

Sheath Blight IPM

What is Sheath Blight?

Sheath blight is a fungal disease caused by *Rhizoctonia solani*. Sclerotia can float to the water surface during land preparation. When sclerotia touch the plant they germinate and the fungi penetrate the plant. Symptoms appear from tillering to milk stage and include:

- 1-3 cm long oval or ellipsoidal greenish gray spots on the leaf sheath just above the water or soil; in advanced stages the spots can extend all the way to the leaf blade.
- Leaves have irregular lesions with gray-white centers and brown margins; orange banding.
- Lesions can occur on flag leaf and panicles.
- Damaged flag leaves and grain reduces yield.

Why control Sheath Blight?

Sheath blight can cause substantial yield losses especially in conditions of high humidity and where high rates of N fertilizer are used.



Rice stalk affected by sheath blight.

Prevention

- **Healthy Soil = Strong Rice.** If possible, right after harvest, turn over the soil and apply compost. Applying the right fertilizer (for your field's soil type) at the right time makes your rice strong and healthy.
- **Varietal resistance.** No rice cultivars have been identified as resistant to sheath blight.
- **Select good seeds.** Do not use seeds that are half-filled, discolored or misshaped. Separate good seeds from bad seeds by hand, by wind, and/or by water (Note: bad seeds float).
- **Seed treatment.** If sheath blight is a recurring problem, treating seeds with fungicides may help. See a crop protection specialist for guidance on the selection and application of a fungicide. Do not touch treated seeds with bare hands. Treated seeds are poisonous and must not be eaten by humans or animals.
- **Cultural methods.** Reduce plant density in fields that suffer sheath blight. Drain fields at maximum tillering for a few days. Deep plow to bury infested plant residues. Crop rotation with beans may reduce fungal disease incidence.
- **Sanitation.** Remove weeds and sick plants from your field.

Control

If sheath blight appears, the only control methods available are removing and destroying the affected plant, or applying fungicide. Neither option is particularly useful for most rice farmers. Pulling and destroying plants is laborious and impractical on a large scale. Destroying plants is likely to reduce yields more than the sheath blight itself within a single season. The only real benefit of pulling and destroying (burning, not burying) plants is to prevent the further spread of the disease into future crops. Fungicides are not readily available in Asia. Most rice farmers in Asia lack the knowledge and equipment to use fungicides safely.



Severe sheath blight infection in a farmer's field in Bicol, Philippines.



Should I burn my diseased stubble?

Burning should only be used following a severe sheath blight outbreak. Incomplete burning of the straw stubble may increase sheath blight problems as it can destroy microorganisms that inhibit the growth of sheath blight.

For more information:

For an overall view of crop management practices, visit <http://www.knowledgebank.irri.org/tropRice>.

To diagnose problems in the field visit <http://www.knowledgebank.irri.org/ricedoctor>.

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