

Comprehensive Nutrient Management Planning

Farmstead and Field Nutrient
Evaluation and Treatment

New York CNMP

- Part of a process
- Certified Planners
- “Comprehensive”
- ID Resource Concerns – barnyard, milking center, silage storage, feed storage, manure and soil nutrient levels, erosion control, plant nutrient needs, manure applications, fertilizer applications
- Plan management or BMPs to reduce risk

Other Differences

- Differences in Process and Land Grant University approach
- NY guidelines:
 - are based on the sufficiency concept (no more recommended if a crop response is unlikely)
 - take into account manure applications, rotation credits, and soil nutrient supply potential
 - and are therefore conservative (not nutrient replacement based!)
- Fertilizer sales information combined with crop production and animal populations in NY indicate that, on average across the watershed, there is a negative nutrient balance for nitrogen and phosphorous

Cutting Edge Tools

- ***Nitrate Leaching Index (NLI):*** The NLI is an indicator of the potential for nitrate to reach groundwater based on soil hydrologic group and 10 year average precipitation data. All fields are evaluated, and high risk fields are identified and managed appropriately.
- ***New York Phosphorus Runoff Index (PI):*** Required for all fields, the PI is designed to identify fields or portions of fields that are at highest risk of contributing phosphorus (P) to lakes and streams so that they can be properly managed.
- ***Precision Feed Management (PFM):*** PFM is a continual process which integrates feeding and crop management to provide adequate, not excess, nutrients to the animal, a majority of which nutrients are derived from homegrown feeds, for the purpose of maintaining environmental and economic sustainability.
- ***Cornell University Corn Stalk Nitrate Test (CSNT):*** CSNT interprets available N in a field – low, optimal, and excess to evaluate N management and inform management decisions for the following year. Fields with excessive CSNTs are identified and treated appropriately, potentially with other tools to further evaluate risk.
- ***Illinois Soil Nitrogen Test (ISNT):*** ISNT determines a field's likeliness to respond to additional N applications. Fields that test above the agronomic threshold will have sufficient N to supply a corn crop with all its N needs that year.
- ***Cornell University Adapt N tool:*** A new web-based decision support tool linked to a computer model and high-resolution climate data that helps adaptively manage N inputs corn. It uses model and weather data to recommend how much N fertilizer to apply on a particular field in a particular year to reduce environmental losses.