

Planning Criteria for Nutrient Management using Grid Soil Sampling

Purpose: To encourage the adoption of variable-rate applications of nutrients based on soil test results from grid soil samples. This practice is to assist farmers in developing a nutrient management plan (NMP) to land apply nutrients using precision agriculture technology for optimum soil fertility levels and protection of the waters of Arkansas.

Eligible Land: Eligible is cropland.

Eligibility Statement:

The grid soil sampling nutrient management payment option applies only on tracts having no fields where variable rate nutrient applications have been applied based on results from grid sampling.

Participant must meet the following to receive grid soil sampling nutrient management payment.

- The Grid Soil Sampling nutrient management planning option will require the farmer to follow an approved NMP.
- Each field under contract will have soil test results derived from recent soil samples using a systematic grid soil sampling protocol.
- The NMP must be developed base on recent soil test results.
- Nutrients will be applied in accordance with the NMP
- The NMP will be written by a person who is familiar with the requirements for grid soil sampling.
- Precision agriculture components of the nutrient management practice are to be implemented by:
 1. Using a systematic grid soil sampling protocol
 2. Acres that are based on aerial or satellite images.
 3. Field specific nutrient application records
 4. And the use of GPS- navigation guided equipment.
 5. And (or) a combination of two or more of these datasets, images, and/or maps.
- Nutrients are applied using variable-rate application equipment and are applied according to fertilizer recommendations based on grid soil samples representing areas of no greater than five acres.

- In addition to soil tests information a combination of datasets, images, and/or maps may also be used to make fertilizer recommendations.
- Qualified variable-rate application(s) of nutrients shall be those made during the soil test time period during which soil map data are collected.
- The farmer will also follow an irrigation water management plan for all irrigated fields that are included in the nutrient management plan.
- The farmer must follow state Conservation Practice Nutrient Management (590) criteria for application rates, method of application, and timing.
- As part of the NMP the farmer may add one or more of the following practices:
 1. Use controlled released nitrogen fertilizer.
 2. Use chlorophyll readers (e.g. Greenseeker) technology to vary nitrogen application.
- The farmer must keep records of where nutrients were applied, how much was applied, and on what crop the nutrients were applied for a minimum of 3 years.
- A maximum 3 year payment requires a 4 year adoption period.
- Crop yield response data are collected using harvesting equipment with a yield monitor equipped with a Global Positioning System (GPS) receiver.

Documentation Required:

- Nutrient recommendation maps for each field
- Written certification that fertilizer has been applied according to the recommendation map(s).
- 1. As-applied (as-spread) maps that show the date of application.
- A copy of recent soil tests results
- A copy of crop yield response maps when this option is adopted