False smut

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Rice Fact Sheet

Scientific name
Ustilaginoidea virens

Individual grains are transformed into a mass of spores

What it does
False smut causes chalkiness of grains which leads to reduction in grain weight. It also reduces seed germination.

Why and where it occurs
The disease can occur in areas with high relative humidity (>90%) and temperature ranging from 25-35 °C.
Rain and high humidity, and soils with high nitrogen content also favor disease development. Wind can spread the fungal spores from plant to plant.
False smut is visible only after panicle exertion. It can infect the plant during flowering stage.

Spore balls are initially orange and turn greenish black when mature

How to identify
Check for presence of velvety smut balls on spikelets.
Plants infected with false smut have individual rice grain transformed into a mass of spore balls. These spore balls are initially orange, and then turn into greenish black when these mature.
In most cases, not all spikelets of a panicle are affected, but spikelets neighboring smut balls are often unfilled.

How to manage
- Keep the field clean.
- Remove infected seeds, panicles, and plant debris after harvest.
- Reduce humidity levels through alternate wetting and drying (AWD) rather than permanently flooding the fields.
- Use recommended dose of nitrogen.
- Use certified seeds.
- Resistant varieties have been reported. Contact your local agriculture office for an up-to-date list of available varieties.
- Treat seeds at 52°C for 10 min.
- Drain out water once the grain is in dough stage.
- Spray hydroxide 77% WP @ 2.5 g/L of water

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