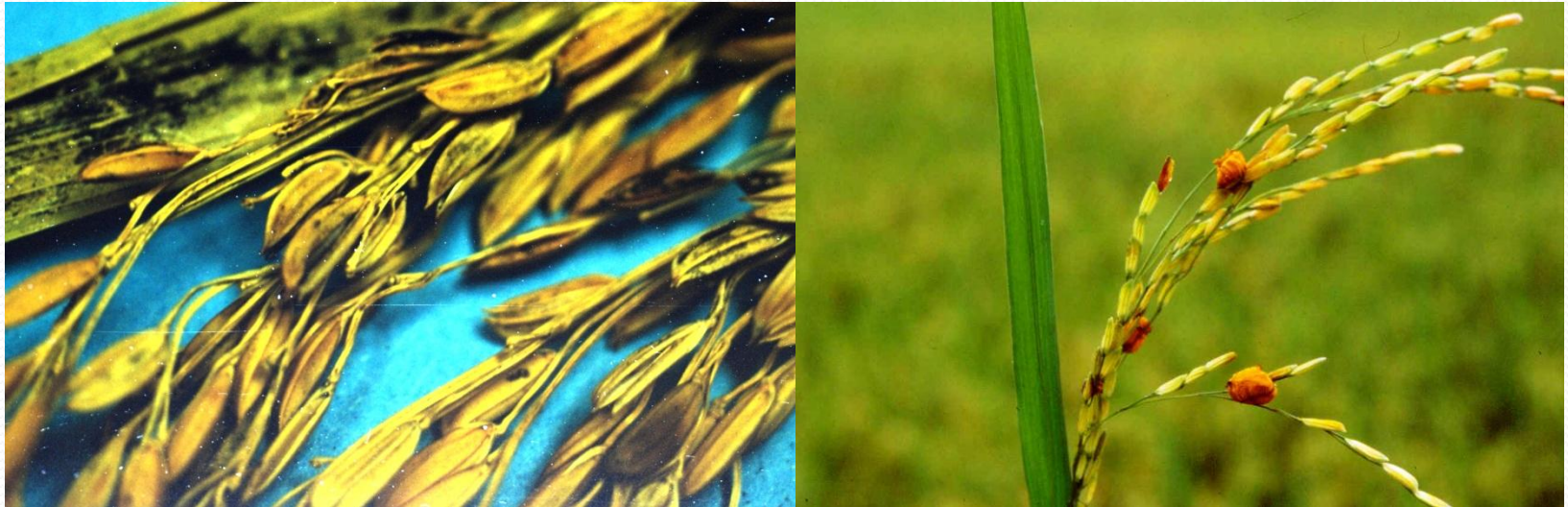


Rice Kernel and False Smut Disease Management

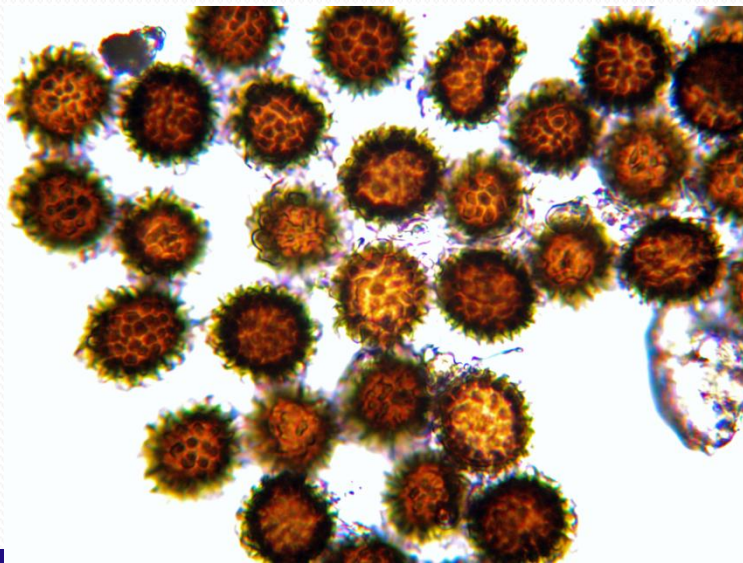


- Prepared by Don Groth, Professor, LSU AgCenter Rice Research Station, Crowley, LA and Clayton Hollier, Professor, LSU AgCenter, Department of Plant Pathology and Crop Physiology, Baton Rouge LA.

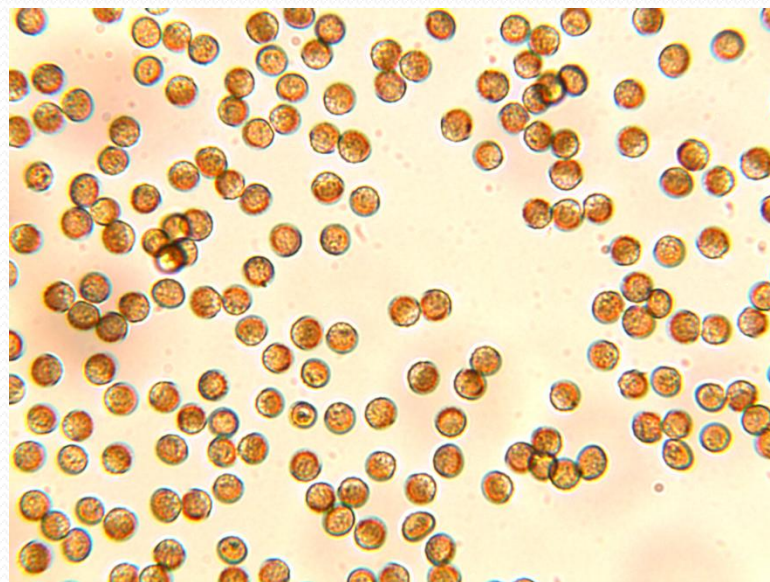
Kernel and false smut

Causal organisms

- False smut: *Ustilaginoidea virens* (Cooke) Takah.
- Kernel smut: *Tilletia barclayana* (Bref.) Sacc. & Syd. in Sacc. = *Neovossia horrida* (Takah.) Padwick & A. Khan



Kernel smut spores



False smut spores

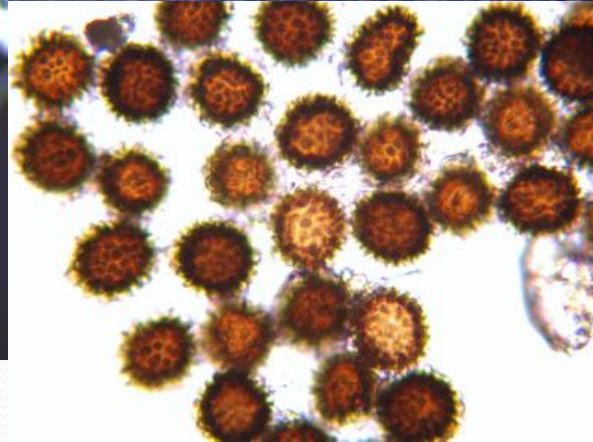
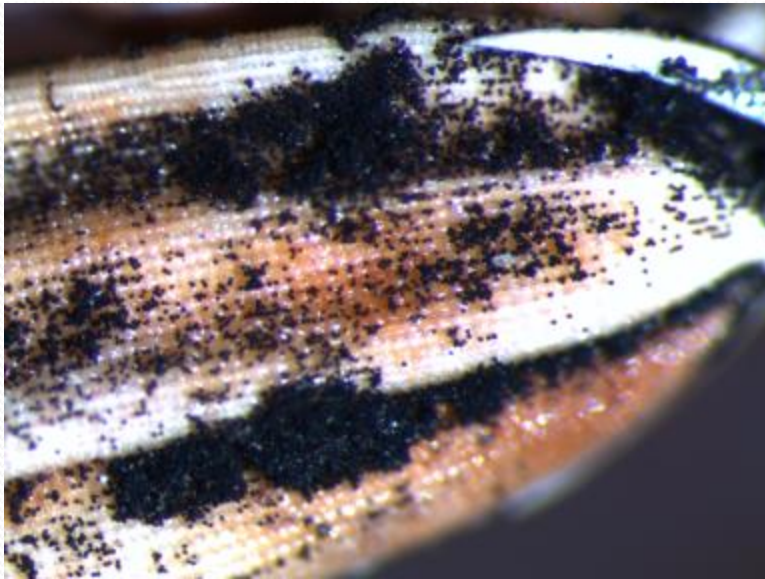
Kernel and false smut affect rice at heading.



The pathogens overwinter in the soil and on seeds. They become active in moist conditions and infect the rice seeds at flowering.

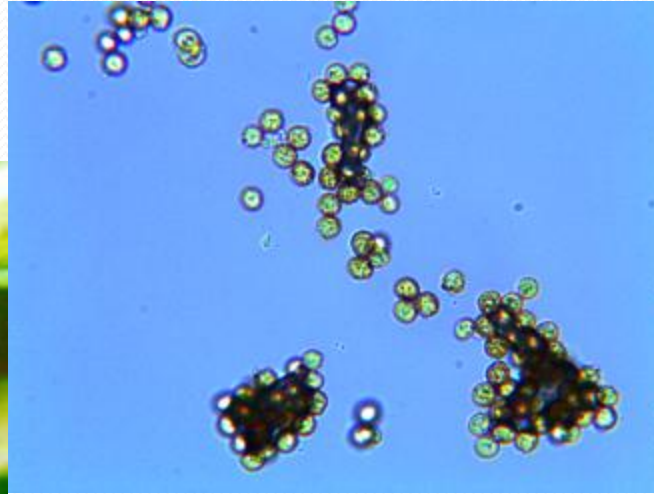


Kernel smut infects the endosperm and partially or completely replaces it with masses of dark spores that ooze out of the seed in moist conditions



Black clouds of spores can be released at harvest
turning combines black

False smut infects the developing seed and completely replaces it with a mass of spores surrounding a hard sclerotia.



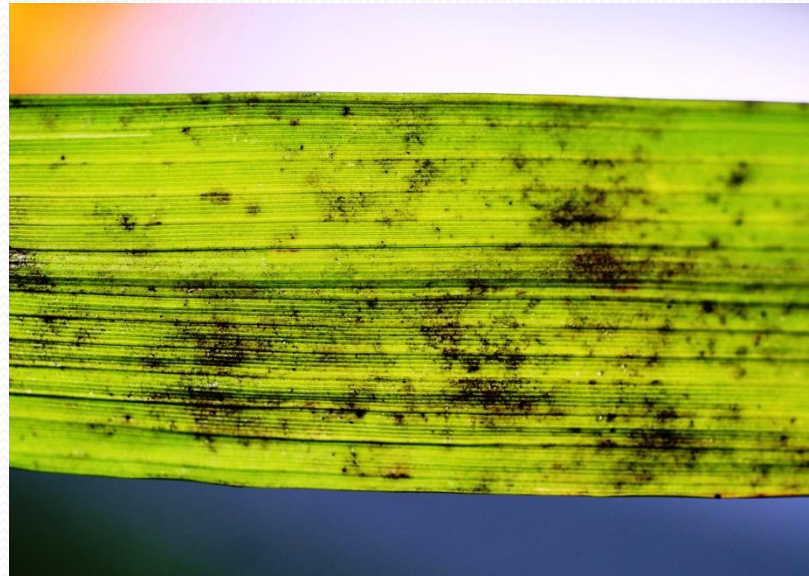
False smut starts as a light green ball of spores covered by a thin silver colored skin. The balls erupt exposing the orange spores. As time passes spores turn dark green to black.



Other diseases can be confused with kernel smut



Black kernel has black spores covering the seed



Sooty molds on leaves can produce black clouds of spores at harvest

Damage from smuts occurs due to contamination of other grains by spores during harvest and milling causing quality problems and discoloration during parboiling and cooking.



Propiconazole containing fungicides applied at boot have the best activity.



Labeled Rice Fungicide

Propiconazole	Propiconazole + Strobilin	Strobilin	Flutolanil
Tilt	Quilt	Quadris	Convoy
PropiMax	Stratego	Gem	
Bumper	Quilt Excel		

Management Practices

- No scouting is possible since disease does not appear until heading and control is ineffective after this stage.
- Excessive nitrogen increases diseases.
- Some varieties have resistance.
- Boot applications of certain fungicides reduce disease.
- Planting early allows rice to escape infection.

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/ricediseases
- 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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