



Pest e-alerts



*Entomology and Plant Pathology, Oklahoma State University
127 Noble Research Center, Stillwater, OK 74078
405.744.5527*

Vol. 17, No. 8

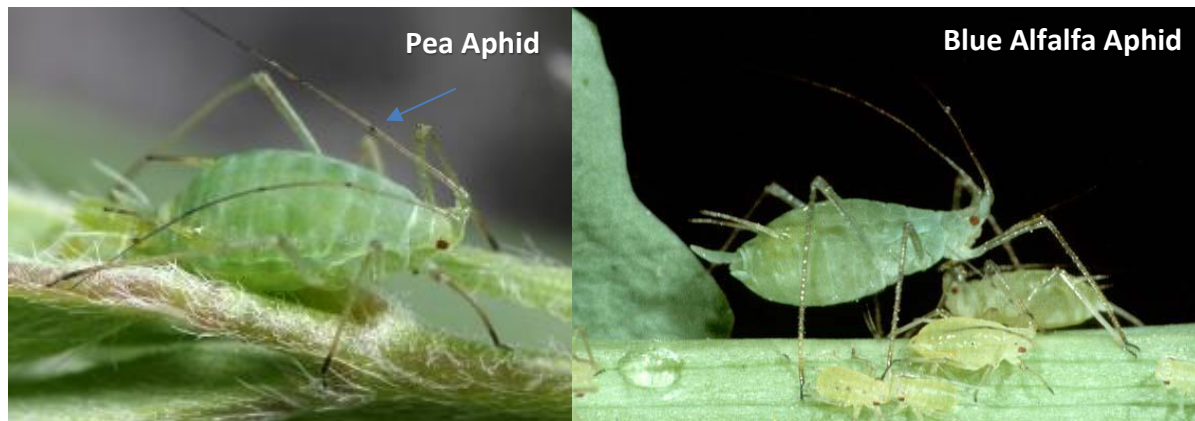
<http://entopl.okstate.edu/pddl/pdidl>

4/13/2018

Increasing Pea and Blue Aphid numbers in Alfalfa

Kelly Seuhs, Assistant Extension Specialist
Department of Entomology & Plant Pathology
Oklahoma State University - 127 Noble Research Center

How quickly things can change. Just a few weeks ago we were looking at increasing levels of cowpea aphids in the southern part of the state with some producers having to make an early season application for control. While scouting late last week in the Chickasha area I noticed a new situation developing. As we get closer to first harvest, increasing numbers of pea and blue alfalfa aphids are starting to appear. It is not uncommon to see increasing numbers before first harvest due to the timing of the season and the fact that any previously applied insecticides are starting to lose their efficacy within two to three weeks after application. For producers who had to make early season insecticide application, the majority of these sprays applied in early to mid-March for cowpea control are in this time frame or beyond. In many instances, insecticide applications will provide enough residual to last until first harvest; however, if an application is needed early enough in the season the residual effects of the chemical may not last until first harvest, prompting management decisions to be made. Both pea and blue aphids can be in alfalfa the entire summer to fall, but reproduction is dramatically slowed when temperatures exceed 90 degrees F. Pea aphid colonies prefer to feed on stems and newly expanding leaves and are more prevalent in the early spring when temperatures are cooler and dryer. Also during this time frame, blue alfalfa aphids feed on stems and tender succulent parts of the alfalfa plant. These aphids cluster on the terminal growth, but as populations increase, they will spread over the entire plant. Heavy infestations of blue alfalfa aphids are characterized by severe stunting of the stems, which have shortened internodes and smaller leaves. Leaf curling and eventual leaf drop are also common symptoms in severely infested fields.



Pea aphids are the larger of the two species and are generally identified by a light green color and enhanced dark bands at the end of each antennae segment. Blue alfalfa aphids are somewhat smaller and have a darker green to blue-green color. Their antennae are lighter at the base and become darker toward the tip, at this point, the concern is what can be done before first harvest?

Evaluating plant vigor is often the key to determining the need to treat for this insect. Closely monitor fields during the early part of the season (March, April and May) during periods of slow growth. Any potential moderate to heavy rain events may help to alleviate some of the problem allowing for more growth and dislodging aphids from the plants.



Control decisions should be based on the maturity of the alfalfa, the size of the aphid population, and the number of natural control agents present. Established alfalfa can tolerate low numbers of aphids without much sign of injury do to natural parasitism and crop growth. With conditions throughout parts of the state in moisture and stress, high numbers of aphids can cause yellowing, wilting and stunting of plants. Fifty pea aphids per

stem or more on (<10 inch tall) alfalfa would be cause for alarm and beneficial insects would not be able to keep up. For blue aphids the threshold level is 10 or more per stem. I am seeing numbers at or above threshold levels for blue aphids (45.0+ /stem with most growth less than 10 inches). For newly established stands the numbers are significantly lower at 1 /stem for blues and 5 /stem for pea. Depending on plant height and crop condition producers might want to consider early cutting as an option when heavy infestations develop close to harvest time

If conditions warrant, another insecticide application may be needed. However, data on efficacy of insecticides for aphid control indicates that some products may provide effective control even at the lowest recommended rates. Keep in mind the decision to make another application of insecticide must be carefully considered due to harvest restrictions and availability of registered products for that commodity, even at the lower rates. It is a violation of **Federal Law** to use products in a manner inconsistent with its labeling. [For example: Depending on the rate, Lorsban[®] (Chlorpyrifos) at 8oz./A has a 7-day harvest restriction (PHI) and up to 21 days (PHI) when applied at a rate greater than 1 pint per acre. In addition, Lorsban[®] can only be applied once per cutting ...(at any rate).]

Likewise, as the potential for alfalfa weevil control approaches, many of the products that can be used on alfalfa for weevil may contain mixtures of different ingredients, and one of those ingredients may be a product already used. Do not assume that because the product has a label for use on alfalfa, but a different commercial name, that the active ingredient is different. There are many generic products on the market currently, but all are required to list the percentage of each active ingredient in their product. Producers must look at their own circumstance and determine the best management strategy for their operation. ***With degree days surpassing 700 in the southern part of the state and approaching 500 in the northern areas, as far as weevils go, with a few exceptions it appears numbers are relatively light again this year.

Wheat Disease Update – April 13 2018

Bob Hunger, Extension Wheat Pathologist
Department of Entomology & Plant Pathology
Oklahoma State University - 127 Noble Research Center
405-744-9958

Powdery mildew (Figure 1) continued to be the primary wheat foliar disease this past week in Oklahoma. Around Stillwater, I have seen powdery mildew on the lower and mid-leaves with severities reaching 90% on the lower leaves. A preponderance of powdery mildew also was indicated by the scouting reports sent in from counties across the central tier of Oklahoma to Zack Meyer (Extension Educator; Kingfisher County) where mildew was reported in Washita and Kingfisher Counties at a light (<25%) severity on lower and mid-leaves. Across the northern tier of counties in Oklahoma, powdery mildew was reported to Josh Bushong (Area Extension Agronomy Specialist; northwest district) from Noble and Garfield Counties at light and heavy (>25%) severities on the lower and mid-leaves. Wheat in central Oklahoma was reported at growth stages 8-9 (flag leaf emerging to flag leaf fully emerged). In northern Oklahoma, wheat was extremely variable with growth stages from 2-8 (tillering to flag leaf emerging) being reported. Again, I want to thank all the educators that participated in this pilot program for reporting powdery mildew, leaf rust and stripe rust, and I would encourage more participation to facilitate the warning of these three foliar diseases of wheat.



Figure 1. Severe powdery mildew on lower wheat leaves.

There were not any reports this last week regarding foliar diseases from Texas, and there still have not been any significant reports of stripe or leaf rust across Oklahoma. There was one report of stripe rust in south central Oklahoma from Anderson Farms located near Ardmore, OK. As you can see in Figure 2, the lower leaf shows a heavy infection of active stripe rust while the top leaf shows a heavily infected leaf that has transitioned to the dormant (telial) spore stage of stripe rust. This happens as temperature rises with both day and night temperature being important. Typically day temperature needs to consistently be above about 75-80 F and night temperature above about 65 F. This transition along with very limited reports of stripe rust in Texas and Oklahoma indicate that stripe rust should not be a major factor in wheat this year in Oklahoma. Leaf rust could still develop, but inoculum will need to increase, and to date, there has not been widespread weather (cool and moist) that favors either rust.



Figure 2. Active wheat stripe rust (lower leaf) and stripe rust that has transitioned to the telial (dormant) stage on wheat in south-central Oklahoma.
(Photo credit: Anderson Farms near Ardmore, OK).

The only other observation this week has been “spots” of barley yellow dwarf as reported last week. However, after the recent freeze events, these barley yellow dwarf “spots” are more difficult to discern because there is widespread burning of leaf tips from the freeze, which has a masking effect.

Plant Disease and Insect Diagnostic Laboratory

The pesticide information presented in this publication was current with federal and state regulations at the time of printing. The user is responsible for determining that the intended use is consistent with the label of the product being used. Use pesticides safely. Read and follow label directions. The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied.

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, and Title IX of the Education Amendments of 1972 (Higher Education Act), the Americans with Disabilities Act of 1990, and other federal and state laws and regulations, does not discriminate on the basis of race, color, national origin, genetic information, sex, age, sexual orientation, gender identity, religion, disability, or status as a veteran, in any of its policies, practices or procedures. This provision includes, but is not limited to admissions, employment, financial aid, and educational services. The Director of Equal Opportunity, 408 Whitehurst, OSU, Stillwater, OK 74078-1035; Phone 405-744-5371; email: eeo@okstate.edu has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity. Any person (student, faculty, or staff) who believes that discriminatory practices have been engaged in based on gender may discuss his or her concerns and file informal or formal complaints of possible violations of Title IX with OSU's Title IX Coordinator 405-744-9154.

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