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Update on soybean rust and sentinel plots

X. B. Yang  
*Iowa State University*, xbyang@iastate.edu

Ralph von Qualen  
*Iowa State University*

Emerson M. Del Ponte  
*Iowa State University*

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Abstract
Soybean rust has still not been detected beyond southern Georgia. Last week, soybean rust was found on kudzu plants in the fifth Florida county, Jefferson. With development this slow, our previous outlook has not changed; the occurrence of soybean rust in Iowa and surrounding states (excluding Missouri and southern Illinois) before the end of July is not great. The first detection date could be even later if no new development of this disease is reported before the end of June.

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Sentinel plot at Mediapolis, Des Moines County, put out by UAP Midwest. Soybean plants in this picture vary in maturity from second trifoliate leaf to flowering.

Tropical Storm Arlene, which arrived June 11, is likely to increase spore movement, although there was a thin spore concentration. Any disease movement as a result of Arlene would not be noticeable for a while due to the thin concentration. The predicted climatic favorability for the next 30 days is not good for disease development for most of the United States soybean production region except for some areas along the Gulf Coast. With limited spores and unfavorable conditions the next 30 days, the effects of Arlene do not change the overall risk picture in northern soybean production regions for this season.
Sentinel plots

The first flowering on the soybean rust sentinel plots was observed June 7, and six of the 30 plots are flowering at this time. No soybean rust has been found so far in our sentinel plots. The late freeze on May 2 made it necessary to replant some plots.

As of June 20, plots vary in maturity from V2 (second trifoliolate leaf) to R1 (beginning flowering). Early planting led to a few plots with low populations, so they were overplanted to increase the population. In a few locations where the population was too low, we shifted our observations to a different part of the field.

Our original strategy was to have plants at a more advanced growth stage than other soybeans in Iowa because in Brazil they noted that the first symptoms of soybean rust are almost always on plants between R1 (flowering) and R6 (full pod with green seeds). This year, soybean rust is moving much slower than anticipated from kudzu in Florida onto soybeans in the southern United States. With the spread in maturity in our sentinel plots, we are prepared to detect soybean rust early after arrival even if the disease comes late in the growing season.

Other observations

Bean leaf beetle feeding is present in nearly all plots. We expected that the first soybeans to emerge in an area would be attractive to the overwintering beetles. Our cooperators managed the beetles effectively so that no plots were lost to the bean leaf beetle. Brown spot caused by Septoria glycines is common on the unifoliolate leaves especially in the early planted (most mature) plots. Bacterial blight is present on some of the upper leaves in a few plots.

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