Illinois Fertilizer & Chemical Association
Supply • Service • Stewardship

BEST MANAGEMENT PRACTICES FOR FERTILIZER APPLICATION IN ILLINOIS

Go to www.ifca.com and click on "Illinois Soil Temperature" to view bare soil 4-inch temperatures throughout the state. The guidelines below are taken from the Illinois Agronomy Handbook which is available at http://iah.aces.uiuc.edu/ Please contact IFCA at 309.827.2774 for assistance.

Procedures for Determining Nutrient Needs

1. Determine cropping plans (crop rotation for 4 years) for the field(s) to be included in the plan.
2. Set yield expectation for each crop in the rotation for each field. This expectation should be based upon actual yield records for the field for the last 5 years, estimate of yield potential for the major soil type in the field provided by University of Illinois publications, or yield records from an adjacent field that is similar in soil type and management.
3. Calculate nutrient removal based on expected yield.
4. Determine inherent fertility level of field(s) through testing of soil samples collected according to the sampling procedure recommended in the Illinois Agronomy Handbook. At a minimum, all soil samples will be tested for pH, phosphorus, and potassium using the procedures recommended by the College of Agriculture at the University of Illinois. Since there is no soil test that accurately predicts nitrogen need under Illinois conditions, the recommendation should be based on the procedure recommended in the Illinois Agronomy Handbook.
5. Determine the quantity of nutrients available from organic nutrient sources such as livestock manure, sewage sludge, etc. Estimates of nutrient availability shall be based upon scientifically based nutrient availability tables published by the University of Illinois. These estimates must take into account the release rates of organically bound nutrients and the potential for volatility losses depending on method of storage, handling, and application.
6. Determine the quantity of nutrients that will be available from previous legume crops.
7. Calculate total nutrient needs for each field by summing the amount needed to build the soil test to a minimum level plus the amount needed to replace that removed by the expected yield.
8. Establish the rate of supplemental nutrient need by subtracting credits for organic sources and/or previous legume crops from total nutrient needs determined in step 7.

Caution: The total rate of nutrient application shall not exceed the amount recommended in the IL Agronomy Handbook. The exception will be that farmers will be allowed to apply adequate phosphorus and/or potassium to meet the needs of 2 succeeding crops in the rotation.

Fertilizer Application Timing and Methods

a. No fertilizer--including organic or inorganic--shall be applied on frozen ground when slope exceeds 5%.

b. Nitrogen shall not be fall applied for corn the following year on sandy soils or on any soil south of a line extending from approximately Jerseyville, IL to West Union, Illinois.

c. Anhydrous ammonia shall not be fall applied until soil temperatures have reached and will remain below 60 degree F when a nitrification inhibitor is included. If no inhibitor is included, not before temperatures have reached and will remain below 50 degree F. Even if the above temperatures are reached earlier in the season, no fall nitrogen shall be applied before the 2nd week in October in the first 3 tiers of counties in Northern Illinois or the 3rd week in October in Central Illinois. Soil temperature measurements shall be taken at 10 am at a 4-inch depth in the field in question. Go to www.ifca.com for daily soil temperatures.

d. Ammonium sulfate shall not be applied until soil temperatures have reached and will remain below 50 degree F.