

# Soybean Cultivars, Fungicides Evaluated for Disease Management

LSU AgCenter scientists continue to evaluate soybean varieties for agronomic characteristics and resistance to naturally occurring diseases.

Diseases reduced Louisiana soybean yields about 11 percent or 3.16 million bushels in 2006, experts estimate.

Resistant varieties and fungicides are the major components of disease management programs.

Fungicides are used to reduce the effects of soybean diseases when genetic resistance is not available. More than 30 fungicide trials were conducted by LSU AgCenter scientists in 2006, and 21 of those were at the Macon Ridge and Northeast research stations, said LSU AgCenter plant pathologist Dr. Boyd Padgett, who directed many of the trials.

“New fungicides have emerged in recent years, and older ones not previously labeled for use on soybean recently have been approved for managing Asian soybean rust,” Padgett said. Evaluations of fungicides used in other countries are still being conducted in Louisiana, as well, he said.

Additional research also is being conducted to assess the impact of diseases on yield and quality.

“Yield loss assessments are targeted for Asian soybean rust, *Cercospora* leaf blight, frogeye leaf spot, pod diseases and aerial blight,” Padgett said. “Results from this research will identify disease-resistant varieties, provide information on efficacy of new fungicides, determine which products are most beneficial, quantify yield losses from diseases and define when fungicides are likely to be most economical.”

Environmental conditions also are monitored during the growing season in an effort to determine their effects on disease development. Some parameters recorded are leaf wetness period, ambient temperature, relative humidity, rainfall, wind speed and wind direction.

Such evaluations are the basis for recommendations from LSU AgCenter researchers and extension experts. Mary Ann Van Osdell

*Photo by Boyd Padgett*



*Cercospora leaf blight was the culprit discovered in this soybean field at the LSU AgCenter's Macon Ridge Research Station last fall. Researchers say Cercospora is a particular problem for Louisiana growers, because fungicides have shown only limited effectiveness against the disease.*