

IMMAG - Iowa Manure Management Action Group

Commercial Nitrogen Application to Fields in DNR Manure or Nutrient Management Plans

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Research shows that the rate and timing of nitrogen application impacts how much nitrate is lost to Iowa waterways. For animal producers with a manure management plan (MMP), this nitrogen rate is determined in a specific way; considering among other things, prior year legume crops, manure applied in previous years, and planned commercial nitrogen applications. The primary purpose of the MMP program is to ensure that manure is applied at agronomic rates, minimizing the amount of nutrients lost to Iowa waterways.

For a variety of reasons, most confinement owners in Iowa apply manure in the fall. Some of these producers also apply a small amount of nitrogen in the spring to provide crops with a source of readily available nitrogen. However, when producers who have MMPs are considering applying commercial nitrogen in the spring they need to consider if that application is allowable based on the amount of nitrogen applied with manure in the fall.

The total amount of nitrogen from both commercial fertilizer and manure application must be accounted for in the MMP. DNR staff working with confinement owners have found a number of instances where commercial nitrogen is not being accounted for in the MMP. Failing to account for commercial nitrogen may result in an over-application of nitrogen which will likely increase the amount of nitrate lost to Iowa waterways. This over-application is also a violation of state regulations for confinements.

Confinement owners must be aware that if the maximum nitrogen rate is applied in the fall, they cannot apply additional nitrogen unless its need is verified by a late spring nitrate test. This includes all commercial nitrogen whether applied as a starter, herbicide carrier or nitrogen applied with phosphorus fertilizer (e.g. MAP, DAP). Consultants who are preparing MMPs for animal producers should make a point to discuss all these sources of nitrogen with confinement owners.

In addition to including the commercial nitrogen application in the MMP, state law requires confinements to keep records of commercial nitrogen application to document that the nitrogen was not over-applied on fields that received manure. This means that if a field received manure in the fall, any spring application of commercial nitrogen must be documented in the MMP records.

Spring is the ideal time to apply nitrogen due to the reduced risk of nitrate leaching out of the root zone. However, producers with an MMP must account for this nitrogen in their plans by reducing the amount of nitrogen applied with manure in the fall.

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Additional information can be found on the Iowa DNR's Animal Feeding Operations Web Page at: <http://www.iowadnr.gov/Environment/LandStewardship/AnimalFeedingOperations.aspx>

Editor's Note: Jeremy has explained the requirements for application of nitrogen on those fields in a manure management plan or nutrient management plan required by DNR. Producers who have nutrient management plans or Comprehensive Nutrient Management Plans with NRCS should consult their local NRCS field office for nutrient management planning requirements.