



Producer: _____

County: _____

Field #: _____

Contract #: _____

Tract #: _____

Practice Location Map
(see conservation plan map)

Basic with Manure Incorporation
590

Purpose of the Practice:

- ✓ Improve plant health and productivity
- ✓ Reduce excess nutrients in surface and ground water
- ✓ Reduce the risk of potential pathogens from manure, biosolids, or compost application from reaching surface and ground water



OBJECTIVE: Basic Nutrient Management with Manure Incorporation is a strategy to manage agricultural fertilizers and manure for water quality protection and optimal crop yields. The management of all applied manure and 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 manures and fertilizers are 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. Additionally, all manure applications will be injected directly into the soil or incorporated within 24 hours of the application.

PLANNING: Nutrient Management Plans (NMP) could be developed by a consultant, Soil and Water Conservation District, 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 and Manure 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 and manure applications will be based on the 25-acre or less sampling area.
- New soil samples will be done on a **2 years cycle**; every other year new soil samples will be taken to refine the source and rate of fertilizer for each sampled area.
- Annual manure sampling is required near the time of land application, application rates may need to be adjusted to account for the actual concentration of nutrients.

590 – Nutrient Management: Basic with Manure Incorporation Implementation Requirements

Nutrient Management Plan and Application Requirements:

- All applications of manure and commercial phosphorus and potassium fertilizers **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.
- Manure and commercial phosphorus fertilizers must be banded, injected, strip tilled or incorporated. **Incorporation must be within 24 hours of the phosphorus and/or manure application.**
- 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 including manure 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 1/2 inch within 24 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 years the application is satisfying the recommendation if the application is being made for multiple years.
- 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 _____

**590 – Nutrient Management: Basic with Manure Incorporation
Implementation Requirements**

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— <ul style="list-style-type: none"> • 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