



Pest e-alerts



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

Vol. 12, No. 10

<http://entopl.okstate.edu/Pddl/>

Apr 16, 2013

Chlorpyrifos-resistant Greenbugs found in the Texas Panhandle

Tom A. Royer, Extension Entomologist



I received some troubling news from the Texas Panhandle. Dr. Ed Bynum, Extension Entomologist from Amarillo, reported finding some greenbug populations that were shown to be resistant to chlorpyrifos, the active ingredient in Lorsban 4E, and other generic products (Govern 4E, Hatchet, Nufos, Vulcan, Warhawk, Whirlwind). You can read the full article by clicking [here](#). The bottom line: he tested some suspect greenbug populations using a diagnostic test that he developed for testing greenbugs in sorghum in the 1990's, and found that they were

resistant to chlorpyrifos at labeled rates.

This should not raise panic among growers in Oklahoma for two reasons. The first is that I have not heard of or received reports of any control failures for greenbugs in Oklahoma; in fact, greenbugs have generally been pretty scarce this winter.

The second reason is that it is late enough in the growing season to expect that the primary natural control of greenbugs, a tiny wasp called *Lysiphlebus testaceipes*, is keeping greenbug numbers from becoming an outbreak.



The best course of action is to sample winter wheat fields with the Glance 'n Go system. Start by going to the Cereal Aphids Decision Support Tool on your computer <http://entopl.okstate.edu/gbweb/index3.htm> and selecting the Greenbug Calculator.

Cereal Aphid Decision Support Tool

[Aphid Search](#)

[Greenbug Calculator](#)

[RWA Calculator](#)

[Insecticide Selector](#)

[Natural Enemies](#)

[Glance'n Go
Tutorial's](#)



Glance'n Go sequential sampling forms.

[Greenbug - SPRING](#)

[Greenbug - FALL](#)

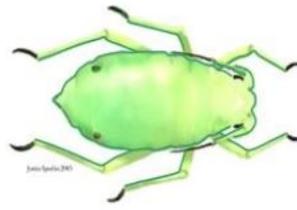
[Russian Wheat Aphid - SPRING](#)

The Cereal Aphid Management Decision support System is provided as a tool for wheat producers, crop consultants, and others involved in wheat insect pest management. The system was designed by the USDA Agricultural Research Service, Oklahoma State University, and Site Specific Technology Development Group, Inc.

The system can help you identify cereal aphids, learn more about their natural enemies, and determine the economic threshold for greenbugs and Russian wheat aphids in your field. You can print a *Glance'n Go* sequential sampling form, and access information about registered insecticides for aphid control.



Greenbug



Russian wheat aphid

External Links

[USDA-ARS](#)

[OSU Entomology](#)

[SST
DEVELOPMENT
GROUP, INC](#)

sitemeter 
97

By answering a few simple questions, you can determine an economic threshold for controlling greenbugs. This threshold is based on the estimated cost of treating the field and the estimated price of wheat. Once a threshold is calculated, you can print a Glance 'n Go scouting form, take it to a field and record your sampling results. The form will help you to decide if the field needs to be treatment for greenbugs. There are several things that make Glance 'n Go a good way to make such a decision. You only have to "Glance" at a tiller to see if it has greenbugs (no counting greenbug numbers). You can make a decision to treat "on the Go" because you stop sampling once a decision is reached (no set number of samples). Finally, you can account for the activity of the greenbug's most important natural enemy, *Lysiphlebus testaceipes*.



Aphid Mummies

When scouting with the Glance 'n Go system, keep a running count of tillers that have aphid mummies and a running count of tillers that are infested with one or more greenbugs. After each set of 5 stops, the Glance 'n Go form directs you to look at your total number of infested tillers and tillers with mummies. If there is enough parasitoid (mummy) activity, you will be directed to stop sampling and DON'T TREAT, even if you have exceeded the treatment threshold for greenbugs! Why? Because research showed that at that level of parasitism, almost all of the healthy-looking greenbugs have been “sentenced

to death” and will be ghosts within 3-5 days. If they have received their “sentence” you can save the cost of an unnecessary insecticide application.

Treatment thresholds will probably fall around 2-4 greenbugs per tiller, but make sure you are using the Spring (January-May) form, not the Fall (Sept-December) form. If a field needs to be treated, check with Current Report [CR-7194, “Management of Insect and Mite Pests in Small Grains”](#). If you treat for greenbugs and have a failure, please contact our Department and we will investigate further to determine if they are resistant.

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

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, gender, age, religion, disability, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural.