United States Department of Agriculture

590 – Nutrient Management: Basic Implementation Requirements

Producer: _____ **County:** _____

Field #: _____ **Contract #:** _____

Tract #: _____

Practice Location Map
(see conference plan map)

Basic 590

Purpose of the Practice:

- ✓ Improve plant health and productivity
- ✓ Reduce excess nutrients in surface and ground water

OBJECTIVE: Basic Nutrient Management is a strategy to manage agricultural fertilizers for water quality protection and optimal crop yields. The management of all applied fertilizers will be implemented based on a written plan that addresses the 4 R's (source, placement, timing, and rate) to the level of the Ohio nutrient management standard (code 590).

DESCRIPTION: Application of fertilizers and or manure is based on a written Nutrient Management Plan (NMP). The NMP will utilize a nutrient budget that incorporates current soil test results, yield goals, nutrient needs of the crops in rotation, and the site-specific risk of nutrient loss to determine the 4R's.

PLANNING: Nutrient Management Plans (NMP) could be developed by a consultant, Soil and Water Conservation District, a farm cooperative agronomist, CCA of the producer's choosing, or the plan may have already been developed as a CAP 104 or 102 in a previous EQIP contract. NMPs must meet NRCS 590 Statement of Work deliverables. NRCS can provide the "template" to serve as the framework for the written basic NMP.

PLAN SPECIFICATIONS:

Soil Sampling Requirements:

- Soil tests used in planning are to be **no older than 2 years**.
- A single test result representing a **maximum of 25 acres**.
- Fertilizer applications will be based on the 25-acre or less sampling area.
- New soil samples will be done on a **2-year cycle**; every other year new soil samples will be taken to refine the source and rate of fertilizer for each sampled area.

Nutrient Management Plan and Application Requirements:

- Commercial phosphorus and potassium recommendations and applications **will NOT exceed** Tri-State Fertilizer Recommendations (Bulletin E-974). Single applications can be made to meet the recommendation for multiple years of the rotation if the application meets all the restrictions within 590 and the years are clearly indicated on the recommendations and application records.
- Commercial phosphorus must be banded, injected, strip tilled, incorporated, applied to a growing crop, or cover crop or surface applied to greater than 30% crop residue.
- Nitrogen rates for corn are to be based on the Maximum Return to Nitrogen (MRTN). Nitrogen rates for wheat are to be based on the likely yield expectation. The rate of Nitrogen for both corn and wheat will not exceed the rates listed in the Tri-State Fertilizer Recommendations (Bulletin E-974).
- No commercial nitrogen will be fall applied for a spring planted crop (except incidental nitrogen in fertilizer blends).
- Urease inhibitors will be applied with UAN and/or Urea when it is surface applied in the spring when losses are likely.
- **No** nutrients will be surface applied on frozen or snow-covered ground, when the top 2 inches of soil are saturated from rainfall or snow melt, and/or when there is a greater than 50% chance of rainfall of more than 1 inch within 12 hours.
- Plan shall include provisions for record keeping of all nutrient applications per field (source, rate, timing, placement).
- The supporting practices in the EQIP participants' plan must be incorporated into the NMP and the client should provide a copy of their Conservation Plan to the person(s) writing the plan.

IMPLEMENTATION: Once a plan has been finalized and approved by the local NRCS planner, producers apply the nutrients following the plan's specification for nutrient rates, timing, placement and sources/types of nutrients. Maintain records for at least 5 years to document plan implementation. Records must include:

- All test results (soil, manure, and plant tissue sample analyses) upon which the nutrient management plan is based.
- The 4R's (Rate, Time, Source and Placement) of all nutrient applications and the year(s) the application is satisfying the recommendation. Examples: if the application is being made for multiple years, both years need indicated. If the application is for one year, that year needs indicated.
- Documentation of the weather conditions and soil moisture at the time of application.
- Crops planted, planting and harvest dates, and yields.
- Dates of plan review, name of reviewer, and recommended adjustments resulting from the review.

NRCS Review Only

Designed By: _____ **Date** _____

Operation and Maintenance Plan:

✓	Review or revise plans periodically to determine if adjustments or modifications are needed. **At a minimum, review and revise plans as needed with each soil test cycle, changes in crop rotation, and crop management.**
✓	Calibrate application equipment to ensure accurate distribution of material at planned rates. Under field operating conditions the acceptable error rate for accurate calibration is within +/- 10%. For products too dangerous to calibrate, follow LGU or equipment manufacturer guidance on proper equipment design, plumbing, and maintenance.
✓	Document the nutrient application rate. When the applied rate differs from the planned rate, provide appropriate documentation to explain the difference.
✓	Protect workers from and avoid unnecessary contact with nutrient sources. Take extra caution when handling anhydrous ammonia or when managing organic wastes stored in unventilated tanks, impoundments, or other enclosures.
✓	Maintain records for at least 5 years to document plan implementation and maintenance. If the practice is being implemented as part of a financial assistance contract the records must be maintained 5 years from the end of the contract. Records must include— • All test results (soil, manure, and plant tissue sample analyses) upon which the nutrient management plan is based. • The 4R's (Rate, Time, Source and Placement) of all nutrient applications and documentation of the weather conditions and soil moisture at the time of application. • Crops planted, planting and harvest dates, yields, nutrient analyses of harvested biomass (if applicable), and plant or crop residues removed. • Dates of plan review, name of reviewer, and recommended adjustments resulting from the review.

Certification Statement: (certification may be documented in the conservation assistance notes)
I certify that implementation of this conservation practice is complete, meets criteria for the stated purpose(s), and meets the NRCS conservation practice standard and specifications.

Signature & Title **Date**