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Report to the Chairman, Committee on
Agriculture, House of Representatives

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FARM PROGRAMS

Conservation Compliance Provisions Could Be Made More Effective



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EXHIBIT

69



United States
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**Resources, Community, and
Economic Development Division**

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September 24, 1990

The Honorable E (Kika) de la Garza
Chairman, Committee on Agriculture
House of Representatives

Dear Mr. Chairman:

In response to your request and subsequent discussions with your office, this report discusses the Department of Agriculture's administration of the conservation compliance, sodbuster, and swampbuster provisions of Title XII of the Food Security Act of 1985.

As requested by your office, we obtained oral comments from the Department of Agriculture. Department officials generally agreed with a draft of the report. We plan to distribute this report today to the Secretary of Agriculture and other interested parties.

This report was prepared under the direction of John W. Harman, Director, Food and Agriculture Issues (202) 275-5138. Other major contributors to this report are listed in appendix II.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "J. Dexter Peach".

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

Every year billions of tons of soil erode from the nation's cropland while millions of other acres are converted into new cropland. To address this problem, the Food Security Act of 1985 requires farmers who participate in federal farm programs to reduce erosion on highly erodible cropland and, with certain exceptions, prohibits the conversion of wetlands to cropland.

The Chairman of the House Committee on Agriculture asked GAO to review the Department of Agriculture's (USDA) administration of the act's conservation provisions by focusing on, among other things, (1) the number of acres of land affected, (2) the implementation of conservation plans to reduce soil erosion, and (3) the implementation of the wetland provisions to reduce wetland conversions.

Background

Before the act, about 3.1 billion tons of soil eroded annually on over 420 million acres of cropland in the United States, and pasture, range, wetlands, and other lands were converted to cropland at a rate of 3.7 million acres a year. Soil erosion gradually reduces the productivity of land, increases sedimentation of water bodies, and damages surface and groundwater quality. When wetlands are drained, flood control and water quality can decrease, fish and wildlife habitat decline, and recreational opportunities can be lost.

The act requires farmers to conserve highly erodible land and wetlands by linking their conservation activities with eligibility for USDA farm program benefits. To be eligible, farmers must (1) develop plans to apply approved conservation systems by 1995 to reduce erosion on highly erodible lands they farmed between 1981 and 1985 and (2) not convert and farm certain wetlands. Farmers who plant on highly erodible land that was not previously farmed (the act's sodbuster provision) must apply a conservation system before planting. In general, farmers cannot plant on naturally occurring wetlands that were converted to cropland after the act (the act's swampbuster provision).

USDA is responsible for administering these provisions, enforcing compliance, providing technical assistance to producers, and assisting with funding to implement conservation measures.

Results in Brief

Using USDA's criterion, the act covers about 142 million acres of highly erodible farmland. Opportunities exist to increase this amount. First, USDA's highly erodible land criterion does not include certain lands with

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substantial erosion. Expanding the criterion would provide additional soil savings, but would also involve additional costs. Second, the act does not fully protect highly erodible land or wetlands from conversion because violations are not recognized until crops are actually planted on converted land.

Although USDA has successfully helped farmers develop conservation plans, it faces implementation obstacles. Because of budget constraints, USDA expects that it will not have sufficient technical and financial resources to help farmers implement their plans, which will adversely affect farmers' ability to achieve the soil savings anticipated by the plans. As of July 1990, USDA's Soil Conservation Service (SCS) had not calculated the national savings expected when producers implement their plans.

Since USDA concentrated on developing conservation plans to meet the deadline set by law, it has only identified about 7.5 million acres of wetlands of the estimated 82 million acres of wetlands on nonfederal land.¹ USDA plans to make wetland determinations on those lands on or near cropland of farm program participants, but has not made any estimate of the number of wetland acres it expects to identify for compliance with the act. Further, in permitting some wetlands to be drained, USDA has not consistently applied criteria established to make these decisions nor has it always consulted the Fish and Wildlife Service as required.

Principal Findings

Opportunities to Protect More Land

USDA conservation criteria, implementing the act for highly erodible land, do not protect all erodible lands and wetlands. USDA requires conservation plans for cropland that has a potential to erode eight or more times the erosion rate at which the land would remain productive—142 million acres using this erosion criterion. The Department's data show that millions of other cropland acres have an erosion potential just below this level. For example, about 75 million acres of land are eroding at 5 to 8 times the soil tolerance level. Any increased soil savings associated with changing USDA's criterion should be balanced against the additional implementation costs.

¹Identification of wetlands refers to the process whereby USDA determines if a land area exhibits the soil, water, and plant characteristics that define a wetland.

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In some instances, the law allows farmers to convert highly erodible land or wetlands to cropland without losing federal farm program benefits. Farmers who convert these lands can still receive farm program benefits in any year that they do not plant on them. In other years, those farmers can plant on the converted lands, provided they forego participating in federal farm programs. In either case, the lands are lost and farmers are not required to restore them to regain their right to farm program benefits.

Conservation Plans May Not Be Implemented and, Thus, Soil Savings May Be Less Than Anticipated

Our review of a limited sample of conservation plans in six counties in five states shows that soil erosion should be reduced on most of the fields in these counties.² However, USDA expects a shortage of staff and funding used to provide farmers with technical and financial assistance in applying conservation systems. SCS told us that field office staffing will be 37 percent below the level needed during fiscal years 1990 through 1994. Also, although SCS has no national estimate of the cost to install conservation systems, SCS personnel in Iowa, Kansas, and Missouri estimate that the shortage in funding assistance in their states during the next 5 years will be about \$409 million. As a result, farmers will not apply conservation systems on all of the 135 million acres planned, or they may apply less effective and less costly systems.

Implementation of Wetland Provisions Slow and Inconsistently Applied

Given limited staff resources, USDA deferred making wetland determinations because it gave priority to developing conservation plans which were required by 1990. To date, USDA has identified about 7.5 million acres of wetlands. USDA estimates that there are about 82 million acres of wetlands on nonfederal lands in the continental United States. Of these 82 million acres, USDA plans to make wetland determinations only on cropland and land adjacent to cropland on farms of USDA participants. While this is reasonable, USDA does not know how much of this acreage is susceptible to cropland conversion. Until wetland acres are identified, USDA cannot ensure that they are protected as required by the act. USDA expects to complete wetland determinations by December 31, 1991.

USDA has amended or modified the criteria for exempting wetland conversions several times since it issued interim rules in 1986. As a result, USDA did not consistently apply the criteria to determine which wetlands can be drained without violating the act. USDA also did not consult with

²These data on soil savings cannot be extrapolated to other counties in the United States.

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the Fish and Wildlife Service in a number of instances when allowing certain wetlands to be drained, as required by the act.

Matters for Congressional Consideration

If the Congress wishes to protect more erodible land, it may wish to consider requiring USDA to lower its criterion to a level that would protect more lands that erode at substantial rates but at less than the current USDA criterion. While such a change would reduce erosion, it would also increase USDA's costs for administering the act's provisions on more land. Among other things, the Congress may also wish to consider amending the act so that benefits are lost when highly erodible land or wetlands are converted for planting, and require the restoration of such converted wetlands or the mitigation of such damages before eligibility can be regained. (See chs. 2 and 3.)

Recommendations

GAO makes several recommendations to the Secretary of Agriculture to improve the administration and effectiveness of the conservation provisions of the act.

Agency Comments

USDA officials received a draft copy of this report, and GAO met with agency officials to obtain their oral comments. USDA offered a number of observations about GAO's findings and recommendations, including the following: (1) its selected erosion level covered lands with the greatest need for soil erosion treatment, (2) wetland determinations were necessary only on lands on or adjacent to cropland and, as such, not all of the wetlands would need to be identified, and (3) GAO's draft did not fully recognize USDA's ongoing efforts to review and correct previous commenced conversion decisions.

Regarding the first observation, GAO did not recommend that USDA change its criterion, but suggested that if the Congress wishes to protect more erodible land, considering the increased costs, lowering the criterion could be used to do so. (See ch. 2.) While USDA's second observation is reasonable, until it identifies wetlands, it will be difficult for it to enforce the swampbuster provisions of the act. (See ch. 4.) Finally, GAO modified the report to reflect USDA's efforts on commenced conversions. (See ch. 4.)

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 Abbreviations

ASCS	Agricultural Stabilization and Conservation Service
FCIC	Federal Crop Insurance Corporation
FmHA	Farmers Home Administration
GAO	General Accounting Office
SCS	Soil Conservation Service
USFWS	U.S. Fish and Wildlife Service
USDA	U.S. Department of Agriculture

Introduction

The Food Security Act of 1985 (P.L. 99-198, Dec. 23, 1985) contains conservation provisions intended to reduce soil erosion and protect wetlands by removing incentives for producing agricultural commodities on highly erodible land or converted wetlands. By removing these incentives, the Congress intended to: reduce soil loss due to wind and water erosion, assist in preserving the nation's wetlands, reduce sedimentation and improve water quality, curb the production of surplus commodities, and protect the nation's long-term capability to produce food and fiber.

Before the act became law, the U.S. Department of Agriculture (USDA) estimated that

- 3.1 billion tons of soil were eroding annually on much of the 420 million acres of cropland in the United States;
- 3.7 million acres of land were being converted from uses such as pasture, range, and wetlands to cropland annually; and
- about 153 million acres of noncropland (including 5.2 million acres of wetlands) had a medium to high potential for conversion to cropland.

The act included provisions on conservation compliance, "sodbuster," "swampbuster," and conservation reserve. The conservation compliance provisions protect highly erodible cropland¹ farmed during 1981 to 1985, while the sodbuster and swampbuster provisions, respectively, protect highly erodible land and wetlands² that may be converted to cropland after the act's passage.

This report covers the first three provisions which impose conservation requirements on producers who participate in USDA farm programs. We reported on the act's fourth provision, the conservation reserve program, in November 1989.³

¹USDA classifies highly erodible land as land consisting of fields in which a minimum of one-third or 50 acres of the field contain soil with a potential to erode at least 8 times the soil loss tolerance level. The soil loss tolerance level is defined as the rate at which the soil can erode and maintain continued productivity.

²USDA classifies wetlands as areas with a predominance of soils that are inundated or saturated by water to the point where the soil can support water-loving plants.

³Farm Programs: Conservation Reserve Program Could Be Less Costly and More Effective (GAO/RCED-90-13, Nov. 15, 1989).

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Why Soil Erosion and Loss of Wetlands Are a Problem

Erosion is a natural process whereby water and wind move soil. Erosion decreases soil productivity by removing nutrients and organic matter and by thinning and modifying the soil zone where plants grow. Erosion on land covered by vegetation is probably no more than 1 inch every 100 years, and much of this loss is offset by the formation of new soil. However, wind and water erosion on bare cropland can gradually reduce productivity. Erosion also contributes to sedimentation of streams and other water bodies and damage to surface and groundwater quality.

A variety of benefits are lost when wetlands are drained. Wetlands are essential habitat for a variety of fish and wildlife species. Some wetlands play an important role in the life cycle of many fish species. Waterfowl depend on wetlands for breeding areas, and fur-bearing and other game species depend on wetlands for food, cover, or water. Wetlands store flood waters, may retard flood peaks, and can improve water quality by trapping sediment and removing nutrients, pesticides, and other toxic substances. Wetlands are also popular recreation sites.

How the Conservation Provisions Work

The act's conservation provisions restrict the use of highly erodible land and wetlands through the sodbuster and swampbuster provisions, respectively. To remain eligible for USDA benefits, producers must apply an approved conservation system to highly erodible land that they farm, and they must not convert and plant an agricultural commodity on certain wetlands. Violations are subject to loss of USDA benefits.

Conservation Compliance and Sodbuster Provisions

The conservation compliance and sodbuster provisions of the act prohibit the cropping of highly erodible land without applying an approved conservation system. The distinction between the two provisions is that the conservation compliance provisions apply to cropland that was being farmed at the time the act was passed⁴ and the sodbuster provisions apply to land that was converted to cropland after the act was passed.⁵

Farmers of highly erodible land must develop and implement a plan that uses approved conservation systems to reduce erosion to an acceptable

⁴The conservation compliance provision applies to highly erodible cropland that was used for planting an agricultural commodity (a crop planted and produced by annual tilling of the soil, or sugarcane) or set aside at least 1 year between 1981 and 1985.

⁵The sodbuster provision applies to highly erodible land that was not used for planting an agricultural commodity or set aside between 1981 and 1985.

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level. The USDA's Soil Conservation Service (SCS) must certify that the plan is technically correct, and the local conservation district must approve the plan.

Producers who plant an agricultural commodity on existing cropland must have filed an approved soil conservation plan with the local SCS and have begun actively applying the plan by January 1, 1990. They must fully apply the plan by January 1, 1995.⁶

Producers who plant an agricultural commodity on land converted to cropland after the act's passage (i.e., sodbuster) must file an approved conservation plan with the local SCS and fully apply the plan before planting.

Swampbuster

The swampbuster provision applies to naturally occurring wetlands. Producers cannot plant an agricultural commodity on naturally occurring wetlands that were converted to cropland after December 23, 1985. However, certain wetlands are exempt from the swampbuster provision, such as: wetlands on which conversion was commenced before December 23, 1985, but not yet completed,⁷ and wetlands on which the production of an agricultural commodity is possible as a result of natural conditions, such as drought.

Penalties and Administration

Violators of the act's conservation provisions lose their eligibility to participate in USDA farm programs. Eligibility is lost during the crop year of the violation. The programs include: price supports or payments, farm program loans, crop insurance, disaster payments, and payments for storage of agricultural commodities.

Within USDA, SCS and the Agricultural Stabilization and Conservation Service (ASCS) administer and enforce the act's conservation provisions. USDA's Farmers Home Administration (FmHA) and Federal Crop Insurance Corporation (FCIC) are to coordinate with ASCS to ensure that producers participating in their programs are in compliance with the act's conservation provisions. The act also requires SCS and ASCS to consult

⁶Producers who did not prepare a conservation plan by January 1, 1990, must develop and apply an approved plan when growing their first crop. Producers who did not participate in USDA programs between 1986 and 1989 have until January 1, 1995, to apply their plans.

⁷Producers who started to convert wetlands prior to the act are granted exemptions to the swampbuster provision if they meet certain criteria. These exemptions are called "commenced conversions."

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with the Department of the Interior's U.S. Fish and Wildlife Service (USFWS) on certain questions involving wetlands.

Objectives, Scope, and Methodology

The Chairman of the House Committee on Agriculture asked us to review USDA's implementation of the Food Security Act's conservation provisions. The Committee was interested in learning how the programs have been working to determine if changes to the act were needed. As agreed with the Chairman's office, our objectives were to address the following questions:

- What is the status of USDA's implementation of the conservation programs, and how many acres have been affected? (See chs. 2, 3, and 4.)
- As a result of these activities, what soil and wetland savings have resulted? (See chs. 3 and 4.)
- How has USDA enforced the conservation provisions, and how many producers have lost benefits? (See ch. 5.)
- What changes in the conservation provisions of the Food Security Act or in their implementation should be made? (See chs. 2, 3, 4, and 5.)

The scope of our work and methodology used to meet the objectives consisted of reviewing pertinent implementation and enforcement information and interviewing knowledgeable officials at the national, state, and county levels. This included ASCS and SCS headquarters; state offices in Iowa, Kansas, Minnesota, Missouri, and North Dakota; and six county offices in these states. We also obtained information and reports from FmHA, FCIC, the Economic Research Service, USFWS, and environmental and farm organizations.

We considered the amounts of highly erodible land and wetlands identified by SCS, the number of sodbuster and swampbuster violations reported by ASCS, and the time and resources available for our review in selecting Iowa, Kansas, Minnesota, and Missouri, and the four counties visited in those states. The number of commenced conversion requests and the resulting decisions were considered in selecting North Dakota and the two counties visited in that state. (The five states we visited contained a total of 38.9 million acres of highly erodible land, or 27.5 percent of the total highly erodible land in the United States as identified by USDA.)

To determine USDA's status of implementing the conservation programs, the acres affected, and the soil and wetland savings, we reviewed USDA's procedures, status reports, and national resources inventories, and we

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interviewed USDA representatives at the offices identified above. We also sampled ASCS and SCS county office implementation records to determine whether producers' annual certifications of compliance were received from USDA program participants, whether highly erodible land and wetland determinations had been made, whether producers had developed conservation plans and determined their effect on soil erosion and farming practices, and the circumstances of commenced conversion requests and decisions and whether USFWS had been consulted.

To determine how USDA enforced the conservation provisions and how many producers lost benefits, we reviewed ASCS enforcement reports and reporting procedures, and ASCS' and SCS' compliance-monitoring procedures. We interviewed representatives at the offices identified above, and we sampled ASCS and SCS county office records to determine the reasons why violations occurred and were appealed and overturned. Samples were also selected to look for unreported violations and to determine whether USFWS had been consulted on wetland decisions.

To identify and recommend changes needed in the conservation provisions and in their implementation, we reviewed the conservation provisions of the act, the implementing regulations, USDA's procedures, and various implementation and enforcement records and reports; interviewed USDA representatives at the offices identified above; obtained opinions from representatives of environmental and farm organizations; and analyzed the results of the samples discussed above.

We made our review in accordance with generally accepted government auditing standards from July 1989 through February 1990. As agreed with the Chairman's office, we obtained oral comments on a draft of this report from the Department of Agriculture.

The Act Does Not Protect All Highly Erodible Land and Wetlands

The act's conservation compliance, sodbuster, and swampbuster provisions do not protect all of the nation's erodible land and wetlands. The act protects only those lands that are farmed by USDA program participants. The amount of land actually protected is further limited by USDA's criteria for requiring conservation systems on erodible cropland. USDA requires that land have a high erosion potential to qualify for conservation compliance or sodbuster protection. This erosion potential is the only criterion used by the Department to determine land that will be protected. This contrasts with the conservation reserve program, where USDA considers other factors besides erosion potential, such as whether trees are planted or if there is serious gully erosion, to qualify land for enrollment and rental payments. The act withdraws farm benefits on highly erodible land and wetlands converted for planting purposes.

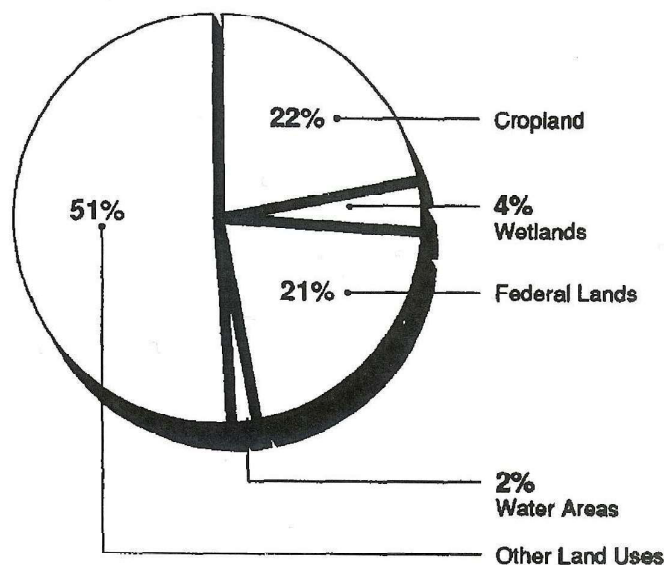
Land Protected by the Act

The 1.94 billion acres of the United States includes about 423 million acres of cropland and 82 million acres of wetlands that are not federally owned.¹ Figure 2.1 shows the amount of the nation's cropland and wetlands relative to other land uses.

¹Both federally owned and nonfederally owned (private) lands are covered by the act. However, most of the nation's farming activities occur on private lands.

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Figure 2.1: Amount of Cropland and Wetlands in the United States (Total Surface of the United States Is 1.94 Billion Acres)



Note: Data exclude Alaska.

Source: 1987 National Resource Inventory, USDA.

Only these lands that USDA classifies as highly erodible or wetlands and that are farmed or planned to be farmed by USDA participants are covered by the act. Producers who do not participate in USDA farm programs are not required to comply with the act's conservation provisions.²

Other Fragile Lands Remain Unprotected

The act allows USDA to establish criteria for classifying land as highly erodible in carrying out the conservation compliance provisions. USDA's criterion requires land to have the potential to erode at least eight times the soil loss tolerance level to be classified as highly erodible for the conservation compliance and sodbuster provisions. This criterion protects the most erodible land. In contrast, USDA used a broader eligibility criterion for removing land from production and enrolling it in the conservation reserve program for USDA rental payments. This criterion included the land's potential and actual erosion, current and future use, and potential to flood.

²According to the National Research Council's report, *Alternative Agriculture*, 1989, about 70 percent of the nation's cropland was enrolled in federal commodity programs at the time of its report.

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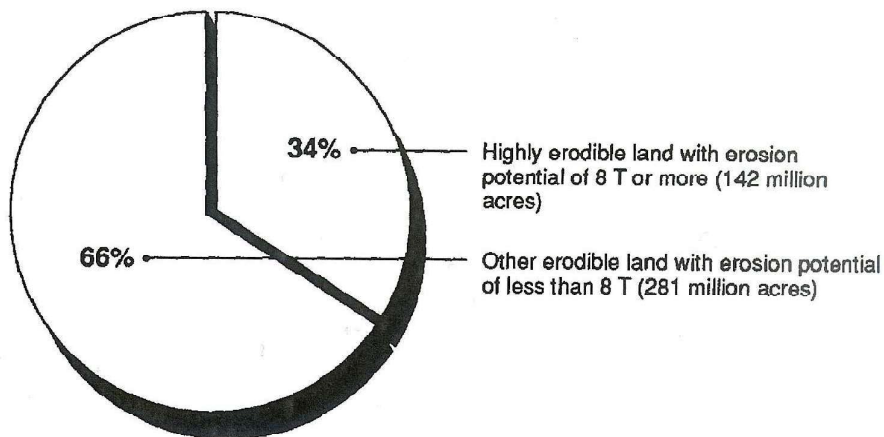
As implemented by SCS, the conservation compliance provisions focused primarily on reducing soil erosion on some of the nation's most erodible cropland. On the other hand, the conservation reserve program, while similarly designed to reduce soil erosion on cropland, was also envisioned as a program to improve water quality and fish and wildlife habitat, and as a means to curb the production of surplus commodities, among other things. As such, the conservation reserve program uses a number of criteria for determining soil erodibility. For example, under this program, land can be enrolled if it has an actual erosion as low as twice the soil loss tolerance level—2T—if trees are planted or if there is serious gully erosion.³ Further, in this example, if a field were to have trees planted, only one-third of the field would have to be eroding at 2T instead of two-thirds of the field as is normally the requirement under the program.

USDA identified 142 million acres of highly erodible cropland using its erosion potential criterion of 8 times the soil tolerance level. As shown in figure 2.2, this USDA criterion does not cover about two-thirds of the nation's cropland. On the basis of USDA data, millions of other acres of land are eroding at substantial rates within the 281 million acres of cropland not covered by USDA's criterion. For example, about 75 million acres of land are eroding at five to eight times the soil tolerance level. Reducing the erosion criterion to a level below eight times the soil tolerance level would result in increased soil savings through reduced erosion, but would also increase program costs. As such, USDA would have to use its limited resources to develop additional conservation plans on these cropland acres as well as provide technical and financial assistance in some cases in order to implement the plans. Therefore, including additional lands in USDA's coverage of highly erodible acres would have to be considered in light of the cost of this additional coverage and competing Department objectives. Nonetheless, as existing conservation plans are implemented to meet the 1995 requirement set by the act, conservation planning for other highly erodible lands could be phased-in as departmental resources allow, thereby increasing the environmental benefits associated with reduced soil erosion.

³The soil loss tolerance level, or T as it is commonly referred to, is the rate at which soil can erode and maintain continued productivity. 2T refers to twice this erosion level. The T level varies depending on the geographic area, soil type, and water and wind conditions, among other things.

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Figure 2.2: Erosion Potential of the Nation's 423 Million Cropland Acres



Source: GAO estimate based on 1987 National Resource Inventory, USDA, and Jan. 1990 Food Security Act Progress, USDA

In addition to the criterion used by USDA, in some instances, the act allows producers to convert highly erodible land and wetlands without the loss of farm program benefits—further limiting the protection of fragile lands. For example, with regard to sodbusting, a loss of benefits does not occur unless a producer converts highly erodible land and plants an agricultural commodity on the land without applying an approved conservation system. Similarly, concerning swampbusting, a loss of benefits does not occur unless a producer converts wetlands and plants an agricultural commodity on the land. In both cases, benefits are not lost if the producer does not plant an agricultural commodity during the crop years that he/she chooses to participate in a USDA farm program. Yet, in the case of converted wetlands, the environmental value of the wetlands is lost. The act does not require farmers to restore converted wetlands to remain eligible for federal farm program benefits. Because of the extensive nature of the task, we did not attempt to identify instances where farmers actually drain wetlands and still obtain federal farm benefits. Nonetheless, it appears that the Congress is considering, as part of its changes to the Food Security Act, remedying this situation.⁴

⁴The House passed a bill in August 1990 which will withhold benefits from program participants who convert wetlands for the purpose of producing an agricultural commodity.

Conclusions

Producers who do not participate in USDA's farm programs are exempt from the act's conservation provisions. For farmers participating in farm programs, USDA is applying the conservation compliance and sodbuster provisions to the most erodible land. There are opportunities for USDA to cover more erodible cropland by expanding its criterion to include, among other factors, lower erosion potential and actual erosion. However, the additional soil savings would have to be considered in light of the added cost to protect these lands and other departmental objectives. In addition, the sodbuster and swampbuster provisions of the act do not come into effect when highly erodible land and wetlands are converted. The act could protect more erodible lands and wetlands if farm program benefits are withheld when these lands are converted for planting and benefits are reestablished if wetlands are repaired or restored.

Matters for Congressional Consideration

If the Congress wishes to increase the amount of erodible land and wetlands protected and the amount of soil erosion and wetlands saved by the act's conservation provisions, it could consider revising the provisions to

- require the Secretary of Agriculture to use a lower erosion potential or other factors to define land covered by the conservation compliance and sodbuster provisions and
- withhold benefits when highly erodible lands or wetlands are converted for planting, and require the restoration of such converted wetlands or mitigation of damages to converted wetlands before farm program eligibility can be regained.

Agency Comments and Our Evaluation

USDA took issue with our matter for congressional consideration that discussed the possibility of lowering the erosion level used to define highly erodible lands. The Department told us that an erosion level of 8T was selected because it included those lands estimated to have the greatest need for soil erosion treatment. USDA also said that resource constraints would have significantly affected its ability to cover more land had the erosion level been set at a lower level. Further, the Department believes that few additional farms would be involved if USDA subjected more land to the act and thus, only a small additional soil loss reduction would occur.

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In response to this comment, and realizing that USDA may have short-run resource constraints, we did not recommend that the Department change its criterion. Rather, we directed our observation about the amount of land covered by USDA's criterion to the Congress. If the Congress wishes to protect more erodible land, considering the increased costs, lowering the USDA criterion could be used to do so. For example, about 75 million acres of land are eroding at 5 to 8 times the soil tolerance level, and controlling erosion on these lands could produce significant soil savings.

Planned Conservation Systems Will Reduce Erosion, but All May Not Be Implemented by the Deadline

As of January 1990, SCS had identified virtually all of the nation's highly erodible cropland and most producers had prepared plans to reduce erosion on this land. To ease the financial burden on producers in planning conservation measures, SCS relaxed its initial requirement that all producers generally reduce erosion to the T level. Thus far, SCS has not calculated the total soil savings expected for the nation when producers fully implement their conservation plans. Our review of a limited sample of conservation plans in six counties in five states indicates that, when implemented, soil erosion will be reduced on most of the fields in these counties. However, despite the relaxed soil loss erosion requirement, many of the systems planned may not be implemented by the deadline of January 1, 1995. According to SCS, this is because it will not have the staff or cost-share funding needed to assist producers in implementing the plans.

Producers Have Prepared Conservation Plans for Most Highly Erodible Cropland

SCS estimates that it has identified virtually all of the nation's highly erodible cropland and that participants have planned conservation systems to reduce soil erosion on most of this land. In January 1990, SCS reported that, including land in the conservation reserve program

- it had identified 142 million acres, or an estimated 99 percent, of the nation's highly erodible cropland;
- producers had prepared conservation plans for about 135 million acres, or about 95 percent, of the highly erodible cropland; and
- producers had applied conservation systems to 36 million acres of this highly erodible land.

Although USDA initially required that all producers generally reduce erosion to the T level, it later relaxed the requirement to ease the financial burden on producers for installing conservation systems. USDA's interim rules that applied through June 1987 required producers to adopt conservation plans that would generally reduce soil erosion to the T level. Subsequent interim rules and the September 1987 final regulation allowed producers to meet a lesser or alternative erosion reduction requirement in those areas where reducing erosion to the T level could impose an economic hardship.¹ Later, in May 1988, USDA announced that

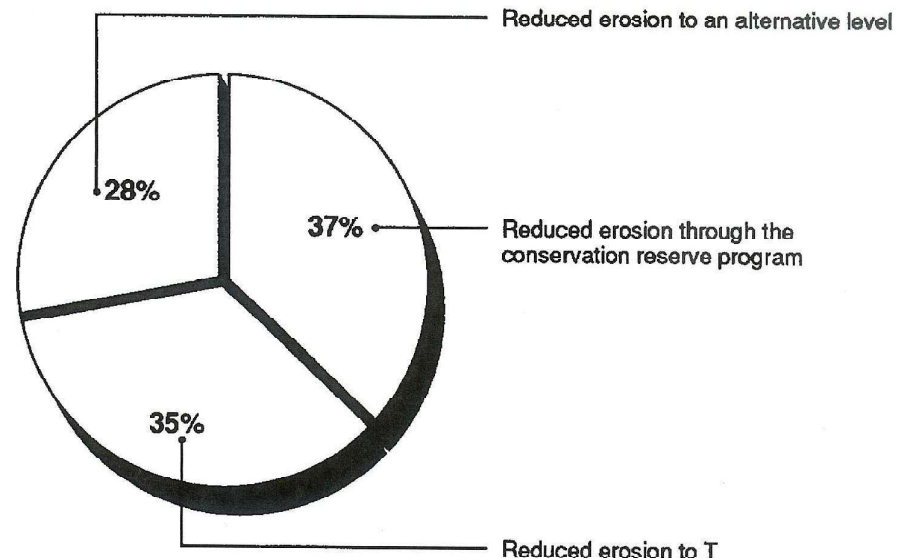
¹The alternative level that farmers must meet varies by geographical area.

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all producers could elect to meet the alternative requirement without showing economic hardship.²

While not required, some producers plan to reduce soil erosion to the T level. We reviewed a sample of conservation plans for 58 farms from a universe of 4,575 farms (covering 548,189 acres) in 6 counties in Iowa, Kansas, Minnesota, Missouri, and North Dakota.³ As shown in figure 3.1, our sample indicates that, in these 6 counties as a whole, producers plan to meet the conservation requirements by enrolling about 37 percent of their acres in the conservation reserve, reducing erosion to the T level on about 35 percent of the acres, and reducing erosion to the alternative level on the remaining 28 percent of the acres.

Figure 3.1: Estimated Frequency of Conservation Applications Planned in Counties We Visited (Percentage of Acres)



Note: Sampling errors for these data are as follows: conservation reserve program, 21.9; conservation systems to reduce erosion to T, 15.7; conservation systems to meet an alternative level, 17.7.

Sampling errors indicate the range within which the actual value would likely fall at the 95-percent confidence level (i.e., 95 times out of 100).

Source: GAO analysis of conservation plans.

²An exception is highly erodible fields converted from native rangelands or woodland vegetation. Both must meet the T level.

³These data on soil erosion cannot be extrapolated to other counties in the United States. See appendix I for details about our sample.

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Soil Savings Will Occur as Conservation Plans Are Implemented

As conservation plans are implemented between 1990 and 1995, soil erosions on these farms will be decreased in most cases. However, SCS has no national estimate of the amount of soil that will be saved when the conservation systems planned for 135 million acres of highly erodible land are implemented. Our sample of conservation plans for farms in six counties in five states shows that, in most instances, soil savings will be realized when the conservation systems planned are fully implemented. The two exceptions are sodbusted land on which a net soil loss occurs, and land where no changes in farming practices were required to meet the T level or alternative T level.

Estimated Soil Savings

While SCS has soil savings data on individual farms at its county offices, an SCS representative said that there are significant differences between SCS county offices' capability to aggregate this information and arrive at a national savings estimate. Some SCS county offices have the information readily available on computers, while others have only handwritten estimates. Although SCS is upgrading and modernizing its computer system in order to report progress, it does not know when national estimates of the soil savings resulting from implementing conservation plans will be available. Without a national estimate of soil savings, SCS will not be able to determine how well conservation systems are working to reduce overall erosion on cropland in the United States.

Most of the conservation plans we reviewed will reduce soil erosion when implemented. In our sample of conservation plans for 58 farms in 6 counties, we estimate that, when implemented, between about 59 and 100 percent of the plans will result in some soil savings. The soil savings ranged from 1 ton per acre per year to 109 tons per acre per year. Table 3.1 shows examples of savings for fields (with identical soil losses prior to conservation planning) under each of the three conservation alternatives. As shown, erosion is reduced in all three conservation alternatives. However, land taken out of productive use in the conservation reserve program reduced erosion most.