Soil Erosion: What’s Being Done in Illinois to Conserve the Soil?

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With the new Conservation Reserve Program (CRP) adopted in 1985, we are going to see many changes in the area of soil conservation. The use of reduced tillage, which includes ridge tillage and single pass tillage operations, will continue. New tillage equipment will use computer controlled sensors to help monitor soil conditions, including loss of organic matter from past erosion. Also with the new program there will be more soil conservation structures built. These may include greater use of terraces, waterways, and contour strips.

1985 CONSERVATION RESERVE PROGRAM

In most cases, a tillage program will control erosion on gentle slopes. On steeper slopes a conservation program involving terracing, waterway construction, and/or contour farming will be needed. According to Richard Farnsworth, University of Illinois extension economist, farmers who develop soil conservation plans have three alternatives: (i) control erosion with tillage, crop rotation, or conservation structures; (ii) remove highly erodible acres from production without compensation; (iii) enroll highly erodible land in the conservation reserve program.

In Illinois, farmers will be encouraged to keep land in sod or wetland out of production, and to set aside millions of acres of highly erodible cropland. These acres are addressed by three CRP provisions: conservation compliance, sodbusting, and swampbusting.

Conservation Compliance

This involves highly erodible land that was planted with an annual crop or designated as set aside for at least one year between 1981 and 1985. The farmer will have until 1990 to begin applying an approved plan and it must be in full operation by 1995. This could affect about 4 000 000 acres of Illinois cropland.

Swampbusting

This applies to existing non-cropped wetlands. The Soil Conservation Service (SCS) determines which land is classified as wetland. This program could affect 822 000 acres in Illinois. Only 103 000 acres could realistically be put into crops.

Farmers who do not participate in the program would lose eligibility for all support programs. As one farmer put it, “If somebody gives you support payments, he has a right to ask you not to ignore an issue like soil conservation.”

CONSERVATION TILLAGE

According to Jerry Mannering, agronomy professor at Purdue University, “conservation tillage will be significantly different from today’s methods.” By the year 2000, conservation tillage practices will be highly versatile. The use of equipment with computer controlled sensors to make use of site specific information based on soil conditions will increase (Fig. 1).

Soon tillage practices that conserve energy will become widespread:

- Controlled traffic to reduce soil compaction will be applied to all fields.
- Planters will control surface residue amounts with row cleaners.
- Planting equipment within row subsoilers will measure soil density.
- Sensors tied to computers will control planting, seeding rates, and pesticide and fertilizer applications based on soil conditions.

Robert Walker, University of Illinois extension specialist, states that conservation tillage will change. There will be more ridge tillage because the farmers want to become less dependent on chemicals (compared to no-till). An article in Prairie Farmer, “Ridge tillage-5 years later,” reports very positive results and continuing future use of ridge tillage. There will also be increases in the use of single pass tillage equipment which combines several tillage operations.