

Water Quality Enhancement Activity – WQL05 – Apply nutrients no more than 30 days prior to planned planting date



Enhancement Description

This enhancement is for applying nutrients from fertilizer, manures and/or compost no more than 30 days prior to the planned planting date of the crop.

Land Use Applicability

Cropland

Benefits

Nutrient application timing is critical in order for nutrients to be available during critical crop growth stages and to meet crop yield goals.

Nutrients that are land applied in excess of 30 days prior to the planned crop planting date are potentially lost to the environment causing water quality concerns and potential soil emissions of nitrous oxide, a potent greenhouse gas.

Conditions Where Enhancement Applies

This enhancement applies to only annually planted crop land use acres.

Criteria

Implementation of this enhancement requires:

1. Fertilizer, manure or any other organic by-products, regardless of form or application method must be applied no more than 30 days prior to the planned crop planting date, or after crop planting.
 - Utilized incorporation or injection where recommended by the Land Grant University (LGU)
2. The producer must have a current soil test (no more than 3 years old).
3. Nutrient application rates must be within the LGU recommendations based on soil testing and established yield goals and considering all nutrient sources.
4. Soil surface disturbance must be minimized by nutrient applications to stay within the site’s residue management goals.

Adoption Requirements

This enhancement is considered adopted when all four criteria above have been met on the land use acre.



United States Department of Agriculture
Natural Resources Conservation Service

2012 Ranking Period 1

Documentation Requirements

For each year of this enhancement, provide documentation of the following:

1. A map showing the treated acres,
2. Target (planned) crop,
3. Planned planting date,
4. Actual planting date and crop planted,
5. Soil test results,
6. Manure analysis results (where appropriate),
7. Crop yields (both yield goals and measured yield), and
8. Nutrient application rates/amounts and application dates for each treatment area.

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.

References

Follett, R.F. 2001. Nitrogen Transformation and Transport Processes. pp. 17-44, In R.F. Follett and J. Hatfield. (eds.). 2001. Nitrogen in the Environment; Sources, Problems, and Solutions. Elsevier Science Publishers. The Netherlands. 520 pp.

Stevenson, F.J. (ed.) 1982. Nitrogen in Agricultural Soils. Agron. Series 22. ASA, CSSA, and SSSA, Madison, WI.

North Dakota Recommendations for CSP Cover Crop Enhancements

Refer to the ND NRCS 340 Standard and Specifications and the ND-NRCS-305 Cover Crop Workbook for species recommendations and planning guidance.

Use of Legume Cover Crops as a Nitrogen Source – ENR12

Acceptable legume species include, but are not limited to:

Alfalfa	Hairy Vetch
Sweet Clover	Soybean
Edible Beans	Cowpea
Peas	Berseem Clover
Lentil	Medic

Continuous Cover Crops - SQL02

Specific NRCS cover crop recommendations will be based on the identified purposes and resource needs as discussed with the client.

Use of Cover Crop Mixes – SQL04

Specific NRCS cover crop mixture recommendations will be based on the identified purposes and resource needs as discussed with the client.

Use of Deep-Rooted Crops to Breakup Soil Compaction – SQL05

Acceptable legume species include, but are not limited to:

Alfalfa	Sorghum
Beets	Sugarbeet
Canola	Sunflower
Corn	Sweet Clover
Radish (oils seed or forage)	Turnips
Safflower	

Plant an Annual Cover Crop Species That Will Scavenge Residual Nitrogen - WQL10

Acceptable species include, but are not limited to:

Annual Ryegrass	Safflower
Barley	Sunflower
Canola	Triticale
Oat	Turnip
Radish	Wheat
Rye	Winter wheat