

# WHAT' S HAPPENING

Volume 24, Issue 15

August 15, 2008

ENTOMOLOGY AND PLANT PATHOLOGY EPP#60

## Corn By Russ Patrick



Corn is beginning to dry down in many parts of the State. I expect to see some harvesting to begin in about two weeks. Several areas had little rainfall , such as Fayette County and the ears did not develop very well. One farmer called us to check for what he believed to be weevils in his corn. Thankfully these were not weevils but Nitidulidae, a fungus feeding beetle very small (2-3mm) in

length. He was relieved that it was not rice or granary weevils that would have infested his new bins. He had just finished building two 50,000 bushel bins. There was some worm, damage observed on several of his corn fields, but not to any great extent.



## Stored Grain By Russ Patrick

Aerate those bins now, with this cool dry weather you will reap the benefits. Richard Buntin and I checked the bagged corn today and the insecticide treatment appears to be keeping out stored grain pests. This bin was treated with Storcide II and still has no insect problems to date. It was well cared for and is being aerated every day we have cooler temperatures. I have advised as many producers as I could to turn on the aeration fans in their wheat storage bins.

Inside this issue:

Grain Sorghum	2	Plant & Pest Diagnostic Highlights	4-6
Red Flour Beetle Gene Sequenced	2	Back to School –Be Prepared for Homework and Head Lice	6-7
Tobacco Bacterial	3	Other Pest Management Newsletters	8
2008 Wheat Production	3		

## Grain Sorghum

By Russ Patrick

Midges are plentiful this time of the year in grain sorghum. Any plants that have not pollinated may incur damage. Once pollination has occurred, there is no need to spray for midges.

Jeff Via and I were looking for worms in grain sorghum this week but found nothing. When checking grain sorghum, beat the grain head onto a piece of white paper or pan. This will dislodge any worms present in the head and help determine if insecticide applications should be made.



## Red Flour Beetle Gene Sequenced

By Darrell Hensley

Researchers with the [U.S. Department of Agriculture, Agricultural Research Service \(ARS\)](#), [Purdue University](#), the [Human Genome Sequencing Center at Baylor College of Medicine](#), [Kansas State University](#), and [Exelixis, Inc.](#) in South San Francisco, Calif., have determined the genetic code of the so-called "selfish" gene in the red flour beetle (*Tribolium castaneum*).

This information may offer a potential tracking tool for facilities where grain is stored. Operators could use the information to determine whether beetles are local or from a distant location and they may be able to develop a plan to control infestations.

[Richard Beeman](#) an ARS entomologist, and [Marcé D. Lorenzen](#) a molecular biologist, at the agency's [Grain Marketing and Production Research Center](#) in Manhattan, Kansas deciphered the genetic code of the "selfish" gene. The research was reported in the [Proceedings of the National Academy of Sciences](#).

The selfish gene is important because red flour beetles that don't inherit it from their mother don't survive. It is called the selfish gene because, whether beneficial or deleterious, it ensures its own perpetuation through the population. These genes are widespread in natural populations of red flour beetles, but are otherwise unknown in the invertebrate world.

According to Beeman, the discovery in red flour beetle may provide a useful vehicle for driving desirable genes into populations, since the gene spreads almost like a disease, and since hitchhiker genes can be attached to it. Malaria researchers think other, similar genes introduced into mosquito populations could reduce the spread of mosquito-borne malaria infections. It may be possible to "attach" another gene to the malaria gene that could negate or minimize its function, thus impeding mosquitoes from spreading the disease.

Modified from: <http://www.ars.usda.gov/is/pr/2008/080731.htm>

## Tobacco Bacterial Hollow Stalk

By Darrell Hensley

Bacterial hollow stalk (BHS) is usually noticed one to two weeks after topping. Infected plants generally have leaves which begin to drop, turn yellow, and/or hang down the stalk. A watery soft rot often develops at the base of the affected leaves and may extend up the midrib. The disease usually occurs due to tissue injury, however it often starts most often due to topping or suckering. The pith in the center of the stalk begins to decompose, leaving a hollow shell. As the disease moves down the stalk, the leaves droop, wilt and yellow. In latter stages of disease development, leaves drop off, leaving a bare stalk. Bacterial hollow stalk usually appears after topping or suckering and may continue to develop after the tobacco is hung in the barn, causing barn rot. Related bacteria may also cause a soft rot of lower leaves during rainy weather. To help reduce BHS within the field, it is recommended that when topping, cut tops at a slant to reduce moisture build up on top of the stalk. Excess moisture creates an environment conducive for bacterial development. Also, regularly wash off any blades or cutting shears with a disinfectant or cleaning solution. A 10% solution of liquid bleach is usually sufficient to disinfect surfaces of cutting tools. Remember, solutions of sodium hypochlorite (liquid bleach and water) will quickly breakdown in sunlight, so you may want to make several batches of solution throughout the day when topping and disinfecting tools. Also, a liquid bleach solution is corrosive, so only allow cutting tools to be in contact with liquid bleach solutions for no more than 20 minutes before rinsing remaining disinfectant from the surface of the tools. To see photos BHS infected plants please review the following URLs:

<http://www.ipmimages.org/browse/subimages.cfm?area=62&sub=7002>

<http://www.ipmimages.org/browse/detail.cfm?imgnum=1440057>

<http://www.ipmimages.org/browse/detail.cfm?imgnum=1440058>

## 2008 Wheat Production

By Russ Patrick

I was prusing the internet and found some information that you and your growers may be interested. The information was listed in the August release of "Grain Highlights." Articles found within the newsletter include recommended wheat varieties for Georgia and various comments by Dewey Lee Georgia Extension Agronomist Tennessee and other southern states can still rely on H7H8 Hessian fly resistance for varieties listed on page 2 of previously mentioned publication, however these varieties may not be as effective as in past years due to movement of new races of the fly moving into our state. Please visit:

<http://www.caes.uga.edu/commodities/fieldcrops/gagrains/documents/Aug2008NewsletterComp.pdf> for more information concerning the Hessian fly.

## Plant & Pest Diagnostic Highlights

By Bruce Kauffman

We received 208 samples from July 15 to August 8, 2008 including 103 samples via the UT Diagnostic Web Site.

**FIELD CROPS :** Sore shin (*Rhizoctonia* spp.), chemical burn and black shank (*Phytophthora pararitica* f.sp. *nicotianae*) of dark fired tobacco; herbicide injury to sunflower causing stunting and poor root structure; possible herbicide injury, potash deficiency, possible zinc and manganese deficiency, anthracnose and charcoal root rot of soybeans.

**FRUIT & VEGETABLES :** Blossom rot, lightning damage, fusarium wilt, alternaria stem canker, early blight (*Alternaria* sp.) of foliage and stem, southern blight (*Sclerotium rolfsii*) and potash deficiency of tomato; blossom rot, fusarium wilt and southern blight of pepper; walnut blight bacterial disease (*Xanthomonas campestris* pv. *juglandis*) of English walnut; southern blight and cedar apple rust of apple; powdery mildew, sunscald, and possible squash vine borer- caused wilt and/or wilt initiated by squash bug or stink bug feeding on pumpkin; possible leaf rust, herbicide injury, branch canker caused by botryosphaeria and/or phomopsis cankers, nutrient deficiency, environmental stress, suspected phytophthora root rot and possible witches' broom mycoplasma of blueberry; cane blight and/or raspberry crown borer of blackberry; suspected fusarium wilt and pH problem of watermelon; scab disease of Pontiac red and Kennebec potatoes; possible pH problem, decline due to squash bug and vine borer feeding and viruses and phytophthora blight (*Phytophthora capsici*) of squash; unidentified bean virus of green beans; possible downy mildew of cucumber; suspected stem winter injury and young plant moisture stress of grape ; fire blight and foliar leaf scorch due to root failure and/or stem girdling of pear; suspected bacterial wilt of cantaloupe; crown anthracnose (*Colletotrichum fragariae*) of strawberry.

**INSECTS, CRUSTACEANS, & MITES :** Green June beetle feeding on blackberry fruit; stink bug and lygus bug feeding on sunflower; variegated fritillary caterpillar feeding on flower leaves; mulberry borer, dogwood twig borer and/or small mulberry borer on mulberry; eastern bumelia borer on Bradford pear; big-eyed click beetle adult on oak ; possible contracted datana caterpillar feeding on hickory leaves; leaf-rolling caterpillar damage to tiger eye tree; tulip tree scale of tulip poplar; possible whitefringed beetle larvae feeding on red maple, pin oak and cistena plum seedlings; flatheaded borer stem damage to pin oak and pink dogwood seedlings; lady bug pupae, aphids and sooty mold on crape myrtle leaves; wood borer and early season leaf-chewing caterpillar damage to oak; aphid, suspected leaf-chewing caterpillar and leafhopper damage to tomato leaves; stink bug and /or tarnished plant bug damage to peach fruit; hawk moth (Family Sphingidae)

feeding on flower nectar; click beetle adult on turf; two-spotted spider mite on rose leaves; leafhoppers on bermudagrass; striped blister beetle on oak.; aphid feeding on sugar maple leaves; hide beetle in curing hams; milkweed tussock caterpillar feeding on butterfly bush; Asian woolly hackberry aphid feeding on hackberry leaves; fall web-worm feeding on sweetgum and redbud leaves; aphid feeding and sooty mold on short-leaf pine; possible *Ips pini* bark beetle attack on Norway spruce; Japanese beetle feeding on ornamental cherry; unidentified twig girdler of sugar maple; fungus gnat larvae feeding on hybrid poplar cuttings; two species of lyctid beetles found in hickory flooring; fly leaf miner of chrysanthemum; lace bug causing leaf yellowing of willow and hawthorn; *Ips* bark beetles feeding on environmentally-stressed eastern white pine branches; spider mites on spruce; gloomy scale of red maple twigs; symptoms of potato leafhopper leaf damage and leaf-tying caterpillar damage to red maple.

Insects and other pests around the home : Purseweb spiders; tile horned prionus beetle; possible ground beetle; midges; suspected moth fly; fungus gnat; backswimmer beetle in pool; acrobat ant; carpenter ant; solitary wasp; black and yellow mud dauber; wheel bug nymph; black and yellow garden spider; long bodied cellar spider; *Neoclytus scutellaris* wood borer; termite damage; fungus mold on house joists; thrips; bark louse; springtail; varied carpet beetle; cigarette beetle; clover mite; oribatid mites; polyphemus moth.

ORNAMENTALS & TREES : Powdery mildew and cherry fungal leaf spot (*Blumeriella jaapii*) of Montmorency cherry leaves; possible resinous branch canker of eastern hemlock; environmental stress causing leaf yellowing of papaw; possible root system decline and environmental stress of 'Little Gem' magnolia; decline, cytospora twig canker and phyllosticta leaf spot of sugar maple; root dieback of maple and river birch due to environmental stress; root failure of Yoshino cherry; environmental stress causing leaf reddening of recent plantings of Bradford pear and Cleveland pear; dieback and/or death of red maple, sugar maple, white dogwood, redbud, sycamore, pin oak, tulip poplar, southern magnolia, cistena plum and pink dogwood seedlings caused by low soil moisture and/or weed competition and poor root structure ; water stress branch dieback of Leyland cypress; canker disease of firethorn (*pyracantha*); decline and/or construction blight, root failure of recent planting, hypoxylon canker, possible phenoxy herbicide injury and coryneum twig blight of oak; stem canker of mulberry; non-infectious leaf blotch of dogwood due to seasonal weather change; possible coprinus mushrooms at base of maple; iron deficiency and botryosphaeria canker of azalea; southern blight of St. John's wort; verticillium wilt of smoketree; leaf scorch drought stress symptoms on ash leaves; root disease of vinca due to over watering; over watering of hybrid poplar cuttings and possible pythium root rot; alternaria leaf spot and bacterial fasciation of chrysanthemum; pestalotiopsis twig blight of arborvitae stressed by too much mulch; volutella leaf and twig blight and macrophoma twig blight of boxwood; loss of golden raintree seed pods due to possible wind and/or hail storms; root system dieback due to

over or under watering of Japanese holly; suspected root rot and/or peachtree borer attack on 'Otto Luken' English laurel; myrothecium leaf spot and symptoms of pythium root rot of New Guinea impatiens; cedar-quince rust of hawthorn; fusarium root rot and possible pythium root rot of hosta; low pH making nutrients unavailable for Callery pear seedlings; phytophthora root rot of juniper; Dutch elm disease of elm; phytophthora root rot of adenostoma; branch mortality of spruce due to hot, dry weather; root tips dying due to under watering and phomopsis twig blight of Helleri holly; possible shoestring root rot and environmental stress of sweetgum; under watering or over watering of knockout rose causing stem or root failure; botryosphaeria canker and environmental stress on ornamental cherry.

**TURF & FORAGE :** Unknown dieback of crabgrass; gray leaf spot (*Pyricularia* sp.) of German millet; decline of roots by root fungus and environmental conditions (*Gaeumannomyces graminis* var *graminis*) and head smut of bermudagrass; thick or-

## Back to School - Be Prepared for Homework and Head Lice

By Karen Vail

Well it's the first week back to school for many Tennessee children and I've already received my first call on head lice.

### Steps to Prevent and Control Head Lice

**Once head lice are found, all steps should be conducted at the same time to reduce the chance of reinfestation.**

1. Do not allow children to share combs, brushes, hats and other personal belongings, including head phones.
2. Give children separate storage space for hats and other clothing from home. Coats should be hung on hooks or the back of chairs so they do not touch other coats or children.
3. Regularly inspect children for lice and nits. Early detection of small populations will make control much easier. Weekly inspections are suggested from August through November. Children often spread head lice in the first months back to school, resulting in widespread infestation by the winter. If one family member is infested, inspect all others. The inspection must include a search of the entire head, with an emphasis on the back of the head and neck. Hair should be partitioned into sections. Use a bright light and a partner to aid detection. Remove any lice or nits with tweezers or a fine-toothed lice comb. Nits can also be removed with small safety scissors or picked out with fingernails. If inspecting more than one child, be careful not to spread lice to others.
4. If lice are detected, use a lice medication, which may contain pyrethrin, permethrin or other active ingredient. Follow the directions on the label. Do not use a creme rinse or

combination shampoo/conditioner before using lice medication. Do not wash hair for one to two days after treatment. Remove nits and lice with a fine-toothed lice comb while the hair is still damp. See step 3 for details on manual removal. Combs should be dipped in soapy or hot water (130 degrees F) or rubbing alcohol to remove the nits and lice from the comb. Re-treat according to label directions, usually in seven to 10 days, to kill hatching eggs, as all eggs are not killed with lice medication. All infested family members should be treated within 24 hours to prevent reinfestation. More than 50 percent of lice-infested children have another infested family member. Continue to inspect regularly. Remind children about prevention.

5. Wash all clothing that could have come in contact with the head in hot, soapy water (125 degrees F for 10 minutes) or dryclean. Bedding material such as pillow cases, sheets and blankets should be washed and dried using the high-heat cycle to ensure the lice and eggs are killed. If items such as children's toys cannot be washed, they can be sealed tightly in a plastic bag for seven to 10 days to kill any lice. Car seats, furniture and carpeting contacted by infested individuals should be vacuumed and the vacuum bag discarded. Insecticidal or lice sprays are NOT required or recommended to be applied to rooms (including classrooms), buses, car seats, furniture or other objects because lice cannot live off the host for more than a couple of days.

Useful links for more information on head lice:

[Biology and Control of Head Lice, http://schoolipm.ifas.ufl.edu/tp2.htm](http://schoolipm.ifas.ufl.edu/tp2.htm)  
[A School's Guide to the 'Nitty-Gritty' About Head Lice \(University of Georgia\) \(780 KB\) , http://schoolipm.ifas.ufl.edu/doc/headlicschools.pdf](http://schoolipm.ifas.ufl.edu/doc/headlicschools.pdf)

[Removing head lice safely, http://lancaster.unl.edu/pest/lice/headlice030.shtml](http://lancaster.unl.edu/pest/lice/headlice030.shtml)

[Head lice information, http://www.hsph.harvard.edu/headlice.html](http://www.hsph.harvard.edu/headlice.html)

[Head lice resources, http://lancaster.unl.edu/pest/lice/](http://lancaster.unl.edu/pest/lice/)

[Body and Head Louse, http://creatures.ifas.ufl.edu/urban/human\\_lice.htm](http://creatures.ifas.ufl.edu/urban/human_lice.htm)

[Human lice , http://edis.ifas.ufl.edu/IN261](http://edis.ifas.ufl.edu/IN261)

[Head lice, http://edis.ifas.ufl.edu/IG142](http://edis.ifas.ufl.edu/IG142)

[Head lice - CDC, http://www.cdc.gov/lic/](http://www.cdc.gov/lic/)

[Head lice, http://www.utextension.utk.edu/publications/spfiles/SP341-S.pdf](http://www.utextension.utk.edu/publications/spfiles/SP341-S.pdf)

ENTOMOLOGY AND PLANT  
PATHOLOGY EPP—#60

**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](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.

Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development. University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating. UT Extension provides equal opportunities in programs and employment.