

# PLANT DISEASE AND INSECT ADVISORY



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Vol. 3, No. 2

Website: <http://entopl.p.okstate.edu/Pddl/advisory.htm>

Mar 5, 2004

## WHEAT DISEASE UPDATE

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The following is a summary from some limited observations I have made in plots around Stillwater and that I have heard from producers and colleagues in other states.

### Wheat Soilborne Mosaic Virus (WSBMV) & Wheat Spindle Streak Mosaic Virus (WSSMV):

Symptoms of these virus diseases begin to appear in Oklahoma in late February through March, and have become strikingly apparent in my WSBMV/WSSMV nursery over the last 7-10 days. For example, **Figure 1**, which was taken on March 2<sup>nd</sup>, shows four WSBMV-resistant lines in the foreground and four WSBMV-susceptible lines in the background. Many of the varieties planted in Oklahoma have good resistance to WSBMV and WSSMV, so significant losses from WSBMV/WSSMV are generally not a problem. For the reaction of specific varieties to these viruses and other diseases, please go to: <http://www.wit.okstate.edu/varietyinfo/jul2003wvcc.html>.



Fig. 1. Wheat lines resistant (foreground) and susceptible (background) to wheat soilborne mosaic.

### Leaf rust:

**Leaf rust (Fig. 2) has been reported in Oklahoma**, although not at high levels as was seen in much of the state last fall. Considering the type of winter we had (especially the cold temperatures through mid-January to mid-February), I would suspect that most of the leaf rust inoculum from last fall did not survive. However, Dr. Art Klatt and I have both observed a few pustules of leaf rust on leaves of Jagger at the Research Farm just west of Stillwater. Rex Herrington (Texas A&M wheat researcher) reported finding **moderate levels of leaf rust on susceptible varieties in southern Texas** (east of San Antonio), no rust of any kind just west of San Antonio (it was much drier at this location), and **mostly intermediate levels in plots near Abilene and other locations scattered around central Texas**.



Fig 2. Wheat leaf rust.



Fig 3. Wheat stripe rust.

**Stripe rust:**

I have not seen or heard of any stripe rust (**Fig. 3**) in Oklahoma as of the first week of March. In Texas, Rex Herrington reported stripe rust southwest of Houston (Wharton County) at levels sufficiently high to rate variety reactions. Hence, there is some stripe rust in the states around Oklahoma, and factors such as weather conditions will determine the severity of this disease in the coming spring.



Fig 4. Wheat powdery mildew on lower leaves.

**Powdery mildew:**

Last fall, there were extremely high levels of powdery mildew (**Fig. 4**) on susceptible varieties in plots planted around Stillwater. As early as 2-3 weeks ago, I and Dr. Klatt both observed actively sporulating mildew on the lower leaves in these same plots on susceptible varieties such as Jagger. I also have had reports of **severe mildew from across much of Texas**. Hence, I would suspect that powdery mildew will again be prevalent on susceptible varieties (see internet reference under WSBMV/WSSMV for variety reactions to powdery mildew); however, I do not recommend considering the application of a fungicide unless it appears likely that the powdery mildew will infect flag leaves.

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