Announcements

WEEKLY FIELD CROP SCOUTING

Come scout crops with me for one hour, ask questions, see some cool bugs, diseases, and weeds, and earn one pesticide credit.

Tuesday, July 24, Albany County
10 am – Stanton Farm, 80 Biers Rd, Coeyman Hollow
1 pm – Brian Wilson farm, 668 Middle Rd., Knox

FYI:

Participate in Corn Fungicide Trials: Dr. Gary Bergstrom, Cornell Field Crops Pathologist, is looking for farmers to be part of a state-wide study evaluating the effectiveness of corn fungicides. Educational materials to support the setup of on-farm corn foliar fungicide strip trials are available on line. These materials include a how-to guide in setting up paired strip trials as well as collecting data from strip trials. These materials can be found on [http://fieldcrops.org/Corn/Pages/ManagingDiseases.aspx](http://fieldcrops.org/Corn/Pages/ManagingDiseases.aspx). If you would like to set up a trial, please call me (Aaron Gabriel, 380-1496) so that I can help out.

Participate in an Study of Sulfur and Potassium Requirements in Alfalfa: Dr. Quirine Ketterings, Cornell Nutrient Management, is looking for farmers to participate in a study evaluating the sulfur and potassium requirements in alfalfa.
Two fields per farm are needed. One likely to be deficient (sandy, no manure) and the other likely to have sufficient sulfur and potassium. Go to http://nmsp.cals.cornell.edu/NYOnFarmResearchPartnership/index.html to find the project outline. Call me if you are interested in participating (Aaron, 380-1496).

Aaron’s Comments

Weather— I am sorry that I can not provide the weather data this week. I am not in the office. The rains Sunday and Monday night were welcomed, but spotty. I got the least at my house (0.18”), while I had reports of 0.8” and more in other areas.

Corn: Northern and western corn rootworm adults (CRW) are emerging from the soil in Washington County (and I suspect all the counties that I cover). They will lay eggs in the fields where they are feeding on the silks and tassels. These eggs will hatch next year. So if corn is grown in the fields where eggs are laid, control measures should be used (when beetles average one per plant) in 2013. Control options include a high dose of seed-applied-insecticide (Poncho, Cruiser) for moderate infestations (2nd year corn), or hybrids with a Bt-rootworm gene or a T-band of insecticide for high infestations (3rd or more years corn).

I had to look hard, but I found northern corn leaf blight and gray leaf spot lesions in corn this week (Washington County). Look for disease lesions in parts of the field where dew and moist are most prevalent. Dry weather should inhibit any severe outbreak, but keep an eye out for disease progress. Fungicides are needed when lesions are found on leaves above the ear.

Alfalfa: Potato leafhoppers (PLH) continue to be the pest of interest. Check alfalfa for this pest and spray if you will not be harvesting soon. Check fields after spraying to be sure PLH are not infesting the regrowth.

Soybeans: I did not look at soybeans this week, but spider mites, aphids, and PLH continue to be a concern. Keep an eye out for foliar disease as well.

Grasses: This continues to be an unusual year. I have been finding just one or two (very few) armyworm larvae in my sweep net after 10 sweeps in grass fields. But in one field in Jefferson County, Mike Hunter (CCE) found a high infestation of second generation armyworm larvae. They were small, but numerous. This field which was hit hard by the first generation, is being hit hard again by the second generation. This is not what normally happens. Usually there is no problem from the second generation. So, be watchful and monitor grass fields for armyworm, just in case the second generation stays local.

Pastures: Now that some rain has come, be sure to let pastures grow a bit and rejuvenate before grazing them again. I know you need to feed your cattle, but for long-term pasture health, give the plants plenty of time to regrow.
Weekly Field Crops Pest Report
This is a seasonal scouting report providing information on presence, identification, and management guidelines for significant field crop pests in New York. This report provides timely information to help users learn about, and better anticipate, current and emerging problems and improve their integrated pest management efforts.
The report is written by Ken Wise and Keith Waldron, Extension Educators with Cornell University’s New York State IPM Program for Livestock and Field Crops in collaboration with other Cornell Cooperative Extension personnel.
July 12, 2012, Volume 11 Number 13

View from the Field
Potato leafhopper (PLH) populations remain high on alfalfa statewide. Many extension educators report extremely high levels. The hot weather and drought stress on the alfalfa seem to promote population explosions of PLH. If you have planted PLH-resistant alfalfa, you most likely are very pleased.

True Armyworm AGAIN!! It seems like we cannot catch a break. Several extension educators report small armyworm larvae in grass fields this week. The timing is about right for this to be the 2nd generation of true armyworm. This means that adults have emerged from the pupa of the 1st generation and migrated to new fields in search of grassy areas to lay eggs. Historically the second generation has not been an economic problem. However, given this year’s massive armyworm infestation, particularly in western NY suggests that we be prudent and KEEP A SHARP EYE on corn and grasses for armyworm larvae. Most small grains are being harvested now and not at risk. WNY Crop Management Association workers report finding very young (1/4”) armyworm larvae while sweeping grass hay fields this week. They also report sweep catches were much higher in the early morning compared to later in the afternoon. This would be consistent with the insect’s nocturnal activity preference.

While doing a TAg soybean meeting in Lewis County this week, we found a disease called frogeye leaf spot. While frogeye leaf spot (Cercospora sojina) can be a serious disease in the southern US, it is only occasionally a problem in cooler climates like New York. In the Midwest its severity and occurrence has increased over the last 5 years. We found it every year we scouted for soybean rust from 2005 to 2010. Frogeye leaf spot is a fungus that can overwinter on residue left on the soil surface. Rain hitting the surface of the residue will dislodge the fungal spores and infect the young soybean leaves. (It can also be transmitted through infected seeds.) It takes 7 to 14 days from infection for symptoms to appear. From each infection spot, more spores develop and can spread widely to other areas and fields.

Frogeye leaf spot is a “polycyclic disease”—meaning that given the right conditions, spots can appear and spores develop several times throughout the growing season. Infections that start later in the season (R5) have little impact on yields. Infections that start before flowering develop over a longer time and can seriously affect yield.

Frogeye leaf spot likes it hot with long spells of wet and moist weather. Look for small brownish spots on leaves. These lesions develop grayish “frogeye” centers Over time they merge and enlarge, showing on lower leaf surfaces as well.
Several extension educators report potato leafhopper nymphs in soybeans. Soybean aphids are increasing populations in Western NY.

I’m finding a lot of European corn borer damage on field corn at the Cornell Research Farm in Valatie. About 50% of the plants in one field are affected. While corn borers bore into stalks, secondary pests such as anthracnose spore can enter, causing stalk rots in corn.

A few extension educators are starting to find corn rootworm adults in corn. Mike Stanyard also reports high levels of corn rootworm adults feeding on the leaves of corn, causing a windowpane appearance. They feed on the leaves because there is no pollen or corn silks emerged yet.

Reports this week of 2 spotted spider mite feeding on soybeans in western NY. The hot temperatures and lack of precipitation are PRIME conditions for their population buildup. Watch soybeans along field margins adjacent to grassy areas, ditch banks, etc. for signs of leaf stippling and spider mites on the lower surface of leaves. If infestations are caught early, field margin border treatments can limit spider mite movement into fields. For more information on spider mites in soybeans see Watch out for Two- Spotted Spider Mites in Soybeans.

Potato Leafhopper Resistant Alfalfa Varieties show their stuff  Keith Waldron, NYS IPM

Potato leafhopper (PLH) populations have been increasing the past few weeks and many alfalfa fields across the state are now showing signs of PLH injury including: yellowing of leaf tips (known as hopperburn), stunting, reduced biomass, and decreased leaf protein concentration.

Potato leafhopper is a migratory insect, and source populations develop in the Gulf Coast and southeastern states. Factors affecting the arrival time and development rate of PLH in the north-eastern USA include weather patterns, temperature, and host plant species availability. Drought stress conditions can further add to PLH impacts. In NY, PLH damage on alfalfa can be expected annually. However, severity of infestations is variable across years and counties. Conditions this season have been quite favorable for PLH populations and their potential to pose significant economic risk to alfalfa.

The prevalence of PLH injured fields provides a perfect opportunity to discuss the value of PLH resistant alfalfa varieties. PLH resistant alfalfa varieties first became commercially available in 1997 and their resistance to PLH has gotten progressively better with each subsequent generation. PLH resistance has been bred into varieties using conventional breeding techniques. The mechanisms of PLH resistance are complex and may involve physical entrapment, antibiosis, non-preference, and tolerance. The glandular hairs appear to be a critical factor for each of these resistance mechanisms. The advantage of PLH resistant varieties is the reduction of PLH impacts – yellowing, stunting, effects on nutritional value of the forage and a reduced need for insecticide applications.

A side by side comparison PLH resistant vs susceptible alfalfa trial was highlighted as part of last week’s Cornell Sponsored Seed Growers Field Day in Ithaca. This event provided the opportunity to view a replicated field trial with 4 PLH resistant and 7 susceptible alfalfa varieties. For comparison, “Vernal” and “Oneida VR”, were included as 2 non-PLH resistant industry standards. Two of the featured PLH resistant varieties are Cornell experimental varieties in development. A photo of the plots reveals the advantage of PLH resistance – greener and taller alfalfa. This trial was planted May 10, 2010 and does not receive an insecticide. Sampling damaged vs healthy appearing alfalfa in one replication of the experiment this week determined:

Avg. susceptible: 3.4 PLH adults / 62.6 PLH nymphs, 7” tall (7 entries)
Avg. Resistant: 1.25 PLH adults / 0.75 PLH nymphs, 15.25 ” tall (4 entries)

As can be seen in the pictures below recent
advances in the development of PLH resistant alfalfa have made the planting of resistant alfalfa a viable alternative to insecticides for the management of leafhoppers. Planting the newest generation of PLH resistant alfalfa hybrids is strongly suggested for the management of PLH in both clear alfalfa seedings and in stands mixed with grass species. Please refer to the alfalfa variety tables available on the Cornell Forage Project web site and in the Cornell Guide for Integrated Field Crop Management to evaluate the different available PLH resistant alfalfa varieties.

**Potato Leafhopper in Soybeans?** Keith Waldron, NYS IPM

The Potato leafhopper populations are increasing across the state and in addition to causing problems in alfalfa, PLH adults and nymphs are being found (some in high numbers) in some soybean fields. Cornell entomologist Elson Shields states: It is the PLH nymphs which cause the majority of the economic damage. Purdue entomologists state: In general, soybean can withstand potato leafhopper feeding without economic loss. Under good growing conditions they normally outgrow leafhopper feeding damage. Soybean varieties under various environmental conditions can show differences in level of tolerance to potato leafhopper feeding. Sparsely pubescent soybean seedlings (V1 to V4 plant growth stages) under moisture stress, with high potato leafhopper numbers, are the most susceptible to damage and most likely to benefit from treatment. Penn state entomologist John Tooker adds: Symptoms of damage in soybeans look very similar to hopperburn commonly seen in alfalfa with yellowing developing at the leaf tip and then spreading in a V-shape down the midrib. Appropriate thresholds are five leafhoppers per plant for V4 stage soybeans, or nine hoppers per plant for R1-2 stage beans.

**More detailed info from Purdue: Potato Leafhopper** is at http://extension.entm.purdue.edu/fieldcropsipm/insects/soybean-potato-leafhopper.php

**Western Bean Cutworm Update** Keith Waldron, NYS IPM

As mentioned in last week’s WPR, a statewide monitoring effort is in place to lookout for western bean cutworm moths. Western bean cutworm (WBC) is an emerging pest in NY, with the potential to cause substantial damage to corn, *Zea mays* and beans, *Phaseolus vulgaris*. Currently at least 53 traps have been placed across the state adjacent to field and sweet corn and dry bean fields.
Western Bean Cutworm Moths. Note the distinctive wing patterns with a cream colored leading edge wing, and presence of a “full moon” dot and “boomerang” shaped markings.

The first 2 moths of the season were caught in Eden (western) NY the week of June 10. Average weekly capture per trap since then: 6/17: 0.06 WBC (0 – 1, 32 traps reporting), 6/24: 0.34 WBC (0 – 4 {Leroy}, 47 traps reporting), 7/1: 1.32 WBC (0 – 13 {Valois}, 53 traps reporting) and 7/8: 4.9 WBC (0 – 41 {Sacketts Harbor}, 44 traps reporting).

These numbers indicate presence but by no means are cause for concern at this time. Indiana reported peak WBC captures occurred last week. Ohio anticipates this may be their peak captures. NY peak catches have occurred the last week of July in 2010 and 2011. Our NY WBC trapping program will continue through August. Western bean cutworm data is being tabulated and can be viewed at two on-line locations:

NYS IPM Sweet Corn Pheromone Trap Network Report, http://sweetcorn.nysipm.cornell.edu/

Penn State's Pest Watch., http://www.pestwatch.psu.edu/sweet_corn.htm

For more WBC information download the Regional Pest Alert from the North Central IPM Center for Western Bean Cutworm, 1.3Mb pdf file. , www.ncipmc.org/alerts/wbc_alert.pdf

We will be reporting more on western bean cutworm activity in the next several weeks. Stay Tuned for more information.

Clipboard Checklist Keith Waldron, NYS IPM General
* Emergency contact information ("911", local hospital, Chem. Spill emergency contact, other?) posted in central posting area
* Maintain crop records by field, including variety, planting date, pesticides used, nutrient inputs including manure, etc.
* Watch for any patches of herbicide resistant weeds, weed escapes
* Storage areas cleaned and ready to accept hay, wheat harvest

Corn:
* Monitor fields for plant vigor, growth stage, vegetative stage pest issues (corn rootworm larvae, European corn borer, armyworm, foliar diseases, nutritional deficiencies)
* Monitor for weeds, note presence of "who", "how many" and "where"

Small Grains:
* Evaluate crop for maturity, lodging, time till harvest
* Grain bins ready to accept upcoming harvest?

Alfalfa & Hay:
* Monitor alfalfa seedings for weeds, insects & diseases.
* Check re-growth of established alfalfa stands for potato leafhopper, weed and disease problems.
* Storage areas cleaned and ready to accept incoming harvest
Soybeans:
* Evaluate stand growth, development and condition
* Monitor fields for soybean aphid, foliar diseases, white mold, natural enemies, weed escapes, spider mites

Dairy Livestock Barn Fly Management:
* Sanitation, sanitation, sanitation - clean animal resting areas, feed troughs, minimize source of moist organic matter i.e. fly breeding areas in barn and in adjacent animal loafing yard
* Check water sources, drainage, roof gutters for leaks and potential overspill
* Continue fly monitoring: install "3X5" index card fly speck monitoring cards throughout barn
* Install/refresh/replenish as needed: fly tapes, insecticide baits, natural enemies (parasitoids)

Dairy Livestock Pasture Fly Management:
* Monitor animals for presence of pasture fly pests. Treatment guidelines: Horn flies (50 per dairy animal side, 100 per side for beef cattle), face flies (10 per animal face), stable flies (10 per 4 legs). See: (http://www.nysipm.cornell.edu/livestock)
* Consider installing biting fly traps to reduce horse, deer and stable fly populations.

Storage:
* Check storage areas (bunk silos, etc.) for readiness to accept upcoming wheat harvest
* Clean in and outside of storage bins and grain handling equipment
* Keep areas around storage bins and silos clean and mowed
* Check areas around storage bins and silos for vertebrate tunneling
* Check temperature of recently baled hay in hay mow

Equipment:
* Note any repairs needed for recently used equipment: tractors, tillage implements, planters, sprayers, etc. as they are cleaned and serviced.
* Service hay harvesting equipment as needed.
* Calibrate manure spreaders - maintain records on amount spread per field

PESTICIDE EMERGENCY NUMBERS
Emergency responder information on pesticide spills and accidents...
CHEMTREC - 800-424-9300

For pesticide information
National Pesticide Information Center: 800-858-7378

To Report Oil and Hazardous Material Spills in New York State
NYS Department of Environmental Conservation Spill Response - 800-457-7362 (in NYS), 518-457-7362 (outside NYS)

Poison Control Centers
Poison Control Centers nationwide - 800-222-1222

If you are unable to reach a Poison Control Center or obtain the information your doctor needs, the office of the NYS Pesticide Coordinator at Cornell University, 607-255-1866, may be able to assist you in obtaining such information.

Contact Information
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