

7/16/2007 University of Missouri Extension Agronomy Update
Soybean Disease Progression and Potato Leafhopper Pressure in Alfalfa
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Many soybean producers throughout west central Missouri have questioned the potential for soybean rust to infect this year's soybean crop, as a result of many late-planted fields and excessive moisture in many areas throughout Missouri. Within the week of July 9-15, several noteworthy confirmations of soybean rust did occur, these including a soybean sentinel plot and surrounding commercial soybean field in Victoria County, Texas (which is on the gulf coast of Texas) on July 12th in addition to Mississippi's first confirmation of soybean rust for 2007, on kudzu in the southwestern corner of the state. For 2007 overall, soybean rust has been positively detected in 4 counties in Texas, 1 county in Mississippi, 10 counties in Florida, 5 counties in Georgia and Alabama, and 5 parishes in Louisiana.

Within the past two weeks, soybean growers throughout Missouri have reported yellowing, wilting soybean plants. MU Plant Pathologist, Laura Sweets, notes that *Phytophthora* root rot appears to be the cause in many fields, in which plant samples have been submitted to the MU Plant Diagnostic Lab. However, other root rot diseases, such as *Fusarium* root and taproot rot and *Rhizoctonia* root rot, have been the primary disease pathogens in some fields. These root rot diseases can either occur alone or in combination, within a field. Plants that have demonstrated reduced vigor season-long, or yellowing between veins in the lower leaves, or yellowed upper leaves may be affected with *Phytophthora*. A brown discoloration in the lower stem region is also characteristic of *Phytophthora* infection. There are no management options at this point in the season to control or reduce the impact of these root rot diseases. A fungicide application will not provide control and Dr. Sweets comments that continued high temperatures and/or fluctuating weather conditions will potentially lead to more wilting and plant death within infected fields.

Lastly, potato leafhopper (PLH) pressure continues to remain high, namely in alfalfa, although varying levels of PLH have also occurred in soybean. MU State Entomologist, Wayne Bailey, notes the presence of both PLH adults and nymphs in alfalfa fields throughout the state. Potato leafhoppers are approximately 1/8 inch in length, wedge-shaped, and greenish-yellow in color. Damage to the alfalfa occurs as a result of the potato leafhoppers penetrating the leaflets and stems with their mouthparts and removing plant juices; infested alfalfa fields will often show yellowing of established plants and stunted plant growth. Mortality can occur, namely in seedling alfalfa stands. Quantity and quality of forage will be reduced. Alfalfa producers are recommended to scout fields using a sweep net and sample 5 random locations throughout the field. For 8-10" alfalfa, treatment is justified for traditional alfalfa varieties when an average of 1.0 PLH is present per sweep. For varieties resistant to PLH, an average of 3.0 PLH present per sweep is the economic threshold for 8-10" alfalfa. For fields in which treatment is agronomically justified, insecticides such as Lorsban, Baythroid, Mustang Max, Warrior, and Sevin are labeled for PLH and provide control.