

High Risk Period for Manure Runoff

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U. W. – Discovery Farms

Livestock producers who apply manure to agricultural fields need to be aware that spreading manure from now until the ground thaws have an extremely high risk of runoff. Studies from farms cooperating in the Discovery Farms Program indicate that manure applied to snow covered and/or frozen soils during conditions of snow melt or rain on frozen soils can contribute the majority of the annual nutrient losses.

For much of Wisconsin, temperatures are predicted to become milder during this week and into next, with daytime highs expected to climb into the 40's in much of southern Wisconsin. This relatively prolonged period of warmth is expected to be accompanied with mostly sunny skies throughout this week, changing to cloudy with chances for rain early next week. The combination of warm air temperatures and increasingly stronger sunshine could lead to snow ripening and starting to melt this week. Rainfall predicted for early next week could contribute to additional snowmelt and increase the potential for surface runoff from farm fields.

Snow depths are generally 8-20" deep in much of southern Wisconsin, with lesser amounts to the southeast towards Milwaukee and greater amounts north of Wausau. If all of this snow were melted, the liquid equivalent would be approximately 1-4". Some of the heaviest snow amounts occurred early in December, which has helped to limit frost depths in most areas. The brief warm-up and rainfall period on January 24 and 25 consolidated some of the heavy December snows, and in many places there are icy layers within the snowpack and on top of the soils. These ice layers may reduce infiltration and increase the potential for surface runoff.

As the temperatures moderate, producers need to listen to the weather forecast. Avoid spreading manure when there is a high probability of rain on frozen soils. What can producers do to reduce the risk of manure run off?

- ✓ During the period of active snow melt or when rain is predicted on frozen soils, producers who must haul manure from their barns should stack it in an area where the potential for runoff or groundwater infiltration is low,
- ✓ Farmers who daily haul manure should work with their local conservation departments to identify safe stacking sites that have minimal potential to runoff into either surface or groundwater,
- ✓ Producers who have lots or facilities with bedded pack systems need to be cautious about spreading this manure during this high risk period. Cleaning lots and getting the manure on the fields before the frost goes out can greatly increase the potential for nutrient losses,
- ✓ Producers who must haul manure during this high risk period should identify fields that are away from streams or lakes and have minimal risk of manure running to surface or groundwater.

We are saying that there is a high potential for manure runoff this year based on the current field conditions and typical weather patterns. This doesn't mean it will happen! If temperatures rise slowly, cloudy days or the lack of rain can greatly reduce the chance of runoff. Producers need to listen to the weather forecast and make good management decisions. Good decisions can reduce the risk of runoff events and continue to protect our farms and our water.