Nutrient Management

Nutrient management involves managing the source, rate, form, timing and placement of nutrients. Through appropriate management, nutrients are effectively and efficiently supplied to soils and plants in adequate quantities to produce food, forage and fiber while minimizing environmental degradation.

A nutrient management plan is for a specific site on which nutrients and soil amendments are to be applied. The plan consists of the following components:

- ✓**Field map and soil map**
- ✓**Analysis of soil, organic matter, plants and irrigation water**
- ✓**Expected yield**
- ✓**Sources of nutrients to be applied**
- ✓**Nutrient budget**
- ✓**Recommended nutrient rates, form, timing, and method of application**
- ✓**Location of sensitive areas and setbacks**
- ✓**Guidelines for operation and maintenance**

Data constituting these components for a specific site typically are recorded on the reverse page of this leaflet. The field map and soil map are essential components to identify the location and physical characteristics of the site and may be an attachment to the nutrient management plan or be included in a conservation plan for the site. Areas designated as "sensitive" and setbacks are shown on the field map.

Conservation Management Systems

Nutrient management may be a component of a conservation management system. It is used in conjunction with crop rotation, cover crops, residue management, pest management, conservation buffer practices, and/or other practices needed on a site-specific basis to address natural resource concerns and objectives.

The major role of nutrient management is to minimize nutrient losses from fields, thus protecting surface and ground water supplies.

Nutrient management is most effective when used with other practices such as cover crops, conservation crop rotation, residue management, conservation buffers, and water management practices. These practices minimize the transport of nutrients from the field. In addition, cover crops aid by uptake and cycling of nutrients, and conservation buffers reduce nutrients leaving the field by filtering of surface runoff and uptake of nutrients from the subsurface flow.

South Carolina

Nutrient Management Conservation Practice Job Sheet

Natural Resources Conservation Service
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Soil Sampling

Soil sampling is important for assessing current soil fertility. However, information provided through soil analysis is only as good as the samples that were collected. Equipment used in sampling must be clean and subsamples must be mixed to render a uniform composite sample for the sample site. In addition, adherence to the following guidelines for soil sampling normally will assure reliable information from soil analysis:

Pastureland/Hayland
- •July/August for cool season
- •Jan./Feb. for warm season
- •Cores 2-3" deep
- •≤ 20 acres/sample
- •15-20 cores/sample

Cropland/No-Till
- •Fall for Spring Crops
- •Spring for Fall Crops
- •Cores 6" deep
- •Periodically take 0-3" and 3-6" samples
- •≤20 acres/sample
- •20-40 cores/sample

Cropland/Conventional
- •Fall for Spring Crops
- •Spring for Fall Crops
- •Cores 6-8" deep
- •≤20 acres/sample
- •15-30 cores/sample

Operation and Maintenance

- ■Review the nutrient management plan annually and adjust as needed
- ■Calibrate equipment
- ■Observe setbacks required for applications along waterbodies and sensitive areas
- ■Protect nutrient storage areas from leakage and prevent pollution of runoff
- ■Avoid unnecessary exposure to fertilizer and organic waste
- ■Maintain records of nutrient application
- ■Clean up residual material from equipment and dispose of properly

Over for worksheet....

Nutrient Management Worksheet

Field No. ____ Size_____

Production history: average yield for the last 3 years:_____

Crop to be grown:_____

A. SOIL Test Information:

Available P lbs/acre	Available K lbs/acre	Soil (water)pH	Buffer pH	Lime Requirement tons/acre (calcitic lime)
_____	_____	_____	_____	_____

Substitute Lime Product: _____ Amount: _____

B. Phosphorus Index (PI) Risk Level:

_____Low (PI1) ____High (PI3)

_____ Medium (PI2) ____Very High (PI4)

Management _____

_____

C. Nutrient Recommendations (lbs/acre:)

	Nitrogen N	Phosphate P2O5	Potash K2O
1. Clemson Recommendations:	_____	_____	_____
2. Nutrient Credits:			
a. Manure (tons ->____):	_____	_____	_____
KIND->_____			
b. Legume N:	_____		
c. Credited N from previous crop :	_____		
Total Credits (a+b+c) :	_____	_____	_____
3. Balance:	_____	_____	_____
4. Inorganic Fertilizers:			
a. Analysis _____tons____	_____	_____	_____
b. Analysis _____tons____	_____	_____	_____

5. Other nutrients: _____

Time and Method of Application:

_____

_____