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# Drought, rain combo contributes to gully erosion

#### By Kelly J. Klausmeyer, NRCS Area Engineer

The recent rains have been very welcome. The wheat is up and looking good, and there is renewed hope for next year to return to a more normal rainfall pattern. Unfortunately, with the rain, the old problem of gully erosion has returned. The drought has left soils dry and loose; perfect to erode once the rains came. Erode they have, leaving numerous gullies in the tilled fields ready for wheat planting. Preventing soil erosion has long been a high priority with the Natural Resources Conservation Service (NRCS), so there are many practices available to assist farmers with any erosion problem they may face.

Water erosion can be described two ways: sheet and rill erosion and gully erosion. The purpose of this article is to discuss methods of treating gully erosion, both ephemeral and the classic gully. Ephemeral gullies are easily identified as places in the field where water concentrates creating a gully that is still small enough to be farmed through. Classical gullies cannot be farmed through. Gully erosion is the easiest to identify, but probably the most difficult and expensive to try to correct.

Several methods exist to reduce or eliminate most gully erosion. Residue management practices, such as reduced tillage or no-till, can reduce the amount of water runoff. While residue is very effective at stopping sheet and rill erosion that occurs on field slopes, it is less

effective at stopping erosion from concentrated water flow in gullies and stream channels. For this reason structural practices, such as grassed waterways, diversions, and terraces, are often recommended to deal with the larger ephemeral and classic gullies. Waterways are grass channels constructed to suitable dimensions to pass water safely. Diversions and terraces are a combination ridge and channel built across the slope that either store the water on the field (typical for western Kansas) or safely transport

water into a grassed waterway or other suitable outlet. These structural practices are extremely effective at protecting concentrated flow channels that are vulnerable to gully erosion.

Several cost-share programs assist farmers with the large costs associated with these structural practices. Local conservation districts may have available State of Kansas funds that are used for conservation. Federal dollars come from the Conservation Reserve Program (CRP) and the Environmental Quality Incentives

Program (EOIP).

Please contact your local conservation district office located in the U. S. Department of Agriculture's Service Center for further details.

For more information about natural resources conservation, go to your local U.S. Department of Agriculture's Service Center and visit with the NRCS or conservation district staff or visit the Kansas NRCS Web site at www.ks.nrcs. usda.gov.

## Even with no-till, terraces need to be maintained

### By CRAIG T. SCHEUERMAN, NRCS Civil Engineering Technician

The emergence of no-till as a cropping system has down-played the need for maintenance of existing structural practices.

If you have terraced land and are using notill, those terraces still need to be maintained. A terrace system in poor condition can cause more erosion than no terraces at all. Terraces that are broken will funnel all the runoff to the low spots where it can cause large gullies.

The solution? Maintain or rebuild those terraces.

One common maintenance practice is to use a plow to increase terrace height and restore capacity. This method is the least costly and can give good results if done on a regular basis. You will also need to fill any spots where the terrace has overtopped and broken.

If your terraces are in very bad shape, other methods must be used. For terraces in very poor condition, rebuilding by your local conservation contractor is probably the best solution. Some conservation districts have cost share available to help with the expense of rebuilding your terrace system.

If terrace spacing or alignment is a problem, an entirely new system may be the answer. Spacing can be adjusted by installing new terraces with wider channels.

In certain situations, a new system can improve alignment and farmability. For additional information about terrace maintenance and options or natural resources conservation,

go to your local U. S. Department of Agriculture's Service Center and talk to the Natural Resources Conservation Service (NRCS) or conservation district staff.

For more information about NRCS programs, visit the Kansas NRCS Web site at www. ks.nrcs.usda.gov.









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