

# CONSERVATION, THE ENVIRONMENT, AND THE FARM BILL

**Margot Anderson<sup>1</sup>**

Deputy Director for Staff Analysis

Natural Resources and Environment Division

Economic Research Service, U.S. Department of Agriculture

## **Conservation and Environment Issues in Farm Legislation Since 1981**

During a sixty year history, farm bills have become increasingly more diverse and complex. This is reflected in the both the names of farm bills and in the number of farm bill titles. For example, the Agricultural Adjustment Act of 1933 contained only 3 titles, compared with 10 titles in the Agriculture and Consumer Protection Act of 1973, 17 titles in the Agriculture and Food Act of 1981, and 25 titles in the Food, Agriculture, Conservation, and Trade Act of 1990. While conservation issues have been addressed in farm legislation since the early 1930's, conservation titles are a relatively recent addition (and contain only a subset of the farm bill programs and policies that affect natural resource use and quality). For example, an amendment to the Soil Conservation and Domestic Allotment Act of 1935 created the Agricultural Conservation Program—USDA's primary cost-sharing program—and the Agricultural Act of 1956 established the Soil Bank Program. Since 1981, conservation *titles* have been included in farm bills. The 1981 title (Title XV—Resource Conservation) contained nearly a dozen conservation initiatives, although most were never funded. Initiatives included grants to states to address unique local problems and the establishment of a critical areas conservation program targeted to erosion hot spots.

Clearly, farm bills are not the only vehicles for addressing agriculture, conservation and environment policy. Other important legislation with a bearing on conservation goals, objectives and programs includes the Soil and Water Resources Conservation Act of 1977 (Resource Conservation Act), which requires USDA to periodically prepare a national appraisal of the condition of the nation's privately owned soil, water and related resources. The Clean Water Act—the nation's most important water quality protection law, the Safe Drinking Water Act, which sets standards for drinking water quality and public water treatment systems, and the Tax Reform Act of 1986, which removed subsidies for converting wetlands, are all examples of legislation affecting resource use and quality in the agricultural sector.

Farm bills are complex pieces of legislation and are required to respond to multiple, and often conflicting pressures. Conservation or environmental concerns rarely dominate the debate. Other important factors include: export market conditions; agricultural programs in competitor countries; budget pressures; domestic supplies; regional conflicts; the level of farm income and farm assets, and the continually evolving structure of the agricultural sector. Many of these themes were evident in the mid-1980's just prior to the 1985 Food Security Act, which created many of the conservation programs still in effect today. In the mid-1980's, the farm sector was experiencing significant financial vulnerability, budget outlays for programs had reached record levels, and exports were suffering under weak foreign demand coupled with a rising dollar. The 1977 National Resource Inventories (NRI) and the 1980 RCA (the Appraisal required by the Soil and Water Resources Act of 1977) had provided the first comprehensive national estimates of soil erosion which raised questions about the effectiveness of soil erosion programs. In response, the 1985 Food Security Act attempted to reduce budget outlays by reducing target prices and freezing program yields but farm income was protected with deficiency payments. In an attempt to improve the export picture, loan rates were lowered to world price levels. In response to concerns about soil erosion and soil erosion programs, the conservation title authorized conservation compliance, Sodbuster, Swampbuster, and the Conservation Reserve Program (CRP). The latter was not just an erosion control program; CRP was also intended to curb production of surplus commodities and to provide needed income support for farmers.

The Food, Agriculture, Conservation and Trade Act of 1990 (FACTA) responded to a somewhat different set of circumstances. During the later-1980's export volume and value had increased significantly. With strong commodity prices, farm program costs declined to \$6.5 billion from a record high of \$26 billion in 1986. Continued pressure to reduce the Federal budget deficit, promote exports, and increase market orientation, were the dominant roles in 1990 farm bill debate. To help control budget outlays, FACTA eliminated payments on 15 percent of base

acreage. To encourage increased market orientation in the sector, FACTA also included planting “flexibility”, which allowed farmers to plant alternative crops on a portion of their land, without losing base acreage. Although flexibility was introduced because it could provide budget savings and allow farmers to better respond to the market, flexibility was supported by environmentalists who argued that producers need to be free to pursue alternative, resource conserving, rotations without program penalty.

FACTA extended, with some adjustments and clarification in program administration, conservation compliance, Sodbuster, and Swampbuster. The 1990 Act also established the Agricultural Resources Conservation Program to act as an umbrella program for the Environmental Conservation Acreage Program (which contains the Conservation Reserve Program and the Wetlands Reserve Program), the Agricultural Water Quality Protections Program (now known as the Water Quality Incentives Program or WQIP), and the Environmental Easement Program. In addition, the 1990 Act augmented CRP with new wetlands, water quality, and environmental easement provisions and the Wetlands Reserve Program (WRP) was created to provide easement payments and restoration cost shares to landowners who permanently return prior converted or farmed wetlands to wetland condition.

Clearly, significant conservation and environmental gains were made in the conservation titles of the 1985 and 1990, both in terms of introducing and refining conservation policy tools and in terms of accommodating concerns beyond soil erosion, such as enhancing water quality and maintaining wildlife habitat. In addition, changes in commodity program provisions have lessened the negative environmental effects attributed to commodity price supports and program planting restrictions. Nevertheless, conservation tools like compliance, land retirement, and cost-sharing may need to undergo adjustments in order to be more effective in meeting budget constraints, accountability requirements, localized problems and issues, and ever-evolving conservation objectives. What lessons have been learned that could lead to more cost-effective policies and programs in the future?

### **Lessons Learned Since 1981**

*Lesson 1: To improve environmental policy design, both the costs and the benefits of programs must be considered.*

Since 1983, USDA has spent close to \$30 billion dollars on conservation and water quality programs. USDA's conservation and water quality programs utilize a mixture of technical assistance and education, cost-sharing assistance and incentives for practice installation, public works projects, paid land retirement for conservation purposes, and research (USDA, ERS, 1994). Other

conservation program costs are imbedded in compliance-type programs, which either restrict production on certain types of land or require a conservation plan in order to be eligible for USDA benefits. Other Federal agencies also allocate funds for conservation and environmental programs that affect the agricultural sector. In FY 1994, the Environmental Protection Agency allocated \$655 million for water quality, drinking water and pesticide programs; the Army Corps of Engineers allocated \$1,026 million for flood control and wetlands programs; the Department of Interior allocated \$1,261 million to mostly range improvement and endangered species habitat conservation, while State and local governments allocated \$502 million for a variety of programs. Although millions have been spent on conservation and environmental programs, the *total* cost and benefits of these programs is not clear.

One way to evaluate conservation programs is to estimate the net cost to the government. Such costs include annual rental payments for land retirement and the cost of technical assistance and financial assistance. But another kind of calculation is necessary to fully evaluate conservation programs. This calculation, which cannot be simply added to net government outlays, focuses on the "social" costs and benefits of programs. The social costs include the costs borne by farmers to comply with program guidelines or regulations and the costs to society should fewer farm products be offered at higher prices due to a changes in farming activities. Social benefits include improvements in on-farm productivity, rural amenities such as recreation and scenic beauty, improved wildlife habitat, safer food supplies, and cleaner surface and groundwater supplies for the public. But measuring the social cost and benefits is complicated by the fact that they are often not like other goods, such as corn or wheat, with well-established markets and prices. Consequently economists use a variety of methods to estimate how the public benefits from clean water or improvements in wildlife habitat (see Ribaudo and Hellerstein, 1992 for a review of these methods).

An evaluation of the Conservation Reserve Program provides a good illustration of the importance of calculating both the social benefits and costs of land retirement. It is widely recognized that the CRP has achieved many of its objectives: reducing soil erosion on highly erodible land, reducing sedimentation, improving water quality, fostering wildlife habitat, curbing the production of surplus commodities and providing income support for farmers (USDA, ERS, 1994). To date, the Conservation Reserve Program has reduced soil erosion by nearly 700 million tons per year, or 19 tons per acre on average. This is a 22 percent reduction in U.S. cropland

erosion compared with conditions prior to CRP. Most CRP acres are planted in grass, but the CRP also includes 2.4 million acres of trees, 2 million acres of special wildlife practices, 410,000 acres of wetlands, and 5,200 miles of filter strips along waterways (USDA, ERS, 1994).

Osborn and Konyar estimated that in 1990, the net social benefits of the CRP were between at \$4.2-\$9 billion in present value over the life of the program, which means that the social benefits of CRP exceeded the social costs by \$4.2 - \$9 billion. The estimated social benefits included increases in net farm income (\$2.2-\$6.3 billion), preservation of soil productivity (\$.6-\$1.7 billion), improved surface water quality (\$1.3-\$4.3 billion); lower damages due to windblown dust (\$.3-\$0.9 billion) and enhancements to wildlife (\$1.9-\$3.1 billion). The social costs of the CRP include higher food costs to consumers (\$2.9 - \$7.8 billion), the cost of establishing vegetative cover on CRP acres (\$.9-\$2.4 billion) and USDA technical assistance (\$.1 billion).

A similar exercise estimates the economic costs of conservation compliance, which requires farmers to implement conservation plans on highly erodible land if they want to retain eligibility for USDA programs and benefits. Costs associated with conservation compliance include the administrative costs of implementing plans and the supply and price effects associated with the on-farm costs of implementing conservation plans. The benefits include maintaining on farm productivity and the value associated with reducing the off-farm effects of soil erosion (USDA, ERS, 1994). Recent estimates indicate that the benefits of conservation compliance exceed the costs: for every dollar of combined public and private expenditure required by the conservation compliance, \$2 in benefits are realized by the public (USDA, ERS, 1994).

Although these estimates are subject to revision as methods and data improve they, nevertheless, are useful in helping policymakers think about how to evaluate the effectiveness of current programs and how to design more cost-effective environmental programs.

*Lesson 2: Commodity programs can be designed to support environmental goals, up to a point.* For many years, commodity programs, which are primarily designed to support farm income, were associated with creating incentives to bring marginal farm land into production and increase the use of potentially damaging farm chemicals. Program planting restrictions often were at odds with good stewardship as farmers planted to maximize program benefits. But the negative role of commodity programs has diminished over the last ten years as program provisions have been adjusted to reflect environmental

concerns. Two basic types of adjustments have been made: those that reduce the incentives to "farm the programs" and those that require farmers to implement conservation plans or restrict use of certain kinds of land to remain eligible for commodity and other program benefits.

Adjustment of the first type include freezing payment yields in the 1985 Act—payments can no longer be increased if farmers increased yields. This provision may increase the incentive to adopt better nutrient and pest management practices. The 1990 Act introduced the Integrated Farm Management Program Option (IFMPO), which allows farmer to adopt resource-conserving crop rotations without losing farm program benefits. Flexible base acreage was also introduced in the 1990 Act and permits farmers to plant a portion of base acreage to the non-base crops while protecting their historical base acreage. Flexibility was promoted as a way to reduce budget outlays and increase the incentives for farmers to adopt environmentally sounder crop rotations. As currently implemented, flexibility provisions provide producers with payments on up to 85% of their eligible base; on the remaining 15%, producers have the option to plant the program commodity or to flex into a variety of alternative crops or leave the land idle. Producers have the option of forgoing deficiency payments on an additional 10% of their program crop base and plant the acreage to an alternative crop. Flexibility provisions increase incentives to plant for the market, not for the deficiency payment, and have resulted primarily in decreases of corn and wheat acreage and increased soybean acreage. Environmental benefits, although not a certainty, can result if the new crop rotation uses fewer agricultural chemicals, as would be the case in a corn/soybean rotation, or is less erosive, or leaves more land idle (but appropriately managed).

Provisions that require specific performance from farmers to retain eligibility for USDA commodity programs and benefits include conservation compliance, Sodbuster and Swampbuster—all introduced in the 1985 Act. Conservation compliance requires that any lands classified as highly erodible must be farmed using an approved conservation systems in order to retain eligibility for USDA program benefits. Sodbuster and Swampbuster focused on protecting non-cropped highly erodible land and nonconverted wetlands, respectively. Compliance-type programs are considered effective but some are concerned about their limited scope as they only address a few environmental problems and have not been used to achieve comprehensive soil quality, water quality, or wildlife goals, which are now understood to be as important as soil erosion (Canning, 1994; National Research Council, 1993). Additionally, their

effectiveness is dependent on program participation—if commodity programs become unattractive to farmers for any reason, the compliance leverage is weakened. Those that argue that compliance could be expanded to include additional environmental goals, perhaps through the use of a whole-farm plan, must consider both the costs (to farmers, USDA, States) and benefits of a more comprehensive program. On-farm costs that are either too high or perceived to be too high could affect participation rates and drive some farmers, possibly those on the most vulnerable land, out of the programs, defeating the compliance purpose.

By removing disincentives to better stewardship, commodity programs can be made "greener", and in some cases also help reduce the overall cost of commodity programs. But innovative programs such as the IFMPO are under subscribed—while up to 5 million acres may be enrolled annually, less than 400,000 acres were enrolled between 1991 and 1994. And relatively few acres eligible for flex actually flex into an alternative crop, mostly because opportunities for increasing profit are limited: most farmers are already growing the optimal mix. Although additional adjustments in commodity programs such as increasing flexibility or enrolling more acres in the IFMPO will likely provide only small environmental gains, these adjustments will continue if they can reduce budget outlays and allow farmers to respond to market conditions. .

*Lesson 3: Targeting environmental programs improves cost-effectiveness.* As defined by the National Research Council (1993), targeting "directs technical assistance, educational efforts, financial resources, or regulations, to those regions where soil and water quality improvements are the most needed, or those enterprises that cause a disproportionate portion of soil and water quality problems." Although targeting clearly requires policymakers and the public to articulate environmental goals, targeting conservation programs requires better information that links farm practices to environmental quality and identifies those regions that contribute to problems (NRC, 1993). The role of economists, who stress targeting as a way to improve the economic efficiency and cost-effectiveness of conservation programs, is to identify how (and where) the environmental benefits per program dollar can be maximized.

Targeting is already a feature of many Federal environmental programs. Several of the activities associated with USDA's Water Quality Program are directed specifically at problem regions. For example, the 74 Hydrologic Unit Area Projects (HUA) are located in watersheds with identified nonpoint-source water quality

problems. Landowners receive financial and technical assistance to implement water quality practices to meet State goals. Water Quality Special Projects extend cost-share assistance to farmer and ranchers for installing approved water quality practices in watersheds with identified agricultural nonpoint source problems (USDA, ERS, 1994).

Many of these targeting activities are funded through USDA's primary cost-sharing program, the Agricultural Conservation Program, which began in 1936. In the past, USDA's cost-sharing approach to conservation has been criticized for offering widely available funds for projects that improve on-farm productivity and income, such as draining of hydric soils, but may have limited impact on environmental quality. Recently, cost-share programs have been aimed at meeting public conservation goals in targeted regions. But cost-share funding has declined dramatically during the last few years and there will likely be increased pressure to better target remaining cost-share funds. Possible avenues include innovative programs such as the Water Quality Incentives Projects (WQIP), which is designed to achieve reductions of nonpoint sources agricultural pollutants in an environmentally and economically sound manner. WQIP (currently 242 projects) is targeted to small watersheds: agricultural producers are provided with the necessary financial assistance required to make changes in management systems to restore or enhance water resources impaired by agricultural source of pollution (USDA, ERS, 1994). The success of targeted cost-sharing programs like WQIP depend on appropriate funding, coordination across USDA, and carefully adjusting payments levels to achieve maximum benefit per cost-share dollar.

Targeting is also an important topic in discussions about the future of the CRP: how can environmental benefits be maximized for any given level of CRP funding? While the early CRP sign-ups achieved one kind of targeting—only highly erodible land was eligible—it is recognized that other kinds of land can provide higher benefits per program dollar (Heimlich and Osborn, 1994). Indeed, since 1990, the CRP bid assessment process has explicitly ranked each offered parcel according to an index of environmental benefits, which included multiple criteria, and selected the parcel with the highest environmental benefit per dollar of rental payment (Heimlich and Osborn, 1994). Alternative targeting approaches are being explored to determine how to maximize environmental benefits for any new acres enrolled in the CRP (Heimlich and Osborn, 1994; Babcock, 1995).

*Lesson 4: Conservation policies need to rely on a mixture of approaches.* There is no one approach that can meet

all conservation and environmental goals. Most Federal and State policies use a mixture of regulations, economic incentives and voluntary approaches backed by demonstration projects and technical assistance. Finding the right mix of approaches, and subjecting them to critical review, is crucial under shrinking budgets and increasing concerns over the effectiveness and cost of some programs. Meeting the public's demand for environmental protection will require innovative approaches at the State and Federal levels as well as coordination across Federal and State policies.

It is well known that competitive markets and competitive prices often fail to account for environmental consequences, such as the effect of farming on water quality. The value of these effects is not fully reflected in private costs producers and processors pay for inputs or when farmers decide what and how to produce. Instead, the public often bears the costs when agricultural runoff, sediment or farm chemicals degrade the quality of the nation's resources. Governments, through public policy, can make environmental improvement a requirement—through regulations—or a matter of self-interest, through the use of economic policy instruments, such as taxes, subsidies, education, and market incentives.

Agriculture is affected by a broad range of regulation, such as those issued through the Federal Insecticide, Fungicide and Rodenticide Act and the amendments to the Coastal Zone Management Act. Regulations are often the policy instrument of choice when restriction of an action, such as the use of a particular pesticide or the location of a feed lot, is in the best interest of the public at large. But regulations can be costly and difficult to implement. Regulations such as design standards (restrictions on farm-level input use or "approved" land management practices) are generally associated with low administrative costs but because they tend to be generic prescriptions rather than least-cost plans, some farmers are required to apply standards that do not minimize costs, which is an unnecessary financial burden. (Shortle and Dunn, 1991). Performance standards, such as specified maximum levels of soil erosion or sediment flows, can be difficult and costly to monitor. Like design standards, performance standards are unlikely to be cost-minimizing means of achieving an environmental goal (Shortle and Dunn, 1991).

Economists argue for the use of economic instruments, such as taxes, subsidies, and market-based incentives to achieve environmental goals. Taxes impose costs on undesired activities, letting farmers and processors find the least-cost formula to avoid these added costs. But taxes are often not well suited to address many environmental problems such as non-point source problems, where it is

often impossible to find the exact source of pollution and thus levy an appropriate tax on sediment flows or chemicals leaching into waterways. Incentive-based policies such as pollution trading, can likely be used only in limited geographic regions. One possible trading scheme to reduce pollution in a watershed would allow point pollution sources (such as sewer treatment plants) to fund programs to reduce nonpoint sources (such as agriculture). Such a scheme is shown to be cost effective in areas with both point and nonpoint sources of pollution, areas with point loadings supplied by large sources, and areas with significant unmet agricultural conservation needs. However, these criteria only describe a small number of watersheds (Letson, 1992). Another incentive based mechanism, used for wetlands restoration, is mitigation banking, which allows a landowner to develop or convert a wetland in one area if there is an ecologically compensating wetland restoration in another site.

Medium-term voluntary paid land retirement (Conservation Reserve Program) and permanent easements (such as the Wetlands Reserve Program) carry a particularly high price tag, making them of limited use in a tight budgetary environment. And conservation programs based on compliance mechanisms are only effective if the environmental problems are concentrated on farm operations producing program crops and are also participating in the farm programs. If problems are on other types of operations or if programs become less attractive and cover fewer production activities, leverage will weaken and fewer environmental benefits will result from conservation compliance.

Cost-sharing and other financial assistance are designed to help farmers overcome investment and adjustment costs associated with the adoption of a new practices. In FY 1994, cost-sharing accounted for about 5 percent of USDA conservation expenditures, mostly through the Agriculture Conservation Program (ACP). In 1983, prior to the CRP, cost-sharing accounted for close to 20 percent of conservation expenditures (USDA, ERS, 1994). ACP provides financial assistance (up to 75 percent of the total cost of implementation with a maximum of \$3,500 per person per year) to farmers who implement technical practices designed to solve a broad range of conservation and environmental problems. Financial assistance can be a valuable tool but its effectiveness may be limited by a poorly designed payment schedule or a lack of targeting.

The WQIP (operated through ACP) is designed to reduce the negative impacts of agricultural activities on ground and surface water and provide financial incentives to farmers who agree to implement approved, non-structural management practices. Producers receive an incentive payment, which is not a cost-share payment in the

traditional sense, but a payment that compensates them for the added costs or risk associated with the new management practice. However, the \$3,500 ACP limit, the incentive payments themselves, the long-term profitability of the practice, or a lack of managerial know-how may be limiting enrollment in WQIP. A recent study by the Sustainable Agriculture Coalition found that per-acre incentive payments for many practices may be too low to attract some producers (Higgins, 1995). Alternative management systems supported by WQIP are often more complex than current systems (Dobbs, Bischoff, Henning, and Pflueger, 1995) and place more importance on producer know-how (and on technical assistance programs). In other cases, producers may be willing to adopt certain practices without an incentive payment, if they are provided sufficient information on the practices (Feather and Cooper, 1995).

*Lesson 5: The role of technology is critical to meeting environmental challenges.* Research provides the foundation for technological innovation and productivity growth. Public sector research, such as that conducted by USDA and State universities, is needed when there are few financial incentives for the private sector investment into research. This is particularly the case for basic research and for some applied research such as environmental protection, natural resource conservation and food safety (Ruttan, 1982). While public sector research is needed, funding levels have been roughly constant at about \$2 billion annually (in 1990 dollars) since the late 1970's (USDA, ERS, 1994). About one-third of public research expenditures is allocated to reducing the production costs of food and forest products; 24 percent is allocated to pest and disease protection; and 14 percent to natural resource management.

Although research and development of new technologies is vital, transferring technologies to farmers and ranchers is of equal importance. Agricultural technology is often transferred through technical assistance and demonstration projects. Yet concerns have been raised that technical guidance sometimes fails to include the full range of available management practices to address environmental needs (National Research Council, 1994). This is partly attributable to Federal conservation policies, which have primarily stressed controlling of soil erosion often without considering other environmental concerns, such as water quality. This has, at times, led to prescribed management practices that may be in conflict with other management practices (Deere and Company Technical Center, 1995). To avoid this conflict and maximize environmental benefits per technical assistance dollar, technical assistance needs to include the full complement of available technology and consider an enterprise's complete environmental needs.

An extensive body of economic research has focused on the factors that affect the decision to adopt new technology. Important factors include policy variables, input and output prices, the cost of the new technology, farm size, type of farm, and education levels. In the case of technologies that are designed to address environmental problems, Caswell and Shoemaker (1993) have demonstrated that technology adoption also depends on environmental characteristics. That is, the range of resource characteristics, such as susceptibility to pest infestation, surface or ground water vulnerability, and erodibility will determine the effectiveness of policies meant to encourage the use of new technologies to solve environmental problems.

USDA has long stressed technological solutions to environmental problems, through technical assistance, demonstration projects, and education. Technical assistance is an important factor in the adoption process because new practices often require a greater degree of management and skill than conventional practices and operators may not be able to apply the practice without specialized assistance.

Without a supply of readily available, cost-effective technologies, farmers have little incentive to voluntarily change current practices. The development and transfer of new technologies, the interaction between conservation policy and technology, the factors affecting the demand for technology all play an important role in meeting environmental goals.

### **The 1995 Farm Bill: Lessons Applied?**

Prior to the 1994 election and the Congressional emphasis on budget reduction, there were several proposals for improving current conservation programs and policies—some clearly building on lessons learned since 1981. In addition to proposals concentrating on targeting schemes for the CRP, other proposals were built on the concept of financial assistance programs that reward farmers for either mitigating existing environmental damage or improving environmental management. Proposed programs were typically voluntary and payments were designed to cover some or all of the start-up or installation costs of the alternative management practice. Payments were targeted to the most vulnerable regions and the programs were typically funded through Federal and/or state governments. Other innovative proposals included:

*Green Ticket Certification*, which would require specification of a set of environmental and resource conservation performance standards which, if attained, qualify a farm operator for financial benefits ( Benbrook, 1994)

An *Environmental Stewardship Incentive Program* that would provide higher deficiency payments or direct cash payments to agricultural producers and landowners who voluntarily adopt farm plans developed in cooperation with certified environmental stewards (Petrucci, B., 1994).

The *Environmental Enhancement Investment Program* that would consolidate all USDA conservation programs (except CRP, WRP, and Conservation Compliance) into one voluntary, incentive-based program based on a total resource management plan for the farm. Provides technical and financial assistance to implement the plan (NASDA, 1995)

The *Conservation Credit Initiative*, which would offer property tax credits to producers who voluntarily apply approved conservation plans. Plans are developed by the farmer, with technical assistance from the local conservation district, partly supported by USDA funding Sullivan, K., 1994)

After the November, 1994 election and the emphasis on budget reduction, it became clear that proposals calling for increased conservation funding were not likely to be seriously considered. In recent months, as deadlines approach, several budget-conscious bills related to the farm and conservation issues have been introduced<sup>2</sup>. For example: "Freedom to Farm" (H.R. 2195), converts current payments to farmers (based on production) into fixed payments that are gradually reduced over seven years and gives farmers 100 percent flexibility. Freedom to Farm does not explicitly address conservation programs other than conservation compliance, which is retained. The Agricultural Resources Conservation Act of 1995 (S. 854), authorizes an environmentally targeted Conservation Reserve Program, a Wetland Reserve Program, and introduces the Agricultural Environmental Quality Incentives Program (EQIP), which stresses prudent management of resources as opposed to idling land. EQIP combines many of USDA cost-share programs into a single program, and increases conservation assistance to livestock production. Annual funding for CRP and EQIP would be mandatory, funded under the Commodity Credit Corporation, which currently funds commodity programs.

The Administration's Guidance for the Farm Bill outlines the Administration's farm 1995 bill position. With respect to conservation and environment, the Guidance has three recommendations: (1) relatively minor, mostly

administrative adjustments to programs linked to commodity programs (conservation compliance and Swampbuster); (2) reaffirmed support, with suggestions for increased targeting, for USDA's major land retirement programs, the Wetlands Reserve Program and the Conservation Reserve Program; and (3) a blueprint for streamlining USDA's technical and financial assistance tools. The latter is a proposal to make conservation programs more streamlined and effective, through the proposed Coordinated Conservation Assistance Program which focuses on: (1) simplifying the set of conservation technical and financial assistance tools; (2) increasing local involvement and control over conservation programs; and (3) site-specific conservation plans for farms or ranches that serve the comprehensive needs of these operations. One goal is to move toward one-stop shopping for conservation assistance and to provide conservation programs that are consistent with sound agronomic and economic principles.

With budget reduction as *the* dominant theme for the 104th Congress and for farm bill debate, a farm bill as we know it appears unlikely. Instead, the budget reconciliation bill now moving through Congress is expected to cover the major funding issues that would normally be included in separate farm bill legislation. Under a budget reduction umbrella, increased funding for conservation appears unlikely, but there may be opportunities to improve the performance of remaining conservation programs by incorporating components of recent proposals and minding the many lessons learned since 1981.

## References

- Babcock, Bruce, P.G. Lakshminarayan; JunJie Wu (1995). "Renewing CRP: Results for a Study of Alternative Targeting Criteria". Resource and Environmental Policy Division, Center for Agricultural and Rural Development. Iowa State University. Ames: IA.
- Benbrook, Charles (1994). "Credit Where Credit Is Due: Green Ticket Certification." in A.A. Sorensen (ed.) *Agricultural Conservation Alternatives: The Greening of the Farm Bill*, American Farmland Trust, Center for Agriculture and the Environment, DeKalb, Illinois.
- Caswell, Margriet and Robbin Shoemaker (1993). *Adoption of Pest Management Strategies Under Varying Environmental Condition*. Economic Research Service, U.S. Department of Agriculture. Technical Bulletin No. 1827.

Deere and Company Technical Center (1995). "Managing Nonpoint Source Pollution in Agriculture". Technical Report No. 272. Moline Illinois.

Dobbs, T.L., J.H. Bischoff, L.D. Henning, and B.W. Pflueger (1995). "Case Study of the Potential Economic and Environmental Effects of the Water Quality Incentive Program and the Integrated Crop Management Program: Preliminary Findings." Paper presented at the annual meeting of the Great Plains Economics Committee, Great Plains Agricultural Council, Kansas City, MO. April, 1995

Heimlich, Ralph E. and Tim Osborn (1994). "Buying more environmental protection with limited dollars." When Conservation Reserve Program Contracts Expire: The Policy Options. Conference Proceeding, February 10-11, 1994, Arlington VA. Soil and Water Conservation Society, Ankeny: IA.

Higgins, E.M. (1995). *The Water Quality Incentive Program: The Unfulfilled Promise*. Walthill, NE: Center for Rural Affairs.

National Association of State Departments of Agriculture (1995) Farm Bill Proposal, October 1994.

National Research Council (1993). *Soil and Water Quality: An Agenda for Agriculture*. Washington, DC: National Academy Press.

Osborn, C. Tim and Kazim Konyar (1990). "A Fresh Look at the CRP", *Agricultural Outlook*, AO-166, U.S. Department of Agriculture., Economic Research Service.

Petrucci, Bryan. 1994. "Environmental Stewardship Incentives Program." in A.A. Sorensen (ed.) *Agricultural Conservation Alternatives: The Greening of the Farm Bill*, American Farmland Trust, Center for Agriculture and the Environment, DeKalb, Illinois.

Ribaudo. Marc O. and Daniel Hellerstein (1992). *Estimating Water Quality Benefits: Theoretical and Methodological Issues*. Economic Research Service, Technical Bulletin No. 1808. U.S. Department of Agriculture.

Ruttan, Vernon (1982). *Agricultural Research Policy*. Minneapolis: Univ. of Minnesota Press

Shortle, James S. and James W. Dunn (1991). "The Economics of Control of Non-point Pollution from Agriculture." in *Farming and the Countryside: An Economic Analysis of External Costs and Benefits*. (ed: Nick Hanley). CAB International. Oxon: UK

Sullivan, Kimberly L. 1994. "Conservation Credit Initiative." in A.A. Sorensen (ed.) *Agricultural Conservation Alternatives: The Greening of the Farm Bill*, American Farmland Trust, Center for Agriculture and the Environment, DeKalb, Illinois.

U.S. Department of Agriculture, Economic Research Service (1994). *Agricultural Resources and Environmental Indicators*. AH-705. December.

## ENDNOTES

1. The views expressed in this paper are the author's and do not necessarily represent the views of the Economic Research or the Department of Agriculture.

2. The 1990 Farm Bill provides the legislative authority through the 1995 marketing year for commodity. Many conservation programs expire at the end of 1995. The Omnibus Reconciliation Act of 1993 extends some program provision through 1997. Failure to pass new farm legislation causes many programs to revert to originating or permanent legislation. Without new legislation, many conservation programs would be eliminated.

*Margot Anderson is Deputy Director for Staff Analysis in the Natural Resources and Environmental division of Economic Research Service, United States Department of Agriculture.*



