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A Weekly Column from Iowa State University Extension and Outreach

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For Immediate Release

Soil Conservation - It's All Our Responsibility!

Joel DeJong, Field Agronomist

This has been a heavy rainfall year in much of Northwest Iowa. Excess rain means water runs off our land, and quite often takes soil with it. Not all of Northwest Iowa has the same erosion risks, some areas erode much more rapidly than other areas.

To be honest, the damage - sheet and rill erosion, gullies, sedimentation - I have observed this year has bothered me. This resource, our rich soil, is the cornerstone for profitable agricultural production in this part of the world. History has shown us several cultures that had rich soils, but those cultures no longer exist – nor do their rich soils. We have observed an increase in cover crop usage in recent years, but additional stewardship of these soils is needed.

Dr. Rick Cruse, ISU Agronomy professor and director of the Iowa Water Center, has presented some information discussing soil formation and losses. He had three different scenarios looking at soil formation, and all three indicated that it took over 1,000 years to form an inch of topsoil. In Iowa, if you have highly erodible soils, allowable soil losses in conservation plans try to limit losses per acre per year to 5 tons. Five tons/acre/year would be like losing soil about the width of a dime off of all of your acres. A roll of dimes has 100 dimes in it. How many inches long is that? It's about 4 inches long. So, if you farm a century farm, and have averaged 5 tons/acre/year, it looks like we might have lost several thousands of years of soil formation on those soils in the last century.

Dr. Cruse helped develop Daily Erosion Project that can estimate soil losses on a daily basis. This project is on version 2, which calculates erosion by watershed for every watershed in Iowa. You can see this information at this website https://dailyerosion.org/. Choose the "View Map Display" option, and then use the tools on the right side of the map to select options to review. You can zoom in on watersheds and see the data for each. Many in this region are estimated to have well over 5 tons per acre of detached hillside soil loss this year. Take a look!

Right now is a good time for landowners and those working farms to evaluate residue cover, erosive areas, and areas that need improvement. Have discussions with NRCS staff about your farms. Run different scenarios of tillage practices, rotations, residue removal, cover crops, waterways, terraces, etc. to see how that influences the erosion on your farm. The staff at those offices would like to have those discussions before there is a problem – they enjoy them less if it is a complaint situation.

These discussions only refer to what it is doing to the land. We haven't even discussed what the value of nutrients lost with eroded soil, what sediment removal in ditches and other areas costs, and sedimentation fill in ponds, rivers, lakes and other water resources.

Annually evaluate the farms you manage or own. Not all farms have the same risk. Know the risks of soil loss on your farms. Hold discussions with landlords on the long-term value of keeping this resource in place. Evaluate what you have been doing, and explore options for improving your management. It is the responsibility of all of us!

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