

## Sugarcane eye spot (305)

### Common Name

Sugarcane eye spot

### Scientific Name

*Bipolaris sacchari*. Previous names are *Cercospora sacchari*, *Drechslera sacchari* and *Helminthosporium sacchari*.

### Distribution

Asia, Africa, North, South and Central America, the Caribbean, Europe, Oceania. It is recorded from Australia, Fiji, French Polynesia, Federated States of Micronesia, New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Vanuatu.

### Hosts

Sugarcane, and its relatives, and a few other members of the grass family (Poaceae), e.g., Sudan grass, pearl millet (*Pennisetum glaucum*), elephant grass (*Pennisetum purpureum*), barnyard grass (*Echinochloa*), citronella grass (*Cymbopogon citratus*).

### Symptoms & Life Cycle

A fungal disease of sugarcane, causing an eyespot and seedling blight. Spots on the leaves and stalks run parallel to the veins; they are elliptical, 12 × 6 mm, reddish with pale yellow halos. Above the spots are reddish-brown to yellow-brown streaks, extending upwards towards the leaf tips. These are sometimes known as 'runners'. The runners are said to be caused by the toxin produced by the fungus. A blight may develop on young plants as the spots join together, especially under cool conditions.

Spread of the fungus is by spores in wind and rain. The spores are produced in large numbers on the leaves.

### Impact

Eyespot is a minor disease, and it is very unlikely that it will reduce the yields of the sugarcane varieties presently grown. Whether the same applies to varieties grown in the subsistence economy has not been reported.

### Detection & inspection

Look for the elliptical brown spots with surrounding bright yellow halos, and reddish-brown to yellowish streaks above. Sometimes, the spots merge to form a blight on seedlings.

### Management

#### CULTURAL CONTROL

The only practical method of controlling this disease (if needed) is by using resistant varieties.

#### RESISTANT VARIETIES

Eyespot is a minor disease as most commercial varieties are resistant, even though they have not been selected or bred for resistance.

#### CHEMICAL CONTROL

Fungicides are not a practical way of controlling this disease.



Photo 1. Reddish-brown elliptical spots with yellow margins, caused by the sugarcane eyespot fungus, *Bipolaris sacchari*. Notice the yellow 'runners' associated with the spots (see text).



Photo 2. Merging spots of sugarcane eyespot, *Bipolaris sacchari*.



Photo 3. Sugarcane eye spot lesions. *Bipolaris sacchari*, on sugarcane.

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Information (and Photo 3) from Philippe Rott, *et al.* *Sugarcane eyespot disease*. University of Florida, IFAS Extension (<http://edis.ifas.ufl.edu/sc003>), and from Diseases of Australian sugarcane: Field guide. BSES Limited, Australia. (<https://sugarcane.com.au/wp-content/uploads/2017/03/Diseases-of-Australian-Sugarcane-Field-Guide.pdf>). Photo 1 MS Irey *Diseases, pests, and nonnutritive disorders of sugarcane*. The American Phytopathological Society. Photo 2 (taken by Eric McKenzie), and used in this fact sheet, appeared previously in McKenzie E (2013) *Bipolaris sacchari*. PaDIL - (<http://www.padil.gov.au>).

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