United States Department of Agriculture
Natural Resources Conservation Service

Water Quality Enhancement Activity – WQL07 – Split Nitrogen Applications, 50% After Crop Emergence

Split Nitrogen Applications

Apply no more than 50% of total crop nitrogen needs within 30 days prior to planting and apply the remaining 50% or more of the total nitrogen needs after crop emergence.

Land Use Applicability

This enhancement is applicable on cropland.

Benefits

Timing of nitrogen application can be used to ensure adequate amounts of N are available during critical crop growth stages. Application rates can also be adjusted based on crop conditions to refine yield goals. Split application of 50% or more of the total N needs allows for more efficient plant uptake and increases nutrient utilization. resulting in a reduction in the potential loss of N through leaching and or other nitrogen-based compounds like the greenhouse gas nitrous oxide to the environment.

Criteria for Split Nitrogen Applications

Implementation of this enhancement requires:

1) Regardless of form or application method (fertilizer, manure or any other organic by-products), 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.
2) Post emergence N application rates can be reduced based on crop scouting reports that would suggest lower yield potential. Scouting reports need to be provided.
3) Producer 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) Soil surface disturbance must be minimized.

Documentation Requirements for Split Nitrogen Applications

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

2) A map showing where the activities are applied.