

## National Agricultural Lands Study

Interim Report Number One
The Program of Study





National Agricultural Lands Study

merican farm land constitutes a resource of great national and international significance. It is a vast natural endowment which has helped to sustain the world's most productive agricultural economy. American farmers produce more food for export than any other nation, and still often produce substantial surpluses.

But, while vast, our agricultural land is nonetheless a finite resource, limited in both extent and quality. Each year some of it is converted into housing subdivisions, water reservoirs, highways and other uses to meet other economic and social demands of a growing and increasingly urban population.

In addition to direct physical alteration, agricultural land can become unavailable for agricultural use even though it has not yet been physically converted to other uses. Nearby urban development can cause changes in zoning and tax rates which make it more difficult or costly to keep land in agricultural use; a decline in the number of operating farms makes it difficult to sustain such agricultural services as farm machine sales and repair, veterinary services, etc.

These and other issues concerning the future availability of agricultural land have raised several questions: Is there a need for a federal policy to aid states and localities in protecting farmland resources? Will there be enough agricultural land to meet future needs for food and fiber? What methods can be used to prevent or retard the conversion of agricultural lands? What are the costs associated

with these methods, and how effective are they?

To explore these issues, the Secretary of Agriculture and the Chairman of the Council on Environmental Quality are jointly sponsoring the National Agricultural Lands Study—NALS—with the participation of ten other federal agencies. The NALS study will attempt to provide the most comprehensive assessment of the agricultural land availability and retention issue yet undertaken in this country.

NALS has been charged with presenting a final report to the President in January 1981 on problems of agricultural land availability in the United States. Meanwhile, interim reports covering aspects of the subject believed to be of wide public interest will be released from time to time. These interim publications are not parts of the final report, nor do they contain recommendations for legislative or executive actions.

Interim Report Number One describes the origin of NALS, the problems it addresses and the research design it intends to follow. Subsequent reports will describe several of the substantive issues on which the NALS research staff is working.

Robert J. Gray Executive Director

March, 1980

#### TABLE OF CONTENTS

#### *PREFACE*

One.	INTRODUCTION	Page
	Overview of the Issue	1 uge
	The National Agricultural Lands Study	7
	Scope and Coverage of the Study	7
	Public Involvement	8
	Interagency Involvement	8
$T_{wo}$ :	THE RESEARCH AGENDA	
, <b>,</b>	Agricultural Land in National and International Perspective	C
	America's Agricultural Land Base	9
	Competing Demands for Agricultural Land	11
		12
	The Market Allocation of Land Among Competing Uses	13
	The Interplay Between Agricultural Land Availability and the Rural Community	
	· ·	14
	State and Local Actions Affecting Agricultural Land Availability	15
	Impacts of Federal Programs and Policies on Agricultural Land Availability	
	· ·	16
	Findings and Recommendations	17
Three:	STUDY ADMINISTRATION	
	Research Products	18
	Study Guidance	18
	Public Involvement	19
	Coordination with Other Studies	
	Personnel Requirements	19
		19
	Selected Bibliography	20

#### Overview of the Issue

uring this decade, increasing uncertainty has developed about the capacity of the U.S. agricultural land base to sustain the high levels of agricultural production that will be needed in the coming years. This uncertainty has prompted a debate about whether conversion of agricultural lands to other uses will interfere with long term production needs by reducing the amount of land available to agriculture.

The debate has arisen quite suddenly. In the two and a half decades following World War II, there seemed to be little basis for concern about the future availability of agricultural land. During this period, U.S. farmers greatly increased agricultural production, while at the same time reducing the amount of land in production. By 1972, American farmerstaking advantage of good weather and advances in agricultural technology-had boosted crop production by 150 percent over the 1950 level, yet planted 50 million fewer acres. If farmland conversion did not seem to be a major agricultural problem during this period, there was, nonetheless, considerable local concern about the loss of open space and the urban sprawl that frequently accompanied farmland conversion on the fringes of major metropolitan areas.

Since 1972, however, several new developments have combined to produce a

growing sense of unease about the ability of a shrinking land resource base to provide continually expanding harvests. This unease has tended to reinforce concerns about maintaining open space and restraining urban sprawl.

In part, this new concern stems from a rapid growth in world demand for U.S. food—a tripling in 10 years—which in the mid years of the 1970s stimulated a significant increase in land put into production compared with the 1960s. It also stems from recent Soil Conservation Service data which suggests that agricultural land is being converted to other uses at a faster rate than had previously been suspected, and that reserves of high or medium quality "potential" crop land are also significantly lower than was thought a decade ago.

World demand for U.S. agricultural commodities is growing—a trend that most expect will continue for some years. With uncertainties about future climatic conditions and other environmental and economic factors affecting yields, many believe that U.S. agriculture will depend ever more heavily upon the country's land resource base.

However, not all agricultural analysts are convinced that an increased amount of land—or even as much as is now in production—will be needed for agriculture in the future. A number of factors, such as technological breakthroughs, advances in agricultural development in other parts of the world, and favorable weather, might reduce the pressure on the land base. But

there is less optimism today than there was in the 1960s that continuing growth in crop yields will substantially reduce the nation's land needs for agricultural purposes. Moreover, if the price of energy dependent capital inputs continues to rise relative to the price of land, further substitution and reliance on land could occur.

In maintaining our country's balance of trade, the recent high level of food exports has played a fundamental role. Pressure on U.S. feed grains increases rapidly as growing incomes in countries around the world stimulate their livestock production. After the massive grain sales of 1972 and 1973 decimated the nation's surplus grain supply, more land, fertilizer, and other inputs were brought into production. Consequently, it is possible that the amount of land in production will need to be increased in the coming years even if there is some increase in yields per acre.

International food demand is not the only uncertainty that makes it difficult to project future needs for agricultural land. Who could have anticipated in the late 1960s, for example, that the use of agricultural land to produce "energy crops" would be seriously proposed a decade later? Yet, as our dependency on foreign oil imports has increased, substantial interest is being expressed in the production of "gasohol"a blend of gasoline and alcohol produced from grain-as an automotive fuel. If undertaken in a major way, "gasohol" production could require the utilization of very substantial additional amounts of crop land.

Given this context of uncertainty surrounding future land needs, a recent SCS finding¹ that the conversion of agricultural land² is occurring at a rate of about 3 million acres a year nationwide—approximately a third of it former cropland—has prompted considerable public concern. The amount of land converted in any given year may appear small in relation to land currently used for crops, and is partially off-set by new land brought into production. But additional agricultural land is affected by nearby development, even though it is not actually developed.

onversion of prime agricultural land, which generally produces more food at less cost than other land, has prompted the most attention. To the extent that marginally productive lands are brought into farm use to off-set the loss of prime farmland, higher production costs, and hence. food costs, can result. On the other hand, land that is prime for agriculture also is often prime land for housing, highways and other non-agricultural uses. Policies which prevent conversion of prime agricultural land to other uses may increase the costs associated with these other uses since it may also be more expensive to utilize other land for these non-agricultural purposes. It is thus important to assess the various values involved, and to ascertain

<sup>&</sup>lt;sup>1</sup>U.S. Department of Agriculture, Soil Conservation Service, *National Resource Inventories*, 1979.

<sup>&</sup>lt;sup>2</sup>NALS' definition of "agricultural land" includes presently and potentially productive crop, pasture, range and forest lands.

the extent to which they can each be accommodated in a rational allocation of the basic land resource.

Although most farmland is privately owned, awareness is growing that federal and federally-assisted programs and projects sometimes can intensify non-agricultural competition for agricultural land. Federal and federally-assisted water projects, highways, sewage treatment facilities and the like can significantly reduce the availability of agricultural land.

All of these circumstances have expanded the debate-occurring initially at the state and local levels, but now also at the national level-about whether agricultural land is being satisfactorily allocated among competing uses by the private market, and if not, whether there is a need for government initiatives to protect farmland.

Since the early 1970s several states and local governments have adopted farmland protection programs designed to encourage the retention of high quality farmland in agricultural use. And as state and local concern about farmland has grown, many other states and localities are considering programs of their own.

Interest in the subject is also high at the national level. Legislation designed to further agricultural land protection goals has been proposed in both the 95th and 96th Congress.<sup>3</sup> Several federal agencies recently have issued reports, studies, and statistical information which shed new light on farmland resources and trends. Even so, a comprehensive assessment of the multifaceted components of this issue has yet to be made.

## The National Agricultural Lands Study

In June, 1979, the U.S. Department of Agriculture (USDA) and the President's Council on Environmental Quality (CEQ) agreed to sponsor a "study of the availability of the Nation's agricultural lands, the extent and causes of their conversion to other uses, and the ways in which these lands might be retained for agricultural purposes."

The National Agricultural Lands Study has been established for this purpose. In addition to USDA and CEQ, ten other federal departments and agencies will participate in the 18-month project.

The purpose of the study will be to:

- Determine the nature, rate, extent and causes of agricultural land conversion;
- Evaluate the economic, environmental, and social consequences of agricultural land conversion and the various methods to attempt to restrain and retard this conversion;

<sup>&</sup>lt;sup>3</sup>The legislation includes H.R. 2551, introduced by Congressman James M. Jeffords of Vermont, and co-sponsored by over 50 colleagues, and S.795, introduced by Senator Warren G. Magnuson and co-sponsored by 17 Senate colleagues.

• Recommend administrative and legislative actions, if found necessary, to reduce the potential losses to the nation which might result from continued conversion of agricultural lands.

A final report to the President on the findings and recommendations of this study will be made in January 1981. Because the study will cover matters of current concern for state and local governments, and for the Congress and the Executive Branch, a series of interim reports (of which this paper is the first) will be released addressing various aspects of the agricultural land availability issue.<sup>4</sup>

Following are some of the highlights of the study.

## Scope and Coverage of the Study

The study will be as comprehensive an assessment of the subject as is feasible given time and budget constraints. These constraints will necessarily preclude certain kinds of research tasks which might otherwise be undertaken, such as conducting new inventories of the land base. NALS intends, however, to identify those research and data needs which do not ap-

pear to have been adequately addressed to date.

A major initial research task of NALS is to develop an appropriate definition of agricultural land as a means to focus subsequent research more effectively. The definition is important because a variety of different descriptions of agricultural land-as well as its subcategories—have been used in previous studies. Since NALS will not conduct its own land inventories, a "working" definition of terms is needed. In the narrowest definition, agricultural land would include only land currently used for crop production, pasture, certain forest lands, or rangelands. In the broadest sense, "agricultural land" could include virtually all land in any way capable of producing an agricultural product. Intermediate definitions use such factors as land ownership, physical capabilities, investment requirements and environmental risks to identify potentially available agricultural land.

#### Public Involvement

Broad-based involvement is a major component of the study. The cornerstone of this public involvement was a series of 17 public workshops held throughout the country during the fall and winter of 1979. The information and perceptions developed from these workshops—as well as followup activities—will add an impor-

<sup>&</sup>lt;sup>4</sup>Farmland Retention Handbook for State and Local Governments. This reference guide will compare and evaluate various techniques for protecting farmland. The handbook format has been selected to maximize the utility of the product for state and local governments and interested citizens. It will be ready for publication in the Fall of 1980.

tant local and regional dimension to the NALS study. Two thousand people participated in the workshops, representing a wide variety of viewpoints and perspectives.

#### Interagency Involvement

welve federal departments and agencies are participating in the study. In addition to the Department of Agriculture and the Council on Environmental Quality, these agencies include the Departments of Interior, Energy, Commerce, Housing and Urban Development, Defense, State, Transportation, and Treasury, as well as the Environmental Protection Agency and the Water Resources Council.

This multiagency involvement is essential for the successful completion of the study. As has been mentioned, many of these agencies conduct programs which affect the availability of farm land, such as federal or federally-assisted highway projects, water resource development projects, and sewage treatment facilities. Moreover, widespread adoption of policies and procedures to protect farm land from development could, by making less land available for other uses, affect the ability of these agencies to achieve mandated objectives.

To factor this multi-agency perspective into the study, an Interagency Coordinating Committee, consisting of policy-level representatives of each participating agency and co-chaired by the Secretary of Agriculture and Chairman of CEQ, has been established to provide guidance. In addition, each agency will donate funds and staff time to NALS.



## Two: THE RESEARCH AGENDA

The National Agricultural Lands Study is focusing upon seven primary areas of investigation:

- 1. U.S. agricultural lands as a national and global resource.
  - 2. America's agricultural land base.
- 3. Competing demands for U.S. agricultural lands.
- 4. Market allocation of agricultural lands among competing uses.
- 5. Agricultural land availability and the rural community.
- 6. State and local actions affecting agricultural land availability.
- 7. Impacts of federal programs and policies on agricultural land availability.

Some 26 research tasks have been developed to illuminate each of these primary areas of investigation. These research tasks will provide the basis for the final report and recommendations regarding executive or legislative initiatives.

NALS' seven primary topics for investigation are briefly discussed in the pages that follow. The discussion includes a brief description of some of the major issues involved, as well as identification of key aspects of the NALS' research approach.

America's agricultural land base is a natural resource of great economic importance to the United States. It is also a resource upon which the world increasingly depends. An important research task of the National Agricultural Lands Study will be to describe and, where possible, to quantify, the contribution of U.S. agricultural land to the well-being of the U.S. and the world.

Perceptions of the importance of the country's agricultural land are changing. During the 1950s and 1960s—an era of vast surpluses—it was widely assumed that the United States had more than enough agricultural land to meet virtually any foreseeable circumstance. But, as discussed in the introduction, there is now less certainty about the capacity of our farm land base to meet long term needs. To summarize:

## Agricultural Land in National and International Perspective

orld demand for U.S. food has increased dramatically, and further increases are expected in the years to come. In the 1960s we generally harvested under 300 million acres a year. Now we routinely harvest over 320 million acres. For the future, some U.S. Department of Agriculture projections anticipate a need to harvest an additional 30 to 80 million acres of crop land in the next few years if export demands continue to increase at a rapid rate. Many

believe that it is in the national interest to meet these demands if we can—because of the contribution agriculture plays in partially offsetting trade deficits incurred from foreign oil imports.<sup>6</sup> In addition, foreign policy and humanitarian concerns are important.

Doubts are being expressed about our ability to continue to "intensify" agricultural production by increasing per-acre yields. During the 1950s and 1960s, yields increased steadily, and land needs for agriculture fell. In this decade, however, per-acre yield increases have been less predictable. Uncertainties about future weather patterns, energy and fertilizer costs and technological advances have led many agricultural analysts to be more cautious about future trends.

ew demands, difficult to have foreseen a decade ago, may increase the need for agricultural land in the coming years. Utilization of crop land to produce grain for distillation into alcohol, which would then be mixed with gasoline to form

"gasohol", is increasingly proposed as a means to partially reduce our dependency on oil imports. If a major "gasohol" program were adopted, millions of additional acres of cropland would be required if food and fiber production were to be maintained as well.

For all these reasons, few now foresee a return to the comparatively modest need for agricultural land that prevailed in the 1950s and 1960s. In fact, the contribution of prime farmlands may become increasingly vital as other factors increase the costs of producing food in poorer soils. This uncertainty about the extent of future land needs for agriculture has added a new dimension to the debate about the significance of loss of high quality farm land to other uses. Once viewed as a local or regional issue, farmland conversion is increasingly perceived to have national and international implications. Whether this is in fact the case is one of the central issues which the National Agricultural Lands Study will address.

To provide a context for judging the implications of agricultural land conversion, therefore, NALS intends to investigate the role agricultural land has historically played in U.S. agricultural production, and to identify factors which could increase or diminish the importance of land in the agricultural economy of the future.

Key components of this research task will include: (1) documentation of the significance of agricultural production for local, regional and national economies,

<sup>&</sup>lt;sup>5</sup>Cited in A Perspective on Crop Land Availability, U.S. Department of Agriculture, Agricultural Economic Report No. 406, a 1978 report by Linda K. Lee. Lee notes that additional crop land would need to be developed to meet the demand for 80 million additional acres.

<sup>&</sup>lt;sup>6</sup>In FY 1978, for example, total agricultural exports were \$27.2 billion. Without this off-setting influence, our \$28.5 billion overall trade deficit would have been twice as bad. While the net agricultural trade balance was only \$13.4 billion-because of importation of such products as coffee, meat, sugar, and cocoa-the U.S. does not import a significant amount of grain.

and for U.S. international commodity trade and overseas food aid; (2) analysis of data which demonstrates the significance of land in the agricultural production equation relative to other factors such as capital investment, climate, and labor; and (3) assessment of projections of future land needs for agriculture and other land uses.

#### America's Agricultural Land Base

o assess adequately the significance of farmland conversion, accurate information is needed about the characteristics of the existing agricultural land base, and its potential for expansion. Budget and time constraints will preclude the National Agricultural Lands Study from developing much original data of this sort. However, a thorough assessment will be made of existing land resource inventories and studies including the extensive analysis developed by the Soil and Water Resources Conservation Act (RCA) study effort of USDA. This information should help provide appropriate "benchmark" data about the physical capabilities and limitations of the U.S. land base for agriculture, including consideration of the economic cost and environmental risks entailed in converting to agriculture land that now is in other uses.

Over the last two decades, nearly a dozen major surveys and studies have

been conducted by various federal agencies and other organizations which are relevant in some degree to this endeavor. Because many of these studies have utilized different definitions and assumptions, however, inconsistent findings have been evident in some cases. For example, one 1974 study estimated a crop land base of 467 million acres while another study, conducted the following year, estimated the crop land base to be just 400 million acres—a discrepancy in part explained by different definitions of crop land.

Different assessments also have been made about the amount of land not currently used for agriculture which could be brought into production if the need arose. Some assessments, for example, have simply considered the physical capabilities of the land, while other assessments have taken into account such factors as land ownership, public and private costs, and the degree of environmental risk involved in bringing the land into production.

This difference in methodology in part explains a recent finding by the Soil Conservation Service that the amount of reserve land potentially available for crop production was not 266 million acres, as had once been believed, but only 127 million acres.

To provide a consistent basis for presentation of the data, therefore, NALS

<sup>&</sup>lt;sup>7</sup>Among them: *The Potential Crop Land Study* (1975), the *National Resource Inventory* (1977); the 1958 and 1967 *Conservation Needs Inventory*, Renewable Resources Planning Act and the Soil and Water Resource Conservation Act; and the Census of Agriculture, to name a few.

intends to assess these existing inventories and studies in terms of its own definition of agricultural land and to select the most appropriate data accordingly. Inconsistencies among data sets, as well as significant deficiencies in existing data, will be identified, and the adequacy of existing monitoring and reporting procedures will be assessed. For maximum utility, NALS intends to characterize the agricultural land base on a national, regional and state-by-state basis, as the data permits.

## Competing Demands for Agricultural Land

✓ach year, a significant amount of agricultural land is either directly converted into housing subdivisions, water reservoirs, highways and other uses that preclude agriculture, or made more difficult to farm because of incompatible nearby development. Estimates vary regarding just how much farmland is affected by these land use changes, but many believe that the pace of rural land conversion may increase in the future-given national population growth, industrial expansion, and the importance accorded recreation. fish and wildlife values and other "open space" uses that prevent agricultural use of otherwise suitable land.

Furthermore, there is some evidence that competition for agricultural land-

traditionally most intense along the fringes of major metropolitan regions—also is intensifying in wholly rural areas. During the 1970s, for example, non-metropolitan areas have grown more rapidly than major metropolitan regions. This rural growth has prompted concern that a rural version of urban sprawl—a discontinuous pattern of urbanization—could penetrate deeply into rural regions.

In addition to urbanization, a number of other land uses claim a significant amount of rural land each year, including water reservoirs, energy development and mining. Given the present effort to rapidly develop domestic energy resources, competition between these uses and agriculture for rural land may escalate significantly in the future.

Federal efforts to conserve and protect public lands may entail limiting their use by private parties—for example, the intensity of grazing on the public domain may be reduced in the interest of range improvement. Since about one-third of the total U.S. mass is in federal ownership, programs to enhance the quality of these public resources could further intensify pressures on privately-owned farmland.

To the extent that available information permits, NALS intends to document the degree to which agricultural land is being affected by land use changes, and will assess possible future trends in terms of their likely effects on agricultural production. NALS also intends to assess the extent to which policies to protect agricul-

tural land could affect the availability of land for other uses.8

To accomplish this task, NALs intends to: (1) review available statistics pertaining to the conversion of agricultural land to non-agricultural use; (2) classify non-agricultural uses of land in terms of their relative impact on agricultural production; and (3) identify alternative future land use trends, and the degree to which these alternative futures could affect agriculture.

As part of this endeavor, NALS will prepare several "scenarios" of possible future land use situations. These will take into account land needs for agricultural and non-agricultural uses under various assumptions pertaining to such factors as climate, world food demand, energy needs, and the rate of household formation. These scenarios, in turn, will provide a framework for anticipating the potential for conflict between agricultural and non-agricultural demands for land in the future.

#### Market Allocation of Agricultural Lands Among Competing Uses

s agricultural land properly allocated by the marketplace among agricul-

tural and non-agricultural users? This is a fundamental question that is being addressed by the National Agricultural Lands Study.

A variety of private and public allocation processes affect the ownership of the land base, and the way it is used. In some instances, for example, the private real estate market is the primary mechanism for determining land allocation. In other instances, market allocation of land may be affected by government subsidies or policies designed to accomplish specific objectives, or may even be supplanted by public purchase of land through powers of eminent domain.

The diverse land use pattern which results from the interaction of these allocation processes, therefore, reflects a mixture of public and private objectivessome of which may be beneficial to agriculture, but some of which may not. For example, all urban areas have parcels of open land that are being held for future development. In some cases, agricultural use of this land is appropriate. In other cases, however, immediate development of the land may be more appropriate. In some instances, holding such land for future development may encourage the "leapfrogging" of new development to more rural areas where its impact on agriculture may be even greater.

The relationship of land allocation to the costs of agricultural production also is an important consideration. For example,

<sup>&</sup>lt;sup>8</sup>Regulation of surface mining of prime agricultural land under the 1977 Surface Mining and Reclamation Act (P.L. 95-87) is an example of such a policy.

non-agricultural development of prime agricultural land may encourage the cultivation of less productive land, thereby requiring more land for a given amount of production. Furthermore, greater expenditures—in terms of fuel costs, for example, or measures to reduce soil erosion—may be required in using such marginally-productive "replacement acres."

The degree to which agricultural land allocation mechanisms take into account environmental and social goals also is important. To many people, for example, the protection of farming as a way of life, and the preservation of agricultural open space within metropolitan areas are desirable objectives even when the economic efficiency of such farm operations may be doubtful.

NALS intends to examine the ways in which these allocation processes distribute agricultural land among different uses, in order to determine whether these processes are functioning in a satisfactory manner. To accomplish this, NALs will investigate the principal market and nonmarket mechanisms for allocating agricultural land, and will assess their performance relative to agricultural and non-agricultural needs. The assessment will not be limited solely to criteria reflecting economic efficiency, but will also take into account the degree to which public interests and concerns-such as environmental and social goals-are reflected in market and nonmarket land allocation processes.

# The Interplay Between Agricultural Land Availability and the Rural Community

The effects of farmland conversion to other uses are not limited to the land that is actually converted. There are often "spillover" effects for nearby farms, as well as social, economic, and lifestyle changes for nearby rural communities. These spillover effects can magnify the impacts of land conversion.

For one thing, nearby urbanization may directly interfere with farm operations, as farmers suddenly have to contend with such problems as traffic congestion and crop damage from trespass. The farmer's urban neighbor may also experience new problems, ranging from unpleasant farm odors to potentially serious problems such as increased exposure to pesticides. As the new residents increase—both in numbers and political power—local ordinances may be developed which impose restrictions on essential farm operations.

Furthermore, the basic infrastructure of the local farm economy may be disrupted. For example, farmers typically rely upon local businesses to provide credit for production expenses, veterinary services, machine repairs and other needs. These services provide an essential economic undergirding of the smaller-sized agri-

cultural operations. In turn, this relationship between farm and community determines to a significant degree the style of life offered (non-farm) residents of the rural community. This mutual interaction requires some "critical mass" of farmer demand for these agricultural support services below which the services cannot be maintained. As agricultural land is converted—or idled in anticipation of future development—the aggregate demand for these "infrastructure" services may fall below this critical level.

Although difficult to quantify, and seldom addressed, these indirect consequences are nonetheless an important consideration in assessing the impacts of agricultural land conversion. While NALS will be unable to undertake primary research on this topic, a survey of pertinent literature on the subject will be undertaken. It is anticipated that this review will permit identification of the major issues and factors which related to rural community change and agricultural land availability, as well as essential topics for future research.

## Actions Affecting Agricultural Land Availability

State and Local Farmland Retention Programs

as concern about the availability of agricultural land has increased, many

states, counties and communities across the country have become actively involved in the issue. Several state and local governments recently have adopted programs designed to reduce the conversion of farm land to other uses. These programs employ a variety of different approaches to agricultural land retention—such as exclusive farm-use zoning, purchase of agricultural easements, and agricultural districting—designed to keep land in farming. And many other states and localities are seriously considering programs of their own.

Initial state level efforts to protect farmland focused upon the property tax. Since 1956, when Maryland pioneered the way, all but a few states have adopted property tax laws which permit preferential treatment for farming. While these state laws have provided landowners tax relief, their effectiveness as a single technique for protecting land from development has been called into question.<sup>9</sup>

As pressures on farmland have increased, new techniques have been developed or proposed to protect farmland. Some, such as purchase or transfer of development rights, involve compensation (either by government or through the market place) to landowners in return for their surrender of development rights. Another approach, called agricultural dis-

<sup>&</sup>lt;sup>9</sup>See *Untaxing Open Space*, a 1976 report prepared by Regional Science Research Institute for the Council on Environmental Quality for an assessment of preferential tax laws.

tricting, encourages farmers to band together blocks of farmland large enough to assure viable agriculture. Farmers temporarily agree not to develop their land, in return for which state and local governments try to make their actions consistent with farm needs. Still other approaches involve direct land use regulation by state or local governments.

While each of these approaches is of considerable interest to other states and localities that are considering farmland protection programs, an in-depth comparative analysis of the effectiveness of these programs, encompassing overall costs, administrative problems, political considerations and landowner equity, has not yet been made. Nor have correlations been made about the social, economic and agricultural circumstances that have led states or communities to adopt—or reject—a given technique for protection of farmland.

As more and more states and localities debate proposals for farmland protection, there is a pressing need for analysis of this sort. The National Agricultural Lands Study, therefore, intends to undertake a thorough assessment of existing state and local programs as a major component of its research program. Moreover, because of the keen interest expressed by many state and local officials in a reference guide which would provide up-to-date information about what other states and localities are doing, NALS intends to provide its analysis in handbook form.

State and Local Programs and Policies that Encourage Conversion of Agricultural Lands

A variety of state and local programs and policies can directly or indirectly contribute to farmland conversion. While many—perhaps most—of these programs are related in some way to Federal programs which will be addressed separately by NALS, some are not.

To the extent practicable, and to the extent that available information permits, NALS intends to evaluate these state and local programs and policies in order to assess their implications for agricultural land availability and conversion. In addition to programs which purchase land for parks, highways, and other uses, state and local tax policies, land use ordinances, and restrictions on farming activities are of particular relevance.

#### Impacts of Federal Programs and Policies on Agricultural Land Availability

The federal government, with its numerous programs and policies, exerts a significant direct and indirect impact on agricultural land. Federally-assisted highway projects, water resource development projects, sewage treatment facilities, and other public works projects contribute to

indiscriminate conversion of agricultural land. Furthermore, federal tax policies and some other kinds of federal policies and regulations can affect the availability of agricultural land and its conversion.

In many cases, of course, the benefits of a federal project or policy may significantly outweigh its costs in terms of effects on agricultural land. But most federal agencies have yet to adopt planning procedures which would permit them to assess the impacts of their activities on farmland.<sup>10</sup>

In any event, the role of the federal government is poorly understood, and has yet to be addressed in depth.

Evaluation of this federal role, therefore, will be one of the major tasks of NALS.

The study's assessment will include:

(1) identification of important federal programs and policies affecting agricultural land availability of use;

- (2) case studies that will provide a representative profile of kinds of impacts, and the extent to which the administering agency has taken into account affects of farmland; and
- (3) evaluation of the consistency of federal program activities with state or local farmland protection programs.

#### Findings and Recommendations

On the basis of its evaluation of these seven topics, NALS intends to formulate appropriate findings, and to make recommendations for further legislative or administrative action if warranted. Because NALS is an interagency study—involving twelve federal departments and agencies—and because many different agencies have programs which affect agricultural land availability, the scope of these recommendations may be quite broad.

NALS also intends to evaluate the adequacy of current research, land monitoring procedures, and analytic capabilities vis-a-vis agricultural land availability.



<sup>&</sup>lt;sup>10</sup>The U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA) are important exceptions. USDA and EPA have developed internal policies for considering the impact of their activities on agricultural land. Also, the CEQ issued a memorandum to all federal agencies in 1976 directing that the impacts of proposed major federal projects on agricultural land be assessed and discussed in agency Environmental Impact Statements. CEQ is presently assessing the degree to which agencies have complied with this memorandum

he National Agricultural Lands Study is jointly sponsored by the Secretary of Agriculture and the Chairman of the Council on Environmental Quality. They lead the study and co-chair an interagency coordinating committee of policy-level representatives from each of ten other federal agencies contributing funds and/or staff to the study. Since many federal programs affect the availability of agricultural land, and since, in turn, farmland protection policies can affect the availability of land for non-agricultural purposes, this involvement is essential.

The study is headed by an Executive Director and a Research Director. NALS has a staff of about 20 full-time persons representing a range of disciplines and experiences; including economics, sociology, law, soil science, forest and range management, public information, etc.

The study will be completed in 18 months. NALS will cease to exist 30 days after it submits its final report to the President (due January 1, 1981) unless the President directs otherwise.

The estimated budget for the 18 month study is approximately \$2.1 million. About two-thirds of this is accounted for by staff donated by participating federal agencies. No new appropriation of funds has been made for the conduct of the study.

#### Research Products

The National Agricultural Lands Study will produce publications of four different kinds. They are: 1) The Report of the National Agricultural Lands Study to the President. This report, in January 1981, will provide analysis, evaluation, findings and recommendations on the agricultural land availability issues discussed in the second chapter. 2) A Compilation of Technical Staff Reports on topics discussed above. 3) A Reference Guide for State and local Governments on Ways to Preserve Agricultural Lands. 4) NALS Interim Reports published during the study to highlight issues and concerns of current interest.

#### Study Guidance

The USDA-CEQ interagency agreement, dated June 14, 1979, and the Plan of Study, approved by the Secretary of Agriculture and the Chairman of the Council on Environmental Quality, will provide basic guidance to the National Agricultural Lands Study. Since additional guidance may be needed as the NALS progresses, provisions will be made for two progress reports to the Interagency Coordinating Committee at 6-month intervals, with a third meeting scheduled just prior to the printing of the final study report and recommendations.

#### Public Involvement

Early and extensive public involvement in the study is an essential component of the work. As discussed, regional workshops, which attracted about 2,000 participants, were held throughout the country to add an essential local and regional perspective to the study. In addition, seminars and meetings will be held periodically with national groups and associations interested in the issue.

### Coordination With Other Studies

The National Agricultural Lands Study is using as fully as possible other current studies that have a bearing on issues to be investigated. Within the USDA, its study on agricultural structure, as well as studies conducted pursuant to the Soil and Water Resource Conservation Act (RCA) and the Forest and Rangelands Renewable Resources Planning Act (RPA), will be relied upon for pertinent statistical data and other information. The National Agricultural Library's information retrieval system will be used to identify other relevant studies.

Similarly pertinent research by other federal agencies such as inventories of "infill" land in three metropolitan areas being conducted under contract for the Department of Housing and Urban Development, and the General Accounting Office's recent study of agricultural land retention, will be consulted and used when practicable.

#### Personnel

The study requires three categories of staff: administrative, research, and support:

Administrative Staff will be associated with the study on a full-time basis for the duration of the study and consists of:

Executive Director Research Director Information Director Administrative Officer

Their duties include direction and supervision of other staff, administrative functions, budget control, public information, and coordination of public participation.

Core Research Staff will be associated with the study on a full-time basis for its duration. The research staff consists of about 15 people selected on the basis of their proficiency in certain analytical disciplines, and their empirical knowledge about situations, circumstances, and problems with which NALS will deal. They will address some 26 specific research tasks covering the scope of the study.

Support Staff comprises editorial, print production, and secretarial assistance to the administrative and core research staff. Included are an editor, administrative assistant and two secretaries.



Robert J. Gray Executive Director

Michael F. Brewer Research Director

Pearlie S. Reed
Administrative Officer
(USDA-SCS)

Shirley Foster Fields Information Director (USDA-SCS)

#### Research Staff

Frank H. Bollman, Water Economist (Water Resources Council)

Robert Boxley, Economist (USDA-ESCS)

David Brown, Sociologist-Demographer (USDA-ESCS)

Nancy Bushwick, Public Involvement Specialist (CEQ)

Michael Caughlin, Economist

Tony DeVito, Urban Planner (HUD)

Allen Hidlebaugh, Resource Inventory and Monitoring (USDA-SCS)

Hal Hiemstra, Environmental Planner (EPA)

Benjamin Huffman, Planner

David William McClintock, International Relations (Department of State)

Thomas Mierzwa, Government Affairs Specialist

John B. Noble, Attorney

Charles P. Prentiss, Soil Scientist (USDA-FS)

Tom Schenarts, Forester and Range Conservationist (USDA-FS)

Joe Yovino, Fish and Wildlife Specialist (USDI-F&WS)

#### Support Staff

Dallas Fields, Editor

Eliza Mabry, Assistant to the Executive Director

Denise B. Medley, Secretary (USDA- ASCS)

Doris A. Nolte, *Program Analyst* (USDA- REA)

Margaret Weiss, Executive Secretary (USDA-SEA-AR)

#### A Selected Bibilography

In the last few years, many excellent reports and studies addressing agricultural land issues have been published. A few of these reports, as well as citations to more comprehensive bibliographies, are here to aid readers in seeking further information.

#### Overview Reports

American Land Forum, Land and Food: Preservation of U.S. Farmland. Washington, D.C.: 1979, pp. 63.

Brown, Lester R., *The Worldwide Loss of Cropland*. Washington, D.C.: The Worldwatch Institute, 1978, pp. 48

Coughlin, Robert E., et al, Saving the Garden: The Preservation of Other Environmentally Valuable Land. Philadelphia: Regional Science Research Institute, 1977, pp. 341.

#### Land Availability and Needs

Dideriksen, Raymond, Allen R. Hidlebaugh and Keith O. Schmude. *Potential Cropland Study*. Washington, D.C.: U.S. Department of Agriculture Soil Conservation Service, 1977, pp. 104.

Lee, Linda K. A Perspective on Cropland Availability, Washington: U.S. Department of Agriculture Economics, Statistics and Cooperatives Service, 1978, pp. 23.

U.S. Department of Agriculture, Soil and Water Resources Conservation Act: Appraisal 1980. Review Draft Part I, Washington: 1979.

Zeimetz, Kathryn A. Growing Energy: Land For Biomass Farms. Washington: U.S. Department of Agriculture Economics, Statistics and Cooperatives Service, 1979, pp. 35.

#### State and Local Farmland Protection Programs

Davies, Bob and Joe Belden. A Survey of State Programs to Preserve Farmland, Washington, a report to the Council on Environmental Quality and by the N.C.S.L.; 1979, pp. 79.

Toner, William. Saving Farms and Farmlands: A Community Guide. Chicago: American Society of Planning Officials, 1978, pp. 45.

#### Federal Policy and Programs

Cotner, M.L., Land Use Policy and Agriculture: A National Perspective, E.S.C.S., 1976.

Frey, H. Thomas, Major Uses of Land In the United States: 1974, E.S.C.S., 1979.

U.S. Cong. House Committee on Agriculture. *Agricultural Land Retention Act: Report.* 95th Cong., 2nd Sess. Washington: GPO, 1978, p. 29.

U.S. Cong. House Committee on Agriculture. *National Agricultural Policy Act. Hearings.* 95th Cong., 1st Sess., Washington: GPO, 1977, p. 260.

U.S. Library of Congress. Agricultural Land Retention: An Analysis of the Issue, A Survey of Recent State and Local Farmland Retention Programs, and a Discussion of Proposed Federal legislation. Washington: Congressional Research Service, 1978, p. 52.

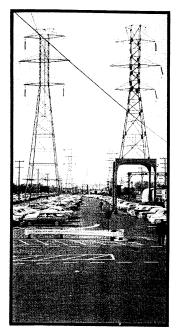
#### Bibliographies on Agricultural Land Issues

Hess, David. Bibliography of State Land Resources Planning, 1970–1975 (supplemental edition) indexed by State, topic, year, agency. (Council of Planning Librarians. Exchange bibliography 845–850) Monticello, Illinois: 1975, v. 2.

Bibliography of State Land Resources Planning, 1960–1974 (preliminary edition): indexed by topic, year, state, agency, (Council of Planning Librarians. Exchange bibliography 769–770 and 771 (parts I-III) Council of Planning Librarians. Exchange bibliography 772–773 and 774 (parts I-III). Monticello, Illinois: 1875, v. 6.

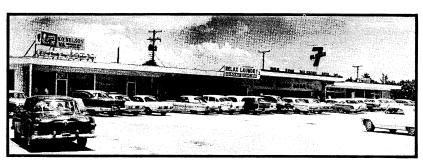
London, Alan C., and Wesley D. Seitz, and Clyde W. Forrest, Jr., *The Conversion of Land From Rural to Urban Use.* (Council of Planning Librarians, Exchange bibliography 721) Monticello, Illinois: 1975, p. 9.

U.S. Library of Congress. *Preservation of Agricultural Land: An Annotated Bibliography*. Congressional Research Service. Washington: 1978, pp. 55.

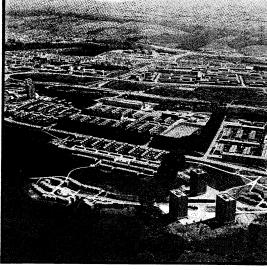




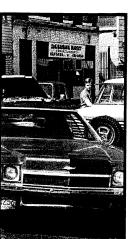






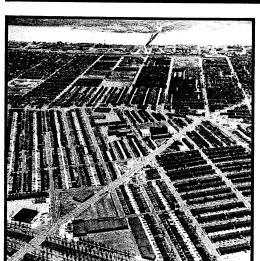




















Photos Courtesy USDA and Department of Housing and Urban Development.



#### National Agricultural Lands Study

New Executive Office Building 722 Jackson Place, N.W. Washington, D.C. 20006 (202) 395-5832

> Robert Gray **Executive Director**

Michael Brewer Research Director

Shirley Foster Fields Information Director

#### **Participating Agencies**

Council on Environmental Quality

Department of Agriculture

Department of Commerce

Department of Defense

Department of Energy

Department of Housing and Urban Development

Department of the Interior

Department of State

Department of Transportation

Department of the Treasury

**Environmental Protection Agency** 

Water Resources Council