



Agronomy Notes

Capital Region

112 Pleasant Acres Rd., York, PA 17402 (717) 840-7408

Capital Region Extension Agronomy Team

EXTRA EDITION

August 2005

Commercial Agronomic Pesticide Applicators and Manure Haulers School

- Who:** Agronomic Commercial Pesticide License Holders, Manure Haulers and Brokers
When: Thursday, September 8, 2005 from 9:30AM - 3:30PM
Where: Penn State Southeast Research and Extension Center, 1446 Auction Rd., Manheim, PA
Cost: \$10.00/person – includes light lunch
Credits: 8 core and 8 category 01 pesticide & Nutrient Management Plan Writer CEC's: 3.0 credits

Please Note: Certification will be required for many manure haulers and brokers. The required certification process will begin in January 2006. For more information contact Robb Meinen at 814-865-2987.

Topics for Commercial Pesticide Applicators

- Spill Management
- Pesticide Industry Updates
- Sprayer Clean Out and Winterizing
- Staging Crops for Label Requirements
- Light Bars- A Practical Alternative to Other Marking Systems
- Sprayer Operation
- Fungicide Selection Parameters
- Using the Penn State Agronomy Guide for Approved Tank Mixes
- Record Keeping
- Personal Protection
- Winter Annual Weed Control
- Perennial Weed Control
- Applications for Rust, Liquid N, Herbicides, Proper Boom Height and Spacing Adjustments for Custom Rigs
- Carrier Discussion - How Low Can You Go?
- Predicting Pest Outbreaks Using Web Resources
- Resistance Management Discussion

Topics for Manure Haulers & Brokers

- Introduction Act 49, Commercial Manure Hauler and Broker Certification Act Update
- Soil Compaction Exercise
- Safety Concerns with Handling Manure
- Calibration of Manure Application Equipment
- Phosphorus Index Exercise
- Manure Spill Response

Commercial Agronomic Pesticide Applicators and Manure Haulers School, September 8, 2005 from 9:30A to 3:30P at Penn State Southeast Research and Extension Center in Landisville, 1446 Auction Road, Manheim, PA 17545. For more information, contact Del Voight (717) 270-4391 or Rob Meinen (814) 865-2987.

Commercial Agronomic Pesticide Applicators & Manure Haulers School Registration

Return by August 15 to: Penn State Cooperative Extension
2120 Cornwall Rd., Suite 1
Lebanon, PA 17042

Name: _____

Address: _____

City/State/Zip: _____

Phone: _____

Attending: _____ \$ Enclosed: _____

Credit Card Payment:

(credit card billing address must match registration address)

Print Name: _____

Signature: _____

VISA ___ M/C ___ Expiration Date _____

Card Number: _____

Make checks payable to: PSCE Program Fund



Directions:

From the west, take Pa 283 east toward Lancaster, exit at the Esbenshade exit, turn left at the stop sign and take the 1st road right (Auction Road). Continue to stop sign, turn right (Erisman Road), take the 1st road left (Auction Road) to Penn State sign and turn left.

From the east, take Pa 283 toward Harrisburg, exit from 283 at the Salunga Exit. At the stop sign, turn right onto Spooky Nook Road, take the 1st road left (Shenk Road at the Armstrong warehouse), proceed to covered bridge and turn left through the covered bridge. Take the 1st road right (Auction Road), and at Penn State Sign turn left.

From the north or Pa Turnpike, take Pa 72 south toward Lancaster and continue through the town of Manheim. At the traffic light by the Manheim Auto Auction, turn right onto Auction Road, proceed to stop sign, turn right then immediately left back onto Auction Road, continue to Penn State sign and turn right.

Registration is open to the first 200 registrants so be sure to register before August 15, 2005. Payment during registration at the Southeast Research and Extension Center in Landisville will be accepted.

Penn State encourages persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, please contact us at (717) 840-7408 in advance of your participation or visit.

Insect Pests

Corn Rootworm Adults – By the time you receive this, we should be seeing high numbers of adults in many corn fields around the region and we are still in the window for scouting fields to determine the need of an insecticide or Bt-corn hybrid next year. Dr. Dennis Calvin reports that late planted fields should be very attractive to female CRW beetles laying eggs since the majority of these fields should be silking. The last silked fields are the only fields with fresh pollen and silks to attract females. These fields are likely to see high numbers of adults and a high number of eggs deposited in the field increasing the field's likelihood of needing protection against the pest next year. In fields that are at least 50% brown silk, silk clipping will not have any effect on grain fill and yield. For fields that are still in green silk, 5 beetles per ear or more and the silks are clipped into the silk tunnel are at or above the economic threshold and interference with pollination and kernel fill is likely. These fields should be sprayed (see Agronomy Guide for materials and rates).



Potato Leafhopper - In some areas PLH pressure continues to be high, but in others numbers are beginning to decline. Dr. Dennis Calvin reports that by about August 20, PLH numbers typically begin to decline due to females stopping their reproduction. This is probably due to a response to increasingly shorter day lengths and cooler temperatures indicating the growing season is coming to an end. After August 20 the economic thresholds do not holdup because they are based on normal population buildup from reproduction. To make treatment decisions after this date, I would double the recommended thresholds which is probably very conservation toward treating the field.





LATE SEASON CORNSTALK NITRATE SUBMISSION FORM

For additional information go to: www.aasl.psu.edu

Note: Please send payment (\$10.00 per sample) with samples. Check made payable to Penn State University.

Grower Name (Please Print):		Send copy to:
Business Name:		Business Name:
Street or R.D. No.:		Street or R.D. No.:
City, State, and Zip:		City, State, Zip:
Telephone No.:	Fax No.:	E-mail:

Note: This information will be printed on your final report for your record-keeping purposes and to assist you with making nitrogen management decisions in the future. This information, in summarized form, may also be used for further development of Penn State's research and extension nutrient management programs.

Lab Use Only (leave this column blank)	Field ID (10 digits or less)	Expected Corn Yield	Nitrogen Fertilizer Applications	Manure Application			Did you use the PSNT or Chlorophyll Meter Test on these fields?
				Enter the grain or silage yield you expect in this field.	Enter the lb N/A for any N applications you made.	Circle the type of manure applied to each field	
Sample 1		_____ bu/A or _____ ton/A	_____ Early Pre-plant _____ Near Planting _____ Sidedress	Dairy Beef Swine Poultry layer Poultry Broiler Other _____ None	_____ gallons/A or _____ ton/A	Fall Winter Spring	PSNT Chlorophyll Meter
Sample 2		_____ bu/A or _____ ton/A	_____ Early Pre-plant _____ Near Planting _____ Sidedress	Dairy Beef Swine Poultry layer Poultry Broiler Other _____ None	_____ gallons/A or _____ ton/A	Fall Winter Spring	PSNT Chlorophyll Meter
Sample 3		_____ bu/A or _____ ton/A	_____ Early Pre-plant _____ Near Planting _____ Sidedress	Dairy Beef Swine Poultry layer Poultry Broiler Other _____ None	_____ gallons/A or _____ ton/A	Fall Winter Spring	PSNT Chlorophyll Meter

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Late Season Cornstalk Nitrate Test

Nitrogen (N) management is one of the most challenging areas in corn production because of the many factors that influence N availability including: form of N applied, timing of application, impact of weather, etc. This is especially true when manure is part of the system. Standard N recommendations take into account many of these variables and early in-season tests such as the Pre-sidedress Soil Nitrate Test (PSNT) and Chlorophyll Meter test are very helpful in reducing the uncertainty in N recommendations. While this uncertainty can never be completely eliminated, it can be minimized. A key to improving N management over time is having reliable feedback on how well your N management program is working. While good yields and dark green plants are clear indicators of adequate N, they do not tell you if you have too much N which can especially be a problem for fields to which manure has been applied. Similarly, visual symptoms of N deficiency may be observed late in the season, but they are not always associated with decreased crop yields.

The Late Season Cornstalk Nitrate Test has been demonstrated to be a reliable end-of-season indicator of crop N status based on research performed throughout PA as well as other states. It provides a good assessment of whether the crop had the right amount of N or too much N or whether it ran out of gas. This information combined with records of N management can be very useful for making future management decisions. While you could test all fields, testing a few representative fields will probably be adequate to provide a good assessment of your N program.

To perform this test, use the submission form and sampling instructions provided here. Sampling instructions should be followed carefully. Send the completed submission form and samples with payment to the Agricultural Analytical Services Laboratory.

Sampling Procedure

WHEN: Stalk sampling can be done anytime between about the 1/4 milkline stage of the grain and up to 3 weeks after the grain forms a blacklayer. Depending on planting date, location, etc., this sampling window usually is from about the later part of August until the later part of October. If any of your fields will be taken for silage, you will need to sample before the silage harvest (often about 1/2 milkline stage).

WHAT: Samples will be 8-inch long sections of corn stalk (subsequently cut into two inch long segments) taken 6 inches above the ground. A stalk section from each of 10 representative plants would be a good sample size for a field.

HOW: A pair of sharp hand-pruning shears are probably the best tool for taking stalk samples. Lopping shears can be used (especially for extra thick stalks), but usually aren't as convenient to carry around a field. A machete or corn knife will work, but not as nicely as shears. You can use a tape rule, yard stick or marked rod for the measurements. One possible shortcut measuring system is to mark your pant leg 14 inches high and use this to measure for your first cut. After discarding the top of the plant, then use your pruning shears which may be about 8 inches long to measure for your second cut. This should result in an 8-inch stalk sample taken and a 6-inch stalk stubble left in the field. To facilitate processing your stalk samples, please cut each of your stalk sections into approximately two inch long segments before you send them to the lab.

SAMPLE HANDLING: If possible, dry the samples immediately or send them to the lab as soon as possible after collection. If there is more than a day between sampling and sending, store sample in paper bags and refrigerate (don't freeze). To prevent molding, do not store samples in plastic bags, or other non-breathable container, for an extended period of time. Package the sample(s) in cardboard box or other container. Send the sample, completed submission form and payment (\$10.00 per sample) to the address listed below.

Make check payable to: *Penn State University*

Submit samples to: **Agricultural Analytical Services Laboratory**
Tower Road
The Pennsylvania State University
University Park, PA 16802