Pest e-alerts

Entomology and Plant Pathology, Oklahoma State University
127 Noble Research Center, Stillwater, OK74078
405.744.5527

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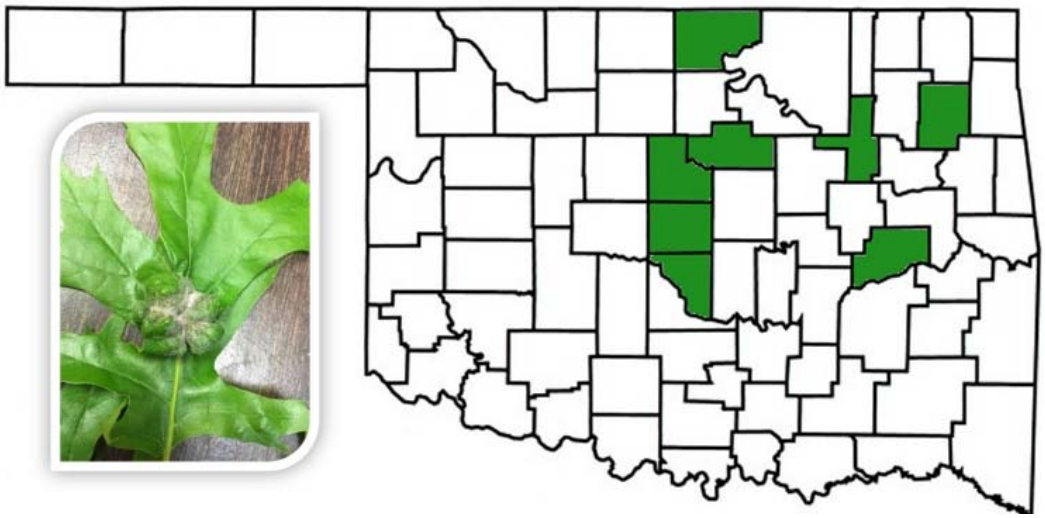
Oak Gall Midges Are at It Again!

Eric Rebek, Extension Entomologist
Rick Grantham, Director, PDIDL

A unique gall-making insect has again reappeared in central Oklahoma landscapes this spring - an oak gall midge likely belonging to the genus, *Contarinia*. These insects were first reported in 2011 infesting live oaks in Texas, and a year later they made their way into Oklahoma where they caused significant leaf distortion in members of the red oak group. We did not receive any reports of the gall midges in 2013 but did find sporadic damage in 2014 and 2015 (see map below). The original Texas report mentioned that tiny, white maggots were seen dropping to the ground, which is typical behavior for larvae of several economically important *Contarinia* species (Gagné and Beavers, 1984; Hara and Niino-Duponte, 2002). We have seen this same behavior in samples shipped to the lab, where the tiny larvae were observed crawling inside Ziploc bags of leaf galls!

There isn't much information about the oak gall midge because it isn't common and hasn't been described scientifically (i.e., no species name has been assigned to this creature). Also, unlike some close relatives like the sorghum midge and blossom midge, oak gall midges do not



Oak gall midge distribution in OK 2012-2016.

appear to cause significant harm to their hosts nor does galling activity result in economic loss. The galls may be unsightly, but affected trees will not suffer and die from an infestation of oak gall midge. While not much is known about the life cycle of oak gall midge, larvae likely feed on sap from the developing oak flowers (Texas Agri-Life Extension, 2011). This feeding behavior causes gall formation. Adult flies emerge from the soil and lay their eggs on flower buds before catkins open. Upon hatching, larvae feed and develop rapidly and reach their full size of 1.5 mm prior to dropping to the ground. Once on the ground, larvae remain in a restful state (called diapause) until pupating the following spring. The circle of life then continues with adults emerging from their pupae and laying eggs on the host tree (Texas Agri-Life Extension, 2011).

While some folks may find the galls ugly, there is no need to treat affected oak trees. In fact, gall-making insects are difficult to manage with insecticides because they are well protected within the gall. Adults can be targeted with contact insecticides, but timing is critical because adults only emerge for a short time. Adults are also tiny so they are difficult to detect. Also, affected trees often are too large to achieve adequate spray coverage. Galls can be removed with pruning shears and destroyed, which will help reduce the abundance of future fly generations if done before larvae drop to the ground. Again, removing every gall is impractical for large trees.

Instead of trying to get rid of these fascinating insects, it would be best to sit back and appreciate one of nature's coolest little quirks, the plant gall. After all, oak gall midges are rarely seen and their ability to sense the short availability of food is simply amazing!

References:

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Hara, A.H. and R.Y. Niino-Duponte. 2002. Contarinia maculipennis. University of Hawaii CES , [Online], http://www.extento.hawaii.edu/kbase/crop/type/bloss_midgei.htm.

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Gulf Coast Ticks in Cattle

Justin Talley, Extension Livestock Entomologist

This is the time of year that cattle producers need to start monitoring and treating cattle for ear tick populations. There have been several reports across the state with cattle severely infested with ear ticks. The majority of the cattle have the Gulf Coast Tick which can cause bloody ears or deform the margins of the ear (Fig 1).

Fig 1. Gulf Coast Tick feeding damage to a replacement heifer. (Photo credit J. Talley Oklahoma State University).

Gulf Coast Tick [*Amblyomma maculatum*] (Fig 2)
This is a three-host tick. As larva and nymph, the Gulf Coast tick is a common pest of ground-inhabiting birds, such as meadowlarks and bobwhite quail, or small rodents. The adults primarily blood feed on cattle, but a variety of other hosts including dog, horse, sheep, deer, coyote and humans can be parasitized. This tick has become increasingly abundant in Oklahoma in the last 20 years and is an important pest of cattle. In addition, the Gulf Coast Tick transmits *Hepatozoon americanum* to dogs and coyotes which is an often fatal, tick-borne protozoal disease of dogs in the United States of America. The adults attach to the ears of cattle and are most abundant in early April to mid-June. When infestations are high on cattle, the ears may become thickened and curled causing a condition called "gotch ear" (Fig. 3).

Fig 2. Gulf Coast Tick adults; male (L) and female (R).
Photo credit R. Grantham; Oklahoma State University.

Insecticide sprays directed towards the ear and in the ear are effective at controlling this tick. Recently, OSU conducted a trail to determine if a 10% permethrin spray could reduce the amount of Gulf Coast Ticks in some infested replacement heifers. The spray reduced the tick population from an average of 11.8 to 1.5 per head two weeks after treatment (Fig. 4). The permethrin spray was highly effective at reducing the ear tick population. Insecticide impregnated ear tags can be an effective treatment for Gulf Coast Ticks but can cause problems with horn fly control later in the summer due to how early the ear tags have to be applied when treating for ear ticks. Usually ticks will fall off after one week after tagging the animals and a small proportion of the ticks will remain attached but are dead.

Fig 3. "Gotch Ear" in a cow infested with Gulf Coast Ticks.

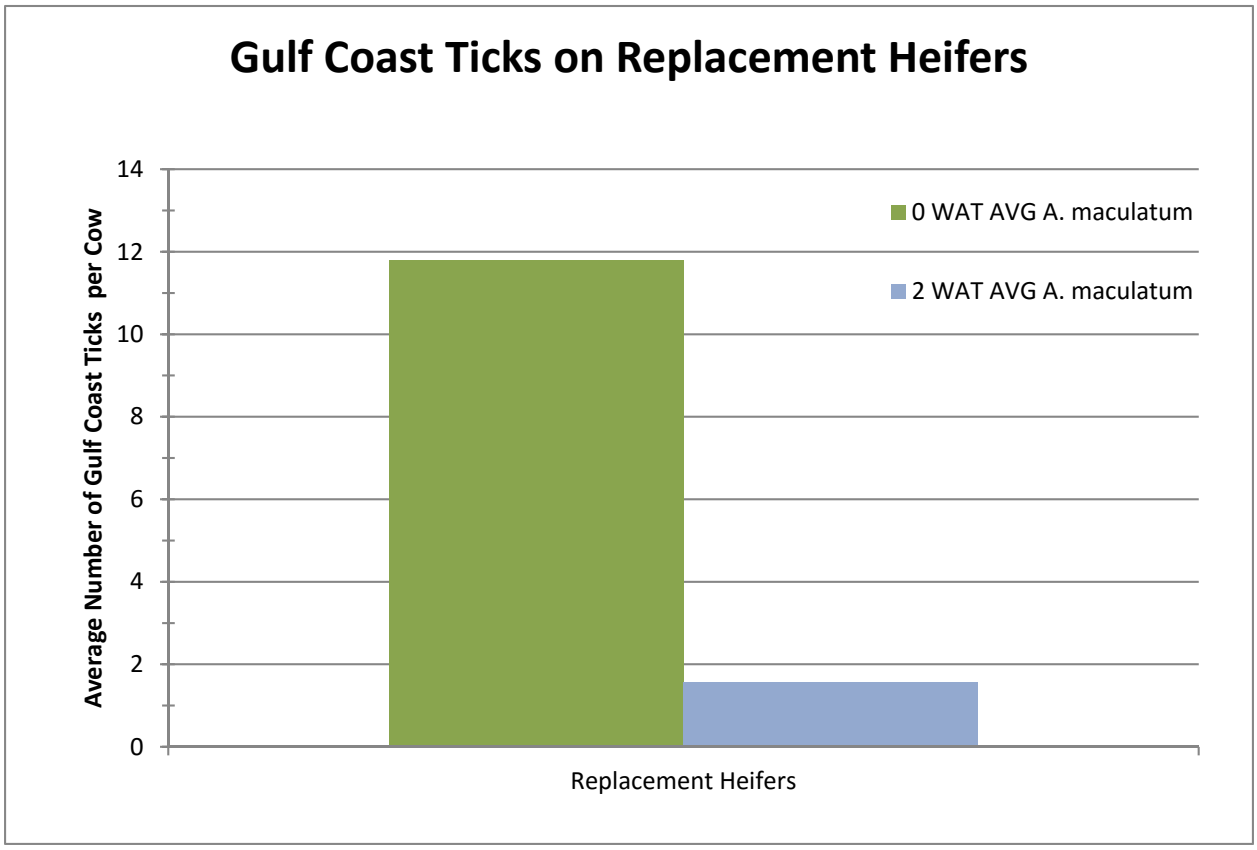

Fig 4. Average Gulf Coast Tick population per head at the time of treatment (Green Bar; 0 WAT - 0 weeks after treatment) and 2 weeks after treatment (Blue Bar; 2 WAT - 2 weeks after treatment).

Bayer's Tolfenpro® Insecticide Ear Tag Voluntary Recall

Justin Talley, Extension Livestock Entomologist

Bayer Animal Health has recently issued a voluntary recall on their new insecticidal ear tag Tolfenpro®. This recall is related to suspected cattle eye irritation. For more specific information on what to do if you have already purchased or applied these tags you will need to click on this link http://www.bayerlivestock.com/show.aspx/voluntary-recall-tolfenpro and contact the proper representative from Bayer Animal Health or your veterinarian. Bayer voluntarily issued the recall of Tolfenpro® to ensure the health and safety of cattle. Bayer is collecting information and investigating the potential causes of the eye irritation in cattle, as well as offering to exchange any Tolfenpro® tags with an alternative Bayer ear tag.

Dr. Richard Grantham - Director, Plant Disease and Insect Diagnostic Laboratory

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