Winter/Slope and Fall N Restricted Soils on My Farm

Wisconsin Department of Agriculture, Trade and Consumer Protection

Wisconsin 590
Nutrient Management Application Restrictions

Why do some soil types have a "Fall N Restriction"?
Areas identified in yellow on these maps are believed to be hazardous because of the strong possibility that they are direct conduits to groundwater. These soils fit into at least one of the following categories:
- Highly permeable, allowing water to flow downward very quickly, or
- Have less than 20 inches to bedrock
- Have less than 12 inches to the water table

How does a fall N-restricted soil affect my farm management?
For fields containing an N-restricted soil type, the general rule of thumb is to restrict the majority of crop N applications to the spring. The following restrictions also apply and must be followed:

- **Fall application of commercial N to these soils is prohibited**, except for establishment of fall-seeded crops, in which case applications may not exceed 30 lbs of available N/acre.

- **Manure-N restrictions**:
  - When manure is fall-applied and soil temperatures are higher than 50°F:
    - use a nitrification inhibitor with liquid manure and limit rate to 120 lb N/acre, or
    - apply after Sept. 15 and limit rate to 90 lb N/acre, or
    - apply to perennial or fall-seeded crops and limit rate to 120 lb N/acre or crop N need, whichever is less.
  - When manure is fall-applied and soil temperatures are lower than 50°F, limit the application rate to 120 lb N/acre or the crop’s N need, whichever is less.

- **On irrigated fields**:
  - split N applications, applying the majority of N after crop establishment, or
  - use a nitrification inhibitor with ammonium forms of N.

Why do some soils have a No Winter Application restriction?
Winter applications of nutrients are prohibited on slopes greater than 12% due to high risk of erosion and nutrient losses (unless effective incorporation can occur at the time of application). Winter conditions are defined as having either frozen and/or snow covered soil. Areas that have been identified as having slopes greater than 12% are depicted in red on these maps.

What does it mean to have a soil labeled with "Winter Restrictions (if slope > 9%)"?
The 590 Nutrient Management Standard restricts manure applications on slopes >9% (unless it is contour plowed, in which case manure applications can be made on slopes up to 12%). Many areas in Wisconsin have been mapped as having slopes between 6-12%; these soils are depicted in pink on the 590 NM Application Restriction maps. Fields labeled with this (pink) restriction must be checked to determine their actual slope.