

Working-Land Conservation Programs

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Many resource concerns are influenced by agricultural production, and “one-size-fits-all” solutions are unlikely to be effective in addressing them. In many instances, environmental problems like pesticide and nutrient runoff are best addressed on actively cropped lands. More flexible conservation programs for land remaining in production are growing, complementing traditional conservation efforts. Such working-land programs may achieve environmental benefits at relatively low cost, enhancing the amount of environmental gain per conservation dollar spent.

Introduction

The many and varied resource concerns influenced by agricultural production are often the result of small contributions from many farms over vast areas, and “one-size-fits-all” solutions are unlikely to be effective in addressing them. Policymakers have a wide range of policy instruments to address resource concerns (see Chapter 5.1, “Conservation Policy Overview”). One tool, land retirement (see Chapter 5.2), is and will continue to be an important part of U.S. conservation policy, yet many resource concerns—such as nutrient and pesticide runoff (see AREI Chapters 2.2 and 4.5)—can be more cost-effectively addressed on the 850 million acres of working cropland and grazing land.

Programs directed at working-land conservation are growing. Much of the 80-percent increase in conservation funding outlined by the Farm Security and Rural Investment (FSRI) Act of 2002 goes toward conservation efforts under two programs that pay farmers for conservation efforts on working lands—the Environmental Quality Incentives Program and the Conservation Security Program.

The Environmental Quality Incentives Program—EQIP

EQIP was established under the 1996 Federal Agriculture Improvement and Reform (FAIR) Act. EQIP’s principal objective is to provide producers with assistance that promotes production and environmental quality as compatible goals, optimizes environmental benefits, and helps farmers and ranchers meet Federal, State, and local regulatory requirements.

EQIP provides producers with technical and financial assistance for implementing and managing a wide range of conservation practices for crop and livestock production. Sixty percent of overall EQIP funding is targeted to

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natural resource concerns related to poultry and livestock production. The remainder is directed toward practices that address conservation priorities on working cropland. Initial funding from 1997 to 2001 was roughly \$200 million annually. However, funding for EQIP increased substantially under the FSRI Act—\$5.8 billion over 6 years (2002-2007), with annual funding levels increasing from \$400 million in 2002 to \$1.3 billion in 2007.

Farmers seeking to participate in EQIP complete an application indicating which land will be enrolled, which resource concerns will be addressed, and what practices will be used. Each State or local Natural Resources Conservation Service (NRCS) office ranks applications based on the treatment of priority natural resource concerns; treatment of multiple resource concerns; use of conservation practices that provide long-term environmental enhancements; compliance with Federal, State, local, or tribal regulatory requirements; and the relative cost-effectiveness of the proposed conservation practice. Applications receiving the highest environmental benefit scores based on the ranking criteria are approved for funding.

EQIP uses two types of financial assistance to encourage implementation and management of conservation practices: cost-share and incentive payments, limited to \$450,000 per person or entity over a 5-year period. Cost-sharing applies to structural and vegetative practices and may pay up to 75 percent of installation costs, although a 50-percent cost-share is more typical. Examples of eligible practices are grassed waterways, filter strips, waste storage facilities, and caps for abandoned wells. Incentive payments encourage producers to adopt land management practices they may not have otherwise used. Incentive payments are not directly linked to producers' costs; rather, a payment amount sufficient to encourage practice adoption is estimated for each county. Eligible practices include nutrient management, integrated pest management, irrigation water management, and wildlife habitat management.

Distribution of EQIP Funds Geographically

Approximately \$2.5 billion has been allocated under EQIP from its inception (FY 1997) through the end of FY 2004. Fund allocation by ERS Farm Resource Region expresses the geographic variation in terms of the natural resource base, products produced, and financial performance (fig. 5.4.1).

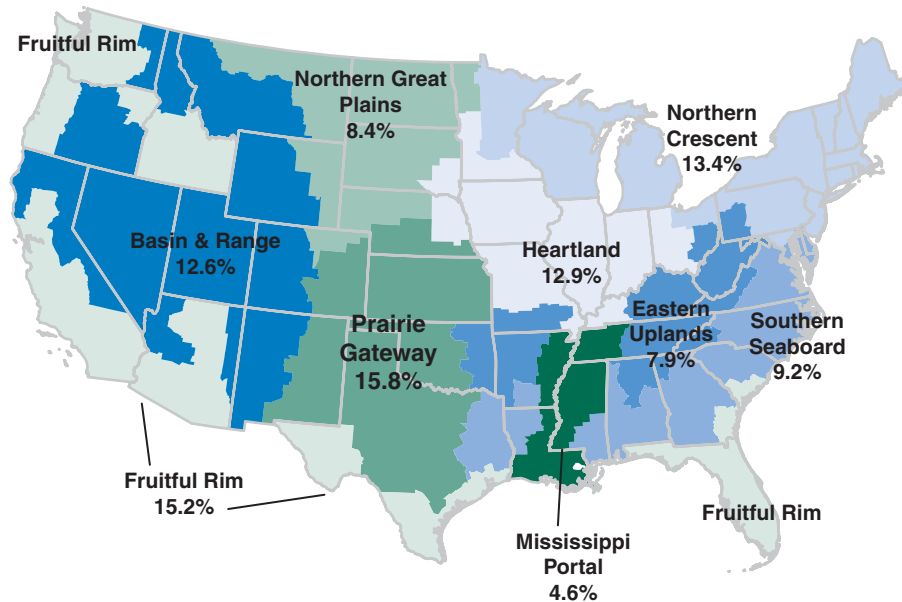
Although resource concerns vary regionally, payments appear to be distributed among resource regions in rough proportion to the number of farms and value of agricultural production in each region.

Distribution of EQIP Funds by Environmental Concern

Between 1997 and 2002, 73 percent of EQIP funds were allocated to geographically defined priority areas: watersheds, regions, or areas of special environmental sensitivity that have significant soil, water, or related natural resource concerns. This regional targeting allowed flexibility in addressing a broad set of environmental priorities (fig. 5.4.2), subject to limited funding. At the national level, over one-third of EQIP funds involved water-related conser-

Figure 5.4.1

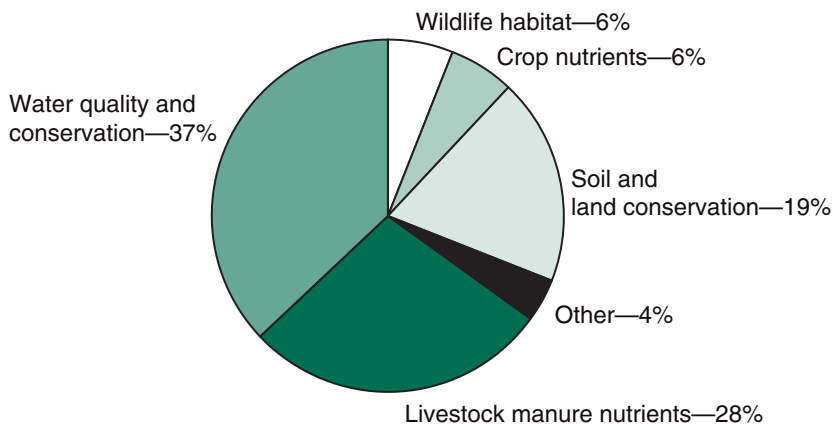
Regional distribution of EQIP funds



Source: USDA, Economic Research Service, based on FSA data, FY 1997-2004.

Figure 5.4.2

Distribution of EQIP funds by environmental concern, 1997-2002



Source: Farm Service Agency data, 1997-2002.

vation practices, ranging from more efficient irrigation systems to livestock drinking systems. Livestock nutrient management practices accounted for 28 percent of funding, followed by soil erosion and land management with 19 percent of funds. The remaining 16 percent was used to address wildlife habitat management, crop nutrient management, and other concerns.

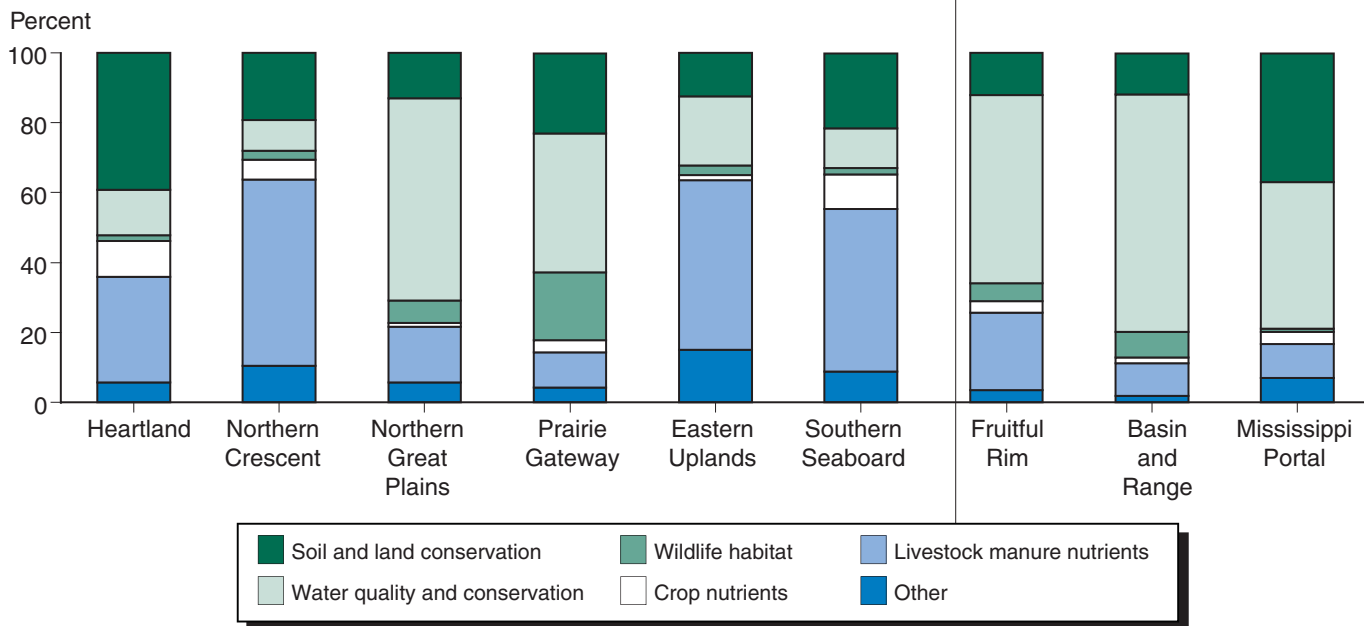
Regionally, EQIP activity from 1997 to 2004 reflected the confluence of regionally important resource concerns and EQIP priorities. For example, livestock waste management practices obtained the lion’s share of EQIP funds in the Northern Crescent, Eastern Uplands, and Southern Seaboard regions, where phosphorus and nitrogen from livestock production (see

AREI Chapters 2.2 and 4.5) far exceed cropland’s ability to assimilate these nutrients. However, the presence of excess nutrients does not always result in EQIP funding for livestock manure management. In the Prairie Gateway, which generates substantial manure nutrients on confined animal operations, only 11 percent of EQIP funds were spent on livestock waste management. In the Western States, where water has long been a concern, the majority of EQIP funds were allocated to water resource management. The Northern Great Plains, Basin and Range, Fruitful Rim, and Prairie Gateway all had water quality and water conservation as the main component of EQIP expenditures. In the Heartland, Mississippi Portal, Prairie Gateway, and Southern Seaboard, where much land is subject to soil erosion (see Chapter 2.2, “Water Quality: Impacts of Agriculture”), a considerable share of EQIP funds was used to prevent soil erosion (fig. 5.4.3).

After 2002, national environmental priorities replaced geographically defined priority areas as a means to screen producers’ EQIP applications. These environmental priorities include:

- Reduction of nonpoint-source pollution, such as nutrients, sediment, pesticides, or excess salinity in impaired watersheds (see Chapter 2.2), as well as the reduction of groundwater contamination and the conservation of ground- and surface-water resources (see Chapter 2.1, “Irrigation Resources and Water Costs”);
- Reduction of particulate matter, nitrogen oxides, volatile organic compounds, and ozone precursors and depleters that contribute to air quality impairment;
- Reduction in soil erosion and sedimentation from unacceptable levels; and
- Promotion of habitat conservation for species at risk.

Figure 5.4.3
Distribution of EQIP funds by region and environmental concern



Source: FAS data, 1997-2002.

The Conservation Security Program—CSP

CSP was introduced under the 2002 FSRI Act, and the program began in 2004 with a budget of \$41 million. CSP addresses familiar conservation issues, but departs from traditional conservation programs in three areas: program eligibility, participation incentives, and selection criteria.

A New Way of Looking at Eligibility

Traditional working-land programs tend toward broad eligibility. EQIP, for example, sponsors adoption of a wide range of practices on many different land types—virtually any type of farm, any type of agricultural land, and any practice found in the NRCS conservation practice handbook can be eligible for funding. Because eligibility has been broad, program decision-makers have used other methods of targeting producers (such as by priority resource concern) or limited participation to stay within budget limits.

In contrast, CSP narrows eligibility to focus on good stewards, and provides payments for the maintenance of some existing conservation practices as well as for the adoption of new practices. Producers become eligible after treating nationally significant resource concerns—soil quality and water quality—using appropriate conservation practices on at least a part of their farm. Depending on the extent to which they have addressed these and other resource concerns, producers may enroll in one of three CSP “tiers.” In tier I, producers may enroll only the portion of their farm on which soil and water quality concerns have been addressed by best management practices. Producers who have addressed soil and water quality concerns throughout their farm and agree to address at least one additional resource concern over the life of the contract (5-10 years) are eligible for tier II. Tier III participants must have treated all identified resource concerns—not just soil quality and water quality—with conservation practices before CSP enrollment.

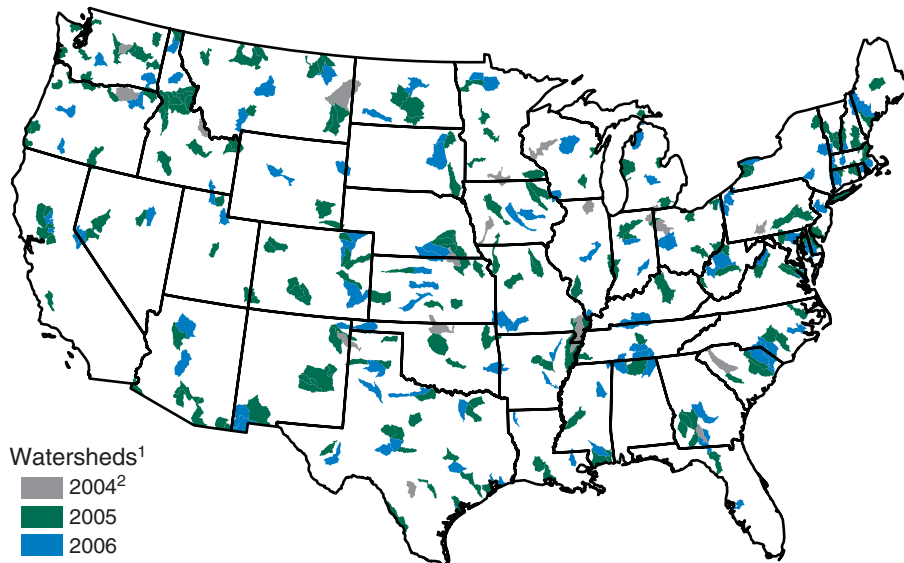
While CSP is a national program, eligibility for any given signup has been limited to specific watersheds. For the initial CSP signup, in July 2004, producers in 18 watersheds were eligible. However, part of the NRCS strategy for CSP implementation is to make every watershed eligible for CSP enrollment. An additional 202 watersheds became eligible for enrollment in 2005, and another 110 watersheds will be eligible for enrollment in 2006 (fig. 5.4.4).

Restructuring Participation Incentives

CSP offers several types of payment—some of which are designed to reward past stewardship and assist producers in maintaining previously installed practices. “Stewardship” and “existing practice” payments are based, roughly, on a percentage of the county average rental rate for the specific type of land involved. Practices that are subject to any other maintenance requirement, such as conservation compliance plans, are not eligible for existing practice payments. Implementation of new practices can be cost-shared at a rate of up to 50 percent, 65 percent for limited-resource and beginning farmers. New practices would be required for CSP participants who agree to move to the next higher tier during their CSP contract or for

Figure 5.4.4

CSP eligible watersheds (2004-2006)



¹Watersheds in Alaska, Hawaii, Puerto Rico, Virgin Islands, Samoa, and Pacific Basin are not shown. For more details see <http://www.nrcs.usda.gov/programs.csp>.

²All 2004 eligible watersheds were eligible in 2005.

Source: USDA, Economic Research Service.

tier II contracts, which require that participants address an additional resource concern over the term of the contract.

Data from the 2004 CSP signup indicate that two-thirds of CSP payments were for new practices intended to (1) address local resource concerns (e.g., resource concerns other than the nationally significant concerns of soil quality and water quality), and (2) encourage practices or activities that improve or enhance resource quality beyond the minimum (quality criteria) standard. In a number of cases, these payments will be based on environmental performance rather than cost. Environmental indices, such as the soil condition index, will serve as proxies for environmental performance. Payments are to be based on the improvement in index values, ensuring that payments reflect likely environmental gains.

If producer applications exceed available CSP funding, acceptance depends on whether producers meet only the basic requirements of the program (i.e., have addressed soil and water quality concerns) or are willing to implement multiple enhancement practices and activities and move to a higher tier (if not already in tier III).

EQIP and CSP—Different Approaches to Similar Concerns

Both EQIP and CSP are designed to address similar resource concerns on working lands. Both of these working-land payment programs are administered by NRCS and in both, payment levels largely determine which eligible producers are willing to participate. Another similarity is that program managers review producers' proposals and decide which ones to accept for

Table 5.4.1

EQIP and CSP designs

Program feature	EQIP	CSP
Budget	2004 contract obligations totaled \$718 million. A total of \$5.8 billion is authorized for 2002-07.	2004 contract obligations totaled \$35.2 million. A total of \$6 billion is authorized for 2002-11.
Conservation standard	Producers must address resource concerns to standards in existing NRCS handbook (referred to as "quality criteria").	Standards in existing handbook are a minimum. Through enhancement payments, CSP supports producers in going beyond this minimum standard.
Eligibility	<ul style="list-style-type: none"> • Both crop and livestock production (in 2003 – 33 percent to crop-related practices; 67 percent to livestock practices). • Emphasis on assisting livestock operations to comply with new Clean Water Act regulations. • No previous conservation effort required. • Only practices not started can be funded unless a waiver is obtained at the time of application. • Available nationally. 	<ul style="list-style-type: none"> • All agricultural land (in 2004 – 67 percent to croplands; 33 percent to range and pasture land). • Animal waste storage or treatment facilities are not eligible. • Soil quality and water quality concerns must be addressed before land can be enrolled in CSP. • Existing practices eligible for payments. • For any given signup, available only in selected watersheds. All 2,119 watersheds to be eligible at least once during 8-year period.
Enrollment screen	Performance-based "offer index." Requests for EQIP funding exceed available budget by 4 to 1.	"Category" system based on level of conservation effort above minimum requirement and performance in terms of soil and water quality criteria.
Participation incentives	<p>Fixed payments:</p> <ul style="list-style-type: none"> • Cost sharing (typically 50 percent) on structural and vegetative practices; • Incentive payments for management practices. No annual payment limitation, but the sum of all EQIP payments to an individual or entity cannot exceed \$450,000. 	<p>Fixed payments:</p> <ul style="list-style-type: none"> • Stewardship and existing practice payment based on rental rates. • Cost-sharing payments for some new practices. Performance-based payments. • Enhancements based, in part, on environmental performance. Payments limited by tier: Tier 1 = \$20,000 max annual payment; Tier 2 = \$35,000 max annual payment; Tier 3 = \$45,000 max annual payment.

program enrollment. This step allows program managers to gather information on potential environmental performance and benefits (and, perhaps, potential to meet other program objectives) and costs directly from farmers – information that can be critical in determining which proposals best contribute to achieving program objectives. However, various program decisions (e.g., budget, eligibility, enrollment screens, and participation incentives) have largely distinguished CSP from EQIP so that now they focus on a wide spectrum of producer types and environmental outcomes (table 5.4.1).

This new flexibility in conservation program design for working lands and livestock production complements traditional conservation efforts, such as land retirement. In many instances, environmental problems like pesticide and nutrient runoff are best addressed on actively cropped lands. Furthermore, working-land programs may often achieve environmental benefits at a lower cost per acre than under land retirement because land remains in production, thereby minimizing the opportunity cost of environmental gain.