

Sugarcane Eye Spot Disease¹

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Eye spot has been reported in many sugarcane-growing areas of the world. Eye spot is a minor disease because almost all varieties are resistant, even without any selection or screening program for resistance. A rare susceptible variety may have severe economic losses if environmental conditions are favorable. In one case, a 33% loss in cane tonnage was documented. Eyespot was observed in a few growers' fields in 2004, but it is not a problem for Florida growers at this time, thus only the most important features of the disease will be described.

SYMPTOMS

Typical mature eye spot symptoms are characterized by a reddish-brown elliptical lesion (0.5 - 4.0 mm long, 0.5 - 2.0 mm wide) with yellowish-brown margins (Figure 1). Reddish-brown to yellowish-brown streaks, sometimes called "runners," extend upward from individual lesions toward the leaf tip. These streaks are 3 - 6 mm wide and 30 - 90 cm long. Multiple lesions can be extensive. The runners occur only in cooler

temperatures and are not present in hotter temperatures. (Figure 2).

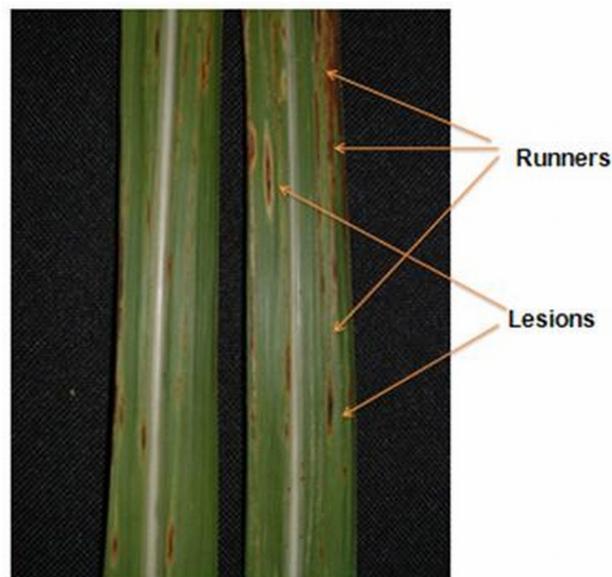


Figure 1. Eye spot lesions and runners on sugarcane leaves.

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Figure 2. Multiple eye spot lesions with runners in the field.

CAUSAL AGENT

Eye spot disease is caused by the fungus *Bipolaris sacchari*.

SPREAD OF THE DISEASE

Eye spot is transmitted by spores, which are produced abundantly on leaf lesions and are dispersed by wind and rain. Fungal spore germination is favored by high humidity and dew formation. Colonization is more rapid in younger leaves than older leaves. Transmission by seed piece does not occur. Mechanical transmission by equipment and by human activity is not an issue.

PREVENTION AND CONTROL

The only practical and efficient method for controlling eye spot disease is with resistant clones. Resistant clones can be grown without losses, even in environments that favor eye spot disease. Chemical control using foliar fungicides is not practical.