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# Extension Extra

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## Residue Cover Critical in Dry Years

by James R. Gerving, Extension Soil Specialist

Periods of drought, especially those which extend through a winter season, create surface soil conditions which are loose and friable. These soils are extremely prone to wind erosion. Unfortunately, droughty periods are also windy periods.

The key to preventing wind erosion is to maintain residue cover on soil. The residue functions in at least three different ways: 1) it slows down wind speed near the soil surface, 2) it catches soil particles bouncing or drifting along the soil surface, and 3) it reduces soil drying and catches snow in winter.

During drought years, it's more difficult to maintain residue cover on soil because not much is produced and the demand for livestock feed encourages as much removal as feasible. Staying out of fields with tillage implements is the best

way to preserve any remaining residue. Weed and crop regrowth can be controlled with herbicides. Standing weed growth, dead or alive, is as effective a wind erosion control "structure" as is crop stubble.

If tillage must be done for weed control or to cover cracks to prevent further moisture loss, only non-inversion tillage implements such as sweeps should be used. Up to 80% of the residue will remain on the surface although much will be flattened, reducing its effectiveness in controlling wind erosion and trapping snow during the winter.

The worst implement to use besides the moldboard plow is the disc. One or two passes with a disc when there is minimal cover and it's dry will usually eliminate most residue and make soil loose on the surface. It then blows easily and doesn't have a chance of catching snow next winter.

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