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Testimony

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General Accounting Office's View on the
Conservation Provisions of the 1990 Farm Bill

Statement for the record of John W. Harman
Director, Food and Agriculture Issues
Resources, Community, and Economic
Development Division

Before the
Subcommittee on Department Operations,
Research, and Foreign Agriculture,
Committee on Agriculture
House of Representatives



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Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to present for the record GAO's views on soil and water programs related to the Food Security Act of 1985, and on potential changes the Congress may want to consider for the 1990 farm bill. This statement is based primarily on information contained in three GAO reports¹ and on-going work for Chairman E. (Kika) de la Garza, House Agriculture Committee, on conservation compliance and for Chairman Mike Synar, Environment, Energy, and Natural Resources subcommittee, Committee on Government Operations, on the U.S. Department of Agriculture's (USDA) water quality efforts. The on-going work, discussed with the permission of the requesters, is preliminary and subject to change.

Conserving and protecting soil and water resources is important not only to the agricultural community but to the nation as a whole. The Food Security Act of 1985 (P.L. 99-198), contained several new conservation provisions in Title XII, including the conservation reserve program (CRP), conservation compliance, and provisions that prevented the conversion of fragile lands to cropland. In addition to these programs, USDA began a Water Quality Initiative in 1990 to protect water resources from the harmful effects of agricultural chemicals and fertilizers, and has an on-going effort on low-input, sustainable agriculture (LISA) methods that use fewer chemicals and fertilizers.

¹Farm Programs: Conservation Reserve Program Could Be Less Costly and More Effective (GAO/RCED-90-13, Nov. 1989); U.S. Department of Agriculture: Interim Report on Ways to Enhance Management (GAO/RCED-90-19, Oct. 26, 1989); and Agriculture Issues (GAO/OCG-89-12TR, Nov. 1988).

Over the past several years, GAO has undertaken work in each of these areas. In summary, our work shows that the agricultural community has made gains in conserving and protecting the nation's soil and water resources. However, opportunities to achieve even greater benefits from these programs have been missed. The new farm bill provides the opportunity to achieve even greater benefits in the future by expanding the coverage of these programs and through increased integration and coordination of the programs.

IMPROVEMENTS IN SOIL CONSERVATION
HAVE OCCURRED, BUT MORE
CAN BE ACHIEVED

Two programs established by the Food Security Act that influenced the nation's soil conservation efforts were the CRP and conservation planning for farms not participating in the CRP. These programs, directed at highly erodible cropland, helped reduce the environmental impacts of agricultural production. However, the CRP was less effective than it could have been because of how USDA implemented the program. Further, because the act applies to only the most highly erodible land (about one-third of the 423 million acres of cropland) in the United States, there is an opportunity to achieve even greater benefits in the future.

As we stated in our previously issued report on the CRP, the program has had a positive impact on soil conservation. Under this program, the Secretary of Agriculture can enter into contracts with producers to remove highly erodible cropland from production for 10 to 15 years in return for annual rental payments. As of January 1990, about 34 million of the authorized 45 million acres have been enrolled. USDA estimates that soil erosion on these acres will be reduced by about 650 million tons per year.

While reducing soil erosion was a major objective of CRP, USDA chose not to target cropland eroding at the highest rates--land

eroding at 10 or more times the rate at which new soil is replaced. USDA could have targeted the enrollment of the most highly erodible land by evaluating bids on the basis of their contribution to reducing soil erosion or on the basis of the cost per ton of soil saved. By including soil erosion criteria in its bid acceptance system, USDA would have increased enrollment of cropland eroding at the highest rates and increased program effectiveness.

Further, USDA relaxed the implementing regulations for the conservation compliance provisions of the act that were designed, in part, to encourage enrollment of the most highly erodible cropland in the CRP. By relaxing the conservation compliance rules, USDA eliminated the incentive for farmers to enroll their most highly eroding land in the CRP. Instead, under alternative conservation plans, producers can continue farming their most highly erodible acres, although they must still reduce, to some extent, erosion on these acres. As a result, about 70 percent of the most highly erodible land eligible for the program, as measured by actual erosion, had not been enrolled through 1988. To some degree, however, USDA's ability to target and enroll the most highly erodible land is limited by the provision of the act that restricts enrollment to 25 percent of cropland in any one county. As a result, enrollment has been closed in about 60 counties.

Producers with highly erodible land that is not enrolled in CRP must develop conservation plans to continue receiving federal farm program benefits on such lands. Our on-going work for Chairman de la Garza shows that over 1.3 million conservation plans have been prepared, as of January 1990. About 27 percent of these conservation plans have already been implemented. The remainder must be implemented by 1995.

Changes in farming practices called for in these plans could significantly reduce soil erosion if actually implemented. However, actual soil savings may be less than anticipated. For

example, some plans require the installation of terraces that may not be affordable given the level of funding available for cost-sharing and technical assistance. As a result, some of the plans may not be implemented as initially anticipated and thus are subject to enforcement actions or renegotiation.

Since conservation planning addresses only about one-third (142 million acres) of the 423 million acres of U. S. cropland, there are millions of acres that may be experiencing moderate to severe erosion, but that are not required to have conservation plans. For example, land eroding at 50 tons per acre per year would be classified as highly erodible under USDA's definition, but if that land were eroding at 30 tons per acre per year it would not be considered highly erodible and therefore not subject to the act. While attacking erosion on the most highly erodible land was a reasonable first step given USDA funding and staffing constraints, it may now be time to consider addressing lower but still high levels of erosion on the remaining cropland. There is considerable potential for environmental benefits on these lands and incorporating them into agricultural resource policy is important. Therefore, gradually expanding conservation planning to include all eroding cropland may be advisable.

WATER RESOURCES NEED
MORE ATTENTION

The agriculture sector is a major contributor to the degradation of water quality from non-point pollution sources through its use of pesticides and fertilizers. Efforts to minimize agriculture's impact on water quality will surely alter future production practices. Although USDA has taken some steps to protect water resources, our issued reports and on-going work highlight opportunities to improve the protection of our water resources.

In our CRP report, we pointed out that while the opportunities existed to address surface and groundwater degradation, USDA implemented the program primarily as an erosion control program. Reducing soil erosion on CRP acres has, to a limited extent, reduced sedimentation of reservoirs and streams and the amount of chemicals and fertilizers washed into such water bodies. However, USDA did not take any specific action to address water quality concerns until the sixth CRP sign-up period in 1988, after 22 million acres were already enrolled. At that time USDA expanded the CRP eligibility criteria to include "filter strips"² for cropland that pose a substantial threat to the degradation of water quality. Because of this late start, only about 49,000 filter strip acres were enrolled through January 1990.

Further, when establishing maximum acceptable rental rates, USDA tended to favor areas suffering predominately from wind-caused erosion over areas suffering predominately from water-caused erosion problems, thereby missing another opportunity to address water quality concerns. As a result, more land suffering from wind-caused erosion tended to be enrolled in the CRP compared with land suffering from water-caused erosion, which is generally considered to cause greater environmental damage. After the sixth CRP sign-up, USDA did raise maximum rental rates by \$5 to \$25 per acre in about 600 counties where water quality problems are a concern.

Issues that warrant consideration in the 1990 farm bill are allowing continued enrollment in the CRP, up to a maximum of 45 million acres, and modifying the 25-percent county cap in areas suffering from water quality problems. USDA has made similar proposals in its report on the 1990 farm bill.

²Filter strips are 66-to 99-foot wide strips of grass, shrubs, or trees planted along streams and bodies of water to reduce the amount of sediment and chemicals entering surface waters.

As a result of our interim report on management issues to the Secretary of Agriculture, we found that the implementation of the Department's strategy to address water quality reflected individual agency programs and that more coordination between agencies was needed. We also found that greater involvement by the Secretary was needed on this issue.

Our on-going work for Chairman Mike Synar supports this view. Even though USDA has been operating programs related to water pollution for more than 35 years, it only recently developed official policies encouraging producers to consider the effects their farming practices could have on water quality. In 1986 the Department issued a policy on non-point source contamination. The following year USDA developed a policy on groundwater protection. However, these policies do not cover all aspects of water quality and overlap. For example, the policies do not prohibit point-source pollution of surface waters by agricultural operators. Further, the existence of two overlapping policies is potentially confusing and may increase the risk that water resources may be contaminated. For example, when ridge tilling practices are used to reduce the runoff of agricultural chemicals, in compliance with the non-point source pollution policy, the water is more likely to percolate through the soil to groundwater, possibly taking chemical contaminants with it.

In addition, although USDA has developed numerous coordinating mechanisms, such as the Secretary's Policy Coordination Council and the Working Group on Water Quality, to oversee its water quality efforts, it has not established a permanent, full-time, Department-wide mechanism to oversee the planning, implementation, and evaluation of all of the Department's water quality programs and activities. Currently, responsibility is divided between the Working Group on Water Quality and numerous Assistant Secretaries with water quality-related programs. The working group does not appear to have authority to monitor overall water quality progress

and to change the directions of programs, if necessary. In addition, it is unclear if this working group is responsible for both internal as well as external coordination.

Further, USDA has not coordinated its Water Quality Initiative, begun in 1990, with its LISA program. The Water Quality Initiative is designed to determine with more precision the nature of the relationship between agricultural activities and groundwater quality, and to develop and induce the adoption of economically effective agricultural and chemical management practices that protect water quality. The LISA program offers research and education grants to develop and encourage the use of farming practices that substitute management skills for the use of some purchased inputs, such as agricultural chemicals. Although both programs focus on the effects of agricultural chemical use and are designed to combine the efforts of various USDA agencies and outside groups, the LISA program was not included in plans for the water quality initiative. As a result, farmers may be adopting conservation systems that compound problems such as groundwater contamination when a LISA system might be more appropriate.

We believe, on the basis of past and on-going work, that USDA needs to develop a comprehensive policy on water quality that takes into consideration other program activities and to designate a focal point within the Department with responsibility for all aspects of the water quality issue.

Another area related to water resource management that needs more attention is the "swampbuster" provision of the act, which attempted to protect the nation's wetlands by denying federal farm program benefits to producers who plant an agricultural commodity on wetlands converted to cropland after December 23, 1985. However, according to our on-going work, producers do not risk losing program benefits until they actually plant on the land they drained or modified. Thus, under the act farmers can drain wetlands

and receive benefits as long as they don't plant a crop. Further in other years, when crop prices are high, producers can choose not to participate in federal farm programs and can then plant on the drained wetland without penalty.

An issue for consideration in the 1990 farm bill is to close loopholes that currently allow conversion of fragile lands without penalty until an agricultural commodity is planted. Further, a requirement that converted wetlands be restored or the damage mitigated, if possible, in order for participants to regain their eligibility for farm program payments may be needed to stop conversion of such lands.

In addition, consideration might need to be given to incorporating water quality concerns into conservation planning. The dynamics between soil and water are closely linked in some cases, and thus their stewardship should be considered together.

GAO OBSERVATION REGARDING THE NEED
FOR A FLEXIBLE BASE ACREAGE SYSTEM

Government farm policy has varying objectives and goals which can sometimes conflict. On the one hand, government policy has encouraged farmers to strive for high yields on program crops to maximize their farm program benefits, which means intensive use of agricultural chemicals in most cases. These chemicals have been associated with increasing environmental problems, such as long-term damage to soil and water quality. On the other hand, USDA encourages farmers to be good stewards of their land and water and, in some cases, requires them to comply with soil and water conservation provisions of the Food Security Act.

During the 1970s, for example, and again in recent years, market prices for soybeans have been high relative to corn. Yet, soybean plantings are down because high government price support

payments encourage production of other program crops--most notably corn. With high target prices for corn, compared to market prices, farmers have an economic incentive to preserve base acreage by continuing to plant corn every year.

Farmers growing program crops depend to a great extent on agricultural fertilizers and pesticides as insurance for high yields and the related price supports. As such, fertilizer use--particularly nitrogen--has increased steadily over the past 30 years or so. As farmers have shifted to growing varieties of corn that are responsive to nitrogen, continuously or in short rotations with soybeans, the demand for nitrogen has increased from about 58 pounds per acre in 1964 to 137 pounds per acre by 1981, and it has since remained relatively steady. Similarly, total pesticide use has increased from about 225 million pounds in 1964 to about 560 million pounds in 1982, while total acres cultivated remained relatively constant.

Flexibility to switch among crops is mostly limited to cropland that is not allocated to base acres. In effect, this locks in production patterns that favor program crops, such as feed grains and cotton, at the expense of non-program crops. In addition, the need to preserve base acres and yields and thus ensure high program payments may discourage farmers from switching to alternative production systems, such as those developed under LISA, because it may result in a loss of base acres or a significant reduction in yield. As a result, legislative changes to encourage the use of alternative methods that reduce environmental damage may be necessary. In our transition report on agriculture issues, we supported the idea of allowing a flexible acreage base as a way to respond to changing market conditions. Our on-going work on water quality also identifies the current base acres system as a disincentive to alternative agriculture systems. As such, we believe that allowing for a flexible base so that farmers are given the opportunity to move toward farming practices

that will better protect soil and water resources, as well as allowing them to respond to changing market conditions, is an issue for consideration in the 1990 farm bill. In addition, protecting existing farm benefits for some period--perhaps 3 to 5 years until alternative production systems have been incorporated into farm operations may be warranted. USDA has made similar proposals in its report on the 1990 farm bill.