

Chapter 1

Setting the Stage

Farmers make choices daily about which land to use for crops or grazing and how to manage that land. Decisions with potentially important environmental implications include what to produce, how much fertilizer and pesticide to use, which tillage practice to employ, and whether to install conservation measures like grassed waterways. Conservation programs aim to improve the environmental performance of agriculture by influencing those decisions.

What Has Worked . . . To a Point

Policymakers can choose from a wide range of agri-environmental policy instruments, but rely heavily on voluntary participation payment programs (see box, “Major USDA Conservation Programs”). For most of the two decades preceding 2002, most USDA financial assistance for conservation was for land retirement under the Conservation Reserve Program (CRP) and the Wetlands Reserve Program (WRP). These two programs accounted for nearly four-fifths of such financial assistance in the 1990s, with spending of \$1.5 billion or more annually.

But land retirement programs, despite environmental gains, are costly and do not address problems on the vast area of land that remains in agricultural production. During these same years (before 2002), Federal financial assistance for working-land programs was modest. Such programs include the Environmental Quality Incentives Program (EQIP), Wildlife Habitat Incentives Program (WHIP), and CRP’s continuous signup that encourages installation of buffer practices such as filter strips and grassed waterways. Nonfinancial assistance programs include Conservation Technical Assistance (CTA), which provides in-kind technical support to producers who want to install or adopt conservation practices without Federal cost-sharing or incentives. Conservation compliance, meanwhile, requires farmers to adopt soil-conserving practices on highly erodible cropland or risk loss of Federal farm program benefits. While these efforts have helped promote conservation on working lands, our focus is on voluntary, financial assistance programs—working-land payment programs (WLPPs).

Although land retirement will continue to be an important part of U.S. agri-environmental policy, it appears that programs directed at working land conservation are growing. Many resource concerns—such as nutrient and pesticide runoff—may be more cost-effectively addressed on the 850 million acres of active cropland and grazing land than on idled land. Much of the 80-percent boost in conservation funding outlined by the Farm Security and Rural Investment Act of 2002 is slated for conservation efforts on working lands (fig. 1.1).

In many instances, WLPPs could achieve environmental benefits at a lower cost per acre under land retirement programs because land remains in production and farmers are able to sell commodities. Also, pressing agri-

Agricultural Land Preservation and Other Programs

Land Retirement Programs

- The *Conservation Reserve Program (CRP)* and the *Conservation Reserve Enhancement Program (CREP)* offer annual payments and cost-sharing to establish long-term, resource-conserving cover, usually grass or trees, on environmentally sensitive land.
- The *Wetlands Reserve Program (WRP)* provides cost-sharing and/or long-term or permanent easements for restoration of wetlands on agricultural land.

Working-Land Payment Programs

- The *Environmental Quality Incentives Program (EQIP)* provides technical assistance and cost-sharing or incentive payments to assist livestock and crop producers with conservation and environmental improvements on working lands.
- The *Conservation Reserve Program (CRP) Continuous Signup* provides cost-sharing and annual payments to producers who establish “buffer” practices such as riparian buffers, filter strips, grassed waterways, and contour grass strips to intercept sediment and nutrients before they leave the field.
- The *Wildlife Habitat Incentives Program (WHIP)* provides cost-sharing to landowners and producers to develop and improve wildlife habitat.
- The *Conservation Security Program (CSP)* will reward demonstrated land stewards for implementing appropriate land-based practices on working lands that address one or more resources of concern, such as soil, water, or wildlife habitat.

Agricultural Land Preservation Programs

- The *Farm and Ranch Lands Protection Program (FRPP)* provides funds to State, tribal, or local governments and private organizations to help purchase development rights and keep productive farmland in agricultural use.
- The *Grassland Reserve Program (GRP)* is designed to preserve and improve native-grass grazing lands through long-term contracts and easements. While normal haying and grazing activities will be allowed under GRP, producers and landowners cannot crop the land and will be required to restore and maintain native grass and shrub species.

Technical Assistance

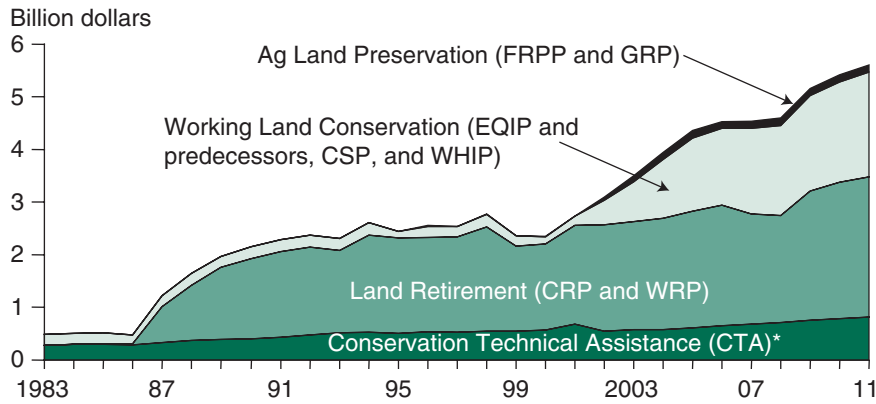
- The *Conservation Technical Assistance (CTA) Program* has been providing conservation technical assistance for planning and implementation of conservation systems since 1935.

Compliance Mechanisms

- *Conservation Compliance, Sodbuster, and Swampbuster* are provisions that tie the receipt of farm payments to management of highly erodible land and wetlands.

Figure 1.1

Conservation emphasis appears to be shifting from land retirement to working land



*Expenditures on CTA estimated for 2005-2011 using 22-year trend.
 Sources: Compiled by Economic Research Service, USDA using data from Office of Budget and Policy Analysis, USDA, and the Congressional Budget Office.

environmental problems like soil, pesticide, and nutrient runoff from farmed land, can be more fully addressed. Maximizing the benefits of WLPPs presents considerable challenges. Which producers apply for enrollment in the program, what land they offer, and what practices they employ will depend largely on the level of payment producers are offered. Which of these producer offers is ultimately accepted will depend on the rules or procedures the government uses to decide which applications to accept. These decisions, together, will determine the economic and environmental effects of the WLPP.

Program performance—both economic and environmental—depends critically on *program design*. Design decisions that will influence participation include eligibility criteria, payment rates for conservation practices, and methods used to rank program applicants (see Claassen et al., 2001).

The design challenge is compounded by the diversity of farm types, crops, farming practices, and environmental concerns. This is especially complicated for WLPPs because these programs would fund a broader range of practices on a wider range of land types than land retirement programs have generally done. For many funded practices, environmental effectiveness and adoption cost will vary significantly across farms and—for practices like nutrient management—implementation will be difficult to monitor and enforcement costly. Finally, the coexistence of major land retirement and working land programs will heighten the need for coordination to avoid inconsistencies and duplication of effort.

In general, it is difficult to accurately predict which producers will participate and what land and practices they will offer in response to a given set of participation incentives. Before a program is implemented, program decisionmakers may have only a general sense of potential benefits or costs of inducing sufficient producer participation. Programs that collect site-specific data on contract offers may help in determining which applications to accept for program enrollment.

We address a broad range of issues concerning the design and implementation of WLPPs and the potential economic and environmental implications of alternative policy designs. Discussions are illustrated using examples from existing working land programs, including the Environmental Quality Incentives Program (EQIP) and the newer Conservation Security Program (CSP). Illustrations are also drawn from the CRP.

Specifically, this report seeks to address the following questions:

- 1) How can program design be used to help shape the pool of applicants who are willing to participate in working land payment programs?
- 2) How can program design be used to enroll producers who could make a particularly valuable contribution to program objectives?
- 3) What impact do the design criteria have on performance in terms of cost-effectiveness, environmental efficiency, and equity objectives?