Study Indicates Earlier Planting Helpful In Managing Bacterial Panicle Blight

STUTTGART, ARK.

A field study of the 2012 crop indicates earlier planting may be helpful in managing bacterial panicle blight in rice, but early planting is not a sure cure for this disease that can damage yield and milling quality.

March and April plantings seemed to decrease the amount of infected plants – in both moderately-resistant and non-resistant varieties.

"We believe early planting would help rice escape the severe heat of July and early August" which, paired with drought, creates favorable conditions for the growth of bacteria panicle blight, she said. "This is predicted from our observation in the previous years and from our research data last year."

Wamishe cautioned that there are other factors involved.

"If the weather conditions are favorable, disease severity may be high even if the rice is planted early," she said. "We remain uncertain about weather factors and the exact developmental stage of the crop needed for a high disease situation."

In her 2012 planting-time research, she used two varieties: the moderately resistant Jupiter and the non-resistant Bengal. For March plantings, infection rates were 0.37 percent for Jupiter and 0.44 percent for Bengal; for April, they were 0.43 percent and 0.69 percent respectively; and for May, they were 49.4 percent on Jupiter plants and 99 percent on Bengal.

Even the moderately-resistant Jupiter saw a large infection when planted too late in the season.

Sixty-five percent of the Arkansas rice planted in 2012 was non-resistant varieties, such as Bengal. The Jupiter variety represented 10 percent of the moderately-resistant rice planted that year. Fortunately, bacterial panicle blight occurrence was very low, most likely due to earlier planting times.

Her research on timing and other facts is critical because there are still no legal chemical methods to suppress this disease, which leaves genetic, cultural, and management techniques as the only realistic options for defeating the blight.

Wamishe offers these recommendations for managing the blight:

Manage fields with adequate water and potassium fertilizer. Excessive nitrogen and seeding rates may aggravate the disease situation. After all, a healthy plant is a more resistant plant.

Rotate fields to another crop after the rice harvest is another recommendation. This mitigates the danger from bacteria incubating in soil.

Wamishe said her research will need to observe additional growing seasons to acquire stronger data.

The above practices should allow farmers to mitigate bacterial panicle blight infections in both moderately-resistant and non-resistant fields until Extension reaches more certain conclusions, she said. Δ