Iowa soybean rust sentinel plots

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Iowa soybean rust sentinel plots

Abstract
Iowa’s sentinel plots are being planted so that we can monitor any development of soybean rust during 2006. During this growing season, sentinel plots are being established in 21 locations in Iowa (see map below) as part of coordinated national efforts funded by check-off dollars and federal funds. Most plots are located at Iowa State University research farms, where the rust will be monitored and scouted closely. Our cooperators are planting Iowa’s sentinel plots early so they will be at a reproductive growth stage sooner.

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Our cooperators are planting Iowa's sentinel plots early so they will be at a reproductive growth stage sooner. This is important because past experiences in the United States and Brazil teach us that soybean rust is most often first found on plants in their reproductive growth stages. Sentinel plots at Castana (Monona County), Chariton (Lucas County), Crawfordsville (Washington County), Kanawha (Hancock County), Nashua (Floyd County), and Sutherland (O'Brien County) have been planted. The earliest was planted April 10. Ours are some of the first sentinel plots planted in the northern states.

This year, two planting dates will be used for each location. This will prevent damage by late frost like we experienced last year. Plus, we will have a longer season to observe the plots. This will help us alert producers if rust reaches Iowa and will help us learn about development of this disease that is new to North America.

In the southern states, many sentinel plots have been planted. Rust was found in Texas last fall, and these infected plants were subsequently destroyed. There have been no reports of rust on soybeans this growing season.

Kudzu ordinarily loses its leaves during the winter months, but in a few sheltered areas, the leaves remained intact. Rust was found on last year's kudzu growth in Florida, Alabama, Georgia, and Texas. In Alabama, Georgia, and Texas, once rust-infected leaves were found, the leaves were removed. In theory, this method should delay the outbreak of disease in the South, although the effectiveness of this method is unknown.

Kudzu plants are breaking dormancy and leafing out. Plant pathologists continue to look for rust on kudzu, but no new findings have been reported since the beginning of March. Warm, dry weather appears to have slowed or halted disease development at this time.

Ralph von Qualen is an independent plant pathologist assisting with the sentinel plots. X. B. Yang is a professor of plant pathology with research and extension responsibilities in soybean diseases.