

**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.



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2012 Ranking Period 1

### **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.



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## IDAHO ADDENDUM 2012

### **Water Quality Enhancement Activity – WQL07 – *Split Nitrogen Applications, 50% after Crop Emergence or Pasture Green-Up***

#### **Additional guidance for split applications:**

**Idaho requires soil testing in accordance with the Idaho Nutrient Management Practice Standard (590). Annual soil tests are required.**

Splitting nitrogen applications and applying more of the nitrogen after crop emergence assures that adequate amounts of nitrogen are available during the critical growth stages, and can reduce loss of nitrogen through leaching, runoff or volatilization.

Crop scouting should be used to assess the need for additional nitrogen. Scouting reports should identify crop, yield goals, visual symptoms of nitrogen deficiency/sufficiency, and other factors limiting potential yield (e.g., limitations on irrigation water supply, poor stand development, weed competition, etc.) that can be used to help make the decision to apply, or not to apply, additional nitrogen. Producers are encouraged to use plant tissue testing to help determine the need for additional fertilizer to optimize plant growth.

For additional information on plant tissue testing and nutrient deficiencies, refer to:

Idaho NRCS Agronomy Technical Note 54, *Plant Nutrient Deficiency for Idaho Crops*.  
[http://efotg.nrcs.usda.gov/references/public/ID/Agronomy\\_TN54.doc](http://efotg.nrcs.usda.gov/references/public/ID/Agronomy_TN54.doc)

Montana State University Cooperative Extension, *Nutrient Management Module 9 – Plant Nutrient Functions and Deficiency and Toxicity Symptoms*.  
[http://msuextension.org/publications/AgandNaturalResources/4449/4449\\_9.pdf](http://msuextension.org/publications/AgandNaturalResources/4449/4449_9.pdf)

Montana State University Cooperative Extension, *Photos of Nitrogen Deficiency in Crops*. <http://landresources.montana.edu/soilfertility/ndeficiency.html>

**This activity may NOT be used with the following enhancements:  
ANM21, ENR10, WQL24**

**Potential Duplicate Practice:  
590 – Nutrient Management**