N590 Nutrient Management

Purpose

1. Demonstrate the environmental and economic advantages of following a nutrient management plan.
2. Provide operators an incentive to encourage the adoption of new management techniques and/or technologies for applying manure and fertilizer. The definition of operator for the purpose of this practice is any individual farming the land, that has incurred the expenses for the nutrients applied. The operator's name should also be listed on file with FSA as the operator of such land. The contract must contain the name of the legal owner.

Applicability

Applies to lands where plant nutrients (commercial fertilizers and/or manure) have been improperly applied and the landowner is utilizing a new approach in the application of nutrients. **The land must be eroding at or below the tolerable soil loss level.**

Erosion Requirements

Practice is eligible for cost-share based sheet and rill erosion. Pre-installation erosion rates must be less than or equal to tolerable soil loss.

Sheet & Rill Erosion Checks: PRE-INSTALL < OR = T

Specifications

1. The completed practice must meet the NRCS Standards and Specifications for Nutrient Management (590) contained in the Field Office Technical Guide.
2. Items for Contract Payment:
   a. Copies of soil test reports from a MSTA-certified soil testing laboratory, including nutrient recommendations and where those recommendations originated, to be maintained in the district office.
   b. Receipts (fertilizer, lime) indicating the quantity and blending analysis of the fertilizer purchased. The corresponding field numbers must be shown on the receipts, to be maintained in the district office.
   c. Records showing harvest date, yield and any sources of nutrients that will credit or deduct from the nutrient balance (hay feeding, legume crop or cover crop) for the applicable season, to be maintained in the district office.
   d. Copies of the Field Nutrient Balance report generated from Manure Management Planner (MMP) shall be scanned and attached to the contract payment. A copy shall be distributed to landowners with the copy of the contract payment.
   e. A completed dated, nutrient management plan that documents the safe and effective application of nutrients for crop/hay/forage production, to be maintained in the district office.

Policies

1. Contracts must be board approved between January 1 - April 15, prior to application of any nutrients. The Nutrient Management Plan must be developed prior to the application of nutrients. Contract payments can be issued after October 31 or after the crop is harvested, whichever date is later.

   a. **Example 1:** If a contract for cropland is approved on April 1 the contract payment cannot be approved until November 1 of that year. If the nutrients have been applied and yield records for that growing season are complete the operator is eligible for contract payment. Proper documentation is required.

   b. **Example 2:** If a contract for cropland is approved on April 1 and the crop is harvested on December 15, the landowner would be eligible for payment after December 15 allowing crop nutrient withdrawals to be accounted for in the nutrient balances. Proper documentation is required.

2. If the operator is not the legal landowner, an Operator Authorization Form must be completed in place of the Landowner Authorization for State Cost-Share form and scanned into MoSWIMS as a document type of "Landowner/Operator Authorization" prior to submission of the contract payment.

3. All recommendations must be based on realistic yield goals. Realistic yield goals shall be based on the following criteria:

   a. Actual yield data collected from the field for 5 or more years. Ignore highest and lowest years and calculate the mean of the remaining three. Add 10 percent to the mean yield to allow for potential to improve yield.

   b. Crop yield estimates from county soil survey adjusted by soil-based crop productivity indices.

   c. County average yield data collected by the National Agricultural Statistics Service.

4. The complete nutrient management plan must be developed to cover the life of the soil test (four years) prior to the operator signing the initial cost-share contract. The soil test used to develop the plan must be less than 2 years old. The nutrient management plan must be developed based on soil test phosphorus levels, not phosphorus index. The plan must be updated to reflect alternate crops planted and to illustrate the actual withdrawals for the crop/hay/forage produced.

5. Soil test analysis for nutrient status must be performed by a Missouri Soil Testing Association (MSTA) approved laboratory. A current list of approved laboratories may be found at http://soilplantlab.missouri.edu/soil/mstacertified/htm.

6. The nutrient applications for each year must be within 10 pounds per acre of the nutrient plan recommendations for N, P, and K. Unutilized P and K is not factored into a nutrient management plan the first year. Yield goals and recommendations can be adjusted to meet economic situations of a landowner, however, the plan must be adjusted accordingly in the planning for the next year and nutrient balances must be reflected accordingly.

a. **Example:** If a landowner reviews the plan based on soil tests and is not comfortable applying the recommended 120-60-60 then yield goals can be adjusted to reduce the recommended N, P, and K to meet his/her economic situation.

   All nutrients (N,P,K) should be reduced proportionately when establishing realistic reduced yield goals based upon the landowner's economic situation (i.e., reduce the yield goal on a forage crop from 4 tons per acre to 2 tons per acre).

7. Nutrient credits from all sources (hay feeding, previous legume crops, etc.) shall be included in the nutrient budget and shall be deducted from amounts of nutrient required.
8. Nitrogen application rates for cool season grasses may be applied at 75% of soil test recommendations.
9. Fertilizer application, according to the nutrient management plan, may be waived if the following criteria are met. Individual nutrient requirement is less than 25 pounds per acre *and* the total amount of the application less than 50 pounds per acre.
10. Phosphorous and potassium may be applied for future planned crops. This includes all planned row crop, cool season grass and warm season grass rotations. The nutrient budget must indicate a proper balance of P and K at the end of the soil test cycle.
11. If the soil test indicates a need of 600 or more pounds of ENM per acre, the lime must be applied in the first year to be eligible for payment. If more than 1,200 pounds of ENM per acre is required, the lime applications can be split between the 1st and 2nd year of the plan. If less than 600 pounds of ENM per acre is required, the cooperator may elect not to apply it. Fields with only rice grown will not have to apply lime according to soil test.
12. A nutrient budget report shall be developed in Manure Management Planner and specify all sources, amount, timing, and method of application for all nutrients both commercial and manure or organic by-products required by the Nutrient Management Standard (590).
13. May be used in conjunction with N595 Pest Management and with the seeding practices of DSL-01 Permanent Vegetative Cover Establishment, DSL-02 Permanent Vegetative Cover Improvement, DSP-02 Permanent Vegetative Cover Enhancement, or DSP 3.5 Grazing System Seed beginning one year after contract payment of the seeding practice.
14. The nutrient management plan for a particular field must be followed in consecutive years.
15. ***Cost-share is authorized for:***

    a. Incentive payments, following one complete growing season where the operator (including landowner-operators) can produce documentation that the nutrients were applied in accordance with the nutrient management plan and the crop nutrient withdrawals are based on the crop/forage yields.

16. ***Cost-share is not authorized for:***

    a. Reimbursement for soil testing as a stand alone component.

Maximum State Cost-Share

1. Incentive Payment
   a. Not to exceed $20 per acre per year for new contracts approved after January 1, 2011.

b. Operators are eligible to receive a lifetime maximum of $10,000 from the N590 Nutrient Management practice. District boards should consider limiting operators to participation for multiple years.

   The definition of operator for the purpose of this practice is any individual farming the land (listed as the operator in the FSA office) and incurring the expense if pesticides need to be applied.

2. Utilize the Practice Limits Detail report in MoSWIMS to ensure compliance with applicable maximums.

Map Requirements

A map that displays the completed practice must be scanned and attached as a document type "Map" in MoSWIMS prior to contract payment submission.

Technical Responsibilities

Technical staff has the responsibility for determining the need for the practice, for design of the practice based upon the minimum extent necessary, and to certify that the completed practice meets NRCS standards and specifications within commission policy.

Acres Served

Acreage treated by nutrients.

Extent Installed

Acres.

Maintenance Life

This practice is completed upon contract payment therefore the contract will not have a maintenance life.