Water Quality Enhancement Activity – WQL07 – Split nitrogen applications, 50% after crop emergence or pasture green up

Enhancement Description
Apply no more than 50% of total crop nitrogen needs within 30 days prior to planting or in the case of pasture or hay after green up of the dormant grasses. Apply the remaining 50% or more of the total nitrogen needs after crop emergence or pasture green up.

Land Use Applicability
Cropland, Pastureland

Benefits
Timing of nitrogen application can be used to ensure adequate amounts of N are available during critical growth stages. Application rates can also be adjusted based on crop forage conditions to refine yield goals. Split application of 50% or more of the total N needs allows for more efficient nutrient utilization resulting in a reduced potential for N loss through leaching and/or greenhouse gases to the environment (e.g. nitrous oxide).

Conditions Where Enhancement Applies
This enhancement applies to all crop or pasture land use acres.

Criteria
Implementation of this enhancement requires:

1. Regardless of form or application method (fertilizer, manure or any other organic byproducts), apply no more than 50% of crop N needs within 30 days prior to planting and 50% or more of the N needs after crop emergence or in the case of pasture or hay after green up of the dormant grasses.
2. Post emergence N application rates can be reduced based on crop scouting reports that would suggest lower yield potential. Scouting reports shall be provided.
3. Participant must have annual manure analysis (if organic nutrient sources are used)
4. Nutrient application rates must be within the "Land Grant University (LGU) recommendations based on soil testing and established yield goals and considering all nutrient sources.
5. Minimize soil surface disturbance to stay within the site's residue management goals.

Adoption Requirements
This enhancement is considered adopted when all of the relevant criteria above have been implemented on the land use acre.

Documentation Requirements
1. Written documentation for each treatment area (field) and year of this enhancement describing these items:
   a. Acres,
   b. Planned crop,
   c. Planting date and crop planted,
   d. Dates of crop emergence,
   e. Annual manure analysis results (if organic nutrient sources are used),
   f. Crop yields (both yield goals and measured yield),
   g. Nutrient application rates/amounts and application dates for each treatment area, and
   h. Scouting reports.
2. A map showing where the activities are applied.

Note: In lieu of documenting each individual item listed in the Documentation Requirements, a Certified Crop Advisor plan that contains each of the items may be substituted.

Michigan Supplement

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Pasture or Hay Production

- Regardless of form or application method, apply no more than 50% of crop N needs of pasture or hay after green up of the dormant plants.
- Apply post green-up nitrogen applications on or about June 1, August 1, and September 1 (depending on soil moisture conditions) for grass pastures.
- Apply nitrogen to grass hays as up to 50 pounds per acre N after the first three cuttings.
- When the pasture or hay crop is greater than 50% legume content, the nitrogen needed from fertilizer is reduced. Documentation of legume content of pasture or hay crop needs to be provided.

Documentation Requirements for Split Nitrogen Applications

Nutrient applications will follow MI NRCS Nutrient Management 590 conservation practice standard criteria for commercially available fertilizers and/or manure.

1. Written documentation for each treatment area (field) and year of this enhancement describing these items:
    a. Acres
    b. Planned crop or existing crop on pasture or hay acres
    c. Planting date and crop planted. This is not applicable to existing pasture and hay acres
    d. Dates of crop emergence. For pasture and/or hay, record date of green-up
    e. Annual manure analysis results (if organic nutrient sources are used)
    f. Crop yields (both yield goals and measured yield)
    g. Nutrient application rates/amounts and application dates for each treatment area - Include scouting reports on crops when altering the nitrogen application rate; include photo documentation of legume content in pasture or hay fields when altering the nitrogen application rate
    h. A Nutrient Management Plan or CNMP and records of nutrient applications may be used as documentation if they provide the information listed above.

2. A map showing where the activities are applied.