

# NUTRIENT APPLICATION GUIDELINES

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## General Guidelines

1. Nutrient applications to a crop shall be made as close to plant uptake periods as possible. Certain exceptions may be considered appropriate as follows:
  - a. Use of natural organic sources of nutrients may be recommended to meet plant nitrogen needs, even if this results initially in over-application of phosphorus, provided the following fall and/or winter Application Guidelines are met. However, when the FIV is 150 or greater, management of phosphorus shall be consistent with phosphorus site index requirements under COMAR 15.20.08.05E.
  - b. Rates of natural organic sources of nutrients for lengthy planting cycles, such as orchard or tree establishment may be recommended as a one time initial application, when periodic, seasonal, or surface application is not feasible.
2. Application of nutrients may vary depending on what type of crop is being grown and weather conditions; however, application timing should maximize plant utilization efficiency and minimize the potential for nutrient movement.
3. Best management practices shall be used when necessary to minimize or control nutrient movement to sensitive areas or to surrounding water bodies. The following guidelines shall be followed to be in compliance with COMAR 15.20.08.05H.

## Fall Application (September 1 thru November 15)

When applying or recommending nutrients in the fall, the consultant and operator, or the certified farm operator, shall use the following management guidelines. The guidelines address chemical fertilizer and natural organic fertilizer use separately.

### Chemical Fertilizer Use

1. Chemical fertilizer may be recommended and applied as a starter fertilizer, provided rates and subsequent applications are made in accordance with recommendations for small grains and fall seeded crops or plants found in Section I-B of this Manual.
2. The application of liming materials without nitrogen may be recommended in the fall or winter.

### Manure Use

1. Manure may be applied as a starter fertilizer if rates and timing follow the recommendations

for fall seeded crops found in Section I-B of the Maryland Nutrient Management Manual.

(Example: For small grains, this is a maximum of 40 pounds of available nitrogen/acre)

2. Manure application above the fall recommended rate for fall seeded crops (greater than 40 pounds/acre of nitrogen) is allowed at fall planting (up to the University of Maryland's recommended rate of the fall crops' phosphorus removal requirements) only if storage is inadequate, and it is necessary to avoid application during the winter. Planting of the crop for which nutrients are being managed should occur in a time frame that would allow significant plant growth, in order for the plants to utilize any available nitrogen.

3. To avoid application during the winter, when storage is inadequate and manure is not stackable (greater than 60% moisture, such as dairy slurry), manure application may be made during the fall at levels up to the next year's warm season crops' phosphorus removal requirements. Applications shall either be made into existing vegetative cover, or a cool season grass or cereal grain shall be planted as a cover crop.

### **Winter Application of Manure (November 16 thru February 28)**

Manure may be applied in the winter only if the farm operation has inadequate storage, a non-stackable manure, and no other reasonable option to manage it. Application shall be made in accordance with the indicated restrictions. The following guidelines should be used as a temporary measure because of inadequate storage. All livestock and poultry operators are encouraged to have adequate manure storage to accommodate manure production through the winter months, when plants are not actively growing.

1. If the manure is stackable (equal to or less than 60% moisture, such as poultry litter), or if adequate storage is available, manure application is prohibited during the winter.
2. Manure application shall not be made on hard-frozen or snow-covered ground.
3. Winter manure application shall not be made on fields when predominant soils are the following poorly drained soil types: Portsmouth, Pocomoke, Bayboro, Johnston, and Plummer.
4. Manure applications shall not be made to land with a slope greater than 7%.
5. A setback of at least 100 feet from all surface waters shall be maintained, unless best management practices providing water quality protection equivalent to such a setback are in place. (Surface water is defined as any permanent or intermittent, continuous, physical conduit for transporting water. Shovel ditches and water leads are not included as surface waters for purposes of this policy.)
6. Rates of application shall be minimized, and available acreage used to the greatest extent practical. In no case shall the application rate per acre exceed the crops' phosphorus removal requirements.
7. Applications should be made into existing vegetative cover, such as cover crops or small grain

crops whenever possible. Established hay and pasture fields may also be used. Vegetative cover shall be maintained as such until March 1.

8. If vegetative cover is not used, manure applications shall be made to land that has a minimum of 30% residue coverage, and is maintained as such until after March 1.

**Stackable manures that are temporarily stockpiled shall be stored under the following guidelines:**

Manure should be stockpiled outside and uncovered, only after all available storage is utilized to the fullest extent; this includes the storage of manure on the producing farm if the manure is to be transported off-site.

1. The manure shall be piled and peaked at least eight to ten feet high, and in a manner that will allow it to shed most of the rainfall.
2. The stockpile shall be located:
  - a. At least 100 feet from any surface water, drainage ditch, swale or gully; however, if a functioning filter strip or riparian buffer is in place, the setback may be a minimum of 35 feet from any surface water;
  - b. At least 100 feet from any public road;
  - c. At least 200 feet from any residence or neighboring property;
  - d. Above the floodplain of the 25-year, 24-hour storm;
  - e. Outside natural drainage ways; and
  - f. At least 150 feet from any wells, or 300 feet from a well when the well is located down gradient from the storage area.