



EARLY SEASON CHLOROPHYLL METER NITROGEN TEST FOR CORN

Doug Beegle and Dwight Lingenfelter Penn State

The chlorophyll meter is a portable, hand-held device that instantaneously measures the greenness (or chlorophyll content) of a plant in the field.

Nitrogen (N) is closely associated with leaf chlorophyll; thus chlorophyll meter readings of corn leaves reveal the N status of the plants.

The early-season chlorophyll meter test consists of taking meter readings of corn leaves when plants are between the six- and the eight-leaf stages (when plants are about 10 to 20 inches tall), which allows time to sidedress if necessary.

Meter readings taken from plants in a field are compared

to readings taken from high N reference plots that have been adequately fertilized with N fertilizer. Additional N is required for optimum corn yield if the average meter reading of the field is less than 95 percent of the high N reference value. An N fertilizer estimate can be calculated using meter

readings and field factors.

Advantages of the early-season chlorophyll meter test:

- Chlorophyll meter readings are quick, easy and provide instantaneous values.
- No samples need to be collected, processed, and sent to a laboratory for analysis.
- Cost of sampling involves only labor costs.
- N recommendations are accurate (comparable to the Pre-sidedress Soil Nitrate Test).

Disadvantages of the early-season chlorophyll meter test:

- Initial expense is high (the meter costs about \$1,400).
- Early-season corn leaf chlorophyll levels are affected by hybrid selection and environmental stresses; therefore, high N reference plots must be established.
- This test is not applicable to fields that have received a preplant or an at-plant N fertilizer application beyond starter

N.

This test provides another option in addition to the already widely used pre-sidedress soil nitrate test for corn (PSNT) for assessing nitrogen status of the corn crop and making economically and environmentally sound N recommendations. Both tests appear to give similar results.

This test has been studied extensively in Dr. Richard Fox's research program here at Penn State and at other research centers. Also, we conducted an extensive three year

field evaluation of the test involving county agents, crop consultants, and fertilizer dealers who used the test under actual farm conditions. On that basis, we are now recommending that the early season chlorophyll meter nitrogen test for corn can be used as a nitrogen management tool in Pennsylvania.

A new Agronomy Fact sheet #53 "The Early-Season Chlorophyll Meter Test for Corn" has been published which gives all of the details on this new test.



With new grain storage now you're investing in your future

With BROCK BINS, the quality of that future is for certain. That's because BROCK offers the best quality grain bins on the market today — with more features that mean not only more convenience but also longer life. Here are a few of the BROCK features that make us your No. 1 bin buy:



BROCK offers quality holding bins in diameters 6 thru 21-ft — to meet any need you have

Choice of conventional or rust-proof black poly-coated bin assembly bolts Both are highest grade to protect your investment

Choice of 45 or 60-degree sloped hopper bottoms

BROCK's unique walk-thru door has no tie bars & needs no tools to open door "boards" Makes life easier

High rise (3" high) roof ribs provide tight fit & added roof strength

Adjustable stiffener ring increases roof strength & eliminates sag

Strong 25-lb per sq ft uniform load rating makes our roof the one most producers prefer

High-strength drying floor, floor supports, and fan transitions let you keep grain in top condition for top price

For more information and prices about the world's No. 1 quality bins — your No. 1 grain marketing tool — see your BROCK dealer or contact us.

BROCK®



PHONE 717-432-9738
FAX NO. 717-432-8389

1248 SOUTH MOUNTAIN RD., DILLSBURG, PA 17019

BUYING SOYBEANS AND SHELLED CORN

Prompt Payment
Competitive Prices
Picked up at your farm or delivered to Milton, PA

SHOOP GRAIN CENTER
R.D. 1, Box 282, Milton, PA 17847
717-524-0325
35 Years of Service

PEERLESS CHALLENGER SILO MILL WITH BLOWER OR AUGER DISCHARGE

Model 20091-Challenger Silo Mill features a 20' portable ear corn roller mill with a 4-bar reel 12" hydraulic auger feeder used tractor hydraulics. 56" blower with 9" flanged discharge and overrunning drive from mill to blower blows rolled high moisture ear



Roll Ear Corn... uniformity, shreds shuck and cracks kernel

High Capacity... will granulate up to 1,000 bushels of ear corn per hour

Swing Feeder... variable speed, uses tractor hydraulic system

PEERLESS CHALLENGER SILO MILL

USED 10x30 Peerless Silo Mill Auger Discharge, Good Shape B.O.

USED Portable Roskamp 30"Rolls, PTO With Blower. \$3,500

Peerless Stationary Hammermill Kits Available To Make Grinder Blowers or Grinder Auger Discharge Units

F.M.I.-FEEDMOBILE

727 Furnace Hills Pk
Lititz, PA 17543

Phone 717-626-2680

Fax 717-627-4948