

BAY FARMS On-Farm Network Program Check list

**Corn Adaptive N Management
Nutrient Management CBWI and EQIP Guidance**

BENEFITS

Nitrogen management decisions can be improved by use of in-season and late season N assessment tools. EQIP encourages eligible farmers to use these tests on their farms.

Standard Agronomy Guide nitrogen (N) recommendations, 1 lb of N per bushel of corn expected yield, are the starting point for improved N management. This base recommendation is calculated to account for the many variables that influence nitrogen availability during the growing season but some, like the weather, cannot be predicted accurately. Farmers using manure as an N source can get better information on true N availability at sidedress time by using the Presidedress Soil Nitrate Test (PSNT) or the Chlorophyll Meter. These tests evaluate whether soil N released from organic sources like manure or alfalfa residues will be sufficient for optimal corn yields or if additional N fertilizer is needed. Delaying the decision to apply N fertilizer until after one of these tests can save you money by optimizing N fertilizer rates applied.

Late in the season, the Cornstalk Nitrate Test (CSNT) can be used to evaluate how well nitrogen application rates matched what the crop needed. This test tells whether the corn plant had enough nitrogen, too much nitrogen, or too little for optimum yields. The CSNT can be used on any corn field whether manure was applied or not.

DESCRIPTION of Advanced Nitrogen Management options:

Producers will agree to practice one or two advanced corn nitrogen management tests during the growing season. The advanced nitrogen management tests are:

- *Pre-sidedress Soil Nitrate Test (PSNT)*
- *The Early Season Chlorophyll Meter Test for Corn (chlorophyll meter)*
- *The Late Season Cornstalk Nitrate Test (CSNT)*

Based on results of either the PSNT or chlorophyll meter tests, planned N rates for corn may be adjusted during the growing season to accurately meet the N needs of the corn.

The CSNT, a late season assessment, reports whether corn had the right amount of N, too much N, or too little N during the growing season. This assessment combined with actual nutrient management records is useful for making future management decisions.

Penn State references for these tests are listed below and can be obtained by through the Cooperative Extension office in your county.

Participating producer may select from the following options:

NM Advanced CBWI and EQIP option	Advanced Nitrogen Management tests
Corn Nutrient Use Efficiency	Use of <u>one</u> test: <ul style="list-style-type: none"> • PSNT before sidedressing <u>OR</u> • Chlorophyll meter before sidedressing <u>OR</u> • CSNT in the late season
Adaptive N for Corn	Use of <u>two</u> tests: <ul style="list-style-type: none"> • PSNT or chlorophyll meter before sidedressing AND • CSNT in the late season

PENNSYLVANIA

PSNT and the chlorophyll meter tests are recommended when corn is grown on ground that has received manure since harvest of the last crop or on ground that is rotating out of alfalfa. Eligible fields should receive no more than minimal fertilizer N (usually less than 15 lbs) before sidedress time.

The CSNT is recommended for use on any corn field regardless of N management.

Participants agree to follow Land Grant University guidance for the selected management activities and to provide documentation that the tests have been completed.

References

Crop Management Extension Group, Crop and Soil Sciences Department, College of Agricultural Sciences, Penn State:

- The Agronomy Guide, 2009-2010, Part 1, Section 2 Soil Fertility Management
- Agronomy Facts No. 17 Pre-sidedress Soil Nitrate Test for Corn
- Agronomy Facts No. 53 The Early-season Chlorophyll Meter Test for Corn
- Agronomy Facts No. 70 Late Season Cornstalk Nitrate Test

ELIGIBILITY

Participating producers are required to implement the nutrient management element of their CNMP or 590 nutrient management plan for corn acres enrolled in this program option. Implementation of a CAFO, CAO, or VAO nutrient management plan meets this nutrient management implementation requirement. The nutrient management implementation requirement for a non-AFO is NRCS Conservation Practice Standard Nutrient Management 590.

Animal Feeding Operation (AFO) operators participating in this program are required to have a CNMP for their operation. NRCS may offer program payments to cover part of the costs of developing a CNMP. Discuss option with your local NRCS District Conservationist

An AFO is a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

- Animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and
- Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, and where applicable sex, marital status, familial status, parental status, religion, sexual orientation, genetic information political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S. W., Washington, D. C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.