



April 3, 2009

TAKING THE NEXT STEP

If you didn't get a chance to repair field gullies last fall, repairing them in the spring, before April storms come, can help reduce further erosion and maintain farmability. However, unless the fill soil is firmed into the gully and anchored, it's likely to wash away with the first heavy rain, down to the depth of tillage. One way to prevent that would have been a pass or two with oats seeded last month, or better yet, take the next step this fall.

The residue in no-till fields protect the soil from wind and water erosion, but the challenge with modern farming practices today is what to do with the concentrated flow areas of fields. Traditionally, terraces, waterways and diversion dams are placed to handle the concentrated flow, but in many situations, all we need is some forward planning and the use of a fall cover crop.

Fall repair is preferable to get cover crop roots and residue started to handle spring runoff events in the concentrated flow areas. After harvest, gullies can be filled and shaped. With a single pass of a drill, one can seed cereal rye in the concentrated flow area. By the next spring, the growing rye roots and the vegetative cover helps anchor the soil and dissipate the energy of the flowing water when the next rainfall event occurs.

Producers should avoid using wide tillage tools as they destroy too much residue cover and loosen too much soil. Consider using a center pivot track filler or a rear-mounted blade to fill in and shape the gully and perhaps a harrow to smooth the soil. Pack the fill soil into the gully and drill a cover crop to protect the soil. The drill openers also will aid in packing and smoothing the soil.

Depending on the amount of soil disturbed when filling the gully, a single pass of the drill may be all that's needed, reducing seeding costs. Cereal rye, winter barley, or wheat will provide some fall growth to anchor the soil. When spring arrives, they'll continue growing, providing more root mass and additional residue cover. By the time the spring storms come in April, the soil should be fairly well protected and anchored.

The small grain cover crops should be sprayed two to three weeks before planting corn to avoid potential germination injury. As the green plants die, they suppress other grass species, a form of biological weed control used by some organic producers. If the plants are fairly brown when planting the corn, the chances of injury are greatly reduced. For soybeans, when the cover crops can be killed is more flexible.

We have a lot of farm operators doing no-till farming practices that saves topsoil from wind and water erosion and increases yield potentials. Taking this to the next level will be the key in the concentrated flow areas of farm fields. Tillage will smooth over the areas, but establishing roots and cover is the key.



Randy Pryor, Extension Educator
University of Nebraska-Lincoln Extension in Saline County
306 West 3rd Street, Wilber, NE 68465
Phone (402) 821-2151 • Fax (402) 821-3398 • e-mail: randy.pryor@unl.edu