



Soil Conservation Service photo by Kane

# Important farmlands: A national view

RAYMOND I. DIDERIKSEN and R. NEIL SAMPSON

**W**HAT land is best suited for farming? Where? Why? How can it be kept in farming? Who should decide—and how—when a highly productive tract is expendable for agriculture and is needed more in another use? What is prime land anyway?

These frequent questions in America's fast-changing land use arena indicate that retaining an adequate supply of high quality farmland is an issue that has many meanings and many different levels of concern.

The U. S. Department of Agriculture is giving much attention to helping define our country's best land for production of food and fiber and to helping locate areas that have the

most favorable characteristics. The impetus has come from:

1. USDA's assigned role to maintain a long-term productive agriculture for domestic and international needs.

2. Long experience by the Soil Conservation Service in helping landowners in conservation districts, as well as other units of government, evaluate soil qualities, land use options, and conservation needs.

3. Recommendations from 80 experts who attended a 1975 national Seminar on the Retention of Prime Lands (6, 7).

4. Views of state and local people who have attended statewide prime lands workshops.

5. Views of many citizens who have written to USDA protesting specific cases where farmland is being taken for other uses (mainly urban development).

USDA does not and will not designate privately owned lands for certain uses. This is a task for private owners, local governments, and other elected officials. The Department's role—confirmed by many recent requests for assistance—is to collect and interpret resource data so that others may have the information needed to make sound decisions.

Decisions about the future of agricultural lands are made at all three levels of government.

At the federal level, licensing or financing or other major decisions are made on power plants, airports, highways, parks, and other land-using developments. These may take top quality agricultural land permanently out of production. The Council on Environmental Quality has asked all federal agencies to consider the impact of their decisions on agricultural productivity; the availability of other locations for development; and other factors (2). To properly weigh such factors, federal agencies will need to know the quality of the lands affected and be able to evaluate the environmental, economic, and social tradeoffs of each alternative. A basic national concern is that we keep available the land that is most productive; requires the least energy, fertilizers, and other inputs; has the fewest environmental hazards; and returns optimum profits to the farmer. Where these specific acres are is of less concern nationally.

At the state level, economics weighs heavily. There is concern for retaining the viability of specific agricultural industries—potatoes in Idaho, cranberries in Massachusetts, citrus in Florida, and so on. These industries depend on a certain amount of land—land well suited for most crops or uniquely suited for special crops—and a certain volume of production. There also is state-level pride in a quality of life provided by varied landscapes and other environmental values as well as economic growth—and new state programs to raise that quality of life.

At the local level, concerns over retaining farmland emphasize freedom of choice for the farmer; enough agriculture to support local agribusinesses and to maintain a local emergency food supply; and the values of farmland for open space, visual quality, and pollution reduction.

These differing perceptions require an inventory system that can help

*Raymond I. Dideriksen is director of the Land Inventory and Monitoring Division and R. Neil Sampson is a soil conservationist in the Resource Development Division of the Soil Conservation Service, U. S. Department of Agriculture, Washington, D. C. 20250.*

answer different questions at each decision-making level.

### The Land Potential

At all three levels there is growing concern that a large proportion of the best land for farming in the United States is already under cultivation. A recently completed study of potential cropland by SCS showed that the United States has only about 111 million acres of potential cropland left—land that is in other good uses but is well suited and available for conversion to farming if needed (8).

This total is considerably lower than recent estimates by others (3) and far below the estimate derived from the 1967 Conservation Needs Inventory conducted by USDA (5). But it is enough to take care of production needs for the foreseeable future—*provided the reserve remains available for agriculture*.

The same SCS study, based on land use changes between 1967 and 1975, shows a disturbing trend of cropland loss to competing, more intensive uses (Table 1). During the eight years, 2 million acres were lost each year to urbanization—and another 1 million acres were converted to lakes, ponds, and reservoirs.

Each acre taken from cropland by urban development usually means at least one more acre is "leapfrogged" or isolated and lost to farm production. Thus, the U. S. currently is adding land to urban and water uses at the rate of about 5 million acres a year. At this rate, between now and the year 2000, we shall convert 120 million acres, about 40 million of which is likely to be cropland. This loss of cropland may require that we farm some low-yielding, erosive, wet, stony, shallow, or droughty soils.

Another illustration is provided by a recent Domestic Council report to Congress (1). In the 22 years between 1950 and 1972, 17 states lost more than 20 percent of their taxable farmland, nine states more than 30 percent, four states more than 40 percent, and two states more than 50 percent.

The U. S., therefore, has a limited time in which to build a protective fence around at least part of its potential cropland reserve, preferably the most productive part. Otherwise it will lose its reserve, along with the

capacity to keep up with demands for food, fiber, open space, and other environmental and social values.

### Important Farmlands

As a means of helping local and state governments decide where to build the fence, SCS has begun an inventory of important farmlands in cooperation with other interested agencies (4). As a first step, several terms were defined:

#### Prime Farmland

This is the land best suited for producing food, feed, forage, fiber, and oilseed crops (and available for these uses). It may be used for crops now or for pasture, range, or forest. It is not in urban use or under water. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops economically when treated and managed according to modern farming methods.

The criteria are based on soil characteristics. Prime farmland soils have an adequate and dependable moisture supply from natural rainfall or irrigation. They are warm enough and have a long enough growing season for crops adapted to the area. They are neither too wet for crops nor subject to frequent flooding. They are neither too acid nor too alkaline for good plant growth. They are permeable to water and air. They are not so stony that they interfere with cultivation by machinery. They are not highly erosive.

In terms of the land capability criteria long used in soil and water conservation, prime farmland is about equal to class I and II land and some class III land. Of the 111 million acres of potential cropland that exist, only 24 million acres qualify as prime farmland.

#### Unique Farmland

This is land used for producing

specific high-value food and fiber crops. It usually is not prime, but is still very important because it has a special combination of location, growing season, soil quality, and moisture supply that makes it highly suited for a specific crop when managed with modern farming and conservation methods. Examples are lands for citrus, olives, cranberries, avocados, and other fruits and vegetables.

#### Farmlands of Statewide Importance

These vary widely. Some states may be concerned about all cropland in classes I through IV, and, therefore, are not satisfied with a prime inventory that would stop somewhere between classes II and III. Another state might want to know what areas would be prime if irrigation water were provided, as an aid in statewide water resource planning. States considering laws to regulate shifts in land use may have an interest in areas other than prime or unique lands.

#### Farmlands of Local Importance

These are additional acres where it is useful and environmentally sound to encourage continued agricultural production. Local people generally are more interested in protecting whole farms or whole corridors of open space, even if some or most of the land is of mediocre quality for farming.

Note that the categorical term "prime land" means the best land, but it is *not* the only category of real importance to decision-makers. The four categories—and the obvious need for state and local input in deciding the criteria for at least three of them—make preparation of an interpretive map for a county a rather complex process. SCS decided to focus its early efforts on counties where soil survey data are already available (about 58 percent of the nation) and where shifts in land use are already rapid or probably will be rapid in the near future.

Table 1. Changes in U. S. Land Use between 1967 and 1975.

Land Use in 1967	Land Use in 1975 (millions of acres)					
	Cropland	Pasture/ range	Forest	Urban	Water	Other
Cropland	352	53	8	5	1	13
Pasture/range	32	442	14	3	1	14
Forest	11	62	349	4	2	16
Other land	6	13	4	4	3	27
Total	401	570	375	16	7	70
						1,440

Sources: USDA Conservation Needs Inventory, 1967, and unpublished data from SCS, 1976.



In fiscal year 1975, SCS began a pilot important-farmland inventory in 122 counties—at least one in almost every state. For each county, the SCS state conservationist has provided a list of soil survey mapping units that fit the criteria for prime farmland; an outline of the unique farmland acres on a base map; a list of mapping units that classify as farmlands of statewide or local importance, based on discussion with state and local officials; and an outline on a base map of urban and built-up areas and bodies of water greater than 10 acres.

The SCS Cartographic Division then arranges with private map-making firms to prepare overlays of important-farmland categories and other items. The completed work goes to SCS state offices for review there and by state and local officials. At the same time, SCS arranges with the U. S. Geological Survey for a standard base map at a scale of 1:100,000 (or 1:50,000 for small counties). This can be used for showing many kinds of land use and vegetative information as well as the inventory results. The corrected important-farmland overlays go back to the map-construction firms for placing on the base map and printing.

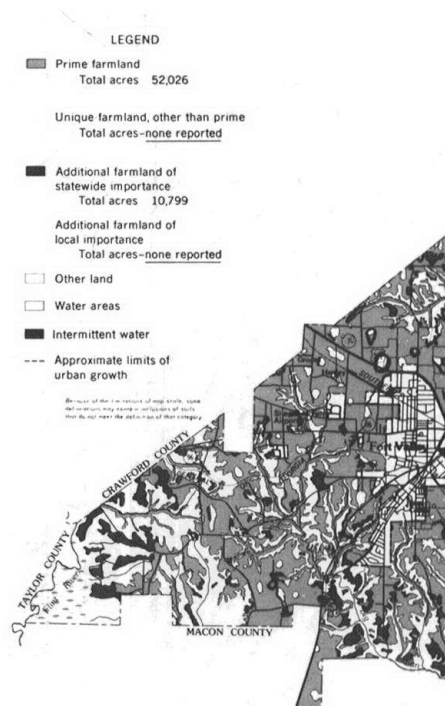
The first completed map, for Peach County, Georgia, was distributed in July 1976 (9). By November 1, maps should be completed for Sargent County, North Dakota; Curry County, New Mexico; Wood and Hancock Counties, Ohio; and Caldwell County, Missouri.

The Peach County map was sent to every SCS state staff for suggestions on improving the maps or the classification categories. These suggestions will help as SCS works on the rest of the 122 counties, as well as the 154 inventories started in fiscal 1976.

Of the 1976 group, SCS plans to put the data for 85 counties into an automated mapping system at the Cartographic Division and to automate even more in later years.

Plans are to do 250 county important-farmland inventories in fiscal year 1977 and 300 a year from 1978 until all 3,068 counties are inventoried. At the same time, beginning in 1981, SCS plans to monitor about 150 counties a year on a continuing basis. Where land use changes are significantly high, the agency will remeasure acreages and reprint maps every five years.

An interesting sidelight of the in-



A section of the Peach County, Georgia, map of important farmlands.

ventories underway is that for only 4 percent of the counties do state and local officials want maps that show all four categories of important land. More than 40 percent want just prime lands and lands of statewide importance shown. Another 24 percent want all but the lands of local importance. Eleven percent want prime and unique lands shown. The other 24 percent want other combinations or just one category.

The variety of interests demonstrates that our nation's landscape is diverse—some states have little or no prime land, for example—and that institutional arrangements and concerns are almost as diverse. That the SCS inventory system can accommodate these varied needs for land and water information demonstrates its value in making resource decisions.

The value of the system will find its main proof in its *being used* by governments and landowners in pursuing meaningful choices in development of prime land or nonprime land. Knowing where prime or unique farmland is located does not automatically mean that the landowner will decide to farm it, that economic or other community pressures will permit him to farm it, or that state or national programs will provide the right incentives

for him to keep it in farming. The inventory system does, however, help assure that decisions can be made with knowledge of the soil and climatic qualities rather than simply trading acres as economic equals. The inventory system can assist decision-makers in determining the real cost of taking any parcel of that land out of production.

The inventory system is intended to be a flexible one. As new facts are learned, one or more of the definitions may be changed to more clearly meet decision-making needs. No system will be without its problems; but to decision-makers struggling to make sense out of conflicting land use arguments, it can be extremely helpful.

SCS's aim is to make the struggle easier and to help make the resulting land use patterns fit America's needs for agricultural production, environmental quality, and pleasant living space.

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