

Disease Update - 2009

Jeff Hoy

Plant Pathology and Crop Physiology



Rust Situation During 2008

- Light brown rust year overall
- Limited fungicide research results
- Not much Headline applied under Sect. 18
- Rust continued to move into July
- Rust observed in HoCP 96-540 at some locations
- Rust re-established through entire area
- No orange rust detected yet

Rust Severity in 2009???

- Very little 384 and 988 planted
- Stubble acreage of 384 decreasing rapidly
- Mild winter, so far.....
- HoCP 96-540 acreage over 50%

Fungicide Update

- Renewal requested for Section 18 allowing two Headline applications
- Residue testing for Headline and Caramba completed
- Pursuit of regular labels for Headline and Caramba “fast-tracked”
- Will “piggy-back” onto Florida Quarantine Section 18 for orange rust control if needed

Fungicide Advantages and Disadvantages

- More out-of-pocket expense
- More passes through field
- Can prevent severe losses when rust starts early
- Use may prolong variety resistance and productive lifespan

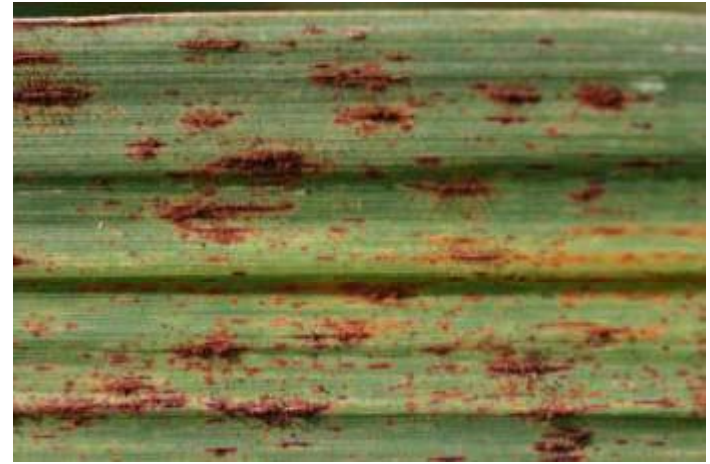
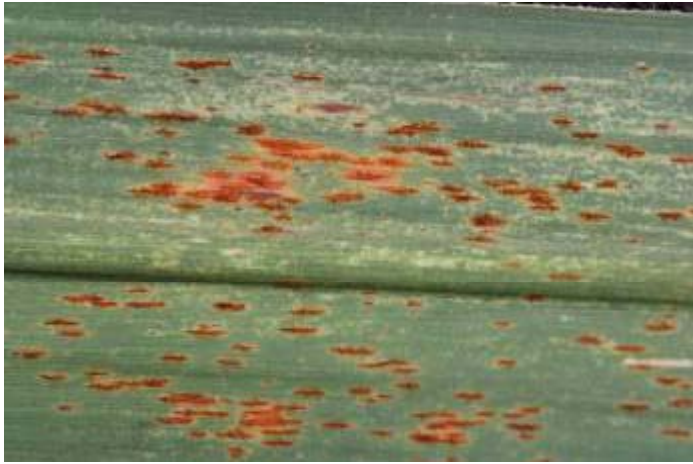
Expectations for Future

- Good chance one of the new varieties will become susceptible to brown rust
- Brown rust will continue to be a cyclical problem
- With additional experience, we will become more confident about knowing when to spray fungicides and what the outcome will be
- The arrival of orange rust may create a need for more spraying

Orange Rust is Coming Our Way

- Found in Florida during 2007
- Pathogens transmitted through air will move from Florida to here
- Resistance status of Louisiana varieties unknown
- Time of arrival and impact in Louisiana unknown
- Need to be on the lookout and report any suspicious looking rust infections

Sugarcane Rusts

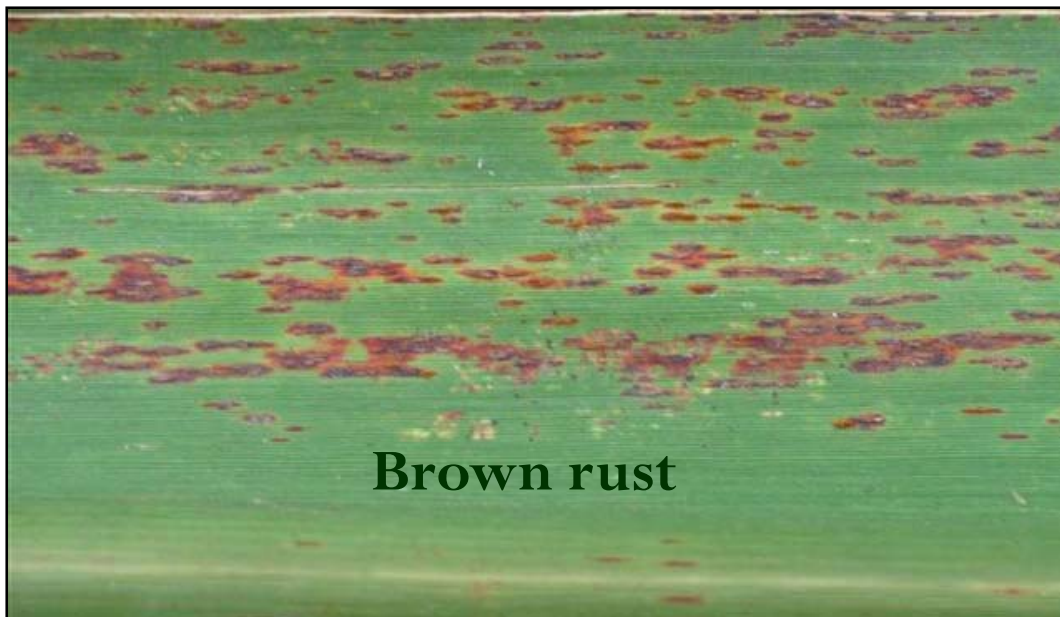


Orange Rust

Brown Rust



Orange rust



Brown rust



Orange rust

 Pustules orange

 Warmer season

 Grand growth stage

 Persistent

 Damage on all crops

Brown rust

 Pustules reddish-brown

 Cool season

 Declines at the grand
growth stage

 Recovery typical

 Most damage on plant
cane crop



Late Season Orange Rust



2008: A Bad Year for Smut

- Ho 95-988, L 97-128, L 99-226, & L 99-233 all can get smut
- Tissue culture healthy seedcane can keep smut at low level in varieties with intermediate susceptibility
- L 97-128 under heavy smut pressure is developing high levels of infection

L 01-283 released

- Very strong agronomic data
- Good disease resistance, except for RSD
- Unstable in tissue culture
- Tissue-culture seedcane may not be available
- Must prevent infection with RSD on farm
- Sanitation practices will be very important
- Disease monitoring will help

RSD: Down But Not Out

- Most important disease for many years now under control (less than 1% infection)
- Not eliminated from all farms
- No visible external symptoms
- Healthy seedcane program still important
- RSD monitoring available through Sugarcane Disease Detection Lab at no charge

Lower yields for billet plantings in four experiments

Variety		Plant cane 2005	Plant cane 2006	Plant cane 2007	Plant cane 2008
LCP 85-384	I	*		*	Not included
Ho 95-988	P	*	*	*	*
HoCP 96-540	I	*		*	
L 97-128	P?		*	*	*
L 99-226	P?	*		*	*
L 99-233	I?			*	*
L 01-283	G	Not included			
L 01-299	G	Not included			