Rice Bacterial Panicle Blight Disease Management

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Bacterial Panicle Blight Causal organisms

- *Burkholderia glumae and B. gladioli*

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The bacterial panicle blight bacteria can infect rice at the seedling stage and after heading, in the United States the disease usually develops late in the season.

The pathogen overwinters in infected seed and in the soil (B. gladioli). The bacteria establish an epiphytic population in the spring on rice seedling and follow the growing plant upward. Bacteria are carried by splashing rain from plant to plant. Movement is usually only over short distances.

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Key diagnostic symptoms include green panicle branches up to the infected grain and two toned grain having brown discoloration on the lower third to half of the grain. Secondary saprophytic organisms infect the grain soon after the bacteria infect often masking typical symptoms. Sheath rot like symptoms occasionally affect the flag leaf sheath.

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Florets on young panicles become discolored and heads stay upright as grain stops filling. Floret stems (panicle branches) stay green after the unaffected grain matures. Damage may vary from a single floret to all of the florets on a panicle. The disease tends to develop in circular areas in the field with the most affected plants in the middle.

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Bacterial panicle blight tends to develop in late planted fields and during very hot weather.

Losses due to bacterial panicle blight include reductions in yield and milling. Unlike most rice diseases bacterial panicle blight develops after heading. The disease can be very explosive, and almost completely reduce grain yields under favorable conditions .

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Partial resistance to bacterial panicle blight is available.

Panicle Blight Reactions

Very Susceptible	Susceptible	Moderately Susceptible	Moderately Resistant
CL131	CL161	Catahoula	Neptune
Bengal	Cheniere		Jupiter
Cocodrie	Trenasse		Pirogue
Cypress	CL151		
Wells	CL171		

A number of other rice diseases can be confused with bacterial panicle blight. If not identified early saprophytic fungi can grow on the dead tissues and mask typical symptoms.

Straight head

Sheath rot

Scab

Scouting and Determining Need

Damage is most severe during periods of unusually hot weather or unusually hot nights. No scouting methods are available and no chemical control agents are labeled to control bacterial panicle blight.

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Management Practices

- Most commercial varieties are susceptible, but some show significant partial resistance.
- Plant early to avoid late season hot temperatures.
- Avoiding excessive nitrogen rates
- No pesticides are currently recommended to control this disease.
- Do not plant seed from fields that were seriously affected the previous year.

Suggested additional sources of additional information

- Rice Varieties and Management Tips, LSU AgCenter Pub. 2270
- Rice Disease Fact Sheet, LSU AgCenter Pub. 3084
- Louisiana Rice Production Handbook, LSU AgCenter Pub. 2321
- www.lsuagcenter.com
- Contact your local cooperative extension agent

Louisiana State University Agricultural Center, William B. Richardson, Chancellor
Louisiana Agricultural Experiment Station, David J. Boethel, Vice Chancellor and Director
Louisiana Cooperative Extension Service, Paul D. Coreil, Vice Chancellor and Director
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