

PLANT DISEASE AND INSECT ADVISORY



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Wheat Disease Update Bob Hunger, Extension Plant Pathologist

Below are some updates and information pertaining to wheat in Oklahoma and other states that may be of interest.

Karnal bunt (KB) update. Over the last 6 weeks or so we have been receiving and processing grain samples of wheat as part of the national KB testing program. As of July 01, 60 samples from Oklahoma have been received. Of those 60 samples, 47 have been processed and were negative for KB. Testing of these samples is needed to help obtain a phytosanitary certificate indicating that wheat in Oklahoma was tested for the presence of KB. If all samples are negative, the certificate is issued stating the wheat was produced in an area not known to be infested with KB. This certificate then allows wheat produced in Oklahoma to freely enter international markets.

Regarding KB news from other states, I received an update in early June that KB had been found in three counties in Arizona. More important, is the examination for KB in Texas (Olney, TX area). On June 04, I received a message indicating that all wheat grain samples to date were negative and only one wheat seed sample tested positive for KB.

Common Bunt Information. During and after harvest this year, I have received many reports indicating that common bunt was more prevalent this year than usual. This also has been indicated in reports from Kansas. Based on this, be careful regarding the seed used to plant fields this coming fall - it will be a good year to be sure to plant seed treated with a fungicide that will control common bunt and loose smut. Watch for an advisory in July that will discuss this topic further.



Reports of a "new virus disease in Kansas." Recall this past spring in Oklahoma that in addition to barley yellow dwarf virus (BYDV), we also saw more wheat streak mosaic virus (WSMV) and high plains virus (HPV) than we have for a number of years. In several cases, we received wheat plants that had symptoms indicative of one or a combination of these viruses. Lab testing was used to confirm which virus or viruses were present. However, with a few samples, none of the viruses were found. Apparently the same thing occurred in Kansas as indicated in the alert below, which was issued by Dr. Jim Stack (Extension Wheat Pathologist at Kansas State University) on June 17 (KSU Alert Newsletter 04-05).

“Over the last two weeks there were reports in the media (newspapers and radio) on the occurrence of a "new" virus in the Kansas wheat crop. Symptomatic plants appeared to be doubly infected with Wheat Streak Mosaic Virus and Barley Yellow Dwarf Virus. However, when assayed they tested negative against antisera for both viruses as well as any of the six viruses for which we routinely screen (WSMV, BYDV-PAV, WYMV-spindle streak, SBWMV, AWStMV, and High Plains Virus). Dallas Seifers at KSU (Hays) has been working on this and using molecular techniques has determined that the "new" virus is a variant of the High Plains Virus. We had several fields test positive for HPV using the standard antisera we've used for the last few years. It appears that more than one strain was prevalent this year. Whether or not this strain will be present next year cannot be predicted at this point. It is not unusual for variants of pathogens to become prevalent in one year and then not be found for many subsequent years. Variations in the weather can select for different strains of pathogens based on their temperature tolerance. This may explain the occurrence of the variant of HPV this year. I'll keep you posted as we learn more about this new strain of HPV.”

This helps to explain what we saw in Oklahoma with some of these samples that appeared to have symptoms of BYDV, WSMV, and/or HPV, but tested negative for all three viruses by laboratory tests. I'll keep you informed as I here more information from Kansas.

Fall Webworms are Active Tom A. Royer, Extension Entomologist



First generation fall webworms have become very noticeable in Oklahoma during the last few weeks. This pest occurs every year, but heavy infestations occur irregularly. These insects have been hatching since early June, and will continue to visibly build their webs through mid-late July. In my opinion, we have the potential for a very heavy second generation infestation, based upon the abundance of this first generation.

Fall webworms overwinter as pupae and emerge as adult moths in late April through May. A female moth can lay up to 500 eggs which are deposited in masses on the underside of leaves. Larvae hatch in early June and immediately begin to form a silken tent, in which they feed for about 40 to 50 days. All larvae within a single web are from the same female. The larva can vary in color, but usually have two rows of black spots down their back and are sparsely covered with long white hairs. There are two races, a brown-headed, and black-headed race that occur. While there are two generations per year, it may appear that there are more generations because the brown-headed and black-headed race may occur in staggered times. Their preferred hosts in Oklahoma are pecan and persimmon, but they can feed on nearly 90 different species of trees, including sweetgum, various fruit trees, cottonwood, hickory, and black walnut.

Fall webworms don't really cause any long-term damage to their tree host, but they can temporarily ruin the aesthetic appearance of the tree. Fall webworms are sometimes a choice meal for social wasps like yellow jackets or paper wasps, as well as many birds, so often, control may not be required if nature is given time to work. In fact, a homeowner may be able to assist this natural control by tearing open the silken bags, which allows fall webworm predators access to the caterpillars.



If control is needed, it can be achieved on small trees by simply removing the nest along with the caterpillars. The nests should be put into a trash bag and removed. A high-pressure water spray can also be used to remove the webs and knock the caterpillars down. These caterpillars are susceptible to the biological insecticides *Bacillus thuringiensis* which is commonly known as "Bt" (Javelin®, Batospeine®, Dipel®) or spinosad (Borer, Bagworm, Leafminer and Tent Caterpillar Spray®) which are available at many garden centers. Best control with these products is achieved when applied to small larvae. They should be applied as a spot spray by spraying inside the web and spraying some of foliage that is nearby the tent. Other chemical products available for the homeowners include Bayer Advanced Garden Power Force® Multi-Insect Killer or Ortho Bug B Gon®, or BugStop® Multi-Purpose Insect Control. Any spray should be applied with sufficient volume to penetrate the webbing. There are other products that are registered for control of fall webworm, just check the label to make sure they have fall webworm on the label. For additional information, check out Page 364 of E-832, the Extension Agent's Handbook. Remember to always follow all label directions before making an insecticide application.

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