

Rice brown leaf spot (427)

Summary

- Widespread. Asia, Africa, North, South, Central America, the Caribbean, Europe, Oceania. In Australia, Fiji, French Polynesia, New Caledonia, Papua New Guinea, Solomon Islands.
- Moderately serious disease of dryland rice and on wild grasses. Affects seedlings and mature leaves, sheaths and panicles. IRRI estimates 5% losses throughout Asia annually, possibly worse where soil deficiencies.
- Yellow-brown or brown spots girdling seedlings; later, spots up to 10 mm, grey centres and dark margins on mature leaves. Seeds with 'eye-spots' fail to fill. Spots on leaves and seeds show black fungal growth.
- Spread in wind and long distances in seed; survival in seed, volunteer rice, debris and grasses.
- Cultural control: treat seed hot water (53-54°C for 10-12 minutes); apply recommended rates of fertilizer; collect straw and burn, or plough stubble and straw into soil after harvest; resistant varieties.
- Chemical control: priority is correct nutrition and resistant varieties; seed treatment with iprodione, carbendazim, or strobilurin and azole products. Also apply treatments at tillering and booting.

Common Name

Rice brown leaf spot. It is also known as glume blotch.

Scientific Name

Cochliobolus miyabeanus. It is also known by its asexual name, *Bipolaris oryzae*.



Photo 1. Early infection of rice by brown leaf spot, *Cochliobolus miyabeanus*.



Photo 2. Infection of rice by brown leaf spot, *Cochliobolus miyabeanus*.



Photo 4. Eye-spot symptoms on rice grains caused by the brown leaf spot fungus, *Cochliobolus miyabeanus*.



Photo 3. Late infection of rice by brown leaf spot, *Cochliobolus miyabeanus*, showing light grey centres and brown margins.

AUTHOR Grahame Jackson

Information from Sparks A (undated) Brown spot. Rice Knowledge Bank. IRRI. (<http://www.knowledgebank.irri.org/training/fact-sheets/pest-management/diseases/item/brown-spot>); and *Cochliobolus miyabeanus*. Wikipedia (https://en.wikipedia.org/wiki/Cochliobolus_miyabeanus); and CABI (2018) *Cochliobolus miyabeanus* (brown leaf spot of rice). Crop Protection Compendium. (<https://www.cabi.org/cpc/datasheet/14691>); and from Graham KM (1971) *Plant diseases of Fiji*. Her Majesty's Stationery Office. London. Photo 1 Yuan-Min Shen, Taichung District Agricultural Research and Extension Station, Bugwood.org. Photos 2-4 Donald Groth, Louisiana State University AgCenter, Bugwood.org

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