

Water Quality Enhancement Activity – WQL06 – Apply controlled release nitrogen fertilizer



Enhancement Description

At least 50% of the pre-emergent and early post emergent nitrogen fertilizer used for crop production must be slow-release or controlled release formulations.

Land Use Applicability

Cropland and pastureland.

Benefits

Nutrient management encompasses managing the amount, source, placement, 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 nitrogen fertilizer products defined as slow-release or controlled-release that are recommended or concurred with by NRCS and the state Land Grant University (LGU) on all treatment acres to supply at least 50% of the LGU recommended nitrogen requirement for the crop(s) grown.
2. Application of nutrients within the LGU recommendations based on soil testing and established yield goals and considering all nutrient sources.
3. Minimize soil surface disturbance during nitrogen placement.

Documentation Requirements

1. A map showing where the activities are applied.
2. Fertilizer product used
3. Treatment acres
4. Soil test results
5. Crops grown and yields (both yield goals and measured yield)
6. Calibration of fertilizer application equipment
7. Nutrient application rates/amounts and application dates for each treatment area

Michigan Supplement

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.

For more information refer to:

- Michigan State University Extension or North Central Regional Publications.
- [Nitrogen Transformation Inhibitors and Controlled Release Urea](#), G. J. Schwab and L. W. Murdock, Department of Plant Science, University of Kentucky College of Agriculture, Cooperative Extension Service, AGR-185.
<http://www.ca.uky.edu/agc/pubs/agr/agr185/agr185.pdf>