



Pest e-alerts



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Soybean Rust Update

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Soybean rust (SBR) (Fig 1) is an invasive foliar disease of soybeans. The disease causes premature defoliation and can reduce yields by up to 50% when severe. The disease overwinters along the Gulf Coast on kudzu during mild winters. Due to the mild winter this



Fig 1. Soybean leaf infected with soybean rust.

year, soybean rust survived the winter well on kudzu in several Gulf Coast States. However dry conditions this spring along the Gulf have limited disease development thus far in 2012 and until last week, no reports of the disease on soybean had yet been made. Soybean rust now has been reported on soybean in the Rio Grande Valley where it has been found at moderate levels on soybeans at the R1 (first bloom) stage (Fig 2). The disease could threaten soybeans in Oklahoma later in the season depending on

weather. Apparently there are only about 300 acres of soybeans in the Rio Grande Valley this year, which will limit the spore load released from this area. The disease will likely have to increase on soybeans further north in Texas before it threatens the Oklahoma soybean crop.

Unlike other soybean diseases that produce easily recognizable spots (see – OSU Extension Circular E-967 “Soybean Production Guide”) soybean rust is difficult to identify at early stages of disease development. Since 2005 Oklahoma has participated in the sentinel plot program for monitoring soybean rust. Leaves from sentinel plot monitoring sites are examined by the Oklahoma State University Plant Disease and Insect Diagnostic Laboratory under a dissecting scope which is needed to verify the presence of rust pustules on the undersides of leaves (Fig 3). While the disease was only a problem in 2007, I believe the program has saved growers the trouble of scouting for the disease, has reduced production inputs by eliminating needless fungicide applications, and has increased the awareness of diseases by growers and crop advisors. The sentinel plot sites for 2012 are shown in (Fig 4). Near real-time reports on the occurrence of rust in Oklahoma and other states can be checked at <http://sbr.ipmpipe.org/cgi-bin/sbr/public.cgi>. We will provide timely alerts and appropriate recommendations on soybean rust if and when it is found in the state this year.

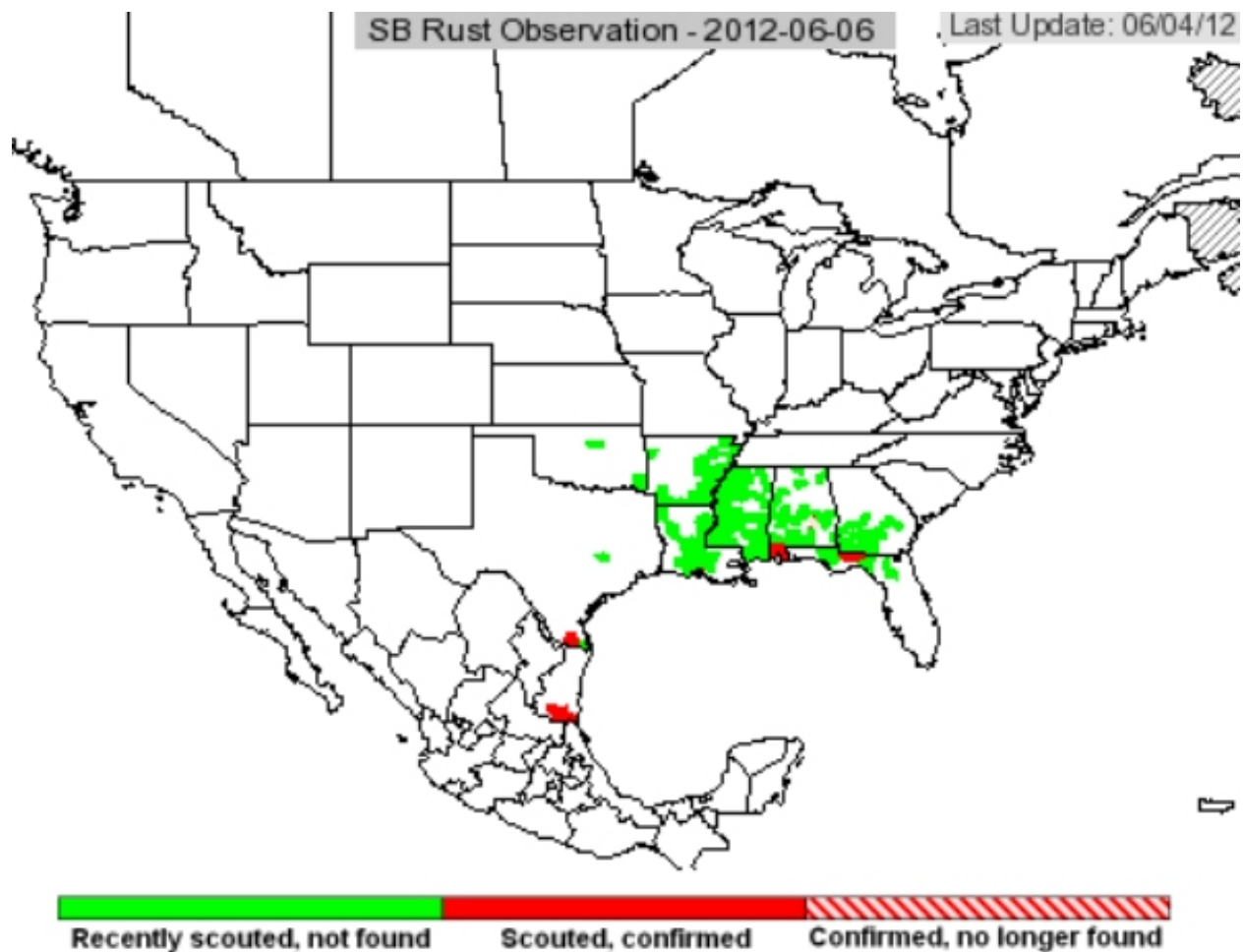


Fig 2. Current distribution of soybean rust in the United States and Mexico.



Fig 3. Soybean rust pustules.

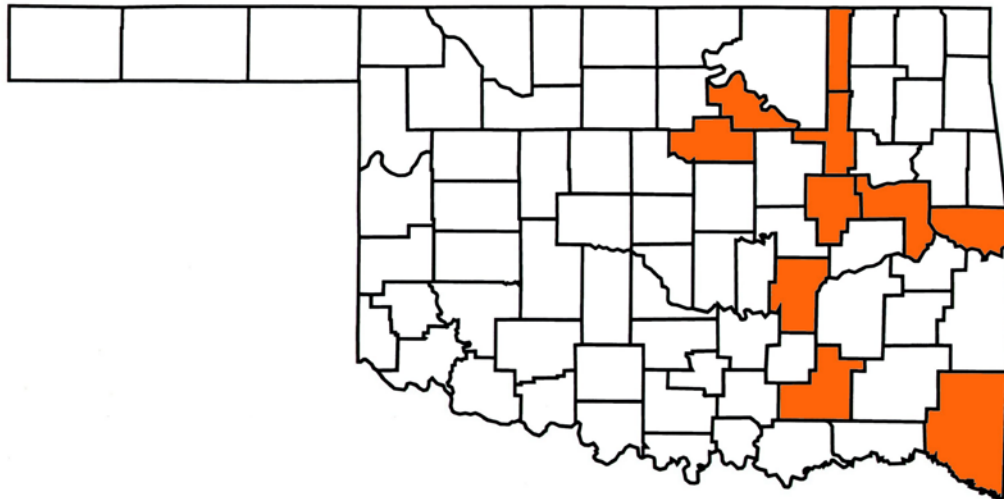


Fig 4. Counties in Oklahoma with soybean rust sentinel (monitoring) plots.

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