
Concentrated Flow Areas Troublesome

Last week I stopped at many no-till fields and several tilled fields in Gage County. There is no question that soil losses are astronomically less in the vast majority of no-till fields after this season of intense rainfall events. We still have management challenges with concentrated water flow areas.

Terrace Issues: Thankfully many acres of Gage County farmland are terraced. Combined with no-till terraces help reduce our soil erosion losses tremendously. Terraces require maintenance in fixing terrace ends, maintaining height and capacity, moving soil sediment back into the field from tile inlet areas and repair at tile outlet areas. Waterways also need soil moved from lower sediment areas back into fields or to fill holes in waterway. Woodchucks have become a problem along terraces and on waterway edges. The Extension office has large gas cartridges for woodchuck control and this is a great time to get control while the woodchucks are hibernating.

Equipment Tracks: Sprayer tracks over terraces and, in particular, end row areas bare the residue and compact the soil creating an opportunity for concentrated flow areas. Anhydrous ammonia injection equipment can also create potential erosion tracks. The more the farm operator and custom applicator can vary patterns and follow the contour, the less issues like this result. Combine and grain cart ruts can also be an issue. They need to be filled and smoothed not tilled. Actually combine ruts get way more discussion than is warranted, particularly among non-no-till farmers. It is amazing the carry capacity no-till fields have and there will never be a way for any farmer or educator to convince conventional farmers of this until they experience it.

Irrigation Issues: Water application amounts on outer part of the pivot can create some real problems. We want lower pressure, lower energy pivots. We need to be sure the water spread during application on either side of the pivot is wide enough not to create a river on the outer towers. The more rolling and marginal the soil the worst this problem becomes. Triple check the pivot design before installation and look at some similar installations to make sure this issue is addressed. Pivot tracks over terraces, diversions, and entering waterways need annual maintenance and sometimes rock. Water application in field draws that stay wet can get the pivot stuck and continually damage soil structure to the point where only rock and bridges can address the problem. Planning for proper field drainage is the only solution.

Fencerow & Farmstead conversion to cropland creates bare soil and poor soil structure. These areas need special attention with cover crops and manure applications to stabilize them. Too often they are left to become a serious erosion problem after the bulldozer leaves.

Concentrated Flow Areas: There are areas below terraces and small areas not practical to terrace where concentrated flows open up and need to be healed by pulling residue into the area, by using soil from waterways and terrace maintenance to fill in with a box scraper. Larger drainage areas going through property and collection from neighboring property through road tubes into waterways or drainage draws create special problems with unique design solutions.

Landlords need to realize the need, cost and importance of routine conservation work.

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