being diverted from agriculture to other uses. Fewer than one-half as many U.S. farms exist today (2.3 million) as in 1950 (5.6 million). The USDA estimates that 87,000 acres of cropland per year will be diverted from cropland to other uses over the next 50 years. And thousands of farmers have tried to reduce their dependence on farm income, either by leaving their farms entirely or by farming part-time. It is not surprising, then, that many farmers find it unprofitable to make investments in maintaining soil quality. One USDA study found the costs of implementing soil conservation techniques in Iowa to be three times as great as the benefits to farmers.11

It follows that real progress in maintaining soil productivity will be difficult until such time as the returns to agriculture are at least equal to the returns in nonagricultural industries. Over the long term, agricultural economists generally forecast that reductions in the number of farms, increases in the average size of these farms, and expansion of the agricultural export market will steadily increase the returns to farming. Over the short run, however, the picture is much more gloomy. Three successive years of bumper crops and a worldwide recession have steadily driven down farm prices and incomes. Also, this increasingly capital-intensive industry has been hit by high interest rates. In 1982 the real income of farm operators (measured in 1982 dollars) per farm, adjusted for inflation) reached its lowest level since 1969.12

A Case of Government Failure?

The analysis presented here supports conclusions of two different kinds. First, with regard to the specifics of the soil conservation program in the United States, the data make the argument for specifying investments on soil conservation programs more difficult to establish. If the programs are intended to redress intergenerational inequities, it must be argued that merely maintaining current agricultural capacity is not enough—future generations are entitled to greater agricultural resource availability than is currently available. If the programs are aimed at combating pollution, the magnitude of the problem presented by the increased use of resources and the inadequacy of other available alternatives need to be more clearly established. Most importantly, if the programs are to be more than just income transfers to farmers, it must be demonstrated that Congress and the USDA possess (or can find) sufficient knowledge, power, and determination to make the programs work.

Second, with respect to the operation of government programs in general, the case of soil conservation illustrates a recurring theme in the literature of economics and politics that both markets and governments sometimes fail to allocate resources equitably and efficiently. In particular, the analysis presented here implies that these two decision-making mechanisms often fail for the same reasons. To maintain intergenerational equity, for example, a soil conservation program might be necessary because a system of private markets might not provide sufficiently for the needs of future generations. But the actions of Congress with respect to the ACP bear out the fears of many natural resource economists that public decision-making mechanisms might not be any more cognizant of the needs and rights of future generations than are private markets. The 1973 decision of which conservation projects to fund, although seemingly based on technical issues in farm management, represents a victory of current farming interests over the interests of farmers and consumers in the future.

Similarly, in dealing with soil-erosion-related water pollution, the same factors that cause private markets to fail also hinder government programs directed at the problem. If the extent of soil pollution from rivers and lakes caused by individual farmers could be monitored thoroughly, the system of taxes could be devised to deal with this problem, while leaving soil management policy in private hands. In fact, if the number of affected individuals were small and property rights were clearly established and enforced, the market itself might be able to solve this problem efficiently through a system of payments between farmers and those hurt by soil-erosion-caused pollution. Since it is difficult and expensive to monitor water-pollution rates in this way, however, the government might have to encourage specific farming practices to deal with this situation. The trouble is that government in this instance has no guidelines by which to target its resources on the problem or gauge success in achieving its goals. Under these circumstances, legislators and agencies tend to measure program performance in terms of numbers of participating farms, types of conservation practices performed, and total dollars spent, rather than in terms of soil saved from erosion or waterways cleaned of pollution. If public authorities are at all inefficient in executing these programs, this situation tends to exacerbate that inefficiency by frustrators, the government—control. It is not at all surprising, then, that analysts have found soil conservation resources poorly focused in terms of soil erosion needs.

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5. See Secretary Block's remarks in a hearing before the U.S. Committee of Congress on Nutrition, and Food, Administration's Recommendations for Economically and Food and Agriculture Policy for the 1980s, 7th Cong., 2d Sess., 1979, p. 15.


7. USDA, Soil and Water Resources Conservation Act of 1985, 51 Soil, Water, and Conservation Operations Program (COP), with a fiscal 1982 budget of $311 million, provides technical assistance and advice to farmers about how to protect soil and water. "Priority projects" do not exist at present. Per acre output per acre an average of 1.82 pounds per acre per year from 1970 to 1978 and 1.73 pounds per acre over the 48 year period from 1930 to 1978. Since additional fertilizer use has caused much of the current soil loss, any increase in productivity will probably be lower than 1.82 percent because of higher energy costs and higher environmental restrictions. Even at its lowest post-Depression point in the 1940s, however, output per acre grew at an average of 1.3 percent per year. A 7. GAO study cited earlier found that there was no significant difference in soil erosion rates for farmers assisted by COP and farmers without such assistance--a negative finding independently confirmed by two other studies.

8. To Protect Tomorrow's Food Supply, 5th Cong., 2d Sess., 1979, p. 5.


10. To Protect Tomorrow's Food, 1979, p. 16.