CAN THE NATION RETAIN GOOD FARMLAND FOR AGRICULTURE?

Land use in all its complexities has consumed my interest and energy for many years. And to discuss it with such a concerned and knowledgeable group gives me a great surge of confidence that we may be able to move more quickly to preserve our nonmetropolitan land for agriculture.

Naturally, my main interest is in farmland, and particularly those acres of relatively flat, deep, and fertile soils we call prime farmland. Each year, about 3 million acres of important agricultural land, about a third of which is prime farmland, are taken out of agricultural use--for good.

In my view, the primary land use issue in the United States is the retention of our finest farmland for farming. And the primary question is how to do it.

Before I attempt to answer that question, I'd like to review some of the reasons for the disappearance of our agricultural land. . .and some of the other major soil and water resource problems facing the Nation.

I don't have to spell out for you what urbanization is doing. Just 2 months ago a farmer in Fayette County, Kentucky, was interviewed by a local reporter. The farmer said that the land on which he started growing tobacco 20 years ago is now part of the Stonewall Estates subdivision. He added: "We've. . .been in the path of progress for a long time. Now it's kind of inching out toward me."

I'd say that "inching" hardly describes it. In the past 10 years, Fayette County lost about one-third of its prime farmland to urbanization, and the State of Kentucky lost more than 123 thousand acres. A serious problem in a State where agriculture is the primary industry.

Remarks prepared for delivery by Norman A. Berg, Chief, USDA Soil Conservation Service, at the Conference on Land Use Issues of Nonmetropolitan America of the Association of American Geographers, College Park, Maryland, June 24, 1980.

And what is true in Kentucky is true throughout the Nation. Secretary of Agriculture Bob Bergland said recently: "I don't know where it is going to stop. But stop it must. Continued destruction of cropland is wanton squandering of an irreplaceable resource." Recent figures show that U.S. population growth may require more than 44,000 new housing units a week for the next 10 years, removing additional land for roads, power plants, and job-related industry. He calls these two opposing trends a "collision course with disaster."

But we can't blame all of this loss of important farmland on urbanization. From 1967 to 1975, about 70,000 acres each year were converted to water uses--farm ponds, dams, flood control structures. These needs will continue.

However, it's soil erosion that is the primary cause of soil loss and the main despoiler of the land.

Each year, water and wind erosion removes about 6.4 billion tons of soil from non-Federal rural lands--an amount equivalent to one inch of topsoil from all such lands in the entire State of Missouri. Most of this loss--nearly 5 billion tons--is from water, or sheet and rill, erosion.

The estimated average sheet and rill erosion rate on all cropland in the conterminous United States is 4.7 tons per acre per year. SCS surveys indicate that 94 million acres of cropland--an area as large as Iowa, Ohio, and North Carolina--are eroding from water at rates which lower agricultural productivity (more than 5 tons per acre per year).

Of the Nation's total water erosion, 11 percent is estimated to be from streambanks, 6 percent from gullies, 3 percent from roads and roadsides, and 2 percent from construction sites.

Soil compaction, which restricts root penetration and cuts down on crop yields, is another problem in many areas. Conservation tillage can help, but many farmers are slow to accept this farming method.

We also have some water problems that need attention. For instance, in some areas, water tables are falling never to be refilled, because of an increase in irrigation, and because people are flocking to places like the Sun Belt to retire and to play. These newcomers' demands for water are high, competing with the farmer's demands.

Salinity is another water problem. In Colorado, for example, 60,000 acre-feet of excess irrigation water seep through the soil and pick up salt from the underlying mica shale deposited on ancient sea beds. This water, now saline, runs underground and eventually rejoins the Colorado River to be used and reused.

And then, of course, there are problems with upstream flood damages. About 175 million acres of non-Federal rural land are classified as flood prone. (A flood-prone area is one adjoining a river, stream, or lake, where there is a 1 percent chance of flooding in any given year.) Of this total, about 106 million acres are pasture, rangeland, or forest land; 48 million acres are cropland; and 21 million acres are classified as rural land.

The cost of upstream flood damages is expected to increase about 35 percent during the next 20 years, partly as a result of construction that alters patterns of water absorption and runoff.

Studies carried out as part of the Soil and Water Resources Conservation Act of 1977, which I will discuss in a moment, indicate that while eight major resource areas need attention in the immediate future, two merit special emphasis: (1) protecting soil quantity and quality, and (2) preventing upstream flood damages to farms and rural areas.

I've briefly touched on some of the major natural resource problems that must be dealt with now and in the years ahead. The question that remains is what are we in the Department and you as geographers doing to solve these problems?

Geographers have been a tremedous help in giving the Department a picture of the land and the waterways as they were in the 18th and 19th centuries--before the Great Plains were stripped of tons of soil. . .before surface mining changed land contours and killed vegetation. . .before free-running rivers and streams were clogged with silt and their channels straightened. . .before low-lying farmland became swamps.

Every step of our progress has brought change. Every change has had its price. The great days of reclamation are over. We can't restore this land to 18th-century conditions. But I believe that we can and we must continue to work to keep a balance between growth and new technologies on the one hand, and abundant and productive farmland and clean water on the other.

In 1975 the Soil Conservation Service issued a Land Inventory and Monitoring Memorandum defining prime and unique farmland. It inaugurated a program of county and State mapping of this land.

So far, 507 county and 8 State maps have been published. Maps of 1,300 high-priority counties--in regions undergoing rapid land-use changes or containing rich coal reserves--should be published by 1986.

The importance of these maps is obvious--we have to know where our best farmland is before we can protect it. These maps already are providing a basis on which local and State governments can design programs to preserve their most valuable farmland.

In addition to retaining our best farmland for farming, it is important that we have a viable agriculture--good markets, good prices, a clear picture of the interrelationships of all the elements. To bring these essentials into a new and sharp perspective, the Department initiated a project called the "Structure of Agriculture" a year ago. The goals are to explore all aspects of the structure of agriculture, its present trends, and its future course. . .and to carry on a national dialogue with the agricultural community and the consumer public.

Another broad, nationwide effort is being carried out in the Department under the Soil and Water Resources Conervation Act of 1977, or RCA. This law directed the Secretary of Agriculture to appraise on a continuing basis the soil, water, and related resources of the Nation's non-Federal land; to develop a program to further the conservation, protection, and enhancement of these resources; to report to the Congress and the public in 1980; and to repeat the process in 1985.

RCA has been a tremendous undertaking, and one of vital importance. What we do now will help determine the condition of the Nation's natural resources for the next 50 years. . .and beyond.

The nine USDA agencies and two White House offices that have been involved with RCA have had the benefit of a poll conducted by Louis Harris and Associates. A cross-section of the entire adult population (7,000 people) was queried on a number of major conservation and agricultural issues.

We were very gratified to learn that farmers are not alone in their recognition that soil and water conservation is one of the country's most pressing concerns. The majority of the people questioned consider the loss of good farmland and the misuse of our soil and water resources to be serious problems, and they believe that continuing soil and water conservation improvements must be made regardless of cost.

So far we've published three RCA draft documents, plus a summary. These documents were made available to the public, and we received about 68,000 written responses. These comments are being evaluated and will be incorporated into a proposed RCA program, which once again will go to the public. After that, a final RCA program will go to the President and the Congress.

The Department also is involved with the National Agricultural Lands Study (NALS), a joint venture with the President's Council on Environmental Quality and 10 other Federal agencies.

Basically, NALS is examining the availability of the Nation's agricultural land. How much of it is being converted to other uses? Why is it being converted? How does the retention or loss of this land affect the United States and the rest of the world now and in the future?

The study is scheduled for completion in January 1981.

In addition to these activities, the Department is directing the bulk of its Federal research funds for basic, rather than applied, research--crop and animal, energy, integrated pest management, food additives, human nutrition, aerospace technology for better information on how weather fluctuations affect crops, and nonpoint source water pollution.

All of these efforts will help us do a better job of protecting and preserving our soil and water resources, including keeping our best farmland in farming. But we mustn't stop with these activities; we must spread the conservation word beyond the doors of the Department of Agriculture and a handful of other Federal agencies.

This conference is certainly a step in the right direction. Many of you are professors in departments of geography, and I trust the dissemination of this information will reach well beyond your students and your immediate colleagues.

I asked a question in the title of this talk--can the Nation retain good farmland for agriculture? My answer is a tentative yes, we can. . .if we can hold urbanization in a pattern that's not destructive to cropland. . .if we can contain soil erosion within the tolerance limits. . .if local, State, and Federal governments can devise effective and coordinated programs for farmland retention. . .if we can find the proper balance between private rights and public interest. . .if we recognize that the time for more informed land use decisions is now. . .and if we can make this Nation's people sensitive to the land and aware of the necessity for all these actions.

If we can do these things, then we can be confident that our fertile land will provide enough food and fiber for our own needs and those of our global neighbors.