

## **NUTRIENT MANAGEMENT PLANNING IN IOWA**

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Nutrient management planning in Iowa can be a complex process. The degree of planning is dependent on the need for one or more different types of management plans to serve the different requirements of state agencies. While the objectives of the plans are the same, sound nutrient management and resource protection, the methods of planning are quite different.

Producers, their technical advisors, and agency staff are often confused as to what regulations must be met and what practices must be employed to meet the various goals of required and voluntary plans. The goal of this workshop is to present two types of nutrient plans used in Iowa and document differences and similarities in the nutrient management plans.

### **Introduction**

In Iowa, nutrient management plans are divided into two types, required or regulatory and voluntary.

#### **Regulatory**

The Iowa Department of Natural Resources (IDNR) requires manure management plans of confinement feeding facilities of a certain size. These plans address all manure and commercial fertilizer inputs and are the most widely developed plans in Iowa.

#### **Voluntary**

Producers who voluntarily choose to participate in the Environmental Quality Incentive Program (EQIP) through NRCS, 319 projects through IDNR, and Water Protection Fund projects through the Iowa Department of Agriculture and Land Stewardship (IDALS), may select to develop nutrient management plans. While the nutrient plans are required for some projects, participation in the programs is voluntary. These plans also account for all sources of crop nutrients.

Regardless of the type of plan, inputs are similar, but not required by all plans. All agencies allow the use of manure nutrient "book values" from research-based data collected by Iowa State University. The same applies for nutrient loss values based on method of application and nutrient availability. Producers are allowed and encouraged to use their own manure nutrient values obtained from sampling their manure. Nutrient applications are based on crop needs.



## **Manure Management Plans**

The State of Iowa began requiring submission of manure management plans (MMPs) in 1985 under House File 519. Plans are submitted to the Iowa Department of Natural Resources (IDNR) if confinement feeding operations meet any of the following criteria: 1) the operation has an animal weight capacity of more than 400,000 lbs of cattle or more than 200,000 lbs of animals other than cattle and the operation was constructed or expanded after May 31, 1985; 2) the operation has obtained or has applied for a construction permit after May 31, 1985; or 3) a person applies manure from a confinement feeding operation located outside of Iowa on land in Iowa.

Requirements of MMPs are specifically defined by Iowa statute. The maximum application rate is based on nitrogen needs of the crops to be grown. Other requirements include identifying tracts of land receiving manure, manure application rates, and the timing and method of application.

## **Nutrient Management Plans**

Nutrient management plans (NMPs) are required of some producers who choose to participate in certain voluntary programs. These programs include 319 non-point source water protection projects, Water Protection Fund (WPF) projects administered by the IDALS and IDNR, and EQIP administered by the USDA-NRCS. Some producers requesting technical assistance from NRCS for nutrient management implementation will also develop and implement a NMP.

NMPs are developed under the technical guidance of the NRCS 590 Nutrient Management Standard. This standard was revised and finalized in March 2001 and for Iowa includes implementation of the Phosphorus Index (PI) when land applying animal waste to determine risk assessment of phosphorus losses to the environment. Depending on the risk assessment outcome, the NMP will be developed on nitrogen or phosphorus needs of the crops.

## **Other Plans**

Comprehensive Nutrient Management Plans (CNMPs) were identified as part of the USDA and EPA "Unified National Strategy for Animal Feeding Operations." The previously discussed NMP is part of a CNMP. According to the National Strategy a CNMP "identifies action or priorities that will be followed to meet and clearly defined nutrient management goals at an agricultural operation." Components of a CNMP include: 1) feed management, 2) manure handling and storage, 3) land application of manure, 4) land management, 5) record keeping, and 6) other utilization options. CNMPs would need to be developed by a certified planner.

Permit Nutrient Plans (PNPs) were proposed by the EPA in proposed rules for Concentrated Animal Feeding Operations (CAFOs). PNP were put forth under the idea that a CNMP was too broad-based and the EPA was only looking to address nutrient management concerns from CAFOs and not a comprehensive plan that also addressed erosion concerns. PNP would also require development by a certified planner.

## **Future Considerations**

Management of all nutrients and nutrient management planning will continue to evolve in Iowa. Although it is too early to determine how the discussed plans will change it is clear that future planning efforts will require the services of certified planners. Certified planners will not only need to be trained to have the basic agronomic principles used in nutrient management planning, but will also need the capacity to determine which, if any, type of plan(s) their clients will need, how to implement and maintain those plans, and the capacity to provide follow-up as rules and regulations change in the future.

## **Electronic Resources for Nutrient Management Planning**

Iowa Manure Management Action Group (IMMAG)

<http://extension.agron.iastate.edu/immag>

Iowa Department of Natural Resources Manure Management Plan Forms

<http://www.state.ia.us/epd/wastewtr/feedlot/manure.htm>

Manure Storage Indemnity Fee Form

<http://www.state.ia.us/epd/wastewtr/feedlot/indem2.doc>

590 Nutrient Management Standard

<http://www.ia.nrcs.usda.gov/fotg/section4/pstands/590std.pdf>

The Iowa Phosphorus Index

<http://www.ia.nrcs.usda.gov/Technical/Phosphorus/phosphorusstandard.htm>

USDA/EPA Unified National Strategy for Animal Feeding Operations

[http://cfpub.epa.gov/npdes/afo/ustrategy.cfm?program\\_id=7](http://cfpub.epa.gov/npdes/afo/ustrategy.cfm?program_id=7)

EPA- Animal Feeding Operations – Proposed CAFO rules

[http://cfpub.epa.gov/npdes/home.cfm?program\\_id=7](http://cfpub.epa.gov/npdes/home.cfm?program_id=7)

Permit Nutrient Plans vs. Comprehensive Nutrient Management Plans

[http://cfpub.epa.gov/npdes/afo/nutrient.cfm?program\\_id=7](http://cfpub.epa.gov/npdes/afo/nutrient.cfm?program_id=7)