Plant Disease and Insect Advisory

Entomology and Plant Pathology
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Vol. 5, No. 7 Website: http://entoplp.okstate.edu/Pddl/advisory.htm May 2, 2006

Wheat Pest Update

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Diseases:

- Today (May 02), Dr. Brett Carver (OSU Wheat Breeder) reported seeing low to medium levels of **leaf rust** pustules on leaves of wheat plants in plots at the Lahoma Field Station. These pustules were located on upper leaves rather than lower leaves, which indicates that inoculum was blown in and infected the upper leaves approximately 7-10 days ago. Hence, what leaf rust occurs in Oklahoma this year not be from overwintering rust but more likely will originate from spores blown into the state.

- Yesterday (May 01) I finally found three **leaf rust** pustules in plots located near Stillwater. One was in a plot of APO502CL and the other was on Jagger. All of the recent moisture we have received will help leaf rust develop, but most of the wheat I saw was approaching or was at the milk stage so it is too late to consider applying a fungicide.

- By far and away the most noticeable disease I saw around Stillwater was **barley yellow dwarf virus (BYDV)**, which was present in nearly every plot/field I examined. Although older leaves (including flag leaves) are yellowing, I don't see a tremendous amount of dwarfing or stunting. However, I'm sure the BYDV that is showing up will result in some reduction of yield because infected plants don't have near as much photosynthetic potential as healthy, uninfected plants.

- **Wheat streak mosaic virus** and **high plains virus** continue to be reported from Oklahoma. Rick Kochenower (Agronomy Area Research and Extension Specialist – Panhandle/Northwest Oklahoma) reported that, "The HPV and wheat streak is really starting to show up out here, I have gone and looked at 5 fields in the last week that have it." These two viruses, which are both transmitted by wheat curl mites, also are causing significant problems in the Texas panhandle (see report below from Dr. Tom Allen, Bushland, TX). For a more detailed description of these two virus diseases, go to: http://entoplp.okstate.edu/Pddl/advisory.htm and look at Volume 5, number 6 (April 24, 2006) issue of the Plant Disease and Insect Advisory.

- There also is still some **powdery mildew** on the second and third leaves below the flag leaf on Jagger, but losses from this disease will be minimal.

<u>Insects</u>:

- Insect activity has taken a back seat to weather and disease-related issues this spring. Aphid activity has wound down. I have received reports of the spring generation of Hessian fly showing up in North Central Oklahoma. Unfortunately, there is not much that can be done to control Hessian fly. Producers can check their fields for Hessian fly infestations, and determine what kind of impact they have had on their field by simply counting the number of lodged wheat stems per row-foot in several locations.

- While the poor condition of this year's wheat crop does not offer much of a threat for an armyworm outbreak, this is the time that producers should normally be watching their fields for signs of armyworm activity. Some good news: Dow Agrosciences announced some changes in the Tracer insecticide label. One of those changes was that the waiting period for grazing wheat has been lowered from 14 days to 3 days. This will provide much more flexibility for producers that may want to choose Tracer for control of armyworm or fall armyworm.

<u>Reports from Texas</u>: (Dr. Tom Allen, Asst. Res. Scientist/Plant Disease Diagnostician, Bushland, TX): We have been monitoring the wheat crop in the TX Panhandle very closely since October/November for the presence of important wheat viruses. Our diagnostic laboratory in Amarillo (a member of the Great Plains Diagnostic Network) first started receiving wheat samples shortly after germination that were exhibiting symptoms of Wheat streak mosaic virus (WSMV). This is considered to be very early in the growing season for viruses to start showing symptoms. In some cases this can be directly correlated to volunteer wheat that was in close proximity to this year's wheat crop.

As the growing season has progressed we have also seen increasing numbers of wheat samples infected with both WSMV and High plains virus (HPV). To date we have processed 309 wheat samples from across the Panhandle. A total of 300 (or 97%) of the samples we have processed have contained WSMV. More than half, 179 of the samples (59%), have also contained HPV. Only 8 of the 309 samples contained HPV alone.

We continue to receive samples daily from across west TX and are continuing to see a large number of virus infected wheat samples. In a year where the drought has been the main topic of discussion we feel that these viruses could become even more important. In some area wheat fields more than 1/3 of the entire field (in one case this has been observed in two adjoining 120 acre wheat fields 25 miles west of Bushland, TX) has symptoms of WSMV.

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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, VP, Dean, and Director for Agricultural Programs, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of Agricultural Sciences and Natural Resources.