

Brown Spot

What is Brown Spot?



Brown spot lesions on rice grain.

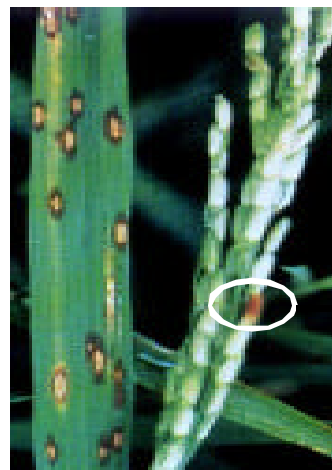
Brown spot is a fungal disease that can infect both seedlings and mature plants. On seedlings, small, slightly elongated or circular, brown lesions may be observed on the coleoptiles and black discoloration of the roots causing distorted seedlings. On mature plants, typical spots on the leaves are circular to oval with gray to light brown center and reddish-brown margin. Black to dark brown spots may also appear on the glumes and when infection is severe, the entire panicle can turn brown. The fungus may also infect grains causing black spots and/or grain discoloration. Brown spot is caused by *Bipolaris oryzae* (Breda de Haan) Shoemaker [syns *Drechslera oryzae* (Breda de Haan) Subramanian & P.C. Jain and *Helminthosporium oryzae* (Breda de Haan)].

Brown spot on the leaf can be confused with blast. How to distinguish? While brown spot lesions are circular to oval with gray to light brown center, leaf blast lesions are diamond-shaped (large in the middle and tapering to ends) and are distinctly gray in the center with dark borders. Infection tends to occur on soils low in potassium.

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>

Why Control Brown Spot?



Brown spot lesions on rice leaves and spikelets.

Brown spot occurs in all rice-growing regions of the world. While Brown spot usually causes little damage, the disease --- on occasions --- can significantly reduce grain quality and weight. Heavily infected seeds can result in severe seedling blight in the next growing season.

How is Brown Spot Controlled?

- Proper crop nutrition - Brown spot often occurs on poor soils.
- Resistant varieties - In areas where soil problems are not easily corrected, resistant varieties should be used.
- Avoid water stress - When it occurs, the disease tends to be more severe on water-stressed plants.
- Keep fields clean - Remove or plough in infected stubble and rice straw to reduce fungus that may cause future infection.
- Seed treatment - Brown spot is seed-borne and seed treatment with fungicides may be a possible means to reduce seedling damage. Always check with an agro-chemical specialist and use safe practices in application.