Stem rot

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Rice Fact Sheet

What it does
Stem rot leads to formation of lesions and production of chalky grains and unfilled panicles.

Why and where it occurs
The infection bodies or sclerotia are found in the upper soil layer. They survive in air-dry soil, buried moist rice soil, and in tap water. They can also survive on straw, which is buried in the soil. The sclerotia float on irrigation water and infect newly planted rice during land preparation.

The fungus penetrates into the culm to weaken the stem

Infection is high on plants with wounds as a result of lodging or insect attack. The panicle moisture content and nitrogen fertilizer also influence disease development.
The presence of the white tip nematode is reported to have a synergistic effect with the disease and incidences become higher.

How to identify
Check the plant for the following symptoms:
- Initial symptoms are small, irregular black lesions on the outer leaf sheath near water level
- Lesions expand as the disease advances
- Infected stem rots
- Visible numerous tiny white and black sclerotia and mycelium inside the infected culms
- Infected culm lodges and caused unfilled panicles and chalky grain
- Severe infection causes tiller death
- The disease aggravates the plants to lodge

How to manage
- Use resistant cultivars. Contact your local agriculture office for an up-to-date list of available varieties.
- Burn straw and stubble or any crop residue after harvest or let the straw decompose.
- Drain the field to reduce sclerotia.
- Balance the use of fertilizer or perform split application with high potash and lime to increase soil pH.
- Chemicals such as carbendazim 50WP@ 1g/L sprayed at the mid tillering stage.
- Other fungicides such as validamycin also show effectivity against the fungus.
- Apply trifloxystrobin + tebuconazole 75 WG @ 0.8 g/L of water.

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