

Brown Stripe Downy Mildew

Sclerophthora rayssiae var. *zeae* R. G. Kenneth, Koltin & I. Wahl Payak & Renfro

Primary hosts

Corn

Large (hairy) crabgrass
(*Digitaria sanguinalis*)



Image courtesy C. De Leon.
Reproduced, with permission, from
Compendium of Corn Diseases, 3rd
ed., 1999, American Phytopathological
Society, St. Paul, MN, USA.

Symptoms

Leaf lesions only. In early stages of infection the leaves will show narrow chlorotic or yellowish stripes 3-7 mm wide. These lesions extend parallel with and are delimited by the leaf veins and have well defined margins. At later stages of infection, the chlorotic stripes take on a reddish or purple color. Severe striping and blotching occurs with confluence of adjacent lesions. When disease occurs prior to flowering, seed development is adversely affected, and early plant death may result. Affected leaves remain intact and do not shred, even after severe storms.

Disease Cycle

Primary inoculum comes from oospores overseasoning in the soil or plant debris, or from mycelium in infected seed. Oospores in air dried leaf tissue remained viable for four years, although infected seed dried to 14 % moisture or less and stored for four or more weeks will not be capable of transmitting the disease. Warm soil temperatures (28° – 32.5° C) are required for disease development. Germinating oospores produce sporangiophores bearing sporangia, and secondary spread occurs with dispersal of sporangia in wind and water splash, or from an infected plant to a healthy plant via physical contact. The pathogen apparently does not systemically infect the plant.

Current geographic distribution

Primarily tropical Asia

Impact in Oregon

Slight – temperatures are too cool and summers are too dry for optimum disease development.

This information was compiled by Melodie Putnam, (Oregon State University Plant Clinic) from information from the CAB International Crop Protection Compendium and other sources. 2005, 2012.