



JEFFERSON COUNTY
CONSERVATION DISTRICT

Conserving Natural Resources for Our Future

Agriculture Newsletter
Spring - 2017



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Free CREP Workshop

Tuesday, April 4th
6:00 pm - 8:00 pm

At the Jefferson Conservation District
Located ¼ mi. North of I-80, Exit 81 (Hazen)
on Route 28 in front of the Jefferson County
Fairgrounds

The Conservation Reserve Enhancement Program (CREP) pays farmers and other landowners to conserve and enhance their land. In this workshop, you'll learn about the benefits of CREP, riparian buffers, how to identify and control the spread of noxious & invasive weeds on your land, and safe herbicide use. Speakers include Mike Kerr of the Farm Service Agency, Nicole Carutis of the Penn State Extension, Megan Whitlatch of the Jefferson Conservation District, and John Brundedge of the DCNR - Bureau of Forestry.

2 pesticide credits offered in the
following categories:
1 core, 1 private category (5, 10, 18)

Refreshments provided
Free soil test kits will be available

**To register, please contact the District
by March 31st at (814) 849 – 7463**



Conservation Reserve Enhancement Program

Financial and other support for the CREP Outreach Program Office Mini-grant Program is provided by the Pennsylvania Association of Conservation Districts, Inc. through a Growing Greener Watershed Protection grant from the Pennsylvania Department of Environmental Protection and with additional support from USDA-NRCS.



1514 Route 28 • Brookville, PA 15825 • Tel (814) 849-7463 • Fax (814) 849-0825 • www.jeffersonconservation.com

Farm Succession Planning Workshop

Thursday, March 30, 2017
9:30 am – 3:00 pm
At Hoss's Steak and Seahouse
1198 Wayne Ave, Indiana, PA 15701

Deciding long-term plans for a farming business is difficult. This workshop, hosted by the Penn State Extension, will provide guidance for how to approach the farm succession planning process, touching on some of the key factors with experienced advisors and educators - communication, legal issues, and evaluation of the financial situation.

This workshop is being provided **free of charge**, thanks to USDA/NIFA grant funding. Pre-registration is necessary. Please register by March 24 to allow for appropriate accommodations. Plan to purchase lunch at your own expense from the Hoss's Restaurant, the venue for this workshop.

To register, contact Andrew Sandeen of the Penn State Extension at 724-465-3880 or register online at extension.psu.edu.



Free PA Riparian Forest Buffer Handbooks

A new publication is now available for new CREP contract holders in Pennsylvania. This handbook is designed to assist new CREP participants as they move forward to implement the CREP riparian forest buffer practice. The handbook includes useful information on the financial payments and issues related to their CREP contract, and helpful resources on the management and maintenance of the conservation practice. Contact the District for a free hardcopy.



Using a Chlorophyll Meter to Determine Nitrogen Needs for Corn

A Chlorophyll Meter is a small handheld device that can measure the chlorophyll content of a plant. Chlorophyll is the green pigment found in the chloroplasts of plant cells essential in photosynthesis.

Chlorophyll content in leaves can indicate the nitrogen status of a plant as they are closely associated with one another; therefore, using a Chlorophyll Meter can help you determine if supplementary Nitrogen is needed to meet your yield goals.

There are two ways to use the chlorophyll meter for corn plants; the *High-Nitrogen Reference Value Chlorophyll Meter Test Method*, and the *Two-Step Chlorophyll Meter Test Method*.

Chlorophyll Meter Reading Procedures

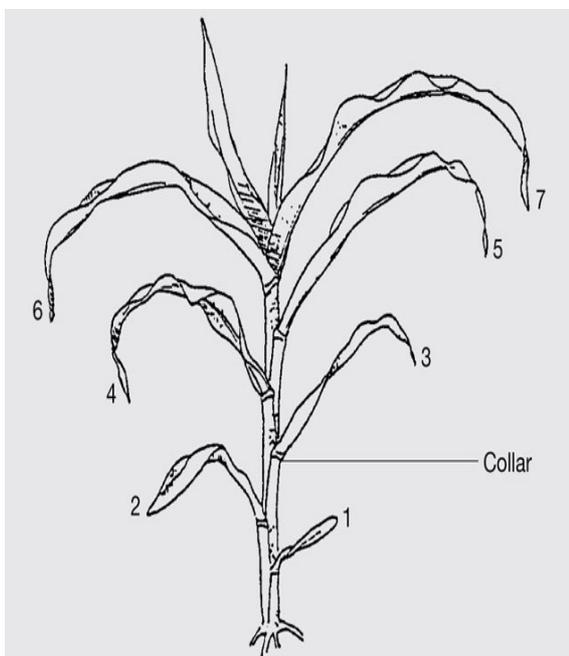
The procedure to take readings is the same for both methods. **Readings must be taken at the 6-8 leaf stage of the corn plant (When the height of the corn is generally 10" - 20"). In addition, fields tested should not have received more than 15 lbs N/acre in the starter fertilizer as any more than this will invalidate the results.** A brief summarization of the procedure is below.

- 1) Corn plant leaves chosen for testing should be representative of the entire field. Avoid damaged and/or diseased plants, and sample corn plants that are spaced relatively evenly from one another.
- 2) Once the meter is calibrated, readings should be taken on leaf 5 of each plant at $\frac{1}{2}$ inch from the leaf edge and $\frac{3}{4}$ of the leaf length from the base of the leaf.

3) Insert the leaf within the meter head slot, and close. The meter will beep with a chlorophyll content reading of that plant.

4) Once readings are taken on 30 corn plants, an average of the 30 readings can be taken. This reading can then be used to determine Nitrogen needs.

Figure 1: Illustration of corn plant showing leaf number & collar region. This corn plant is at the 6-leaf stage as it is fully emerged and has a collar. (Penn State Ext. Agronomy Facts 53)



High-Nitrogen Reference Value Chlorophyll Meter Test Method

This technique involves establishing a reference area within a field that has received ample nitrogen to meet the corn’s needs. Fertilizer should not be applied later than the spike stage in the reference area to avoid burning the plant’s leaves. You’ll want to mark this area so you’ll be able to locate it again once the plants reach the 6- leaf stage. Meter readings are taken in this reference area and compared to the readings in the rest of the field. If the average meter reading of the field is < 95% of

the High-Nitrogen Reference Area, a Nitrogen recommendation can be calculated relative to the High-Nitrogen Reference Area¹.

This method is preferred as other factors play a role in the chlorophyll content of corn leaves; including cold stress, hybrid traits, and the temperature of the soils. Having a high-N reference area to compare the rest of the field will provide a more accurate indication if the chlorophyll content of the leaves are primarily the result of environmental/genetic factors or mostly the result of Nitrogen needs.

Two-Step Chlorophyll Meter Test Method

This method is only applicable to fields that either have had manure spread on them since the harvest of the previous crop, and/or for corn fields that have had a forage legume as a preceding crop (such as alfalfa/grass, clover). Once an average of 30 chlorophyll meter readings are taken, one of the two tables below can then be used (depending on leaf stage) to determine whether sidedressing Nitrogen is recommended, and how much.

Table 1. Interpretation of chlorophyll meter readings taken at the 6-leaf stage in fields with a recent history of manure or a forage legume without a high-N reference plot.

Average Meter Reading for the Field	Nitrogen Recommendation
Less than 42.0	Sidedress 80 lbs N/Acre
42.0 – 45.9	Test again or sidedress 50 lbs N/acre
≥ 46.0	No sidedress N needed



Table 2. Interpretation of chlorophyll meter readings taken at the 7 to 8-leaf stage in fields with a recent history of manure or a forage legume without a high-N reference plot.

Average Meter reading for the Field	Nitrogen Recommendation
Less than 43.0	Sidedress 50 lbs N/acre
≥ 43.0	No sidedress N needed

¹A more in-depth guide on using a chlorophyll meter to test corn (including the equation used to calculate Nitrogen recommendations using the High-N Reference Area Method) can be found from Penn State *Extension's Agronomy Facts 53: The Early Season Chlorophyll Meter Test for Corn* (extension.psu.edu).



The District has a Chlorophyll Meter available for farmers to use! Contact Megan Whitlatch at 814-849-7463.



**CREP Workshop
 Tuesday, April 4, 2017
 See page 1 for details**

