

WHAT'S HAPPENING

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Ralstonia Survey Help Needed

By Beth Long



Ralstonia solanacearum race 3 biovar 2 is a bacterial pathogen not known to occur in the US. It causes a wilt disease in several important agricultural crops such as potatoes, tomatoes, peppers and eggplant. The disease it causes is known as Southern wilt, bacterial wilt, and brown rot of potato. Introductions in greenhouse production geraniums occurred in several states in 2003 (introduced from Kenya) and 2004 (introduced from Guatemala) both introductions were eradicated.

There is still time to complete the survey that will determine the direction of national training (USA) that will be developed. The aim is to develop a training program over the next three years on *Ralstonia solanacearum* race 3 biovar 2. This will assess your current knowledge level performing an initial survey. There are different survey links to choose for Extension agents, industry representatives, producers, state regulatory personnel, inspectors, researchers, specialists, master gardeners and others.

The *Ralstonia* survey consists of 11 or 13 questions and should not take longer than 10 minutes. Your participation would be appreciated.

A direct link to the survey can be found at http://pestalert.ifas.ufl.edu/Ralstonia_solanacearum_survey.htm or a link to the survey is available on the UF/IFAS Pest Alert site <http://pestalert.ifas.ufl.edu/>. The online survey will be available until June 30, 2008.



Pictures: Above Greenhouse Geranium with *Ralstonia* wilt disease; Right is Geranium stem infected with *Ralstonia*. Source: www.bugwood.org

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Wheat Disease Update

By Melvin Newman

Three diseases are really starting to show up in the fields now. They are: Take-All, Glume Blotch and Head Scab. All three diseases are affected by the recent rainy weather and may become severe in many fields. You may refer to utcrops.com for a complete description of these diseases.

Take-All (caused by the soil-borne fungus *Gaeumannomyces graminis var tritici*) is common in many soils but it is usually worse in soils with a pH of 6.5 – 7.0. Symptoms may include patches of dead plants with white heads and very little seed ranging from a few tillers to spots as big as 10 to 15 feet in diameter in irregular patterns across the field. Roots are rotted and plants are very easily pulled out of the soil. Many times, but not always, a black (sooty appearance) rot can be seen at the crown near the soil line when the old dry leaf sheath is scrapped away. This disease has been noted in several counties in West Tennessee this year ranging from only slight to 50% loss to the yield. Usually, Middle and East Tennessee have a greater incidence of take-all than West Tennessee.

Some research indicates that rotation with other crops not in the “grass family” might help some, but wet weather conditions such as we have been having, plays the biggest role. Corn, oats and dicotyledonous crops are good rotational crops where grassy weeds are not a problem. Deep tillage can be beneficial by decomposing the infested residue. Take-all is not spread by infected seed or wind-borne spores. Ammoniacal and slow-release forms of nitrogen may suppress take-all, in contrast to nitrates, which favor the disease. Also important, is an adequate supply of other essential nutrients to promote root growth. Wheat should not be nutritionally stressed for lack of nitrogen, phosphorus, potassium, or trace nutrients at any time during the growing season. Foliar fungicides and fungicide seed treatments are not effective in controlling this disease.

Glume Blotch (caused by the fungus *Stagonospora “Septoria” nodorum*) is now showing up on the heads of wheat. The brown discoloration of the glume (chaff) is a good indication of the infection of this fungus. The disease begins as a “lens shaped” lesion on the lower leaves and advances as new leaves emerge. Yield loss is greatest under humid, wet conditions. Properly applied foliar fungicides can significantly reduce this damage, but may not completely control all the disease. Crop rotation, foliar fungicides and seed treatments are recommended to help control this disease.

Scab or Head Blight (caused by the fungus *Fusarium* spp.) is now showing up as white heads that may be white only on parts of the head, but in severe cases the whole head is killed by the fungus. Frequently, a pink or orange spore mass may be seen on or at the base of the diseased spikelet. Prolonged rainy spells during and after the blooming stage will enhance conditions for infection. Significant yield loss and reduced test weight may occur from floret sterility and poor seed filling. Severely infected grain may contain mycotoxins such as zearalenone and vomitoxin (deoxynivalenol or DON) which can cause problems when fed to animals. In Tennessee, tests with foliar fungicides gave no control of this disease. Fungicide seed treatments may help reduce the inoculum carried on the seed but it is not enough to prevent the disease from occurring. *Fusarium* is also an important pathogen in corn, therefore rotation with corn may increase scab under favor disease conditions.

Wheat: We have not had any Serious Damage from Armyworms to Date

By Russ Patrick

This is a critical time for wheat development because insect infestation may cause devastating results. So you should be on the outlook for possible problems. To date, we have had no serious outbreaks of armyworms in wheat, however, Curtis Yates from the Tennessee Farmers Cooperative brought by some true armyworms for identification. These armyworms were infesting corn in the East Tennessee area. Scouting seedling corn, twice weekly would be extremely helpful in determining the possible presence of any infestations.

Wheat is beginning to mature and growers should be aware that wheat can be stored for a short period of time. A storage protectant insecticide, such as Storcide can lengthen the insect free period by a month or so.



Corn and Cutworms

By Russ Patrick



It has been cool for the past few weeks and the ground has been very wet, which is perfect for cutworm development. As corn matures (knee high), cutworms are generally not a problem, however growers should be on the outlook for these pests. Scout corn twice a week when it is in seedling stage and as corn gets larger you can switch to a weekly scouting schedule. Be aware that cutworms and armyworms can both cause serious problems when corn is young.

Stored Grain Workshop

By Russ Patrick

Dr. Kathy Flanders (Auburn University, Extension Entomologist) and I will be hosting a "hands on" stored grain workshop. We will be providing attendees some new management techniques that we have adapted from the National Stored Grain Training Workshop which we attended a year ago at Oklahoma State University. The workshop will be held for the Central District Extension Agents at Woodbury, Tennessee on August 7th at 1:00 p.m. For more information please call (731) 425-4718 or call Bruce Steelman (615) 563-2554.



Phorate Insecticide

By Darrell Hensley

AMVAC has acquired the Phorate (an organophosphate insecticide) product line from Aceto Agricultural Chemicals Corp. Phorate is used on agricultural crops, mainly potatoes, corn, cotton, rice, sugarcane, and peanuts, to protect against chewing and piercing-sucking insects. Purchased assets included registrations, data, know-how, and certain inventories. The acquisition was made in connection with the settlement of pending litigation between AMVAC and Aceto Ag.

Springtails

By Karen Vail



Springtails trapped on glue board (in millimeter dimension).

Springtails are tiny wingless insects with distinctive heads and often a hump-backed appearance. Their name comes from a forked structure attached to the underside of the abdomen which acts a spring to project them into the air. This "jumping" behavior gives them the appearance of tiny fleas. Other than being a nuisance, these small creatures pose little threat.

Most springtails live in rich soil or leaf litter, under bark or decaying wood, or are associated with fungi. Many are scavengers, feeding on decaying plants, fungi, molds, or algae. Springtails may become abundant among wet leaves, soil, and plant material along a house foundations or sidewalk where they can be a temporary annoyance.

Most common springtails do not survive in dry conditions. They infest buildings that have constant high humidity. This is usually in the basement, but may be in other areas with water leaks. Springtails also can occur around floor drains and crawl spaces. Masses of these insects can be swept or vacuumed and discarded.

The best method of control is to stop the leak or decrease the humidity. Fans or dehumidifiers may be used to dry wet areas. In crawlspaces, maintain adequate ventilation and drainage. Water plants in the morning to allow the surface to dry in between waterings. Remove accumulations of wet leaves and other organic matter, as well as boards on the ground, to help eliminate breeding sites.

Any steps to improve ventilation and promote drying are the best long term solutions. Insecticides can be used to treat entry points into the structure, but this will not drastically reduce the number of springtails in an area because it only provides temporary relief if the favorable conditions are not corrected. Pyrethroids appear to be less effective than the older chemistry of organophosphates and carbamates. Unfortunately we don't have many insecticide options because most organophosphates and carbamates are no longer allowed to be used around structures. Potential insecticides

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for springtail management can be found at <http://eppserver.ag.utk.edu/redbook/sections/structural.htm> .

Springtails are attracted to light and may enter homes or other structures under doors. Sealing entry points (see PB1303 Managing Pests Around the Home, <http://www.utextension.utk.edu/publications/pests/default.asp#home>) or changing to a sodium vapor or yellow bug light may help reduce pest entry into the home.

In new homes where water leaks or other sources of moisture cannot be found, it is possible that fungi or molds are growing on studs in the wall voids. We've received several inquiries about springtails in new homes and believe the food source to be in the wall voids. Using dehumidifiers and adding ventilation to the walls may reduce moisture and associated fungi and molds. In most cases, the walls should dry naturally in a few years.

Modified from:

Townsend, L. 2000. Snowfleas and other spring tales. Kentucky Pest News. Feb. 21, 2000.

Vail, K. 2003. Springtails. WHAT'S HAPPENING?" University of Tennessee Extension Entomology & Plant Pathology. EPP #60Volume No. 11. July 31, 2003.

<http://eppserver.ag.utk.edu/Whats/wh2003/Issue-11-03.htm>

Pesticide Certification Reminders

By Gene Burgess

Some questions have come up about the following issues.

1. **Social Security Numbers:**

Please remember when a new Private Applicator goes through the training and sends in their form and \$10 to TDA, they must put their SSN on the form for TDA to process. Extension offices no longer keep a copies of the TDA triplicate forms but substitute EPP Info #756 for your files. And, only the last four digits of the SSN are requested on UT's rosters for recertification points.

2. **Dealers Certification:**

Category 12 is for dealers to sell restricted-use pesticides only. If a dealer wants to buy a restricted-use pesticide for their own use, they must be certified in the area they are applying the pesticide. For example, if they are applying it on their own farm, they must be certified as a Private Applicator.

3. **Extension Agents Certification:**

Extension Agents must be certified in Category 10 in order to make recommendations and put out demonstrations. If an agent wants to apply a restricted-use pesticide on their own farm or for other personal reasons, they must be certified as a Private Applicator or Commercial Applicator in the respective category. For some, this may be a slight change in practice from a number of years ago. For a Private Applicator certification, you would send in a copy of the TDA triplicate form to TDA with a note on the form that you are a UT employee. You will not have to pay the \$10 fee to become a Private Applicator or the \$15 fee to take a commercial certification exam.

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OTHER UT NEWSLETTERS WITH PEST MANAGEMENT INFORMATION

Fruit Pest News

<http://web.utk.edu/~extepp/fpn/fpn.htm>

Tennessee Crop and Pest Management Newsletter

http://www.utextension.utk.edu/fieldCrops/cotton/cotton_insects/ipmnewsletters.htm

Ornamental Pest and Disease Update

<http://soilplantandpest.utk.edu/publications/ornamentalnwsltr.html>

Tennessee Soybean Rust Hotline - 877-875-2326

USDA Soybean Rust Web Site

<http://www.sbrusa.net>

This and other "What's Happening" issues can be found at

<http://eppserver.ag.utk.edu/Whats/whatshap.htm>

Entomology and Plant Pathology Web Site

<http://eppserver.ag.utk.edu>

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

Use of trade or brand names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar, suitable composition, nor does it guarantee or warrant the standard of the product. The author(s), the University of Tennessee Institute of Agriculture and University of Tennessee Extension assume no liability resulting from the use of these recommendations.

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