



Pest e-alerts



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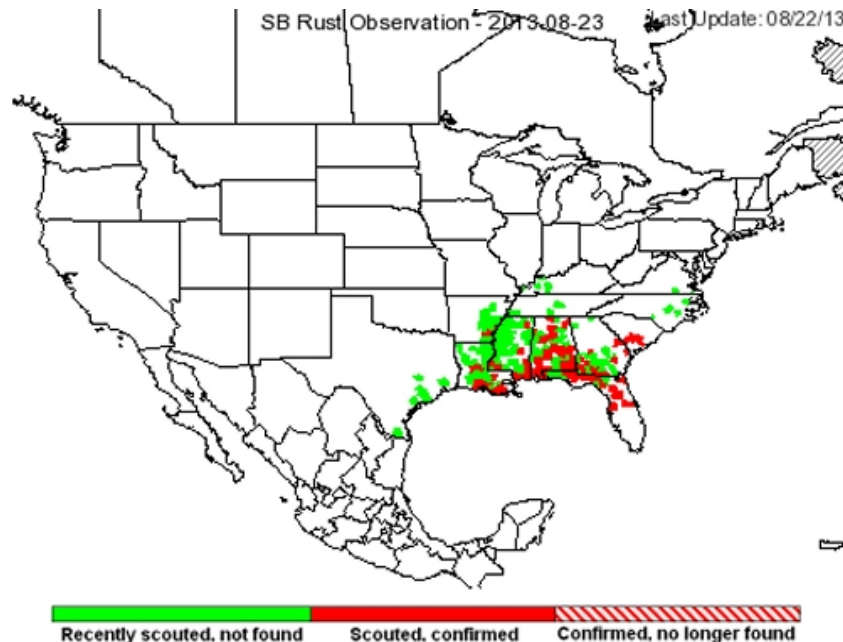
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Soybean Disease Update

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Soybean Rust

What a difference a year makes! The soybean crop looks outstanding this year given the rainfall and unseasonably cool weather experienced in many parts of the state where soybeans are grown. Most full-season varieties are entering reproductive stages. This is in contrast to the last two years when heat, drought, and charcoal rot severely limited the crop. However, when conditions are good for the crop they are also good for diseases. Below is a report from the IPM Pipe group that show the current distribution of rust soybean rust in the U.S., areas at risk for rust development, and a crop weather outlook. Rust is very active in the southeast this year (see map below). However, rust has not been found in Oklahoma this year and is currently not active in Texas. The lack of rust development here is likely due to the prolonged drought conditions in large areas of Texas. Oklahoma is currently not at risk from rust and fungicides are not recommended for rust control.



Other Foliar Diseases

Other foliar diseases have been active in the southern U.S. this year. Frogeye leaf spot (Fig. 1), downy mildew (Fig. 2), and target spot (Fig. 3) have been particularly widespread. Downy mildew and target spot have been identified in Oklahoma this year, but they are generally considered of minor importance with little impact on yield. However, frogeye leaf spot has the potential to damage yield and fields in early reproductive stages with frogeye leaf spot are likely to respond to fungicide application. Be aware that there is documented resistance to strobilurin (Group 11) fungicides in the frogeye leaf spot pathogen where fungicides have been regularly applied.



Fig. 1. Frogeye leaf spot (photo courtesy of T. Allen, MS St. Univ.).



Fig. 2. Downy mildew (tufts of white-colored mold are often visible on the underside of the leaf spots [see below]).





Fig. 3. Target spot of soybean (photo courtesy of T. Allen, MS St. Univ.).

Sudden Death Syndrome (SDS)

Doug Jardine at Kansas State University has reported that sudden death syndrome is unusually severe in Kansas this year. It is occurring mostly in irrigated field with high yield potential. The disease is a root rot that is favored by cool and wet growing seasons and it is particularly severe on susceptible cultivars grown in high-yielding environments. Foliar symptoms appear in reproductive stages of plant development as chlorotic and then necrotic blotches in between the leaf veins (Fig. 4). Leaves curl upward, appear scorched, and fall from the plant with the petioles remaining attached to the stem. Affected plants decline and/or are killed prior to pod fill (Fig. 5). To my knowledge this disease has not been reported in Oklahoma but keep a look out for it. The foliar symptoms can be mistaken for stem canker which is distinguished by cankers present on the stem, and triazole (Group 3) fungicide injury which appears suddenly after a fungicide application, but does not progress to defoliate the plant. Planting resistant varieties is the only management strategy for SDS.



Fig. 4. Foliar symptoms of sudden death syndrome (photo courtesy of Ohio St. Univ.).



Fig. 5. Defoliation caused by sudden death syndrome (photo courtesy of APS).

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