



Farm Talk

by
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Erosion hurts

How much is soil erosion hurting America's farm productivity? The signs are everywhere that soil erosion is taking a heavy toll and predictions abound that someday we will reach a time when our weakened acres will no longer feed our people. So far a lot of the predictions about soil losses are strictly guesses. At best they're estimates. But now the Department of Agriculture is putting the computer to work, hoping to find some answers about soil erosion.

The Agriculture Department experts figure well over five million tons of topsoil are eroded each year. And much of that comes from farms. Enough soil washes down the Mississippi River each year, they say, to build an island a mile long, a quarter mile wide and 200 feet high. These are astonishing figures, but what do they really mean in terms of our total food production system? That's where the computer gets involved.

A new computerized analysis created by a team of Department

of Agriculture scientists is working to put fragmented pieces of a puzzle together so they can forecast how soil erosion may affect the land's ability to grow food and fiber in the years ahead—maybe even centuries in the future. The project is called "EPIC." That stands for Erosion-Productivity Impact Calculator. When it's all done, EPIC will bring together that researchers know about hydrology, erosion and sedimentation, livestock grazing, nutrient cycling, crop growth, tillage, soil properties, climate, pesticides, insects, diseases, economics, and any other information. Once all that is fed into a computer it may be a lot easier to make meaningful guesses.

Nearing pay off

After years of painstaking data gathering, the EPIC team thinks the work may be about ready to pay off. "Once EPIC establishes the relationship between erosion and productivity, we will be better able to put a dollar value on the loss of U.S. soil," according to Terry B. Kenny, Jr., administrator

of USDA's Agricultural Research Service. He says, "We also will be able to select management strategies to maximize long-term crop production."

EPIC will provide information on the current status of soil and water resources in this country. That's part of the requirement by the Soil and Water Conservation Act of 1977. Beyond that, the effort should help in the department's effort to determine why soil productivity has leveled off in recent years.

Alarming data

Data generated by the EPIC project could be quite alarming, because no doubt the amount of soil erosion in this country is staggering. It's gone on for centuries and it's generally felt in agricultural circles that not nearly enough is being done to stop it. And that's frightening when you really think about it. After all, only a few inches of topsoil separate all of us from our bountiful food supply and total starvation. And already the EPIC researchers are saying that in some areas where erosion rates are high and subsoils poor, crop yields have been reduced by as much as 40 percent in only 50 years. Combine that with the projection of a U.S. population well over 300 million in another 50 years, and you start to realize the magnitude of the soil loss problem.

It's not just dirty streams and pesticide runoff. It's a lot more than environmental issue made popular by the current nature movement. There is no question that without good soil, crop production suffers. Granted, fertilizers have eased the situations and have allowed us to produce more food than we really need, but how long can that con-

tinue? Technology has not really reached the point where our food supply can be grown in test tubes. Productive soil is still the basis for productive agriculture.

Affects yield

Looking closer at the problem, there is usually a relationship between erosion control, soil building efforts, and improved crop yields. Those farmers who are on top of erosion problems in general seem to be the ones who grow soil-enriching cover crops, and add humus-building manure. They worry about the soil's feel, its ability to hold water, and its natural crop-producing characteristics. On the other hand, those farmers with little concern about erosion and soil building techniques are often plagued with seemingly unavoidable problems that result in low yields and unprofitable farming.

Historically, farmers in some parts of the country wore out farms through bad cultural practices and simply abandoned

them to move on to virgin ground. During a time when land was cheap and plentiful, an uncaring and uninformed farmer could wear out several farms in a lifetime. Of course, that changed with the end of homesteading and other cheap land policies. Farmers went back and reclaimed those wornout places. Many were improved and built up to become productive units once again. But now there's an increasing national concern that modern farming techniques and an economic squeeze that is causing farmers to take all they can and put back as little as possible is getting them into trouble again.

Maybe the EPIC project will show graphically and unquestionably that we are losing our topsoil at an unacceptable rate. And just maybe that will be the beginning of a national effort, with a high level of public concern and government funding to help financially strapped farmers save and rebuild the land before it's too late.

Hog hedging leaflet offered

LANCASTER — To help farmers determine their costs of fattening hogs, Trade Tech Management, Inc. has published a leaflet entitled "Tractors, Combines and Commodities Hedges — Tools of Successful Farming." The leaflet also suggests when a hedge should be placed in the futures market to protect profit.

In this leaflet, the registered commodities advisors list a few cost figures from their own hogs produced on local farms last year.

In addition, a graph shows when they placed their commodities hedge and the profit margin locked in. Trade Tech's president, David K. Sauder, believes farmers need to use the commodities hedge as a necessary tool in these times of excessive price fluctuations.

To obtain this free leaflet, farmers may call (717) 898-0139. Or they may write to Trade Tech Management, Inc., 1020 Stony Battery Road, Lancaster, PA 17601.

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