given farmland problems and in specific policies. All state governments have at least some sort of preferential tax system for farmland or agricultural income, usually with the intention of limiting farmland conversions. These programs have achieved various levels of success. A few states are much more proactive than the majority in legislating standards for urban expansion and encroachments on farmland. Oregon stands out in this regard, with its 20-year record of requiring local governments to adopt urban limit lines and exclusive farmland zones with residential limits. Other states, notably Maryland and Pennsylvania, tackle the conversion issue by funding conservation easements on farmland in cooperation with local governments.

Farmland policy is very much affected by the mix of state and local government powers and responsibilities in each state. The key is how state law either empowers or restrains local governments' abilities to use specific land use tools and what statewide standards or mandates are imposed on the use of these tools.

Although there is considerable variation in the expansiveness of these local delegations of power, the tendency nationwide is to permit local control over land use matters with minimal state government direction or oversight. Exceptions to this *laissez-faire* approach, besides the Oregon case, include California's state requirements for city and county comprehensive planning and environmental review of land use changes, tax-base sharing in Minnesota's major metropolitan region, and urban boundary controls and infrastructure funding incentives. In a quite different way, state governments directly influence land use changes in agricultural areas through their capital improvement programs—primarily highway building and in some cases preemption of local zoning authority over agricultural uses.

Further policy variations show up at the community level, a result in part of the multiple and overlapping local government jurisdictions found throughout the nation. Most

farmland is located in territory controlled by rural counties and townships—the governments with the most direct stake in how farming is affected by land use change. But urban governments are also a part of the equation. One cannot ignore that the source of much of the agricultural/urban edge problem involves the actions of cities and villages in expanding their borders to accommodate growth and the actions of city dwellers in seeking home sites in rural areas. Adding to the complexity of the local government landscape are the many single-purpose units of government (e.g., special districts, assessment areas, etc.) that stimulate development in rural areas by providing much of the water, sewer, and other public services necessary for the location of new homes and other nonagricultural uses.

Community political circumstances and economic imperatives largely drive the specific land use policies and practices of local governments. The prevailing sentiment in many rural areas is a reluctance to employ regulatory powers to control land use change, both because of a fear of restricting the exercise of private property rights and a belief in the local economic benefits of residential and commercial growth. Agricultural zoning is still a controversial topic in numerous townships and rural counties, despite the wide promotion of this tool by planners and educators for more than 50 years. For their part, municipal governments often see adjacent farmland as a land bank for future expansion and thus a source for added tax base.

Local political circumstances at times also work in the other direction—to restrict urban expansion and protect farmland. Compelled by fears of the negative consequences of growth, including impacts on local agriculture and open space, preservationist groups in some communities mobilize to bring about more aggressive land use policies. For example, a number of communities fund local farmland easement programs through special property or sales tax levies. Others support farmland protection through tough zoning ordinances and other regulatory measures.

Local scenarios usually lack a substantial degree of urban-rural, or city-county/township, coordination in land use matters. In fact, interlocal relationships on this front are more characterized by conflict than cooperation, despite the obvious externalities generated by the land use actions of any single government. Efforts to achieve coordination across local jurisdictions fail if they rest alone on appeals to rational planning and a common regional interest; they must first address revenue and other local control concerns.

3. Policy Approaches

Considering the many recent innovations occurring in individual states and localities, there is no absence of policy ideas for dealing with the problem of land use impacts on agriculture. Indeed, the menu of tools available to state and local governments is a rich one. It includes regulatory, planning, and market incentive techniques. The techniques can be categorized into several major policy approaches that differ by focus:

- Focus on the edge. Resolving farm-urban neighbor conflicts through right-to-farm ordinances, disclosure requirements for real estate transactions, accommodations in agricultural practices, buffer zones, residential subdivision design, and sensitive urban planning.

- Focus on urban expansion. Avoiding leapfrog and inefficient use of land in urban development through such techniques as urban growth boundaries, inventories of soil quality and farm productivity, the designation of farm preserve areas, annexation control, planning for phased growth, infill development, and higher density projects.
- Focus on rural residential development. Restricting scattered development in agricultural areas through agricultural zoning with large minimum parcel sizes, limiting home sites on farm parcels, limiting the extension of urban infrastructure, and requiring environmental or Land Evaluation and Site Assessment (LESA) review of proposed building.
- Focus on economic incentives. Providing compensation to farmland owners through preferential taxation, purchase of farmland easements, and changes in tax codes.
- Focus on intergovernmental and regional coordination. Seeking cooperation in land use matters through revenue sharing, interlocal agreements on the direction of future urbanization, joint planning, and common development standards.

No one type of policy can provide the magic bullet that solves the land use problems affecting agriculture. Rather, the wiser strategy is to figure out combinations of techniques that can be applied in diverse state and local environments. The limits of easement programs in protecting farmland against urban development is a case in point. While the public purchase and other acquisition of farmland easements (development rights) is becoming the technique of choice in the 1990s, the widespread interest in such programs is dimmed by the inability of public funds and voluntary donations to cover more than a small fraction of all the farmland that is threatened by urban encroachments. Easement programs, consequently, work best in a community or region when they are combined with regulatory and other techniques.

IV. SUMMARY AND CONCLUSIONS

Several forces have combined in recent years to bring rapid changes in land use and the political systems at the rural-urban interface. These forces include: the movement of urban and suburban dwellers into "rural areas"; the transition of agriculture into big business and the squeezing out of small, family-owned farms; increasing concern for preserving a safe environment; and the devolving of power from the federal government to state and local governments. These changes have brought conflict between farmers and new residents and confusion about which level of government has the authority and is best suited to deal with land use issues.

Communication and understanding are essential if land use issues at the rural-urban interface are to be effectively resolved. It is unrealistic to hope that farmlands and residential areas can remain totally separate. It is essential that all parties work toward

consensus about land use decisions that are consistent with the community's present and future goals. The emerging issues related to land use at the rural-urban interface present a significant opportunity to Cooperative Extension and other educational organizations.

V. SELECTED BIBLIOGRAPHY

Coppock, R. and M. Kreith, eds. *California's Future: Maintaining Viable Agriculture at the Urban Edge*. Agricultural Issues Center, University of California (1997).

Daniels, T. and D. Bowers. *Holding Our Ground: Protecting America's Farms and Farmland*. Island Press, Washington, D.C. (1997).

Heimlich, R.E. and D.H. Brooks. *Metropolitan Growth and Agriculture: Farming in the City's Shadow*. Washington, DC: USDA Economics Research Service, Resource and Technology Division, Report No. 619. (September 1989).

Johnson, K.M. and C. Beale. Nonmetropolitan Population Change in the 1990s. *Choices* 22-23 (Fourth Quarter, 1994).

Malme, Jane. *Preferential Property Tax Treatment of Land*. Lincoln Institute of Land Policy, Cambridge, Mass. (1993).

Nelson, A. C. Preserving Prime Farmland in the Face of Urbanization: Lessons from Oregon. *Journal of the American Planning Association*, 58(4)467-488 (Autumn, 1992).

Pagano, A.P. and C.W. Abdalla. Clustering in Animal Agriculture: Economic Trends and Policy. *Proceedings of the Great Plains Animal Waste Conference on Confined Animal Products and Water Quality*, D.E. Storm and K.G. Casey, editors. Denver, CO (1994).

Sokolow, A.D., Farmland Protection Policy as a State-Local Policy Arena. Paper presented at the annual meeting of the American Society for Public Administration, Kansas City, Mo. (July 23-27, 1994).

Sorenson, A.A., R.P. Greene, and K. Straus. *Farming at the Edge*. 29+ pp. Washington, DC: American Farmland Trust, (March 1997).

Vesterby, M., R.E. Heimlich and K.S. Krupa. *Urbanization of Rural Land in the United States*. Washington DC: USDA Economics Research Service Ag. Econ. Report 673. March 1994.