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America's Cropland: Where Does It Come From?

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Our cropland was originally wrested from forestland or native grassland. Early in our history, almost all forest and grassland near settlements was converted to crop use. As the population moved West, pioneers converted new cropland from native land cover.

Over time, much of the land in the East that had been cleared and cropped or pastured reverted to forest. For example, in the 19th century, an estimated 85 percent of the land in Vermont had been cleared for agricultural purposes. As of 1987, nearly 85 percent of Vermont's land area was again forested.

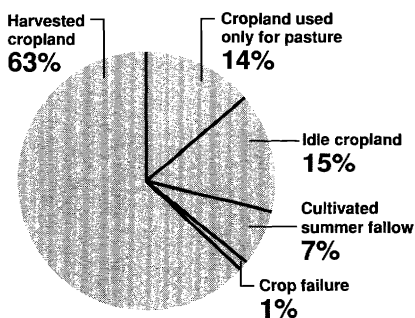
As farmers expanded the cropland base, more environmentally fragile land began to be used for crop production. Steeper slopes and land with more highly erodible soils were cleared and used for cropland, increasing soil erosion contributing to sediment damage in downstream rivers and reservoirs. Ecologically valuable wetlands were drained, destroying important wildlife habitat, reducing the ability of the land to retain rainfall, and thus contribut-

ing to increased flood damage. In the Great Plains, farmers plowed native grassland, increasing wind erosion. The effects of this conversion peaked during the Dust Bowl of the 1930's, but similar conversions occurred on a smaller scale during the 1970's and early 1980's.

What Is Cropland?

Cropland is land used for the production of adapted crops, like corn, soybeans, wheat, hay, and horticultural crops. As such, it is a landscape created by humans and is no longer part of the natural ecology. The land may be

Figure 1. Harvested cropland accounted for nearly two-thirds of our cropland base in 1987



used continuously for these crops or crops may be grown over a period of years in rotation with grasses and legumes. "Cropland used for crops" includes cropland from which crops are harvested (cropland harvested), land on which crops failed (crop failure), and "cultivated summer fallow." Cropland used only for pasture makes up the remainder of the Nation's cropland resources (see fig. 1).

Not all cropland is used for crops in any given year. Idle cropland includes land in cover and soil improvement crops as well as completely idle cropland. Some cropland may be left idle

for physical and economic reasons. However, since farm programs were instituted in the 1930's, much of the idle cropland has been land diverted from crop production into soil-conserving uses by Federal commodity programs.

Crop failure occurs primarily due to weather, insects, or diseases, but crops also may not be harvested—and thus considered failed—due to lack of labor, low market prices, or other factors. Cultivated summer fallow is cropland left unplanted, but cultivated, as a way of accumulating moisture for the next year's crop. Although optional in many

Figure 2. Cropland used for crops is relatively constant over time, but highly variable year-to-year

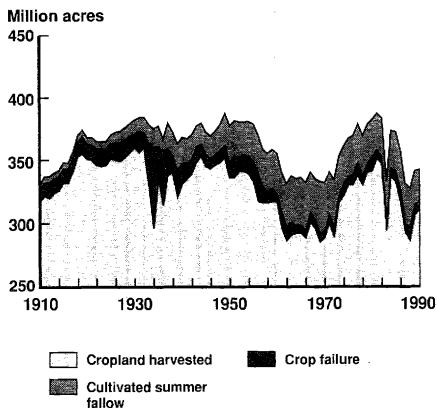
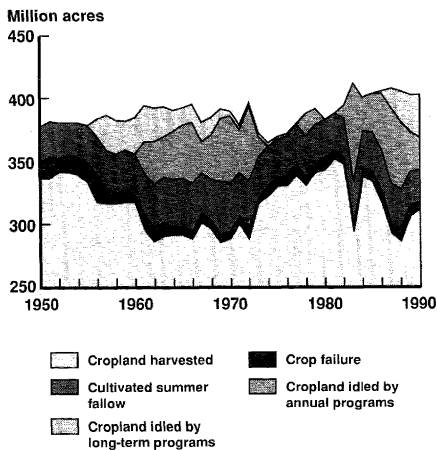


Figure 3. Federal programs idled up to 78 million acres in some years since 1950



important grain-producing areas, cultivated summer fallow is required in some of the drier cropland areas of the West.

Cropland Trends

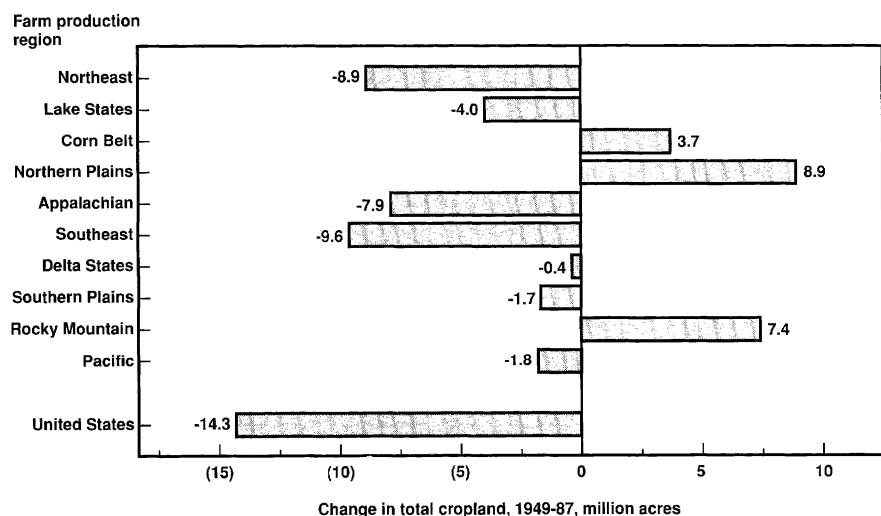
The amount of cropland used for crops has been relatively constant in this century (see fig. 2). In 1910, about 330 million acres were used for cropland. During World War I, farmers expanded cropland to almost 375 million acres in order to compensate for the loss of European production. The U.S. cropland base remained at about 375 million acres from then until after World War II. The export boom of the 1970's caused farmers to once again expand crop acreage to more than 380 million acres. After the downturn in farm exports in the mid-1980's, U.S. cropland returned to about 330

million acres, the same amount as in 1910.

In recent years, the major factor changing the amount of cropland used was diversions from production by Federal farm programs (fig. 3). Cropland diverted under both annual and long-term programs accounted for as much as 20 percent of the U.S. cropland base since the 1950's. The peak acreage idled by Federal programs occurred in 1988 when 78 million acres were diverted from crop production. Of these, nearly 25 million acres were contracted into the 10-year Conservation Reserve Program (CRP), which had environmental improvement as a primary objective.

Underlying the relatively stable trend in total cropland are striking regional changes in the location of our cropland resources (see fig. 4).

Figure 4. Northern Plains, Rocky Mountain, and Corn Belt regions gained cropland from 1949 to 1987, while other regions lost.



The Corn Belt, Northern Plains, and Mountain farm production regions together gained 20 million acres of cropland while all other regions combined lost 34.3 million acres. Once again, cropland idled under Government farm programs has had an effect, since the regions that gained cropland are also the regions where the most cropland had previously been idled by Federal programs. In 1990, the Corn Belt, Northern Plains, and Mountain regions accounted for more than 60 percent of the acreage contracted into the CRP and over 50 percent of cropland idled by annual Federal crop programs.

Cropland and the Environment

At the margin, loss of cropland to urban development and other uses and development of “new” cropland from less intensive uses such as pasture, range, or woodland combine in a continuous process. During the export boom of the 1970’s and early 1980’s, however, development of new cropland from natural lands accelerated and became a focus of public concern. Concerns included direct loss of fragile grassland and wetland ecosystems and indirect effects, such as increased soil erosion and degraded water quality that resulted from farming these vulnerable lands.

Estimates from USDA’s 1978 Landownership Survey showed

that 9.1 million acres were converted to cropland during 1975 to 1977, of which 38 percent was in the Northern Plains, Southern Plains, and Mountain regions. Analysis of USDA’s 1982 National Resources Inventory showed 11.1 million acres were converted to cropland during 1979-81, 37 percent of which were in the Plains and Mountain regions. Much of the land converted to cropland in the Plains and Mountain regions came from pasture and range, leading to the term “sodbusting” to describe this type of conversion.

Wetlands have been converted into cropland from the beginning of European settlement. Wetland drainage caused little concern in the past because of the vast extent of natural wetlands and the perception that drainage was “reclaiming” wastelands for productive uses. However, increased public awareness of the environmental value of wetlands prompted growing interest in preserving the wetlands that remained.

Inventories by the Fish and Wildlife Service in the U.S. Department of the Interior show that 13.8 million wetland acres were converted to other uses between 1954 and 1975, a rate of 458,000 acres per year. About 12 million acres (87 percent) were converted to agricultural uses, mostly cropland. Paralleling

“sodbusting” in the Great Plains, wetland conversion for crop production was called “swampbusting.”

As farm exports dropped off in the 1980's and crop surpluses developed, Federal income tax incentives, farm commodity program benefits, and prospective land value increases began to provide greater impetus to land conversion than did market-driven demand. These Federal Government incentives appeared to be contributing to conversion of fragile grasslands and wetlands, creating economic and environmental problems that other Federal programs were designed to correct. Concerns about land use conversion ultimately led to policies aimed at greater consistency among Federal programs.

By the mid-1980's, Congress was ready to reduce Federal incentives for sodbusting and swampbusting. Most of these policy changes were included in omnibus farm legislation, the Food Security Act of 1985 (FSA), but other incentives were eliminated or reduced in the Tax Reform Act of 1986.

Conservation Provisions in 1985 and 1990 Farm Bills

The 1985 FSA's provisions concerning highly erodible land include the so-called “sodbuster” provision restricting farm program benefits for operators who converted highly erodible grassland

to crop production after 1985, as well as conservation compliance provisions requiring conservation practices on highly erodible land converted to cropping before 1985. Both provisions prohibit receipt of USDA farm program benefits by any person who is producing an agricultural commodity on highly erodible land without following an approved conservation plan. Prohibited Government benefits include any type of price support, farm storage facility loans, Federal crop insurance, disaster payments, loans authorized by the Farmers Home Administration, and storage payments from the Commodity Credit Corporation. The main difference between sodbuster and conservation compliance is that producers converting fragile grasslands for production must meet more stringent erosion control goals than those farming land converted before 1985.

The 1985 FSA swampbuster provision prohibited many USDA program benefits for farmers who planted an agricultural commodity on wetlands converted to cropland after 1985. Recent changes enacted in the Food, Agriculture, Conservation, and Trade Act of 1990 closed a perceived loophole in swampbuster provisions by withholding benefits when wetlands are drained, whether a commodity is planted or not. In return, farmers are assessed smaller penalties for

minor wetland conversions and have more flexibility to drain some land in return for restoring other wetlands.

The Conservation Reserve Program (CRP) offered positive incentives to landowners for voluntarily retiring highly erodible and environmentally sensitive cropland for 10 years. Farmers received annual rental payments and assistance with the costs of establishing permanent vegetation to protect the land. Almost 34 million acres were enrolled in CRP contracts by 1990. Most of the CRP land was planted to native or improved grasses, but nearly 2 million acres were planted to trees and over 400,000 acres of farmed wetlands were protected.

The Tax Reform Act of 1986, while not focused on environmental problems from land conversion, eliminated or reduced indirect incentives for conversion contained in the Internal Revenue Code. Preferential tax rates for capital gains were eliminated on all classes of property, including capital gains obtained by selling cropland developed from lower valued pasture, range, or forestland. Deductions for land improvement costs, including clearing and drainage, were eliminated. Deductions for soil and water conservation expenses were restricted to those approved in a Soil Conservation Service plan, eliminating many deduc-

tions for drainage and irrigation development costs for new cropland. Rules for tax treatment of passive investments were tightened, reducing opportunities to shelter nonfarm income through investments in cropland development.

Recent Trends in Land Conversion

Reduced market incentives and restrictions in farm and tax policy apparently resulted in less conversion of natural lands to cropland in the late 1980's. National Resources Inventory (NRI) data show that cropland increased by only 1.4 million acres between 1982 and 1987, down considerably from the 8.1 million acres gained between 1977 and 1982. Highly erodible cropland increased only 70,000 acres between 1982 and 1987, even before most of the cropland eventually enrolled in CRP was retired from production.

Comparison of 1982 and 1987 NRI data and new data from Fish and Wildlife Service inventories also shows that the rate of wetland loss in the 1980's was 200,000-280,000 acres per year, about half that recorded in 1954-75. As much as half of the loss in the 1980's was probably due to lake water level changes and loss of wetlands in coastal Louisiana, which are not due to cropland conversion.

The apparent success of programs designed to reduce artificial incentives for creating cropland from environmentally sensitive or valuable lands, coupled with reduced market incentives for

conversion, is encouraging. We need to ensure that adequate amounts of cropland are available to meet domestic and world needs for food and fiber, while minimizing the sacrifice of important natural lands. ■

Agriculture That Fits the Environment: A Look Backward and Forward

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by J. Douglas Helms, National Historian; Karl H. Reinhardt, Conservation Planning & Application Leader; and Gary A. Margheim, Deputy Chief, Programs, Soil Conservation Service, USDA, Washington, DC

The search continues for an agriculture that fits the land as well as maintains it. Public opinion polls increasingly identify the environment as a major public concern.

Through legislation passed by Congress and signed by the President, this concern has been translated into action affecting numerous aspects of life in the United States—including life on the farm. Within the past decade, laws such as the Food Security Act of 1985, the Clean Water Act amendments of 1987, and the Conservation Program Improvements Act of 1990 (part of the 1990 farm bill) called for modifications in programs and development of new ones in USDA. The intent of the new laws is to ensure

that USDA's programs are compatible with our environmental objectives.

But, if we are to maintain environmental quality, we must have a mechanism and a source of knowledge to turn legislative intent into action on the land. Fortunately for the American public and American farmers, earlier concerns over soil and water conservation led to a system that helps producers farm efficiently while still meeting environmental objectives. Without the scientific research, the practical experience, and the development of institutions at the local, State, and Federal level, public concerns about the environment would be far more difficult to translate into action at the farm level.