

Rice Cercospora Disease Complex Management

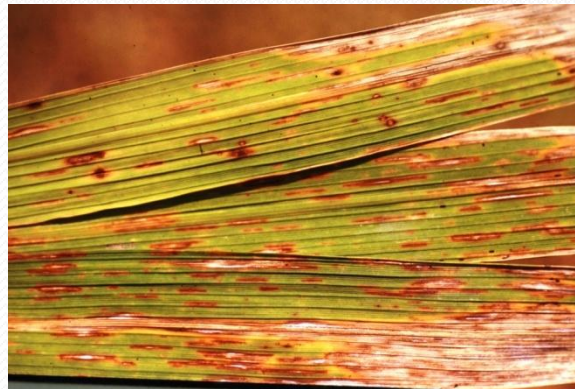
- **Prepared by Don Groth, Professor, LSU AgCenter Rice Research Station, Crowley, LA and Clayton Hollier, Professor, LSU AgCenter, Department of Plant Pathology and Crop Physiology, Baton Rouge LA.**



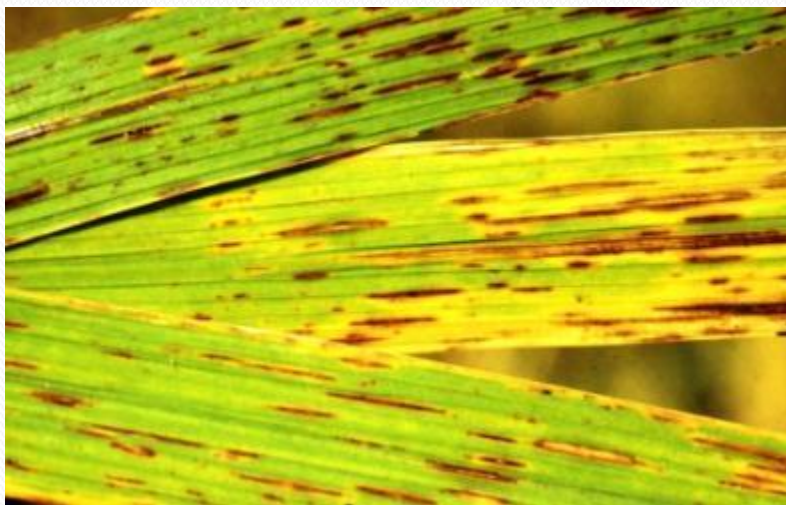
Cercospora complex

Causal organism

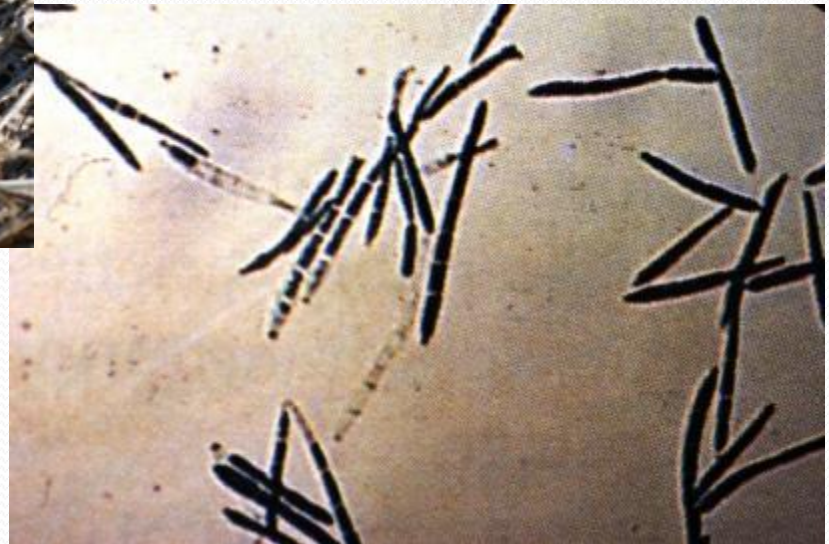
- Perfect stage: (teleomorph): *Sphaerulina oryzina* K. Hara
- Imperfect stage (anamorph): *Cercospora janseana* (Racib.) O. Const *C. oryzae* Miyake



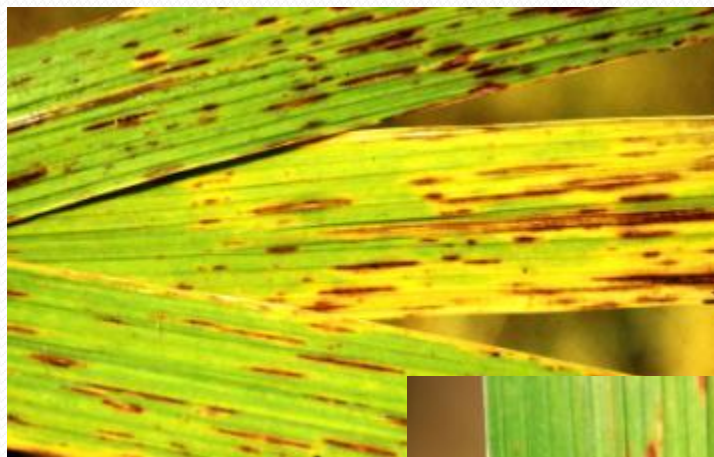
C. oryzae can infect rice from the seedling stage to harvest maturity, however in the United States the disease usually develops during after heading.



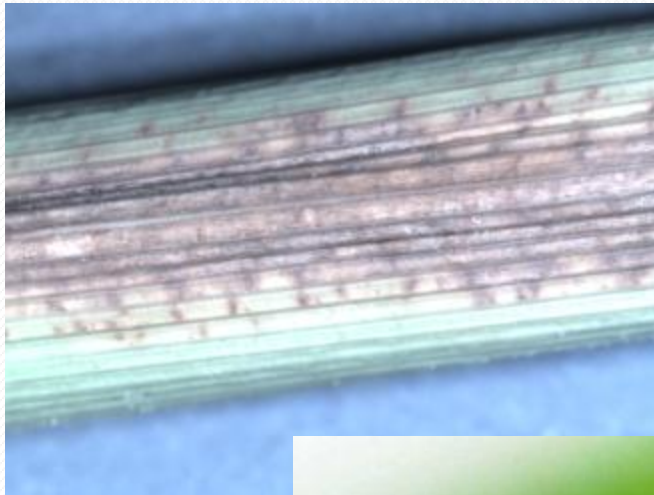
The pathogen overwinters as spores in infected plant debris. The fungus produces new spores in the spring that reinfects rice. Spores are carried by wind and splashing rain. Movement can be over long distances.



The initial infections occurs on leaves usually around tillering and appear as long linear shaped brown lesions. Lesions start as small linear lesions on older leaves and enlarge into longer wider lesions. Lesions often dry out and have tan centers with a brown borders. Lesion shape and size can vary depending on susceptibility and age.



Most plant parts are susceptible to infection except the roots. On leaf sheaths the pathogen produces Cercospora net blotch or sheath rot with a net like pattern of dark veins.



Head infections usually develop at the internodes and have typical brown striations from vein discoloration.



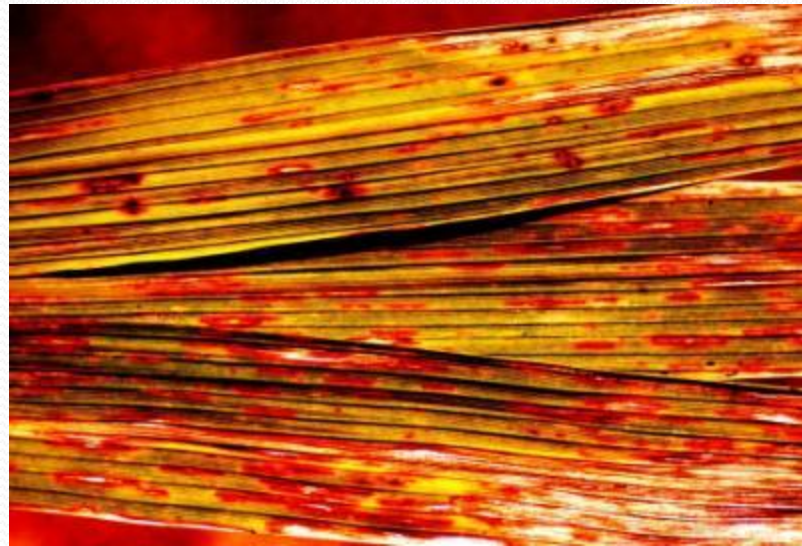
Cercospora development is favored by thick stands, high nitrogen rates and late planting. The disease is exceptionally severe in the second crop.



Losses due to *Cercospora* include reductions in yield, milling, and the cost of applying fungicides. Unlike most rice diseases blast is very explosive and can completely destroy a crop in a short time.



Resistance to *Cercospora* is available but resistance tends to break down over time as the fungus adapts to new resistant varieties.



Narrow Brown Reactions

<u>Susceptible</u>	Moderately <u>Susceptible</u>	Moderately <u>Resistant</u>	<u>Resistant</u>
CL131	CL161	Bengal	XL723
Cheniere	Cocodrie		Wells
Trenasse	CL151		CLXP729
	Cybonnet		Banks
	Cypress		CLXL730
	Spring		Jupiter
	CL171		XP744
			CLXP745

A number of other rice diseases can be confused with Cercospora.



Fungicides are available to control Cercospora. Unless plants are severely damaged plants are not treated with a fungicide. Fungicide applications are typically applied between boot (2-4 inch panicle in the flag leaf sheath) and 50 70% heading



Cercospora Activity

Poor	Good	Best
Quadris 9-12 oz/A	Stratego 14-19 oz/A	Tilt 6 oz
Gem 8-9.6 oz/A 2X?	Quilt 21-28 oz/A	PropiMax 6 oz
		Bumper 6 oz

Management Practices

- Plant varieties resistant to *Cercospora*.
- Plant as early as possible within the recommended planting period. Avoid late planting.
- Do not over fertilize with nitrogen.
- Apply a fungicide if necessary.

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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