

KENTUCKY PEST NEWS

ENTOMOLOGY • PLANT PATHOLOGY • WEED SCIENCE

On line at: www.uky.edu/Agriculture/kpn/kpnhome.htm

Number 1151

January 28, 2008

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ANNOUNCEMENTS

2008 IPM TRAINING – MARCH 5

The 2008 IPM Training School will be held on Wednesday, March 5, at the University of Kentucky Research and Education Center in Princeton. Registration will open at 8:30 AM with the meeting starting at 9:00 AM and ending at 3:00 PM.

Topics covered in the training will include: Soybean Rust Up-date, Corn Fungicides, Dectes Stem Borer, IPM Preventive Tools, Refinement of the UK Lime Recommendations and Herbicide Resistance.

The program is free of charge and lunch will be provided. **To guarantee a lunch, call (270) 365-7541 extension 216 or e-mail plucas@uky.edu before March 3.**

The program has applied for 5.0 CEU's for certified crop advisors and has been approved for 3 general and 1 specific hours (1a, 10, and 12) for pesticide applicators.

TRAINING ON HOW TO USE INSECT TRAPS

Two trainings will be offered during the month of February on How to Use Insect Traps. The trainings will cover the different types of pheromone baited traps, how they work, trap placement, which trap to use for specific insect pests, using the data you collect and more.

Trainings are scheduled for February 13th at the Clark County Extension Office in Winchester and February 20th at the UK Research & Education Center in Princeton. Both meetings will start at 10:00AM (LOCAL TIME) and end at 2:00 PM.

The trainings are offered free of charge and lunch will be provided. **PLEASE PRE-REGISTER TO IF YOU PLAN**

TO ATTEND. SPACE AT EACH TRAINING IS LIMITED. To register to attend the trainings, call (270) 365-7541 extension 216 or e-mail makelley@uky.edu before February 8 and tell us if you will be attending the training at Princeton or Winchester!

The program will apply for CEU's for certified crop advisors and hours for pesticide applicators.

TOBACCO

TIPS ON MANAGING DISEASES ON TOBACCO SEEDLINGS IN 2008 **by Kenny Seebold**

It won't be long before it will be time for many of our growers to prepare greenhouses and outdoor float beds and start producing tobacco transplants. Higher production costs associated with increased prices of fuel and other inputs are among the problems faced by tobacco producers in Kentucky. Losses to disease in the float system could take an additional toll on our growers' bottom line. Planning and preparation now can lead to better disease control and better yields of transplants in the spring.

The float system is the most widely used means of producing tobacco transplants in Kentucky. This system is generally superior to traditional plant beds, but creates ideal conditions for some important diseases. Water in float bays favors diseases like Pythium root rot, while high plant populations and densely packed trays favor a number of leaf diseases on tobacco seedlings.

A preventive approach is a "must" to be successful against the pathogens that we encounter in the float system. The disease-conducive environment and limited number of fungicide tools dictate this type of approach. Here are some considerations in developing a preventive

disease management strategy:

- Avoid the introduction of plant pathogens into the float system. Water from ponds or creeks can harbor fungi like *Pythium* or the black shank pathogen that devastate a float bed. Keep soil out of float bays – this can also cause certain plant pathogens to be introduced into the system. Produce your own plants, or buy from a Kentucky source if at all possible. Historically, blue mold has been introduced into KY from plug plants that originated in Florida. Those growers that still utilize the plug-and-transfer system should consider buying KY-grown plugs or those produced in northern areas. Contact your dealer or the UK Cooperative Extension Service for more information.
- Seed into clean, sanitized trays. New trays will not harbor plant pathogens, but re-used trays pose more of a risk. Trays can be sanitized by dipping or spraying trays with a 10% bleach solution. Afterward, cover trays with plastic sheeting and allow them to stand overnight, and follow up with a good rinse to remove bleach residue. Trays that have been used for several years will be difficult to sanitize effectively with bleach. Steaming older trays at 165-175 °F for 30 minutes is the most effective way to eradicate pathogens, but watch temperature and steaming time carefully to avoid damage to trays.
- Dispose of unused or diseased plants quickly and properly. Bury or burn the plants, or discard them at least 100 yards from float beds or tobacco fields.
- Keep your transplants as stress-free as possible. Avoid temperature extremes and keep fertilizer levels in recommended ranges. Plants that are under- or over-fertilized are more susceptible to diseases in general.
- Maintain good air movement through the use of side vents and fans. Keep the area around float beds weed-free. Good airflow promotes rapid drying of foliage, creating less favorable conditions for diseases.
- When clipping plants, use a high-vacuum clipper to avoid the buildup of leaf matter in float trays. Some pathogens use leaf debris as a food base to become established and then spread in the float system. Sanitize your mower regularly with bleach to avoid pathogen spread.
- Consider a regular fungicide program to control root and leaf diseases. Fungicides are cheap insurance considering the high value of your transplants. Consult ID-160, the 2008 Kentucky Tobacco Production Guide, for specific recommendations.

Disease-free transplants pay dividends down the road because they are more vigorous and less prone to attack by pathogens in the field. Proper management of diseases in the float system will help insure that your tobacco crop gets off to a good start.

FORAGES

SELDOM SEEN ALFALFA PESTS

by Lee Townsend

An aphid trapping program was conducted in 2007 by the UK IPM program (identifications by Dr. David Voegtlin, IL Natural History Survey) with collection sites at Princeton and Lexington. It has provided interesting information on some important aphid species that feed on alfalfa. Of these, the spotted alfalfa aphid and blue alfalfa have not been seen as problems in the Commonwealth. However, the black legume aphid, also known as the cowpea aphid, reached noticeable levels in several counties in 2007.

Total trap catches 20 April – 26 October 2007

Species	Lexington	Princeton
Pea aphid	41	56
Black legume aphid	109	16
Spotted alfalfa aphid	166	19
Blue alfalfa aphid	20	0

Here is some background on these insects- The pea aphid is a common sight in Kentucky alfalfa fields in the spring and early fall when cool temperatures favor its development. While they can become abundant, it is rare that they reach levels that would justify control. In fact, they may be important as early season prey for several natural enemy species. There was an early season flight in May.

Black legume aphid adults are small, shiny black insect insects. They nymphs are dull gray to black. Typical of aphid, colonies begin in growing tips and subsequently spread over the whole plant. This aphid can feed on a wide range of plants and can transmit almost 30 virus strains. This species had a strong flight in mid-June and another in mid-October.

The spotted alfalfa aphid is pale yellow-green with rows of distinct black spots along the back. Each spot has a short spine. While these aphids prefer alfalfa, they will feed on some clovers. A toxic salivary secretion that is

injected during feeding causes localized yellowing. Heavy infestations can reduce yield and protein content; their waste (honeydew) can result in honeydew growth on leaves of infested plants. Fortunately, many modern alfalfa varieties are resistant to this aphid. Flights of the spotted alfalfa aphid were seen on almost a monthly basis from late April through late August in Lexington.

Blue alfalfa aphid has been a troublesome pest in the southwest but has been moving steadily eastward. This small, blue green aphid has a waxy appearance. It prefers to feed on tender, succulent parts of alfalfa plants. Heavily infested plants can be stunted- shorter internodes and smaller leaves. Leaf curl and leaf drop also are common symptoms.

The blue alfalfa aphid overwinters as small black eggs glued to stems and fallen leaves. This stage should be relatively tolerant of cold winter weather so survival should be good under typical winter conditions. This is a cool season insect so field populations should decline in July. There was a small amount of flight activity from mid-May to early June in Lexington and no captures at Princeton.

Early field visits to check on alfalfa weevil populations should include inspection of growing tips for aphid infestations. This will allow early detection of aphid populations as temperatures warm in the spring. While the pea aphid has not been an economic pest on Kentucky alfalfa, it is clear that the potential exists for the establishment of species that could have a detrimental impact on the crop. Your county extension office can help with identification of suspected new pests.

FRUIT CROPS

2007 PLANT DISEASE MANAGEMENT REPORTS FOR TREE FRUITS

by John Hartman

The University of Kentucky is a partner in the on-line Plant Management Network (PMN). Because U.K. is a partner, County Extension Agents and State Extension Specialists have access to the on-line PMN and its resources. The PMN, providing science-based plant and crop information, makes available many useful resources for Extension personnel and plant scientists worldwide. Recently, it was announced that PMN had recorded more than 250,000 "hits" during 2007. It should be assumed that University of Kentucky College of Agriculture employees are among those doing the "hitting."

One of the PMN resources available to U.K. employees is the Efficacy Trials option which includes: Variety Trials,

Arthropod Management Tests, and Plant Disease Management Reports (PDMR). A collection of the reports in PDMR (Vol. 1, 2007) could be of interest to Kentucky County Extension Agents and State Specialists working with tree fruits. Agents and specialists are urged to go to (<http://www.plantmanagementnetwork.org/>) and click under Resources to find the 2007 PDMR reports of research done in 2006. Remember that once you have registered in PMN, your uky.edu address automatically grants you access to these resources. Our University of Kentucky IPM program provides the funds to make PMN resources available.

Inside PDMR, the menu choice "Reports by Sections" is most useful. Clicking there provides choices of groups of plants or crops to narrow down the choices of reports. For example, by choosing the Pome Fruits section, the following topics emerge:

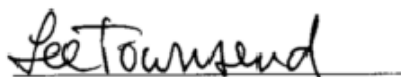
- Ten reports of field experiments for management of apple fire blight including evaluation of SAR inducers, biological controls, Famoxate fungicide and terpene products, integrated biological and streptomycin treatments, experimental fungicides, gentamicin, antibiotic treatments, and bacterial antagonists.
- Nine reports on apple scab control using experimental fungicides, metconazole, post-infection treatments, DMI fungicides in DMI-resistant orchards, rotation programs in a DMI-resistant orchard, strobilurin fungicides, and difenoconazole.
- Nine reports on fungicides for management of apple post-harvest diseases such as blue mold, gray mold, and mucor rot using pre- or post-harvest treatments of Captan as a mixing partner, Scholar, pyraclostrobin and boscalid, fludioxonil and pyrimethanil, Topsin M and several experimental fungicides.
- Six reports on control of apple summer diseases including sooty blotch and flyspeck using disease forecasting models, reduced risk fungicides, phosphorous acid, the experimental fungicide difenoconazole and traditional fungicides including Captan and thiophanate-methyl combinations.
- Six reports on broad spectrum and season-long apple disease control with Sporan, Enable, Scala, flutriafol, and experimental and other fungicides including control of *Glomerella cingulata*.
- Five reports of organic alternatives including Effective Microorganisms®, calcium salts and other alternatives to conventional fungicides for management of scab and the summer disease complex on several different apple cultivars.
- Five reports on apple powdery mildew management using flutriafol and other fungicide programs.
- One report on comparison of fungicides for control of rust on Serviceberry.

In choosing the Stone Fruits and Nuts section, the following PDMR topics emerge:

- Five reports on management of brown rot of peach and nectarine including pre-harvest fungicide programs, using tebuconazole formulations, and managing DMI-resistant *Monilinia fructicola* in late- and early-ripening peaches.
- Four reports on peach disease management using experimental fungicides, tebuconazole formulations, and standard and alternative fungicides.
- Two reports on management of peach bacterial spot including use of oxytetracycline alternatives, copper, biologicals, and plant-defense activators.
- A report evaluating fungicides for control of peach leaf curl of nectarines.
- Two reports on sweet cherry powdery mildew management.
- Two reports of tart cherry disease management with new fungicide rotations and copper sprays as part of a reduced-risk, IPM program.

- Three reports of almond brown rot, powdery mildew and shot hole disease management.
- A report on evaluation of fungicides for the control of pecan scab.

Other crop sections of PDMR are equally full of useful fungicide and variety tests for disease management. Be watching for the 2008 edition of PDMR which should be coming on line in the coming weeks. Also, look for pre-2007 disease management test reports in the many volumes of Fungicide and Nematicide Tests (F&N Tests) and Biological and Cultural Tests (B&C Tests), also available on-line through the PMN.


Lee Townsend, Extension Entomologist

NOTE: Trade names are used to simplify the information presented in this newsletter. No endorsement by the Cooperative Extension Service is intended, nor is criticism implied of similar products that are not named.