

## CLEAN WATER IN AGRICULTURE

DWIGHT M. TREADWAY

It is a pleasure to be on your program today. First, let me describe the organization I work for--the Soil Conservation Service. The SCS is part of the U.S. Department of Agriculture. We are a technical agency made up of such disciplines as biologists, engineers, soil scientists, soil conservationists, economists, foresters, and agronomists. Our assistance is provided through local soil and water conservation districts and includes (1) providing technical assistance to help landowners plan and carry out conservation practices on their land, (2) preparing soil surveys and making interpretations, (3) helping units of government solve flood problems, provide municipal and industrial water supply, and provide water-oriented recreational activities, and (4) helping units of government and individuals make sound land use decisions.

Next, I will talk about soil conservation, and this is really the heart of my presentation. I don't plan for us to look back into the dust bowl thirties nor to dwell on the severe erosion that was occurring in the thirties and before. We know about those days, but we must not forget those hard lessons that those before us learned.

My objective today is to build a discussion on old lessons--the need for sound conservation in a time when we must produce not only to make a living, but also to truly feed the world. From this comes two things--first, food production and second, the resultant environmental quality standards for a better life of which clean water is one.

The main work of the Soil Conservation Service and soil conservation districts for the past 40 years has been to deal with soil erosion to protect the land's ability to produce food and fiber. We and conservation districts are justly proud of what we have helped Georgia's landowners do in conservation. We call our basic program of conservation operations "CO." In this program we provide help to landowners to carry out conservation practices on their land. Our soil survey program, the watershed program, and the resource conservation and development program have all been successful. We can point to many success stories.

In spite of this, today three-fourths of the cropland in Georgia does not have adequate conservation treatment and a large portion of urban and other land uses do not have adequate conservation treatment.

Although these figures are for Georgia, the same story also applies to our neighboring states, and throughout all of the South. Erosion is still in the range of ten to fifteen tons per acre per year from untreated cropland. This is two or three times the minimum necessary to maintain sustained production.

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Technical assistance to land users through soil conservation districts has done much toward the job of controlling erosion. Last year, the Soil Conservation Service delivered over 90,000 services to landowners in Georgia. The other states around us did the same.

In the last five or six years, the American farmer began to compete in the export market more than ever before. This may prove to be a great thing for agriculture. Exports are not only valuable to the farmer, but they are also equally valuable to the entire economy. Exports create jobs and they also buy things such as oil from the world market that our dollars cannot buy. Therefore, for the past few years agriculture was in a no-program, farm-program situation. The green light was on--plant all you wanted. The new USDA grain reserve program changes this somewhat so there will likely be a dampening effect on total production.

This increase in production and in cropland use came about as a result of decisions made at the national level.

On the other hand, in 1972 Congress said that by 1983 all of the streams and waters in the nation would be fishable and swimmable. The question becomes then, "How do we do both?" How do we increase food supply and at the same time improve water quality?

Nearly half of the 1,000,000 acres of new land that went into crop production in Georgia during the past four or five years has been subject to excessive soil erosion.

In Georgia, we now have 7,000,000 acres of cropland. Only half of it is on prime land. The remainder is subject to severe erosion.

But, we have the potential of adding an additional 7,000,000 acres of cropland without creating serious problems. This can be done by using prime lands now in pasture, woodland, or other uses. The same kind of thing could be done in neighboring states.

Another significant happening in the South is the increased use of irrigation. We are approaching the 800,000-acre-range of irrigation on cropland in Georgia. This is creating a new demand for waterways, terraces, and other erosion control practices.

Up to this point, we have talked about increasing exports in order to balance payments to the extent possible so that we can buy foreign oil. We have discussed the increased use of cropland in the South as a result of that. We have also set the stage for the Federal Water Pollution Act setting forth a national objective that by 1983 we will have fishable and swimmable waters.

Our question now is how well are we doing and how well have we done in the past in terms of protecting our soil resource in order to meet these two apparent conflicting objectives.

In 1976, we helped landowners apply conservation practices on 118,000 acres of cropland out of something like 3,000,000 acres of land needing conservation practices. In 1977, we helped landowners apply conservation practices

on 290,000 acres of cropland. This year, we will pass the 600,000 mark. How did we do this? A lot of **it** came from the use of no-till farming

My message to you today is this. In this time of land use changes and demands for greater food production, we must speed up our application of conservation and improved water quality practices. If we depend on terraces, contour stripcropping, or other traditional practices, we will never get the job done.

The bright star in our program today is no-till farming. No-till offers the best ray of hope that we have for meeting the demands of soil erosion control on farms in the South and still reach the goals of increased food production and improved water quality. We in the Soil Conservation Service are going all out to advocate the use of no-till. There is no other choice.

Sure, we recognize there are still problems, but it is the only tool we have at present for controlling soil erosion on a large area in a relatively short time. So, we ask your help--we ask for your skills, your knowledge, your ideas, your technical competence, your patience, and your understanding. It is the best erosion control tool that has come along lately, and we must use **it**.

We think no-till has a great future in Georgia and in the South. Research conducted by the University of Georgia and the Southern Piedmont Research Center has been expanded during the past year. We are looking forward to results from this work as well as research from adjoining states. We have good conservation farmers throughout the South who value their topsoil and are interested in keeping **it** at home.

We are grateful to the people in agriculture, industry, research, and extension for joining together to make this meeting possible. Most of all, we appreciate you farmers and all others who took time to attend this conference.

I hope this meeting will answer many of our questions and move no-till farming a step closer to becoming a science.

With all of us working together we can make no-till become an outstanding success in the South.