

Farming with Ephemeral Gullies

Fix It, Don't Disk It!



Got a Gully?

“Ephemeral gullies” are small channels that are formed in natural, concentrated water flow areas. They are generally shallow, yet visible, and are normally easily filled in by annual tillage. They will typically re-develop again in the same location after additional runoff events and continue to erode valuable topsoil.

In contrast, “classic gullies” are deeper channels that are not easily filled by normal tillage equipment and usually not crossable at all.

Disking or smoothing the gullies will NOT fix the problem.

Gully Control

Control of ephemeral gullies begins with minimizing runoff by improving water infiltration and protecting the soil surface – in other words, a soil health management system using the four principles of **MINIMIZING DISTURBANCE**, **MAXIMIZING SOIL COVER**, **PROVIDING CONTINUOUS LIVING ROOTS**, and **MAXIMIZING BIODIVERSITY**.

Soil Protection

The initial steps are to plant high residue crops, use minimum or no tillage, or plant cover crops after low residue crops in the drainage area of ephemeral gullies.

Vegetative Options

Drilling a high rate of a winter grain/cover crop every fall after harvest in the channel area may be all that is needed to control small ephemeral gullies. These plantings can be farmed through, but should be left intact to control the erosion. Wheat, cereal rye, or triticale are all effective; do not use annuals that winter kill. Drilling in a serpentine pattern or across the slope is more effective than up and down the hill. Where annual winter species are not working, planting small areas of perennial grass is recommended.



Heavily Drilled Wheat

Structural Options

If minimal tillage and vegetative control practices are not working, the next alternative is a structural practice such as water and sediment control basins, grassed waterways, terraces, or other practices.



Grass Waterway



Water and Sediment Control Basin

Operation & Maintenance

Check often in areas known for ephemeral gullies and watch fields for new ephemeral gullies that form after storm events in the future. Anywhere water concentrates from a heavy rain, there is potential for ephemeral gullies, especially if the soil is left unprotected. Maintaining soil cover, providing continuous live roots, reducing or eliminating tillage, and crop rotation diversity are essential for managing erosion.

Technical & Financial Help

USDA Natural Resources Conservation Service (NRCS) will provide technical assistance to plan and design the right practice(s) to implement any of these requirements. USDA financial assistance may also be available.

To learn more visit:

www.in.nrcs.usda.gov