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Conservation Choices for a New Millennium

Since its inception in 1935, modern farm conservation policy has focused on a limited range of issues and used voluntary approaches tied to commodity programs and farm income subsidies. However, recent legislation eliminated annual acreage set-aside programs and decoupled income support payments from commodity prices, crop production, and most land use decisions. Congress used the 1996 Federal Agricultural Improvement and Reform Act (FAIR) to provide a transition to a more market-oriented agriculture, but the direction of new commodity programs today is less clear than in 1996. The range of environmental and conservation problems confronting agriculture and the constituencies calling for their solution have both expanded, creating more diverse and novel pressures for change. Whether new programs can be designed to leverage conservation remains to be seen.

Evolution of agricultural conservation programs

Agricultural conservation and environmental policies have always been closely tied to the income and distributional goals of farm policy. The Agricultural Adjustment Act of 1933 (AAA) was the nation's first attempt to control commodity supplies to increase prices and incomes. The AAA taxed food processors to pay farmers to divert land from soil-depleting crops. When the U.S. Supreme Court

invalidated the AAA, the 1936 Soil Conservation and Domestic Allotment Act used soil conservation goals to justify payments for land retirement from the general treasury, with commodity supply control an important by-product.

Policy makers relied exclusively on subsidies offered in voluntary programs to achieve conservation objectives between 1936 and 1985. Programs provided technical and financial assistance, and long-term land retirement. Voluntary conservation programs had to benefit producers to attract participants.

Expenditures on conservation programs responded to commodity markets (figure 1). Peaks in conservation spending occurred after large drops in agricultural prices. Expenditures focused on land retirement programs to shrink commodity surpluses, reduce soil erosion, and meet other conservation objectives. This pattern began in Depression-era programs. The 1936 Act made payments to farmers for the dual purposes of conservation and production control until 1944, retiring as much as 40 million acres a year between 1933 and 1942 (Berg and Gray). The Soil Bank (1956–72) began in the midst of the long decline in real prices that began in 1951. The Conservation Reserve Program (CRP) was enacted in 1985 in response to falling farm prices between 1981 and 1985. Reauthorization of the CRP program in 1996 was passed as 1985–90 contracts expired and prices turned down from 1996 peaks.

by Ralph E. Heimlich and Roger Claassen

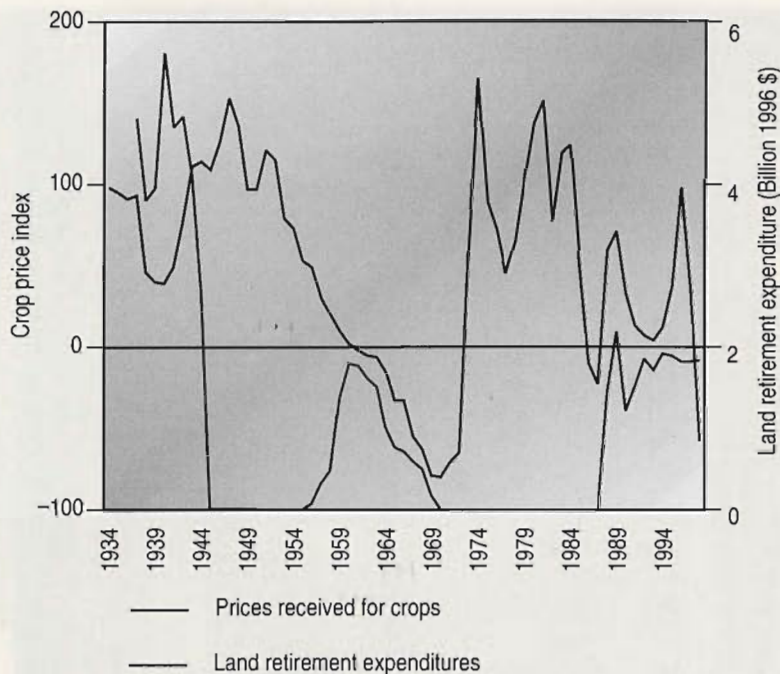


Figure 1. Land retirement expenditures and crop prices, 1934–1938 (in 1996 constant dollars)

In the export boom of the early 1970s, Congress abandoned conservation practices that reduced the extent (land retirement) and efficiency (terraces, contour stripcropping) of farming operations. And, while legislation in the “Environmental Decade” of the 1970s dealt with problems in other sectors, Congress broke little new ground in agriculture. Both the Federal Insecticide, Fungicide, and Rodenticide Act Amendments of 1972 and the Endangered Species Act of 1973 were passed outside agricultural legislation, despite potentially significant impacts for agriculture.

The incipient agricultural recession in the early and mid 1980s set the stage for a new era in agricultural conservation policy. For the first time, CRP eligibility targeted highly erodible land, although USDA expanded the technical definition of “highly erodible” to include traditional farm policy participants on less erodible land. For the first time, too, legislation tied farm commodity program benefits to environmental performance on highly erodible cropland, uncultivated pasture and range, and wetlands (termed conservation compliance, sodbuster, and swampbuster). These provisions forced producers to weigh the loss of farm program benefits against the costs of complying with conservation programs. As market prices declined sharply, participation in commodity programs became financially more attractive. Congressional eagerness to support farm income was joined with consumer and environmental demands to reduce soil erosion, improve water quality, and preserve wetlands.

The 1990 Food, Agriculture, Conservation, and

Trade Act (FACTA) significantly broadened the environmental objectives of agricultural policies. CRP now included water quality and wildlife habitat goals, in addition to the traditional supply management and soil productivity objectives. A new Wetlands Reserve Program (WRP) was enacted, authorizing USDA to obtain permanent easements and restore wetlands on former cropland. In 1996, the new farm legislation called FAIR decoupled income support payments from production and prices but still provided leverage for conservation compliance.

Consolidation of older conservation programs (ACP, GPCP, CTA, etc.) into the Environmental Quality Improvement Program (EQIP) reduced funding, although livestock waste problems were included for the first time. Financial and technical assistance funding for programs consolidated in EQIP averaged \$966 million per year (1992 constant dollars) in the 1983–92 period, while total EQIP funding for 1997–2002 is \$200 million per year, of which half is earmarked for livestock waste problems.

Conservation at a crossroads?

As the millennium draws to a close, policy makers face unprecedented choices for conservation policy. New forms of income support, such as crop or revenue insurance, may not offer economic leverage for conservation compliance programs. Three alternative paths to conservation are greater regulation, increasing use of market-based mechanisms, and “green payments.”

Regulation. The 1990 Coastal Zone Act Reauthorization Amendments (CZARA) regulated agricultural nonpoint pollution for the first time. CZARA’s implementation may offer clues to potential regulatory programs. Within broad federal guidelines, states may develop regulations with heavy input from the agricultural community and careful attention to the “economic achievability” of required management measures. In contrast, a recent spate of livestock waste problems, and uneven state responses, provoked a strong EPA-USDA proposal for reinvigorating long-standing federal regulatory authority over confined animal feeding operations (CAFOs; USDA-EPA).

Market mechanisms. Both sides of the congressional aisle advocate market-based incentives. Limited applications of these instruments to date include sulphur dioxide (SO₂) emissions trading in the Clean Air Act, point-nonpoint source pollution trading, wetland mitigation banking to compensate for permitted wetland conversion, and proposals for environmental hazard assurance programs. Proponents of market-based incentives to modify polluters’ behavior anticipate “win-win” solutions and the chance to avoid expensive bureaucracies and heavy-handed enforcement action. However,

these market-based solutions require an underlying regulatory framework to provide the initial impetus for action. For example, point-source regulation under the Clean Water Act motivates pollution trading. Market-based schemes provide flexibility to efficiently meet environmental goals, but depend on regulatory incentives to reduce environmental externalities.

"Green" payments. As the federal budget emerges from deficits in the late 1990s, Congress could fund both environmental and income support programs. Yet policy makers may find "green" programs to support the farm sector preferable to either a return to traditional commodity programs or movement toward "polluter pays" regulatory principles applied to other sectors (Smith).

Green payments could be based directly on environmental performance. However, current commodity payment recipients (for example, corn and soybean producers on flat, Illinois fields and wheat producers in the Dakotas) may not have the most severe environmental problems. On the other hand, many producers with environmental problems (for example, specialty crop producers who use large quantities of pesticides, or livestock producers with manure management problems) currently receive no commodity payments. Green payments could be designed to get the most environmental performance out of producers who now receive payments, or could be directed at the most pressing environmental problems, regardless of payment history.

Green payments would most likely be based on plans. Experience with CZARA and conservation compliance shows that blanket requirements imposed across a variety of producer and resource conditions don't work. Farm-level planning is an alter-

native that accounts for resource capacities, producer capabilities, and environmental conditions. A plan can describe the problems to be addressed and prescribe practices to ameliorate them, much like current federal conservation compliance and some state nutrient management policies (Ervin and Smith). Further, the diffuse, unobservable nature of agricultural nonpoint source pollution means that plan adoption substitutes for direct observation of cleaner water, more abundant wildlife, or higher-quality soil.

Green payments must go beyond traditional cost-share programs if they are to replace traditional commodity programs that supplemented producers' incomes. Cost-sharing doesn't increase farm income. In the current market equilibrium, society's demand for reducing unpriced environmental externalities jointly created in agricultural production remains largely unaddressed. If the marginal social benefit of a cleaner environment exceeds the marginal cost of practices to produce it, farmers may assert a right to part of this marginal value to supplement their incomes.

Conflicts between conservation and trade policy may arise from this approach. Some believe limitations on WTO "green box" rules restrict payments to the costs of environmental programs (Vasavada and Warmerdam). While a lower level of green payments could provide less incentive for increased production and trade distortion than traditional income supports, it would further institutionalize a perceived right to pollute by farmers. Poorly designed green payments could induce producers to bring more land into production. Green payments could thus unintentionally result in greater overall environmental harm, even though the rate of environmental harm per acre falls. The extent of such



unintended consequences is a matter for theoretical and empirical analysis, based on actual proposals which have, as yet, failed to materialize.

Expanding problems and partnerships

Regardless of the path taken at this conservation crossroads, any national policy must take into account the expanding set of problems and the increasing necessity to engage new public and private partners in solving them. Under CRP and compli-

Proponents of market-based incentives to modify polluters' behavior anticipate "win-win" solutions and the chance to avoid expensive bureaucracies and heavy-handed enforcement action. However, these market-based solutions require an underlying regulatory framework to provide the initial impetus for action.

ance, agriculture successfully attacked traditional concerns like soil erosion, wetland conversion, and wildlife habitat. However, the range of environmental problems confronting agriculture has expanded dramatically, posing diverse and novel pressures for new conservation policy (Ervin et al.). Hypoxia (oxygen deficiency) in a large "dead zone" in the Gulf of Mexico, and blooms of alarmingly predatory *pfisteria piscicida* organisms in Albemarle Sound and the Chesapeake Bay have been added to better-understood nonpoint source water quality problems. Industrialization of livestock enterprises, food safety concerns with new or antibiotic-resistant bacteria, and the framework of phytosanitary issues permitted under the WTO have also emerged. These new problems raise the level of scientific uncertainty and introduce new actors and institutions.

Pressures for devolution of environmental policy also prompt a more diverse set of policy responses at different levels of government and geography

(Resource Policy Consortium). Federal authorities have played facilitating or support roles, deferring to strong state initiatives in the face of a bewildering array of environmental problems. These initiatives may continue to expand and produce increasingly divergent environmental requirements. However, more recent joint EPA-USDA activity on re-vamping the CAFO permit process shows how disjoint state and local efforts can be consolidated at the federal level, following older models of clean air, water, and coastal management legislation. Whether environmental policy continues to devolve or is recentralized remains to be seen. ■

■ For more information

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