Farmers Change Practices To Combat Erosion

WHITE PLAINS, N.Y. — It's crunch time for farmers across the country who have land classified as highly erodible by the federal government. The conservation compliance provisions of the 1985 and 1990 farm bills give them only two more years to install conservation practices that reduce soil erosion to acceptable levels.

Farmers who don't control erosion by 1995 can be ruled ineligible for federal price-support programs, loans, insurance and many other USDA programs.

"It's crucial that farmers use the 1993 and 1994 growing seasons to get their compliance plans implemented," said Dan McCain, field specialist at the Conservation Technology Information Center (CTIC) in Indiana.

Compliance plans — which had to be filed with local Soil Conservation Service offices by 1990 — were only a first step, McCain said.

"Making the actual changes in the field may be more of a challenge than it seemed when planning them on paper," he said.

Crop residues a key

Farmers have many options for reducing soil erosion. For example, they can change rotations in favor of crops that cover the ground better, such as small grains, corn, hay or pasture.

They can farm across slopes instead of up and down them, or install terraces or a strip-cropping system.

But the most popular option, according to McCain, is crop residue management — doing less tillage in order to leave more dead stalks or straw on the soil surface. At least three-fourths of the compliance plans include residue management, he said.

The most intensive form of residue management is no-till farming, where farmers completely eliminate plowing, disking, and cultivating. The only disturbance of the soil occurs when the planter makes a slot, drops in the seed, and closes up the slot again. All crop residues remain on the soil surface.

Mulch tillage popular

However, many farmers don't want to go all the way to no-till. So they're learning how to do just enough tillage to help control weeds, mix fertilizer and herbicides into the soil, and prepare a seedbed. It's called "mulch tillage."

Farmers who practice mulch tillage don't use implements that bury all crop residues, as the traditional moldboard plow does. Field tools such as chisel plows and field cultivators, that lift the soil rather than invert the residue, are more common.

But mulch-tillers get many of the benefits of tillage. Mixing fertilizer into the soil places it where it will be available to plant roots and prevents potential losses of nitrogen fertilizers to the atmosphere.

Weed control can be another benefit. Loren Bode, University of Illinois agricultural engineer, said tillage alone reduced weed pressures by 50 to 80 percent in University studies.

Incorporating herbicides

What's more, some highly effective herbicides require tillage to incorporate them into the soil For example, a 10-year weed-control study conducted by Dr Leon Wrage at South Dakota State University showed that Eradicane a preplant incorporated (PPI) herbicide for corn, had an average grass control rating of 87 to 91 percent. Herbicides that weren't incorporated provided lower average control — 82 to 84 percent.

"Farmers are looking for ways to keep these herbicides in their plans, said John Benson of Benson Agri-Service, a farm supply dealer in Lewiston, Minn. He said it used to be typical for farmers to bury nearly all crop residues with tillage when using PPI herbicides.

Last spring, however, one of his customers had Eradicane impregnated on dry fertilizer, then had the mixture spread onto a field of untilled cornstalks. The farmer incorporated with a combination disk-cultivator tool, then planted, leaving the ground more than 50 percent covered by crop residues while attaining excellent weed control.

"Farmers and farm suppliers are finding innovative ways to meet compliance requirements," McCain said. "By exploring all the options and working with them in the field, most farmers are able to achieve compliance with a minimum of disruption to their operations. In fact, many conservation-minded farmers have had to make little or no changes in the way they farm."

Northrup King Builds New Seedstock Facility

WASHINGTON, Iowa — Northrup King Co. is investing $7 million to demolish an old plant and build and equip an entirely new seedstock facility here.

The company expects the new plant to be fully operational by November 1, 1993, in time for Washington's 25 full-time and 36 seasonal employees to condition the 1993 corn and soybean seedstock crops.

When the dust settles after demolition, begun in mid-November, only two warehouses will remain from the current facility. The new construction will include a conditioning tower along with buildings to house the latest in husking, sorting, drying and shelling equipment.

Greg Kegler, Northrup King seedstock plant manager, explains the significance of this new construction.

"The Washington, Iowa, facility is one of the links between plant breeders and corn growers. The seedstock we multiply and condition here represents the parents of the seed planted by corn and soybean growers," Kegler said. "Our job is to multiply and condition the seed from each parent in preparation for commercial seed production. This whole process revolves around an efficient plant.

"This new facility will help us maintain seed quality and genetic purity in several ways," Kegler said. "Gravity tables help us eliminate lightweight and damaged kernels. We've also doubled the size of our genetic purity lab, which measures the percentage of foreign genes in a seed sample using isozyme technology."

Researchers conduct a genetic purity analysis by germinating a small amount of seed and analyzing the proteins present. Each parent has distinctive proteins, enabling detection of impure samples, which are discarded. The expanded lab enables faster analysis and and quick turnaround of samples, especially important for winter production from Florida and Chile which is received and conditioned in spring for planting that season.

"Plant breeders give us genetically pure seed and it's up to us to maintain that purity every step of the way. This facility will have the most advanced equipment to help us assure our customers of corn hybrids and soybean varieties that germinate well and perform up to growers' expectations," Kegler said.

Northrup King worked closely with engineers to custom-design the Washington seedstock conditioning plant to gently handle delicate parental seed. In addition, electronic dryer monitors continually measure drying temperatures and moisture levels to protect germination.

Process control equipment will also enable gentle, automated seed handling. These technologies will enhance efficiency at the facility, speeding harvest and reducing the risk of frost damage.

1 FARM EQUIPMENT

0 Twin Vacuum Pipeline System, Receiving Jar, 2 Inlets (Left and Right), 3 Milking Units, 1½" Stainless Steel Line, 2 Vacuum Pumps, 4 Surge Milkers +, Some 1½" Glass Line and Fittings, Some Other Parts 2 Ice Bank Bulk Tanks 200 Gallon and 400 Gallon 717-323-6168

1895 NH self-propelled 4WD chopper w/pickup & 3R cornhead 301/829-2864

1944 JD BO Lindeman Crawler w/blade, $4500. 216/876-5360

1945 JD LA, 1939 JD A Both good condition 1945 JD LA, fair condition; 1970 Case 310G, track loader, very good condition 412-548-5996 after 6PM

1971 White tractor, 318 engine, 13 speed, wet line, give offer 250 Cummins, 6V71 Detroit rebuilt 478GMV6 diesel 13 speed transmission (717)866-2091.

1972 JD 4620 tractor, 4646 hrs, dual wheels, 1000 RPM PTO Field ready $11,000. (410)836-2398 evenings

1975 Ford 3000 tractor, a loader, rotary mower, blades, sickel bar, auger, spreader, manure spreader. (717)927-9326

1980 Button Johnson tomatoe harvester, refurbished 1985, w/brush shaker, electronic color sort, disc pickup head w/ conversion to knife head 717-473-4473 Ask for Sam

1984 7720 4x4, big tires, 1,495 hrs, 1989 218 flex, 1983 643, oil bath Reason for selling-health problems, $55,000 Trade-Finance and Haul Larry Stalter "The Combine Man" 1-800-248-2151

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