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End of Season Soybean Rust Update

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Abstract
Following the pattern of 2010, soybean rust never really got off the starting line in 2011. As of mid-October, soybean rust has been found in two Georgia counties, seven Florida counties and one Louisiana county in the continental United States. The disease was also found in parts of Mexico and Puerto Rico earlier this year; there is a recent report (early October) out of Tamaulipas, Mexico (Figure 1).

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End of Season Soybean Rust Update

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Figure 1. Current distribution of soybean rust ([http://sbrusa.net](http://sbrusa.net))

What happened to soybean rust?

Of the three critical steps that must happen for rust to get to Iowa – (1) to survive winters somewhere in the south, (2) build up inoculum (spores) where survival occurs and (3) movement of these spores to fields further north and successful infection of soybeans in those fields – none of them happened in 2011.

In years past, soybean rust has survived in several states across the southern United States. Droughts and other obstacles have prevented the overwintered spores from building up and moving north until late in the season. However, soybean rust never even got started in 2010 so at the end of 2010 there was very little soybean rust in the United States and Mexico to overwinter. Fast forward to 2011, which started much like 2010, with very little inoculum. In fact there was only one report in the entire United States at the beginning of May (Figure 2).
In addition to the lack of inoculum, the historic drought in Texas and neighboring states (Figure 3) provided an obviously poor environment for soybean growth and soybean rust infection. Even if spores were traveling from Mexico to Texas (one possible avenue for soybean rust to travel to Iowa), disease was not getting established in drought-stricken areas. Once again, lack of inoculum and weather not conducive for rust development (two of three points in the disease triangle) stopped soybean rust before it even got started.

![Figure 2. Survival as shown by the number of counties with reported soybean rust on May 1, 2011](http://www.extension.iastate.edu/CropNews/2011/1017mueller2.htm)

**Soybean rust scouting system**

Plant pathologists, especially in southern states, continue to monitor for soybean rust. In Iowa, we have had an agreement with the Iowa State University Research and Demonstration Farms to establish a sentinel plot system when the threat of soybean rust materialized. We never did start scouting at the ISU research farms in 2011. While soybean rust has petered out the past two seasons, this only exemplifies the importance of an established nationwide scouting system. Knowing that soybean rust is not on the move allows Midwestern growers the peace of mind to mentally eliminate this disease as a possible threat each particular year and concentrate on other issues. Soybean rust will need to reestablish itself on
kudzu in southern states before it is even a threat to the South. Until then, soybean growers in Iowa can focus on other things.

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