Rice Stem Rot

Recognize the problem
The symptoms are generally observed after mid-tillering stage. The disease appears as small, irregular black lesions on the outer leaf sheath near water level. As the disease advances, the lesions enlarge and the fungus moves inwards and rots the stem. This may result in lodging, unfilled panicles and chalky grains. Severe infection causes tiller death. Infected stem rots produce numerous tiny white and black sclerotia and mycelium inside the infected culms as the plants matures.

Background
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. 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.

Management
• If available, 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 compost the stubble.
• Drain the field to reduce sclerotia.
• Balance the use of fertilizer or perform split application of Nitrogen fertilizer with high potash and lime to increase soil pH.
• Chemicals such as fentin hydroxide sprayed at the mid-tillering stage, thiophanate-methyl sprayed at the time of disease initiation can reduce stem rot incidence in the rice field.
• Other fungicides such as Ferimzone and validamycin A also show effectiveness against the fungus.

Scientific name(s) > Sclerotium oryzae

The recommendations in this factsheet are relevant to: Cambodia

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.