

Winter Conditions and How it Shapes Soil Conservation Efforts in Walsh County

***By Walsh County Three Rivers Soil Conservation District
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As another winter settles across northeastern North Dakota, agricultural experts say the season plays a larger role in soil conservation than many residents realize. While farm activity slows during the colder months, winter weather continues to influence soil health, erosion risk, and spring field conditions. One of the most beneficial winter elements is a consistent blanket of snow. When present, snow acts as an insulating layer that shields the soil from extreme temperature swings. This helps prevent compaction caused by repeated freeze–thaw cycles and allows microbial activity to continue below the surface.

However, winter also brings significant challenges. Bare or lightly covered fields are particularly vulnerable to wind erosion, a problem made worse by the open prairie landscape and frequent winter gusts. On fields lacking residue or cover crops, topsoil can be lifted and blown away, reducing long-term productivity. Freeze–thaw conditions can also break apart soil aggregates, making the surface more fragile by early spring. To counter these effects, many Walsh County producers rely on conservation practices designed to protect the land throughout the winter months. Common strategies include leaving crop residue on fields after harvest, planting winter-hardy cover crops, and maintaining shelterbelts that reduce wind speeds. These measures help stabilize soil, retain moisture, and safeguard nutrients that will be needed for spring planting.

With several weeks of winter weather still remaining, farmers and conservation agencies continue to monitor conditions closely, preparing for both the challenges and opportunities that the season brings. One of the most important but small things that we can do in the winter is snow management which consists of placing snow in areas where it can be filtered through the soil as it melts which prevents pollutant runoff from reaching streams and lakes.

For more information or to schedule a conservation planning visit, contact the Walsh County Three Rivers Soil Conservation District at 701-284-7363 or visit us at www.walshcounty1938.com.

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