

# Conservation and Commodity Programs Can Work in Harmony

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**T**he Food Security Act of 1985 contains three conservation provisions that bring compatibility and consistency to USDA farm and conservation programs—Conservation Reserve, Wetland Conservation, and the Highly Erodible Land Conservation provisions. These provisions will lead to reduced soil erosion and associated offsite adverse effects, encourage conservation of natural wetlands, and promote a more productive and competitive agriculture.

The previous article, "A Farm Program With Incentives To Do Good," discusses each of these provisions. Here, let us take a longer look at conservation compliance under the Highly Erodible Land Conservation provisions.

## Conservation Compliance

Conservation compliance applies to highly erodible land used to produce an agricultural commodity between December 31, 1980, and December 23, 1985. Some 118 million acres—more than one-fourth of the Nation's 421 million acres of existing cropland—are highly erodible and subject to conser-

vation compliance. Producers of agricultural commodities on highly erodible cropland must develop by January 1, 1990, and carry out by January 1, 1995, an approved conservation plan to maintain eligibility for certain USDA program benefits.

Conservation plans include specific, practical conservation measures that will allow farmers to continue producing crops on highly erodible land while keeping soil erosion to acceptable levels. About 80 percent of all farmers producing on highly erodible land will want to maintain eligibility for USDA program benefits and will consequently need a conservation plan.

## Effects of Conservation Compliance

**Costs of Carrying Out Conservation Plans.** The cost depends on the potential erodibility of the soil, the current level of erosion, and the degree of erosion reduction. Of the 118 million acres of highly erodible land subject to conservation compliance, about 83 million acres will

need additional treatment to meet conservation compliance requirements.

A farmer has three choices on these areas: (1) Develop and apply an approved conservation plan and retain eligibility for USDA program benefits, (2) enter the land into CRP, or (3) continue to farm without an approved conservation plan and lose eligibility for certain USDA program benefits.

Of the 83 million acres requiring additional treatment, it is assumed that 45 million acres of the most difficult to treat will be enrolled in CRP. Bringing erosion down to acceptable levels on the remaining 38 million acres of highly erodible land under varying conditions requires different approaches with different installation and operating costs. In some cases conservation tillage, crop rotations, and contour plowing will be sufficient and compliance costs will be small. Some operators, however, may have to install terraces with greater up-front and maintenance costs.

An analysis of the 1983 Conservation Reporting Evaluation System data suggests that costs of bringing erosion on highly erodible land to a reasonable and practicable level would range from \$25 to \$60 an acre. Based on this data and judgment of professional conservationists, investments are expected to be between \$800 million and \$1.4 billion on the 38 million acres. Considering depreciated value of investment and reduced gross returns from crop rotations, the cost is about \$7 to \$13 an acre per year.

These costs are reasonably consistent with recent estimates of Dicks,<sup>1</sup>

who estimated costs ranging from \$7 to \$17 an acre a year with a national average of \$13.

**Soil Erosion.** The 118 million acres of cropland subject to conservation compliance are eroding at about 1.8 billion tons annually, or approximately 58 percent of the 3.1 billion tons of soil erosion occurring on all cropland. Conservation compliance will reduce erosion by up to 600 million tons annually, or about 20 percent of all cropland erosion. The actual level of erosion reduction will depend on the level of compliance that is technically and economically possible. With a 45-million-acre CRP and conservation compliance, 45 to 50 percent of all soil erosion on cropland would be eliminated. Soil erosion on cropland not meeting the highly erodible land definition would continue unless addressed by other traditional conservation efforts.

**Soil Productivity.** Reducing soil erosion will help maintain the long-term productivity of protected lands. Preliminary data from the Second Resources Conservation Act Appraisal of Soil, Water, and Related Resources indicate a national onsite annual loss in soil productivity of about 2.5 percent from sheet and rill erosion and about 1.2 percent from wind erosion. This translates to an average annual loss of about \$125 to \$150 million as a result of continued excessive soil erosion over the next 100 years. Con-

<sup>1</sup>Michael R. Dicks, "What Will It Cost Farmers to Comply With Conservation Provisions?," *Agricultural Outlook*, Oct. 1986

servation compliance along with CRP should reduce this loss by \$70 to \$90 million annually.

**Water Quality.** The major adverse offsite effect of soil erosion is the degradation of water quality in the Nation's streams, reservoirs, and lakes. It is difficult to quantify damages to water caused by sediment from soil erosion and the extent to which erosion control measures would reduce them. Opportunities, however, for reducing these losses and damages are significant with conservation compliance and other provisions of the act. A recent study<sup>2</sup> indicates that about 400 million tons of sediment a year will not reach the waterways through these provisions. Based on Economic Research Service studies of offsite benefits per acre of land treated, the associated offsite benefits could approach \$1 to \$1.5 billion a year. These estimates do not account for benefits associated with land treated for wind erosion.

**Social Considerations.** Conservation compliance will create job opportunities in the private sector. Workers will be needed to install conservation practices, and the market for farm inputs used for conservation will expand. Employment for those engaged in land conversion activities is likely to be reduced. Depending on how it is ultimately implemented, conservation compliance could substantially affect the financial position and economic well-being of producers, sup-

pliers, financial institutions, and rural communities.

These effects will vary, depending on inherent erodibility of the soil and specific crops grown. To minimize adverse effects, economics, social acceptance, and technical feasibility must be considered in determining the level of erosion control required by farmers to maintain their eligibility for USDA program benefits.

A social factor is the direct relationship between the quality of farmland and the socioeconomic status of operators. Farmers who have been prosperous are more likely to have better land, with less need for erosion control practices than limited resource farmers. Farmers on better quality land also are more likely to have higher education levels and better managerial skills, and to participate more actively in local and State conservation programs and organizations than farmers on poorer quality land.

### Further Reading

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Reichelderfer, Katherine H., *Do USDA Farm Program Participants Contribute to Soil Erosion?*, Economic Research Service, U.S. Dept. of Agriculture, AER-532, Apr. 1985.

<sup>2</sup>*Nonpoint Source Pollution: Are Cropland Controls the Answer?* Resources for the Future, Inc., Feb. 1986

Ribaudo, Marc O., *Reducing Soil Erosion: Off-site Benefits*, Economic Research Service, U.S. Dept. of Agriculture, AER-561, Sept. 1986.

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