

LOUISIANA PLANT PATHOLOGY

DISEASE IDENTIFICATION AND MANAGEMENT SERIES



Brown Spot of Rice

Cochliobolus miyabeanus (Ito and Kuribayashi) Drechs. ex Dastur

(Anamorph: *Bipolaris oryzae* (Breda de Haan) Shoemaker)

Brown spot is caused by the fungus *Cochliobolus miyabeanus*. Also called Helminthosporium leaf spot, it is one of the most prevalent rice diseases in Louisiana.

When *C. miyabeanus* attacks the rice plants at emergence, the resulting seedling blight causes sparse or inadequate stands and weakened plants (Figure 1). Leaf spots are present on young rice, but the disease is more prevalent as the plants approach maturity and the leaves begin to senesce.

Yield losses from leaf infection or leaf spots probably are not serious. Brown spot is an indicator of unfavorable growing conditions, including insufficient nitrogen, inability of the plants to use nitrogen because of rice water weevil injury, root rot or other unfavorable soil conditions.

Leaf spots are found throughout the season. On young leaves, the spots are smaller than those on older leaves. The spots may vary in size and shape from minute dark spots to large oval to circular spots (Figure 2). The smaller spots are dark brown to reddish-brown. The larger spots have a dark brown margin and a light reddish-brown or gray center with a gold halo (Figure 3). The spots on the leaf sheath and hulls are similar to those on the leaves. The pathogen also attacks the coleoptiles, branches of the panicle, glumes and grains. The fungus causes brown, circular to oval spots on the coleoptile leaves of the seedlings.

Damage from brown spot can be reduced by maintaining good rice growing conditions through proper fertilization, crop rotation, land leveling, proper soil preparation and water management. Seed-protectant fungicides reduce the severity of seedling blight caused by this seedborne fungus. In addition, some rice varieties are less susceptible than others. (See LSU AgCenter publication 2270, "Rice Varieties and Management Tips.")



Figure 1. Seedling disease caused by the brown spot fungus



Figure 2. Typical brown leaf spot symptoms

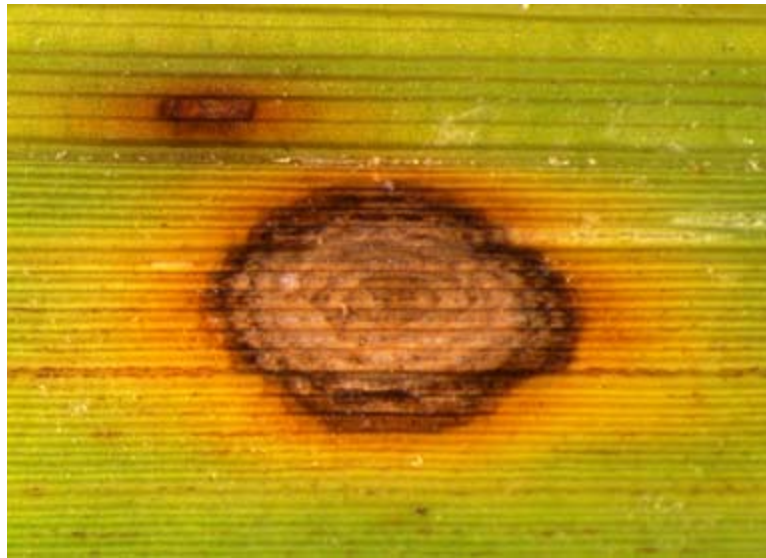


Figure 3. Close-up view of a brown spot lesion

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