10 Minute Supervisor Trainings

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NUTRIENT MANAGEMENT PLANNING

Nutrient management planning continues to grow in importance for all types and sizes of agricultural operations in Kentucky. This is driven in large part by slim profit margins, increased concerns regarding water quality, and the long term sustainability of our agricultural production lands. Many agricultural producers view nutrient management planning as an additional chore on an already lengthy to-do list or a box to be checked to meet government program requirements. The reality is that nutrient management planning is the process of getting to know more about your farm and managing it for increased profitability and sustainability.

What is a Nutrient Management Plan?

A nutrient management plan is a written inventory of a farming operation's soil nutrient levels reported by field, on-farm nutrient inputs from manure and commercial fertilizer, and a strategy to meet crop production nutrient needs without substantially increasing soil Phosphorous levels.

A typical farming operation's nutrient management plan should contain:

- A farm map that shows the field boundaries and some sort of naming system.
- Soil test results for each field.
- Nutrient sample results for each type of livestock manure being land applied.
- Calculations that show the amount of manure that should be applied to each field.
- A written description of how to manage your on-farm nutrients in relation to cropping cycles.
- Nutrient Management Plans may also contain recommendations for additional farm facilities such as covered manure stack pads or barn yard guttering to reduce stormwater into livestock feeding areas and lagoons.

What type of Nutrient Management Plan do I need?

The type of nutrient management plan needed for a particular farming operation can be determined by the type of operation, the producer's management goals, and whether or not the producer plans to apply for USDA Farm Bill funding. Generally speaking, anyone whose farming operation generates livestock waste and plans to seek technical and financial assistance from USDA NRCS will need a Comprehensive Nutrient Management Plan (CNMP).

A Kentucky Nutrient Management Plan (KYNMP) is required by the KY Agriculture Water Quality Act, Statewide Agriculture Water Quality Plan, for the land application of manure or commercial fertilizer. Additionally, the State Cost Share Program requires that a KYNMP be completed prior to installing a winter feeding Heavy Use Area (NRCS Practice Code 561) in order to verify that nutrients can be managed appropriately on the land available for application.

Producers must update their Nutrient Management Plans whether it is a CNMP or KYNMP every five (5) years or more frequently if there are significant changes in animal numbers, cropping sequence, or acreages where livestock manure is being applied.

How can I get a Nutrient Management Plan prepared for my farming operation?

If a KYNMP is needed, you can request a technical professional to develop the plan through your local Conservation District or UK Cooperative Extension Service. Certified Crop Advisors or other agricultural service planners can also be hired by the producer to develop a KYNMP. You also have the option of developing a KYNMP yourself using the tools provided by the UK Cooperative Extension Service. Extension publication ID-211, Kentucky Nutrient Management Planning Guidelines and the KY Nutrient Management Planning Calculation Tool includes instructions and examples from different types of farming operations that are helpful when developing a plan.

If a Comprehensive Nutrient Management Plan is necessary for your farming operation, or if you aren't certain that a KYNMP will fulfill your needs please contact your local Conservation District to schedule a technical assistance site visit and discussion. An NRCS, Conservation District, or Division of Conservation technical staff employee will help determine your needs, and assist you in applying for either EQIP or KY State Cost Share Program funding for development of that plan. Upon notice of funding, you can contact an NRCS Technical Service Provider who will work with you to develop the CNMP.

How do I get started with a KY Nutrient Management Plan?

- Begin by getting with a map of your farming operation.
  - a. You can acquire a map using the internet, through your local Conservation District, USDA Service Center, or County Property Valuation Administrator.
- Draw and name each of fields where you are pasturing livestock or growing crops.
- Collect soil samples for each of the farm fields that you marked and named on the farm map.
- Collect a sample from stockpiled manure that you plan to land apply using the recommendations provided in the KYNMP.
- Provide the results of the soil and manure samples to your local Conservation District or whoever will be developing your KYNMP.

What are the benefits in following a Nutrient Management Plan?

Producers gain information about their farming operation through the development and use of a nutrient management plan. They gain more knowledge about their soil nutrient levels and the nutrients needed to produce a crop. They gain a better understanding about when and where to apply livestock manure, commercial fertilizers, or other soil amendments. They have a better understanding of which farm fields need additional nutrients and which do not. Ultimately their farming operation is more productive and sustainable with increased crop yield, soil organic matter, and improved soil moisture.

The most straightforward benefit of nutrient management planning for a producer is saving money. Applying only the nutrients that are necessary to produce a crop reduces input costs, and producers get increased crop yields by providing adequate nutrients necessary to produce that crop.

The 4 R's of Nutrient Management

- Right Amount (rate)
- Right Source
- Right Placement (application method)
- Right Timing of commercial fertilizers, manure, soil amendments, and organic by-products to agricultural landscapes as a source of plant nutrients while protection local air, soil, and water quality.