United States Department of Agriculture
Natural Resources Conservation Service

Water Quality Enhancement Activity – WQL06 – Apply Controlled Release Nitrogen Fertilizer

Enhancement Name
Apply only slow-release or controlled release formulations of nitrogen fertilizer

Land Use Applicability
This enhancement is applicable on cropland and pasture land.

Benefits
Nutrient management encompasses managing the amount, source, placement, form, and timing of the application of plant nutrients and soil amendments. Nutrient management effectively utilizes available nutrient resources to supply crops with nutrients required to efficiently produce food, forage, fiber, and cover while minimizing environmental degradation.

The use of slow or controlled release nitrogen fertilizer makes nitrogen available to plants over a longer portion of the growing season to match the plant uptake needs. This limits the loss of nitrogen to leaching and denitrification, and can help control soil emissions of the greenhouse gas nitrous oxide.

Criteria
Implementation of this enhancement requires:
1) The use of one or more of the following nitrogen fertilizer products on all treatment acres:
   Slow-release
   Controlled release
2) The producer must have a current soil test (no more than 3 years old).
3) Nutrient application rates are within the "Land Grant University (LGU) recommendations based on soil testing and established yield goals and considering all nutrient sources.
4) Soil surface disturbance must be minimized during nitrogen placement.

Documentation Requirements

1) Documentation for each Treatment area (field) and year of this enhancement describing these items:
   - Fertilizer product used
   - Treatment acres
   - Soil test results
   - Crops grown and yields (both yield goals and measured yield)
   - Calibration of fertilizer application equipment

- Nutrient application rates/amounts and application dates for each treatment area

2) A map showing where the activities are applied.

TENNESSEE SUPPLEMENTAL INFORMATION FOR THIS ENHANCEMENT

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Nitrogen Fertilizer Products	
Slow-release:	**Controlled release:**
Isobutylidene diurea (IBDU)	Polymer coated urea (PCU)
Urea-formaldehyde	Sulfer-coated urea (SCU)
Methylene Urea	PCU + SCU
Natural Organics	

No known sources currently available in Tennessee

Nitrogen stabilizers (such as Agrotain and N-Serve) do not meet this enhancement.