

Rice Stem Rot Disease Management

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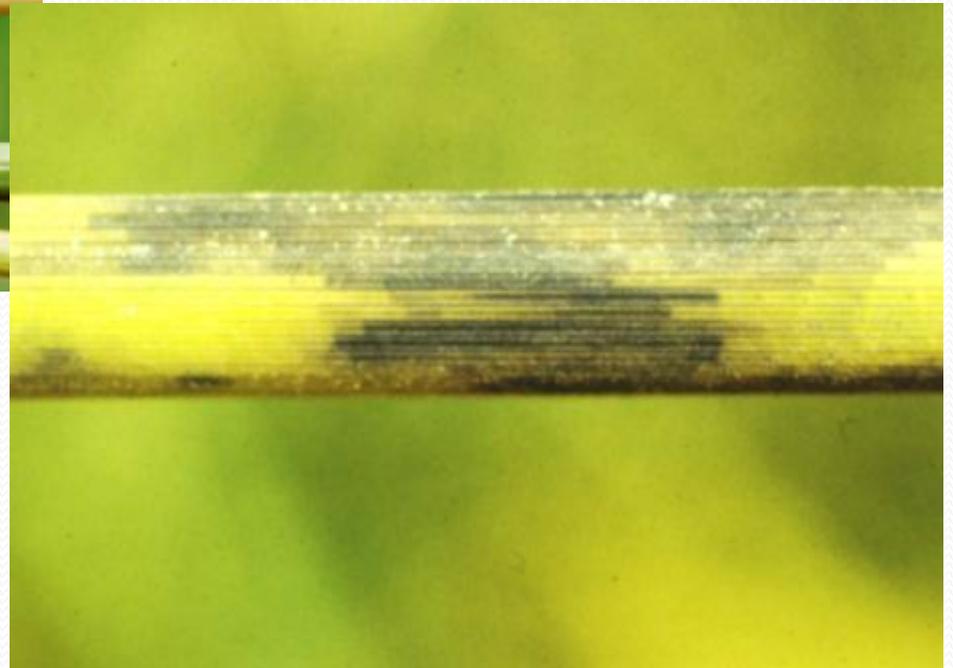


Stem rot

Causal organism

- Perfect stage: *Magnaporthe salvinii* (Cattaneo) R. Krause & Webster
- synanamorphs: *Sclerotium oryzae* Cattaneo, *Nakataea sigmoidae* (Cavara) K. Hara

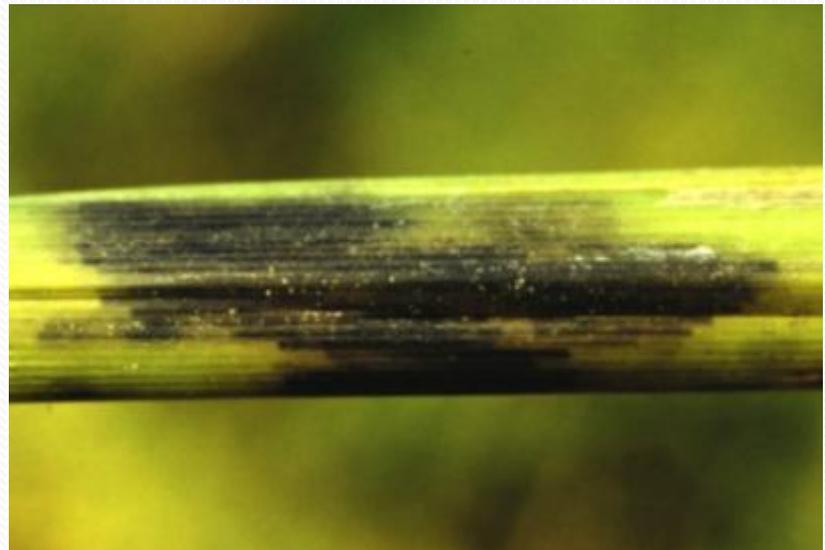
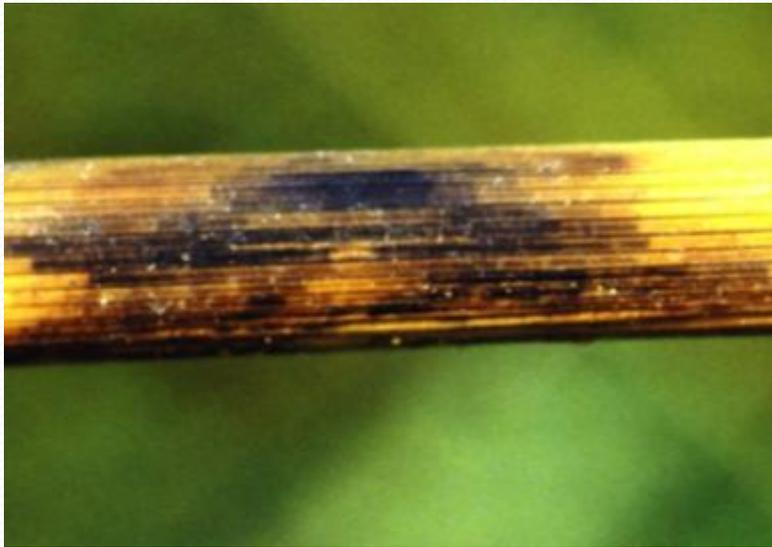
Sclerotium oryzae normally infects rice after tillering. however in the United States disease usually develops late in the season.



The pathogen overwinters as small seed like structures called sclerotia. These survival structures float in the first flood and comes in contact with the rice plants. They tend to accumulate toward one side of the field due to wind.



The initial infection occurs on the stem near the water line and appears as a dark black angular lesions.



The fungus affects rice stems only starting on the leaf sheath and toward maturity penetrating into the culm often causing lodging.



Small black sclerotia are formed in the plant tissues mainly after plant death. They are incorporated into the soil with the crop debris and can survive for many years.



Stem rot development is favored by low Potassium levels in the soil and rice following rice rotations.



Most rice varieties are susceptible to stem rot. However stem rot occurs only sporadically and is not considered a major rice disease in the Southern United States. A number of other rice diseases can be confused with stem rot.



Fungicides are available to control stem rot however infestation levels seldom reach economic levels to justify spraying and no economic thresholds have been developed. Stem rot is usually detected when scouting for sheath blight. Fungicide applications targeted at other diseases can reduce stem rot severity.



Labeled Rice Fungicides

| Propiconazole | Propiconazole + Strobilin | Strobilin | Flutolanil |
|----------------------|--------------------------------------|------------------|-------------------|
| Tilt | Quilt | Quadris | Moncut |
| PropiMax | Stratego | Gem | |
| Bumper | Tank Mix | | |

Management Practices

- Potassium fertilization will reduce disease severity where potassium is deficient.
- Early maturing varieties are less affected by stem rot.
- Destroying sclerotia in stubble by crop rotation, tillage, or burning can reduce disease pressure.

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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