The Loss

of

Agricultural Lands
(an issue paper)

by

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for the

W. Alton Jones Foundation, Inc.

November 5, 1983

THE LOSS OF AGRICULTURAL LAND

INTRODUCTION

"The development of civilization has been hand in hand with the development of agriculture."

Our nation has been endowed with an agricultural land resource that is gigantic and complex. Over 20,000 kinds of soil are used for growing crops, trees and livestock that feed and clothe the nation, provide raw materials for manufacturing and supply export demands. This vast U.S. land area includes the world's largest regions of productive soils located under temperate climate and semi-tropical conditions. We have capitalized on this great natural resource wealth by making enormous public and private investments, over many years, in the agricultural sector. The transportation and marketing systems of the U.S. coupled with its agricultural institutions, (research, extension, credit and technical assistance), the private sector and the managerial capability of its farmers, foresters and ranchers provide assurance for the foreseeable future that:

-- this country's domestic food and fiber supply is reliable; and

-- we will continue to be an ever more important source of agricultural production for export.

However, even though, "U.S. agriculture is a marvel of the application of science and technology to production", Batie and Healy conclude in The Future of American Agriculture as a Strategic Resource, "it is vulnerable to a number of identifiable threats".1/

Along with wide variations in farm income, U.S. Treasury payments to farmers, and uneven performance of agricultural exports, we have an insidious and increasing degradation of the very land and water resources upon which our agricultural abundance depends.

The two main causes of potential agricultural productivity loss are excessive soil depletion and the continued conversion of prime farmlands to non-agricultural uses. Both can be reversed, but the costs are such that it is most prudent to agree that for all practical purposes both represent losses of agricultural productivity that are permanent to society.

Soil erosion is a double-bladed sword that reduces productivity of our cropland and pollutes our water courses and air. These two effects constitute serious threats to our well being as a nation and have been exacerbated by foreign demands for U.S. agricultural products since 1972. We are, in effect, exporting our soil and water quality in the form of food and feed grain shipped to other lands.

The other side of the coin relates to that land lost to urban, built-up and water storage areas. Instead of the insidious, mostly unseen, losses from soil erosion that rob productivity so slowly that too few notice; the conversion of a tract of prime farmland from corn to houses is clearly apparent.

The causes for both the excessive soil erosion and farmland conversion losses are not simple or superficial, nor are they likely to respond to cosmetic actions. Instead, they are deeply rooted in such phenomena as peoples' lifestyles, international trade, and traditional institutions.

This paper will examine:

-- the nature of the problem;

-- the geographic scope of the problem;

-- the major actors; and

-- what needs to be done?

NATURE OF THE PROBLEM

> "Nothing, in my opinion, would contribute more to the welfare of the states than the proper management of the lands."
>
> George Washington

BACKGROUND

The total surface area of the U.S. consists of about 2.3 billion acres. Of this, 64 percent (1.5 billion acres) is non-Federal land, 32 percent (751 million acres) is Federal land, and the remaining 4 percent (99 million acres) consists of water areas more than 40 acres in size and streams more than one-eighth of a mile wide (referred to as "census water"). Nearly all agricultural land is in non-Federal ownership. The reservoir of rural, non-Federal land is abundant, but not endless. Most rural land is not suited to the intensive agricultural uses as cropland, pasture and native grass, and rangeland. In 1977, of the 1.5 billion acres 27 percent (414 million acres) is rangeland, 27 percent (413 million acres) is cropland, 25 percent (377 million acres) is forestland, 9 percent (134 million acres) is pastureland, and 12 percent (178 million acres) is urban and built-up areas, roads and highways, barren lands, mined land, permanent snow and ice, and similar non-agricultural areas.2/

Although it varies in kind, there is more high quality land available for agriculture in the U.S. than in any other country. Of the total non-Federal land, about 414 million acres are level to nearly level, 422 million acres are gently sloping to sloping and 559 million acres have moderately steep to very steep slopes. At least 269 million acres are naturally wet and nearly 402 million acres are droughty. Some land is not only sloping but wet. Other land is level but lacks sufficient water to grow a variety of agricultural crops. These conditions severely limit the use of land for agriculture. Agriculture can no longer expand in the U.S. at the expense of other fragile resources, for instance, wetlands. In addition, some lands are in flood prone areas or are underlain with strippable coal deposits.

LOSSES FROM SOIL EROSION

Of the 413 million acres of cropland the average annual soil loss via sheet and rill erosion is nearly 2 billion tons. About one-third of our cropland is eroding at rates that reduce its long-term productivity. For example, if soil erosion in the Corn Belt continues to the year 2030 at 1977 rates, corn and soybean yields could be 15 to 30 percent less than potential yields with soil erosion under control. For instance, on the average, for each ton of corn produced in Iowa five tons of soil were eroded from their croplands.3/

The objective is to reduce annual soil loss to less than 5 tons per acre. A ton of soil is about as much as a cubic yard. One acre - inch of topsoil - weighs about 160 tons. Thus, a soil loss of 5 tons per acre per year would represent an inch in 30

years. This utilizes the concept of a soil loss tolerance ("T-value), which attempts to establish the maximum acceptable soil loss rate. Total annual soil erosion from all non-Federal lands in the U.S. approaches 6.4 billion tons caused by both water and wind. Some soils are so fragile that annual, average loss should be less than five tons per acre.

The range of soil erosion on U.S. agricultural lands varied from less than 2 tons/acre/year to well over 50 tons/acre/year. In an increasingly integrated world food economy, other nations are also severely stressing their soil resource base. Soil erosion worldwide from the roughly 3 billion acres of cropland is estimated by Les Brown to be over 25 billion tons each year and probably accelerating.

The Worldwatch Institute is in the process of analyzing the limited available data, making rational assumptions and developing a forthcoming report on the progress toward a sustainable society. Loss of agricultural land from both soil erosion and land conversion, as pointed out in Worldwatch Paper 48, is undermining the global economy. 4/

LOSSES FROM LAND USE CONVERSION

There are (based on 1977 data) about 345 million acres of prime farmland in the U.S. ranging from 37 million acres in Texas to 84,000 acres in Rhode Island. These soils have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oil seed crops. About 231 million acres are intensively cropped. The rest is in valuable forests and/or grass use. From 1967 to 1975, about 8 million acres of prime farmland were lost to other uses at an average rate of 1 million acres per year. Considering all types of

rural land converted to non-agricultural uses the total acreage may approach 3-5 million acres per year as some land is isolated and becomes unfarmable by sprawling growth patterns.[5/] This incremental piece-by-piece land conversion is by no means limited to the U.S. Protecting the croplands that are the main source of food worldwide becomes even more imperative as population continues to grow (now over 4 billion), given the double-edged effect of population growth on the cropland base. More people generate demand for more cropland and yet increase the pressure to convert farmland to other uses. At present, urban sprawl, village expansion, and other urbanizing activities claim several million acres of the world's prime cropland each year, while farmers try to wring more out of their cropland and push cultivation onto ever more fragile soils.

Most of our Nation's crops -- and a large share of the agricultural exports -- should be produced on prime farmland, with the least damage to the environment. Their continued loss puts more pressure on marginal lands, which are generally more erodible, droughty, difficult to cultivate and usually less productive.

WHAT ARE THE ISSUES

The extent to which agricultural lands will be eroded, water quality impaired, prime land converted to urban uses, or the extent to which they will be conserved, depends on a complex set of variables.

One set of variables includes the quantity and composition of demand for agricultural commodities. The export component of demand will depend on population, income growth, the strength of the dollar and the rate of agricultural development in other countries.

Another variable is our ability to develop new technology. If it progresses as it has in the past, and serves as a land substitute as it has over the last 40 years, we could meet food demands from a smaller cropland base. Effective land and water conservation programs then could be implemented more readily. The variable that can modify all others is the further development and option of land conserving practices and cost effective farming systems.

Another set of forces exogenous to agriculture that will also help determine the intensity with which land and water resources will be used include the structure of agriculture, the use of agricultural commodities as a source of liquid fuels and the agricultural policies employed by the Federal government.

The issue of private rights vs. public interest in land and the proper role of governments continues to be controversial.

As Dr. Richard L. Barrows points out, "there is no right or general answer to the proper distribution of government roles in governing land use. The history of federalism and the traditions of American development have been guiding the public in fixing responsibility for various governmental land use functions. However, a new public awareness of risks and dangers in the management of land resources has put a different focus on such decisions from that of the past".6/

WHY BE CONCERNED?

A fairly broad concensus prevails that world demand for U.S. grain will continue to expand over the long-run and that the real price of food will rise accordingly.

With 4 of every 10 acres of U.S. agriculture now producing for export we need to be concerned that inadequate land management is

damaging our land and water resources. Agriculture, a natural process, has recently become increasing dependent on unnatural inputs, large machinery, fertilizers, pesticides and other chemicals. It is a highly specialized, monoculture industry, and due to cash flow pressure the farming is intense and even soil loss does not affect the lands capital value. The market does not reward the individual producer for long-range conservation investments. There is a strong tendency during hard economic times to tolerate the exploitation of resources in search of short-term advantages.

However, there are enough uncertainties that emphasize the importance of conserving those agricultural land resources that remain.

This summer's drought and heat will rank among the ten worst in history -- and is an example for caution.

We are entering a new phase of our agricultural history. We face a new and complex international interplay of many factors that will determine the adequacy of our agricultural land resources.

PRIORITIES

Although both soil erosion and land conversion represent loss of agricultural land, the emphasis for decades, at the national level, has been on soil erosion. However, land that is moved permanently out of agriculture is most significant in those many localities where prime land is limited and their communities are experiencing rapid growth. Until the early 1970's this conversion caused little concern at the national level. The land met a genuine demand for new housing and other goods and services, and the overall productivity capacity of U.S. agriculture seemed undiminished. There was enough unused or underused land and the steady gain in crop yields per acre (productivity) more than offset that agricultural land

converted to other uses. But in the last decade the situation - as in soil erosion - has changed. Rapid international and national changes involving food, inflation, energy and economic instability have created uncertainties about the capacity of the U.S. agricultural land base to supply food and fiber at the high levels of production that are likely to be demanded in the future. Land conversion and soil erosion add to uncertainty.

IS U.S. POLICY ADEQUATE TO ASSURE THE STABILITY OF OUR NATION'S MOST BASIC INDUSTRY?

Present commodity and conservation policies, at the Federal level, are in conflict. Too often land ends up in the back seat.

Federal subsidies for crop production have, in the past, encouraged some unwise land use. A "Sodbuster" bill -- yet to be enacted -- would be a step in the right direction.

S. 663 and H.R. 3457 would prohibit the payment of certain agriculture incentives to persons who produce agricultural commodities on highly erodible land. These measures would be a first step. The next would be to develop strategy to remove about 17,000,000 acres, now in the system, from intensive cultivation.

An effort to discourage unwise agricultural land loss relates to early implementation of the Farmland Protection Policy Act of 1981. This would require that all Federal agencies consider the impact of their actions on prime agricultural land. The final rules to implement that law have yet to be adopted, although over 100 responses to the proposed rule are now being analyzed in USDA.

The "blueprint for the future of soil conservation" sent to Congress in December 1982 by the President proposes a weak interim action.7/ (Also attached is a summary of the USDA National Conservation Program (NCP))

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GEOGRAPHIC SCOPE

"Civilization depends for continuance on the seed saved each year for planting the next.

In too many Nations there is evidence we are now consuming the productive resource itself. In economic terms, we are consuming the capital along with the interest. The world has about 10,000 years of agricultural history. What is different now? The current trends, from several key indicators, suggest here and abroad that the world seems to be going in directions that can't be continued. The current trends of soil erosion - over 25 billion tons per acre year from the 3 billion acres of cropland is soil depletion and waste that is intolerable to all nations.

The conversion each year of millions of acres of the most important farmland to non-agricultural uses is of some concern to the developed nations, but needs to be of equal concern to all. The problem is that if the developed nations do not retain and conserve their best land for agriculture -- do not set an example -- how can others be encouraged to build top soil quality rather than deplete it?

Widespread public awareness is an essential prelude to effective action. The question is whether action will come soon enough for a world that in 1970 had 3.68 billion persons and increasing 70 million per year; and in 1983 has 4.66 billion persons and increasing 79 million per year. It should disturb Americans that in 1982 the U.S. controlled 55 percent of world grain exports.

That means that millions of people abroad, as well as here in the U.S., depend on this Nation's agriculture for their daily bread. Moreover, this dependence is expected to grow in the decade ahead. In the past decade, agriculture has become an

increasingly prominent aspect of national economic policy, and the policies governing our relations with other nations of the world.

One of the most striking facets of that situation is the growing disparity between food consumption requirements and indigenous production in the world outside the highly developed market economies. And, it is the food deficit regions with the majority of the present world population, and which are expected to have most of the future growth in population. Alternatively stated, the world outside the U.S., Canada, the EEC, and Australia is becoming more dependent each year upon the abundance of these countries.

Norman E. Hudson summed up the relative inportance of the issue at the annual meeting of the Soil Conservation Society of America in Hartford Connecticut (August 2, 1983) when he said . . .

> "I want to make two points today. First, if you think you have problems in making soil conservation work in the United States, spare a thought for the countries of the Third World, where the problems are much worse, and the difficulties of applying the solutions are much greater. Second, you must get it right, because if soil conservation cannot be made to work effectively in the United States, with all the advantages of research services, extension services, and conservation services, plus wealthy educated farmers on good land with a gentle climate -- if with all these benefits conservation is not successful, than what hope is there for struggling countries which have few, or none, of these advantages?"8/

A final point on geographic scope is the importance of public lands, especially U.S. federal lands. Their proper use is a topic beyond the scope of this paper. They, obviously, cannot be overlooked as they encompass 751,000,000 acres of the U.S. total of 2,263,000,000 acres. Their use and management by the federal agencies in USDA and the U.S. Department of the Interior is significant to agriculture in several ways. Public lands yield water for irrigation, provide some grazing for livestock, supply timber, minerals and recreation for millions of users. The U.S. has the

luxury also to set aside some lands for wildlife, wilderness, historic and cultural purposes that many other nations simply cannot afford. Because their management impacts the private sector, their wise use in many local situations is very important. The public land agencies need to plan and implement programs that are prime examples of stewardship and are in harmony with those concerned about the loss of agricultural lands.

The Major Actors

"Actor - one that takes part in any affair: participant" (Webster)

There are many people and key institutions, both public and private, concerned about the loss of agricultural land. An annotated outline is attached. (See excerpts from NASDA Directory)

The most predominant actor is the landuser. The farm sector today is far different than just ten years ago. There are about 2.44 million farms in the United States, and about 3.7 million farmworkers. A farm is defined as a place that has $1,000 or more gross sales of farm products. Eighty-eight percent of all farms with sales over $2,500 are family farms. Communities do not fully appreciate the value of a viable, stable agriculture in their economy.

Loss of top soil, whether in terms of long-run productivity or downstream pollution, does not excite a sense of immediacy. The costs of business as usual are still too nebulous, and are borne too far into the future. What matters is that those who provide the agricultural products need to be able to carry on that activity in an environment of predictability and reasonable reward.

Traditionally, a schism has existed between mainstream farm policy and agricultural resource conservation policy. Programs to

support prices, promote exports, and finance farm purchases and operating costs usually have been designed and administered with little regard for their impact upon the nation's land and water resources.

In general, the government has actually subsidized unsound land management with powerful incentives, while at the same time offering limited technical and financial assistance to promote wise land use and soil conservation. Many government activities have had the unintended effect of removing large amounts of prime farmland from production -- by dividing farmland into parcels that are difficult to farm. Federal planning and assistance programs are often oriented to a single purpose (e.g., wastewater treatment) and fail to consider the impacts of the program on agricultural land. For example, many federal programs have provided support for the public purchase of farmland for highways, dams, reservoirs, outdoor recreation facilities and other structures. The National Agricultural Lands Study identified some 90 federal programs that promote conversion of agricultural land.

Local governments, with the assistance of federal grants and loans, bear equal responsibility for farmland conversion. Often they may locate sewer and water lines near agricultural land, causing the development value of this land to increase. Local zoning and other regulatory activities may permit and, in some cases, even encourage the development of prime farmland because this land is considered "undeveloped."

Several interrelated forces are hemming in the farmer. As new highways are built, rural areas become easier to reach, attracting more nonfarm residents. More industry is moving into rural areas near cities. Property taxes are increasing to provide for new

urban-type services demanded by nonfarm residents, whether farmers want the services or not. Local ordinances and environmental regulations are gradually changing in response to complaints about such things as livestock odor and night plowing on farms next to nonfarm homes. Furthermore, farming equipment, supplies, and services are farther from the farm as the country becomes more oriented toward the nonfarming population.

The result? Land prices (and property taxes) are up, tempting farmers to sell acreage and making it difficult to enlarge a farm or start a new one. This type of "agri-urbanization" is easily seen in the Boston-to-Washington corridor and often results in a lessening of distinction between urban and rural counties. Accordingly, among the key actors are the governments at all levels. In spite of constitutional constraints at the federal level and the state's delegation of land use control to local government, innumerable options remain for federal and state involvement in land use policy.

The federal government has long been identified as a major contributor to farmland conversion. Acknowledging this, the Congress adopted the National Farmland Protection Policy Act as part of the 1981 Farm Bill.9/ This law requires all federal agencies to evaluate the effects of their programs on farmland, to consider alternative actions that will reduce farmland conversion and to infuse in all agency policy and regulations a commitment to retain farmland in agricultural use whenever possible. The act was to be effective June 22, 1981, however, USDA is only now developing regulations that will determine how strong the federal policy will actually be. Secretary of Agriculture John Block points out that the act "gives state and local governments and the private sector

a far greater say in the execution of federal programs that may endanger agricultural lands and farming activities."

In several states a Governor's Executive Order instructs state agencies to identify steps required to minimize adverse effects. State programs attempting to deal with the competition for agricultural land include deferred taxation, agricultural zoning and districting, differential assessment of farmland, and purchase of development rights. Many states are establishing land use planning programs to provide comprehensive coordination of regulations involving housing, natural resources, transportation, industrial development, and other important factors. Local programs vary but typically are aimed toward the permanent maintenance of farms and farmland in the area. Twelve commonly used techniques10/ that combine state and local initiatives include: 1) agricultural zoning; 2) differential property tax assessment; 3) agricultural districting; 4) purchase of development rights; 5) transfer of development rights; 6) estate tax benefits; 7) purchase and resale or lease with restrictions; 8) right-to-farm legislation; 9) property tax credits; 10) development permit system; 11) growth management and comprehensive planning; and 12) private land trusts.

In the private and not-for-profit sector, the international, national and state associations, organizations, groups, conservancy trusts and forums who are also important actors include those representing agriculture, forestry, conservation, land and water, the environment, financers, realtors, planners, home builders, researchers and academic institutions. The loss of agricultural land, as a prime focus, varies from positive to high priority action for land trusts, conservation districts and some environmental and farm groups to some who disagree with those who foresee significant problems caused by disappearing farmland.11/ Therefore,

the current and prospective roles of the key participants in resolving the problem will depend on how pressing they view farmland loss. While some agree that the total amount of farmland lost nationally is not significant, others observe that local and regional losses of farmland have played a significant part in reducing an area's agricultural viability and have caused serious repercussions for individual farmers. While some believe that the major determinant of land capability is economic and that farmland should respond strictly to a free-market system, others believe that land is not a commodity but an indispensible yet finite resource -- one that must be protected through a stewardship ethic that takes into account both the quantity and the quality of agricultural land. Professional opinion also diverges on the role of technology, including petroleum-based fertilizer, as a essential thing, if the nation is to sustain or increase yields despite a reduced cropland base, they see an agricultural sector overly dependent on technology.

There has been a relatively long history of concern about soil conservation. More recently, in the opinion of many, the uncertainty about the future of farmland here and in the world is reason enough for limiting soil erosion and farmland conversion rates, given the extreme difficulty of recapturing topsoil or prime land once it is lost for agricultural uses.

Questions that need more research and answers are:

-- What has been the effect of uncontrolled urban growth on costs for services -- e.g., electricity, gas, telephone, roads and bridges, transportation of school children?

-- How effective are current measures to protect farmland? Do they have a degree of permanence and adaptability? Would they change dramatically if political leadership changed? Do they have the strong support of agricultural interest?

-- What new initiatives might be considered for farmland protection? How would they fit into the overall food system and enhance the area's agricultural self-sufficiency? Which initiatives are dependent on private sector or federal government support?

Private-sector land trusts and farmland conservancies are strategically effective methods, using a wide variety of real estate transactions to protect agricultural land. Trusts can operate without the cumbersome regulation and public notice requirements necessary in public acquisition efforts. Land trusts are also free of bureaucratic red tape. Working in partnership with local or state government, the trusts' overall independence from government helps them gain the confidence of landowners. However, land trusts are limited by a lack of permanent funding. Unless trusts have large, supportive membership rolls, they must depend largely on foundation contributions to sustain their land purchasing and management efforts.

What needs to be done?

"Conservation is a state of harmony between men and land" (Aldo Leopold)

Realistically the directions in the short-term of soil conservation policy are for the most part structured by the RCA National Conservation Program (NCP). 12/ Because the NCP did not link soil erosion and farmland retention, the direction for the latter will primarily be determined by the leadership and advocacy role of USDA as they implement the Farmland Protection Policy Act. 13/

The National Agricultural Lands Study (NALS) had conclusions that are also still valid. 14/ Based on its review of state and local programs, NALS made the following recommendations to communities and states that wish to adopt successful farmland preservation programs.

1. Make agricultural land protection part of a comprehensive growth management plan, to assure that a balance is reached in meeting all community demands.

2. Tailor programs to local conditions.

3. To make the job easier for local governments, get state governments to take the lead, whenever possible, in seting policy guidance for protecting agricultural land.

4. Develop programs early, before development pressure is intense.

5. Set as top priorities, strong community leadership (farmers plus other interested citizens) and accurate information on the status of agricultural activities.

6. Design programs that work toward maintaining the economic viability of agriculture in an area.

The serious short-fall in the federal soil loss efforts is that the final program (NCP) lacks specifics. The goals are to:

-- target some part of limited federal assistance to the ten areas in the country where erosion is most severe;

-- emphasize conservation tillage (as opposed to conventional, erosion-inducing plowing) and other methods to control erosion at a reasonable cost;

-- require farmers receiving loans from the Farmers Home Administration to develop a conservation plan; and

-- encourage farmers who receive federal conservation assistance to make long-term agreements to continue conservation efforts.

However, there are difficulties that involve reallocating a shrinking federal budget. Non-federal appropriations are growing, but they are not uniform and states and counties also face serious budget problems.

In the longer term -- and it is a cloudy crystal ball -- the various participants and the public will demand that the issues be clarified, that critical questions be asked, and that there be more fundamental changes made in the soil conservation programs. Some needed changes include acceptance that the various agricultural and national goals intertwine and impact one another.

Agricultural surplus programs relate to trade policies, which relate to the structure of agriculture, which relate to foreign governments' food and resource policies, which relate to the loss of agricultural land.

The American Farmland Trusts' soil conservation study "The Search for Solutions" 15/ will recommend that the U.S.:

First, establish the nondegradation of agricultural resources as a central goal of national policy.

Second, establish a long-term cropland reserve program for highly erodible cropland under the umbrella of USDA's traditional conservation and commodity programs.

Third, eliminate those elements of USDA's commodity programs which would subsidize cultivation of highly erodible lands in the future.

A "Seminar on the Retention of Prime Lands" sponsored by USDA in 1975 stressed the need for accelerated training, education, action-oriented research and public information programs for agricultural land problems. These activities still need to be strengthened by both the public and private sectors.

"Hands on" technical assistance and cost-effective scientifically defensible demonstrations to reduce the risk of "reinventing the wheel" is high priority for many rural counties who do not have the experience they need. 16/

The advocacy role requires a firm intellectual base and firm dedication that our legacy is to leave for future generations the renewable natural resources they will need to produce adequate supplies of food and fiber.

An appropriate role for private philanthropy in helping to find solutions to the loss of agricultural lands would be:

First, strengthening and, to the extent possible, accelerating those activities already underway. This type of support would require limited additional research of the "State of the Art". For instance, an RCA Symposium: Future Agricultural Technology and Resource Conservation held December 5-9, 1982 has recently released an Executive Summary. 17/ The research and action-type recommendations related to "Land Use" and the "Adoption and Diffusion of Soil and Water Conservation Practices" are timely for follow-up.

Second, the USDA will soon begin release of the data on the condition of the Nation's resources. This extensive 1982 National Resources Inventory (NRI) is an update of the SCS 1977 NRI and has five times the sample points (1,000,000). The valuable information, to be fully credible and accepted by the public, will also need analysis and interpretations by the private nonprofit sector.

Third, there is great need to provide rural citizens and their decisionmakers with natural resource information systems, that they can afford, based on soils, land ownership, water resources, and agricultural productivity. National profiles need to be developed for use by over 2,600 largely rural counties according to criteria such as demographics, agricultural significance, budget limits, technical support, and need for resource information and conservation policies. The final product would be a categorization of rural counties to help set priorities for assistance and pilot projects leading to a stronger Natural Resource Information System. The local citizens need "hands-on" tools that are cost effective in order to make sound technical and judgement decisions related to the loss of their agricultural land.

Fourth, there is need for a revolving fund to be able to move quickly on land trust options. These funds can also be used to generate additional money for protecting agricultural land.

Fifth, a "strike force" of experts for consulting services to assist on a timely basis those officials wrestling with the issue of farmland protection, but lacking needed skills and prior experience on this issue.

Sixth, forecast capability needs more work, along with the analysis and ability to focus on urgent, high priority areas in time to impact on pending problems with reasonable solutions. This suggests that organizations with demonstrated ability to influence direction and policy need priority for funds.

Seventh, in land use issues incompatibility between activities often means that one use adversely affects the other. At the individual level, conflict is viewed as personal goal interference because of another's behavior. On an operational level, conflict exists whenever incompatible activities occur. An assessment of the conflicting views that need to be resolved in solutions to the loss of agricultural land would be beneficial. Conflict among users is a fact of life for most resource managers. Understanding the paradox of conflict in land use can permit development of programs to reduce conflict.

Eight, the continuing debate as to the balance needed between the voluntary vs. the mandatory approach to soil loss reduction and agricultural land retention is significant. The value of incentives vs. disincentives; of persuasion vs. regulation brings into play the proper role of government, the market place and the courts in deciding the "rights" of landowners vs. the "interests" of society.

Is the range of decisionmaking of landowners being unduly circumscribed, rights invaded, liberty reduced by the solutions offered to slow the loss of agricultural land? Those who have demonstrated, through experience and competence, a "middle-ground" approach to solving the agricultural land loss problem endorse a synthesis of those land saving strategies whether adopted by government by popular consent, or initiated by the private sector -- that are most appropriate to apply to site-specific circumstances. These common ground solutions deserve support and a stronger role in advocacy efforts with others who share a commitment to safe-guarding the future of America's agriculture.

As stated previously, we have been a nation rich in both land and technology, especially the latter, since World War II. Through out my career as a conservationist, the basic agriculture challenge facing the U.S. has been the management of over production. This has led national policymakers to view the agricultural scene as one where there were too many bushels, too many farmers and more good land than we could ever need. Public spending to learn more about the basic facts of soil erosion and land loss on soil productivity, or to increase crop production while maintaining topsoil quality was not a high priority. But that view in vogue for several decades can't last much longer.

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2. U.S.D.A. Soil and Water Resources Conservation Act, 1980 Appraisal, Part 1.

3. U.S.D.A. Soil and Water Resources Conservation Act, 1980 Appraisal, Part II.

4. Brown, Lester R. and Pamela Shaw. World Watch Paper 48. Six Steps to a Sustainable Society, 1982.

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8. Hudson, Norman E., Professor of Field Engineering, National College of Agricultural Engineering. Silsoe, Bedford, England. Soil Conservation Strategies in the Third World (6th H. Wayne Pritchard Lecture - SCSA).

9. Public Law 97-98, 1981.

10. The Future of America's Farmland, Pub. No. 261, 1983. League of Women Voters Education Fund.

11. An Opposing View - Researchers at Resources for the Future (RFF), an independent, Washington, DC-based economic "think tank," disagree with the authors of NALS and others who foresee significant problems caused by disappearing farmland. RFF economists argue that the marketplace will not permit a shortage of land, for if demand is great enough, land will be automatically put back into agricultural production. In the meantime, RFF does not believe that current farmland preservation programs are cost effective: the benefits to society for keeping these relatively small amounts of agricultural land in production are outweighed by the costs to society in terms of lost revenues (estimated at $40 billion) from taxes on developed property.

    RFF also points to some studies that predict that farmland conversion rates in the 1980's and 1990's will fall far below those in preceding decades. Several reasons are cited, among them, the slowdown in reservoir and highway construction and the shrinking rate of new household formations.

    RFF also believes that most of the farmland preservation move is sorely misdirected. Their economists foresee serious problems for American agriculture brought on by increased product demand and rising production costs. The prices of fertilizer, energy and water continue to skyrocket, and increased soil erosion is expected to take a heavier toll on productivity in the future. Consequently, RFF thinks that government efforts to help farmers and the farming industry would better be directed towards research to reduce erosion and improve crop yields than toward farmland preservation.

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12. Ibid, Summary of the 1982 National Program for Soil and Water Conservation (NCP), U.S.D.A.

13. The Land Evaluation and Site Assessment (LESA) system, Soil Conservation Service, U.S.D.A. (see attached).

14. Ibid, (NALS), Executive summary.

15. American Farmland Trust, A Search for Solutions (see attached).

16. U.S.D.A., Recommendations on Prime Lands, From the Seminar on Retention of Prime Lands, 1975.

17. RCA Symposium: Future Agricultural Technology and Resource Conservation (Executive Summary) Center for Agricultural and Rural Development -- 578 Heady Hall, Iowa State University, Ames, Iowa 50011.

Land Evaluation and Site Assessment (LESA)

The Soil Conservation Service (SCS) of the U.S.D.A. has developed a new system -- the Land Evaluation and Site Assessment (LESA) system -- to help local governments in land use planning to protect farmlands. SCS believes this system will facilitate making consistent, technically defensible land use decisions based on both accurate information on soil capability and careful assessment of other factors that go into land use decisionmaking (such as proximity to town, distance to water and sewer lines, impact on water quality, or potential flood hazard).

According to SCS the system should be useful in:

-- implementing the National Farmland Protection Policy Act;

-- determining farm units to be included in agricultural land protection programs;

-- determining the minimum parcel size for farm subdivision in agricultural districts;

-- planning sewer, water and transportation projects, agricultural districts, etc.;

-- determining the need for an agricultural land protection program;

-- determining the type of agricultural land protection program to be used;

-- developing and reviewing environmental assessments; and

-- developing guidelines under which conversion of agricultural land to nonagricultural uses should be permitted.

To implement the Farmland Protection Policy Act the proposed federal rule draws upon the Land Evaluation and Site Assessment (LESA) technique for the criteria to evaluate effects of all federal programs on the conversion of farmland to other uses.

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The rule would require the Soil Conservation Service to compute a land evaluation score for all farmland in every county where federally assisted development is anticipated. It would also encourage every State and local government to designate farmland of statewide or local importance, with the concurrence of SCS State conservationists, if they want it given consideration for protection in the evaluation. The Federal agencies involved in proposed developments on prime or unique farmlands or farmlands of statewide or local importance would have to compute the site assessment score for sites under consideration.

The rule, published in the Federal Register on July 12, 1983, describes how the Farmland Protection Policy Act provisions of the Agriculture and Food Act of 1981 will be implemented.

SCS would also, upon request, help States, local governments, and private, nonprofit organizations protect farmland from unnecessary conversion to non-agricultural uses. As part of this aid, SCS would give soil maps and other soil and water resource information to these agencies and help them to develop and use a LESA system.

An Annotated Outline of Major Actors

The National Association of State Departments of Agriculture - Research Foundation - in May, 1983 published a National Directory of Farmland Protection Organizations. This excellent 1st Edition ($4.50) is available through their Farmland Project at 1616 H Street, N.W., Washington, D.C. 20006. This Preservation Report No. 4 has a copyright label. It is most complete in its coverage of National and State organizations by regions. The format is as follows:

American Farmland Trust, 1717 Massachusetts Avenue, N.W., Washington, D.C. 20036 (202)332-0769

Contact, Douglas P. Wheeler, President - Robert J. Gray, Director of Policy Development

History, Founded in 1980 as a nonprofit organization committed to the protection of farmland through private sector land transactions and public policy change. AFT supports measures designed to maintain a healthy and diversified agricultural industry and has recently initiated a special soil conservation research and analysis project.

Activities, Acquires "agricultural conservation easements" on farmland through direct purchase or donation on a case by case basis. Provides technical advice and assistance to states, local governments, and private organizations seeking to develop policies that help protect farmland and to change those that do not. Testifies frequently on proposed state farmland protection legislation. Functions as an information clearinghouse. Conducted an extensive evaluation of current soil and water conservation efforts and an analysis of the Resources Conservation Act.

Publications, Farmland, a bi-monthly newsletter; Farmland Facts, an educational series of brochures.

Financial Support, Membership fees ($15 up; membership exceeds 20,000); private donations; foundation grants; corporate contributions; endowments.

Subtitle I—Farmland Protection Policy Act

SHORT TITLE

SEC. 1539. This subtitle may be cited as the "Farmland Protection Policy Act".

FINDINGS, PURPOSE, AND DEFINITIONS

SEC. 1540. (a) Congress finds that—

(1) the Nation's farmland is a unique natural resource and provides food and fiber necessary for the continued welfare of the people of the United States;

(2) each year, a large amount of the Nation's farmland is irrevocably converted from actual or potential agricultural use to nonagricultural use;

(3) continued decrease in the Nation's farmland base may threaten the ability of the United States to produce food and fiber in sufficient quantities to meet domestic needs and the demands of our export markets;

(4) the extensive use of farmland for nonagricultural purposes undermines the economic base of many rural areas;

(5) Federal actions, in many cases, result in the conversion of farmland to nonagricultural uses where alternative actions would be preferred;

(6) the Department of Agriculture is the agency primarily responsible for the implementation of Federal policy with respect to United States farmland, assuring the maintenance of the agricultural production capacity of the United States, and has the personnel and other resources needed to implement national farmland protection policy; and

(7) the Department of Agriculture and other Federal agencies should take steps to assure that the actions of the Federal Government do not cause United States farmland to be irreversibly converted to nonagricultural uses in cases in which other national interests do not override the importance of the protection of farmland nor otherwise outweigh the benefits of maintaining farmland resources.

(b) The purpose of this subtitle is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland.

(c) As used in this subtitle—

(1) the term "farmland" includes all land defined as follows:

(A) prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary. Prime farmland includes land that possesses the above characteristics but is being used currently to produce livestock and timber. It does not include land already in or committed to urban development or water storage;

(B) unique farmland is land other than prime farmland that is used for production of specific high-value food and fiber crops, as determined by the Secretary. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables; and

(C) farmland, other than prime or unique farmland, that is of statewide or local importance for the production of food, feed, fiber, forage, or oilseed crops, as determined by the appropriate State or unit of local government agency or agencies, and that the Secretary determines should be considered as farmland for the purposes of this subtitle;

(2) the term "State" means any of the fifty States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, or any territory or possession of the United States;

(3) the term "unit of local government" means the government of a county, municipality, town, township, village, or other unit of general government below the State level, or a combination of units of local government acting through an areawide agency under State law or an agreement for the formulation of regional development policies and plans;

(4) the term "Federal program" means those activities or responsibilities of a department, agency, independent commission, or other unit of the Federal Government that involve (A) undertaking, financing, or assisting construction or improvement projects; or (B) acquiring, managing, or disposing of Federal lands and facilities. The term "Federal program" does not include construction or improvement projects that on the effective date of this subtitle are beyond the planning stage and are in either the active design or construction state; and

(5) the term "Secretary" means the Secretary of Agriculture.

FARMLAND PROTECTION POLICY

SEC. 1541. (a) The Department of Agriculture, in cooperation with other departments, agencies, independent commissions, and other units of the Federal Government, shall develop criteria for identifying the effects of Federal programs on the conversion of farmland to nonagricultural uses.

(b) Departments, agencies, independent commissions, and other units of the Federal Government shall use the criteria established under subsection (a) of this section, to identify and take into account the adverse effects of Federal programs on the preservation of farmland; consider alternative actions, as appropriate, that could

lessen ..h adverse effects; and assure that such Federal programs, to the extent practicable, are compatible with State, unit of local government, and private programs and policies to protect farmland.

(c) The Department of Agriculture may make available to States, units of local government, individuals, organizations, and other units of the Federal Government information useful in restoring, maintaining, and improving the quantity and quality of farmland.

EXISTING POLICIES AND PROCEDURES

SEC. 1542. (a) Each department, agency, independent commission, or other unit of the Federal Government, with the assistance of the Department of Agriculture, shall review current provisions of law, administrative rules and regulations, and policies and procedures applicable to it to determine whether any provision thereof will prevent such unit of the Federal Government from taking appropriate action to comply fully with the provisions of this subtitle.

(b) Each department, agency, independent commission, or other unit of the Federal Government, with the assistance of the Department of Agriculture, shall, as appropriate, develop proposals for action to bring its programs, authorities, and administrative activities into conformity with the purpose and policy of this subtitle.

TECHNICAL ASSISTANCE

SEC. 1543. The Secretary is encouraged to provide technical assistance to any State or unit of local government, or any nonprofit organization, as determined by the Secretary, that desires to develop programs or policies to limit the conversion of productive farmland to nonagricultural uses.

FARMLAND RESOURCE INFORMATION

SEC. 1544. (a) The Secretary, through existing agencies or interagency groups, and in cooperation with the cooperative extension services of the States, shall design and implement educational programs and materials emphasizing the importance of productive farmland to the Nation's well-being and distribute educational materials through communications media, schools, groups, and other Federal agencies.

(b) The Secretary shall designate one or more farmland information centers to serve as central depositories and distribution points for information on farmland issues, policies, programs, technical principles, and innovative actions or proposals by local and State governments.

GRANTS; CONTRACTS

SEC. 1545. The Secretary may carry out the purposes of this subtitle, with existing facilities and funds otherwise available, through the use of grants, contracts, or such other means as the Secretary deems appropriate.

REPORT

SEC. 1546. Within one year after the enactment of this subtitle, the Secretary of Agriculture shall report to the Committee on Agriculture, Nutrition, and Forestry of the Senate and the Committee on Agriculture of the House of Representatives on the progress made in implementing the provisions of this subtitle. Such report shall include information on—

(1) the effects, if any, of Federal programs, authorities, and administrative activities with respect to the protection of United States farmland; and

(2) the results of the reviews of existing policies and procedures required under section 1542(a) of this subtitle.

STATEMENT OF LIMITATION

SEC. 1547. (a) This subtitle does not authorize the Federal Government in any way to regulate the use of private or non-Federal land, or in any way affect the property rights of owners of such land.

(b) None of the provisions or other requirements of this subtitle shall apply to the acquisition or use of farmland for national defense purposes.

PROHIBITION

SEC. 1548. This subtitle shall not be deemed to provide a basis for any action, either legal or equitable, by any State, local unit of government, or any person or class of persons challenging a Federal project, program, or other activity that may affect farmland.

EFFECTIVE DATE

SEC. 1549. The provisions of this subtitle shall become effective six months after the date of enactment of this Act.

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Summary of USDA National Conservation Program

The national conservation program would 1) set national objectives; 2) priorities; 3) focus assistance in areas with critical resource problems; and 4) strengthen the partnership of Federal, state and local agencies and private organizations.

When carried out, the USDA national conservation program will slow -- but not reverse -- present trends of resource degradation. To achieve that ultimate goal will require large increases in public and private investments in conservation. The Administration says, "such costs are not practical today, given current economic conditions." Their program, therefore, aims to make the most progress possible by making USDA efforts more effective.

REDIRECTING USDA CONSERVATION ACTIVITIES

The USDA national conservation program would begin giving special attention to areas with critical resource problems through targeting assistance to these areas. However, the program will also attempt to maintain a base level of assistance in other areas.

TARGETING

USDA is designating critical resource problem areas, where excessive soil erosion, water shortages, flooding, or other problems threaten long-term agricultural productivity. A targeted area receives extra assistance to control or significantly reduce the problem.

By fiscal year 1986, targeted assistance would account for 25 percent of the technical and financial assistance budgets of two USDA agencies, the Soil Conservation Service and the Agricultural Stabilization and Conservation Service. Targeted assistance

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was 5 percent of these budgets in fiscal year 1983 and is planned to increase 5 percent each year through 1987.

Targeting should also be supported by USDA's Forest Service, Agricultural Research Service, Economic Research Service, Cooperative State Research Service, and Extension Service. These agencies are to emphasize the priority resource problems in their research, information, and education activities.

BASE-LEVEL ASSISTANCE

Where resource conditions are adequate for sustained productivity, the Department promised to continue to help landowners through technical assistance, cost sharing, and other services. Because of the emphasis on critical problems, however, landowners in some areas may have fewer USDA personnel and less funds available to them.

PROJECTED FUNDING LEVELS

The Department projected two levels of funding for the national conservation program -- low-bound and high-bound. The low-bound funding level for each fiscal year through 1987 would be $735 million for all USDA conservation activities. This is the amount requested by the Administration for fiscal year 1983, and it would not be increased annually to cover inflation. If funding remained at or near this level, some activities no doubt would be reduced or eliminated.

The high-bound level is based on the Congressional appropriation for all conservation activities in fiscal year 1982, which, adjusted to 1983 dollars, was $1,005 million. Under high-bound funding, this amount would be funded and increased 5 percent each

year through fiscal year 1987 to account for inflation. In fiscal year 1987, high-bound funding would reach $1,282 million, compared to $735 million for the low-bound funding. The President's statement said "the Department's budget requests for the 5-year period will likely fall between the low- and high-bound levels. Each year, however, the budget is subject to economic and fiscal conditions applicable at that time." The Fiscal Year 1984 budget proposed by the President in January 1983 was below the low-bound amount.