

NUTRIENT MANAGEMENT

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service - practice code 590



NUTRIENT MANAGEMENT

This practice involves managing the amount, placement, and timing of plant nutrients to obtain optimum yields and minimize the risk of surface and groundwater pollution.

PRACTICE INFORMATION

Nutrient management may be used on any area of land where plant nutrients are applied to enhance yields and maintain or improve chemical and biological condition of the soil. The source of plant nutrients may be from organic wastes, commercial fertilizer, legumes, or crop residue. The objective is to apply the proper amount of nutrients at the proper time to achieve the desired yield and minimize entry of nutrients into surface or groundwater supplies.

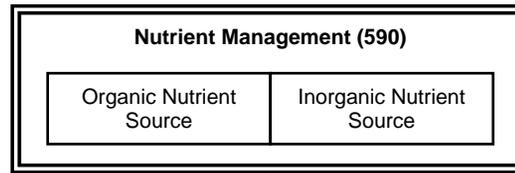
Planning Nutrient Management involves the following considerations:

1. National, state and local water quality standards.
2. Sources and forms of plant nutrients available to the farmer.
3. Amounts and timing of nutrients based on soil testing, planned yield and growing season of target plants.
4. Evaluate use of crop rotations that enhance efficiency of nutrient utilization and improve soil tilth.
5. Consider waste storage requirements and land area requirements for proper management of plant nutrients.
6. Others.

Additional information including standards and specifications are filed in the local NRCS Field Office Technical Guide.

The following page identifies the conservation effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

Nutrient Management Practice
10/7/2007



*Initial Setting:
Cropland, non-irrigated, receiving manure and subject to erosion*



1. Form & method of application optimized for equipment & source availability

2. Nutrient amount optimized to meet crop needs

3. Nutrient application timing optimized to crop growth stage

D.1 (+) Local vendor income

D.2 (-) Costs to farmer

D.4 (+) Crop growth & vigor

D.5 (-) Contaminants, pathogens, sediments to receiving waters

D.6 (-) Excess nutrients in fields

C.1 (+) Crop business support infrastructure

I.1 (-) Local vendor income

D.3 (+) Time required by farmer

I.4 (-) Soil erosion

I.5 (+) Dissolved O₂ in surface waters

I.6 (+) Meeting water quality standards

C.2 (-) Crop business support infrastructure

I.2 (-) Time required by farmer

I.3 (-) Pest/pathogen infestations

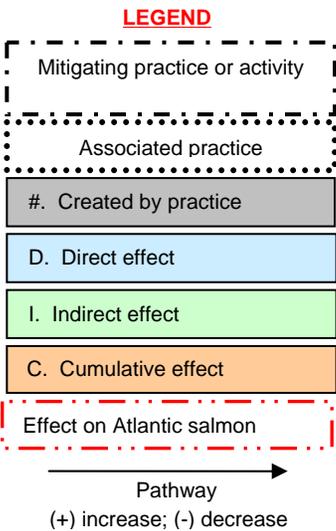
I.7 (-) Noxious algal growth

C.3 (+/-) Income and income stability (individuals & community)



I.8 (+) Quality of surface waters and aquatic habitats

C.4 (+) Habitat suitability; health for humans, domestic & wild animals



The diagram above identifies the effects expected to occur when this practice is applied according to NRCS practice standards and specifications. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowner and are presumed to have been obtained. All income changes are partially dependent upon market fluctuations which are independent of the conservation practices. Users are cautioned that these effects are estimates that may or may not apply to a specific site.