Pest e-alerts

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Vol. 14, No. 9 http://entoplp.okstate.edu/Pddl/ **Mar 23, 2015**

Insect Hotels: Good Bugs Check In AND They Check Out

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From backyard gardeners to large-scale producers, more and more folks are becoming interested in insect conservation. You might be asking, "Why would anyone want to encourage greater numbers of those creepy crawlies?" The short answer is even if they give you the chills, not all insects are pests—in fact, less than 1% of all insect species on planet Earth are considered pests (i.e., those that compete with us for food and fiber or cause us harm). So, what about the other 99%? They either serve as an important food source for vertebrate predators or they benefit us directly.

A couple of these insect-derived benefits include pollination and natural pest control. Every gardener and farmer appreciates these important ecological services as their crops, and livelihood, often depend on them. There are myriad strategies available to conserve these "good guys" in our landscapes, ranging from polycultural plantings of mixed crops to modified (reduced) pesticide use (see OCES publication E-1023: Conserving Beneficial Arthropods in Residential Landscapes). Here, I will focus on one conservation technique for home gardeners that integrates science and art: insect hotels.

Insect hotels are simple structures that provide shelter to a wide variety of beneficial arthropods, including bees, wasps, lady beetles, and spiders. These bug-friendly structures are often constructed from scraps of wood, brick, bamboo, plant pots, and other

leftover landscaping/gardening materials. Gardeners can tap their creative energy and design insect hotels to be aesthetically pleasing and tailored to their landscape. Beneficial arthropods are attracted to insect hotels because they require shelter for nesting or overwintering. Thus, the design of insect hotels should accommodate these requirements.

Native pollinators such as solitary bees and wasps require nesting sites that are often lacking in well-manicured lawns and landscapes. To attract these beneficials, insect hotels should have lots of nooks and crannies with deep recesses. These nesting sites can be created from stacked bamboo, old pots, masonry, and wood pieces drilled with holes of various diameters. Spiders, lady beetles, and other predators require hiding places and/or overwintering sites, which can be provided by adding straw, fallen leaves, pine cones, and sticks. For lots of design ideas, see the following website: http://www.inspirationgreen.com/insect-habitats.html. After visiting this site, I'm totally inspired to repurpose lots of old scraps, landscaping material, and yard waste lying around my garage to construct my own insect hotel this spring!

For more information about conserving native pollinators, including bumble bees, visit the University of Florida's "Native Buzz" project page (see references below). Also, information about specific nesting requirements and do-it-yourself bee boxes can be found by visiting the website of the Xerces Society for Invertebrate Conservation (see references below).

References

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Alfalfa Weevil Scouting Report

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Based on scouting reports from across the state, alfalfa weevil larvae are being reported. So far, reports have indicated that larvae are small (mostly 1st and 2nd instars) and are tightly embedded in the terminals of the plants with very limited amounts of feeding being observed. When scouting, keep in mind alfalfa weevil larvae go through 4 instars, with the 3rd and 4th being the most important for feeding. Depending on temperature, it takes about one week for each instar to develop. With the onset of warm weather small larvae will increase in size and begin defoliating plants. In scouting Stillwater area fields, the numbers (50/30stems) have tripled in the last week. While we are at threshold level in our area, continued monitoring of field conditions is essential for determining potential spray dates.

When scouting, sample as much of the field as possible. Levels of infestation may vary in different areas. Avoid edges and sample when foliage is dry so large larvae can be found. In thirty evenly spaced intervals, carefully pick an entire stem (without dislodging any larvae) and place in a two to three gallon container. Stems are selected randomly. Next, beat the 30 stems vigorously against the inside of the container to dislodge medium to large larvae for counting. Small larvae do not pose an immediate threat of damage. The decision to spray is based on numbers of larger larvae which may cause damage within a few days of sampling. Transfer larvae to a shallow pan for counting and record the numbers. Randomly select 10 stems from the original 30 stems and record the average length to the nearest inch. In large fields (> 40 acres) multiple samples may need to be taken. Decisions for spraying are based on degree days, plant height, and larval numbers. (Spray Decision Information Table can be found in OSU Entomology CR- 7177).

We have also observed cowpea aphids in the Stillwater test plots as well as reports from the southern part of the state. Populations of these aphids thus far are relatively low and inconsistent from 5/plant to 50+/ plant, compared to 2011 when we were seeing a hundred or more per plant. Individual plants in existing stands which may already be stunted due to lack of moisture can be affected with up to 50/plant. However, low numbers such as one to three per stem in seedling stands can be detrimental. With mild, dry conditions the potential for aphid build up, especially for cowpea and spotted aphid could increase. In previous years, parasitism has helped in controlling Cowpea numbers when populations were low to moderate. We will have to wait to see what this season brings.

We will keep you informed as information becomes available.

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

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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.