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## Soybean rust update and outlook

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# Soybean rust update and outlook

## **Abstract**

Soybean planting and germination are well under way in Iowa. Similar to our work last year, we have been using computer modeling results combined with information from sentinel plot data to project the seasonal progress of soybean rust and the potential risk for Iowa. Below is our update and seasonal outlook.

## **Keywords**

Plant Pathology

## **Disciplines**

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## Plant Diseases

# Soybean rust update and outlook

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Soybean planting and germination are well under way in Iowa. Similar to our work last year, we have been using computer modeling results combined with information from sentinel plot data to project the seasonal progress of soybean rust and the potential risk for Iowa. Below is our update and seasonal outlook.

**Situation in the southeastern region.** In the Gulf Coast regions, we are lucky again this year due to drier than normal conditions. In Texas, no new disease has developed after the diseased plants were removed during the winter. The latest report has indicated no further development because of a lack of rain. Likewise in Florida, rust has developed slower than last spring because of a lack of precipitation. However, new observations of soybean rust in kudzu plants have been observed after recent rains. The most encouraging news in this region comes from a report published May 25 from observations in Alabama. This report indicated that the disease has developed only minimally and has not spread far from the area where infected plants were found months ago.

We have run computer models to project the suitability of soybean rust for the next two weeks. The modeling results indicated that spore movement from infested areas in Florida and Georgia is limited. Areas that are most suitable for rust development are mainly in north-central Florida, where more rains are predicted.

**Rust from Mexico.** Recent reports have indicated the presence of soybean rust in Mexico in the same area where it was reported late last fall. Using check-off funds, we are doing computer simulation analysis on the risk of soybean rust spreading from Mexico to the northern soybean production region in the United States. Part of the results have been reported in a previous *ICM* article. In general, the northward dispersal is much stronger early in the spring. However, in the summertime, prevailing westerly winds reduce the northward movement of the spores. For the northward spread early in summer, the most likely spore deposition areas are southern and central Texas.

Questions are currently being raised as to whether fungicides should be stocked for soybean rust. We have been closely monitoring this situation in Mexico and Texas to see how this may pertain to Iowa. This is especially important if Texas can act as a land bridge for rust, providing a source of spores for Iowa. Recent



Asian soybean rust. (X.B. Yang)

weather conditions, as well as forecasts for the immediate future, have not been favorable for rust development in Texas. April 2006 was the warmest month on record. Daily high temperatures in Texas normally range in the mid- to upper 90°s in the summer. Rainfall has been minimal and forecasted rainfall probability is typically less than 10 percent throughout the region. These hot and dry conditions also extend farther north into Oklahoma and Kansas. Because the weather condition is dry and warm, the risk of having an epidemic from spores spreading from that direction is not high. We will continue to monitor and perform modeling for this region throughout the growing season.

**This season's summary/outlook.** Before April this year, rust had already reached a similar level to that of last July. Although soybean rust had spread as far west as Alabama, further spread has not been observed. This is partly due to the drier than normal spring season in the southern regions. Despite precipitation during the past few weeks, a severe outbreak in the coming season in the northern region is unlikely if history can shed light on our assessment. For the 1971 southern corn leaf blight, the disease was at an epidemic proportion in the Gulf Coast region by mid-May. With May passed and low levels of soybean rust in the South, we will soon pass the window for having an outbreak this growing season.

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