

PLECTOSPORIUM BLIGHT OF CUCURBITS

Plectosporium blight (Microdochium blight), caused by the fungus *Plectosporium tabacinum* (*Microdochium tabacinum*) is an important disease of pumpkin and squash. This disease was first reported in Tennessee in the United States (US) in 1988. It was subsequently reported from most of the pumpkin growing areas in the US.

Plectosporium was first diagnosed in pumpkin fields in Illinois in 2000. The disease was observed in most of the pumpkin fields, causing more than 50% yield losses in some fields (Figure 1). The most susceptible cucurbits to Plectosporium blight are pumpkin, yellow squash, and zucchini.



Figure 1. *Plectosporium* blight of pumpkin, caused by *Plectosporium tabacinum*. Entire field is affected.

SYMPTOMS

Plectosporium tabacinum infects stems, leaf veins, petioles, and fruit. Symptoms of Plectosporium blight are very distinctive. The disease is characterized by the production of light tan “bleached,” sunken, spindle-shaped lesions on the main stems, petioles, main leaf veins, and peduncles (Figure 2). Initially, the lesions are small, but they quickly coalesce, causing the entire surface of the stem or leaf vein to turn white (Figures 3 and 4). Because leaf lesions are restricted to the veins and do not spread to the interveinal tissue, they may be overlooked in the early stages of disease development. Infected stems are dry and brittle. Leaves on the severely affected vines die and complete defoliation may occur in severe infections.



Figure 2. Spindle-shaped lesions on a petiole of pumpkin leaf, caused by *Plectosporium tabacinum*.

For further information contact **Mohammad Babadoost**, Extension Specialist in Fruit and Vegetable Pathology, Department of Crop Sciences, University of Illinois, at Urbana-Champaign. (Phone: 217-333-1523; email: babadoos@illinois.edu).

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On fruits, the fungus causes white, tan, or silver russeting. Individual lesions are less than ¼ inch in diameter, but often coalesce to form a continuous dry, scabby surface (Figure 5). Fruit stems may become entirely white at harvest (Figure 5).

DISEASE CYCLE

Plectosporium tabacinum survives in soil and plant debris between crops. The fungus produces two-celled, ellipsoidal to cylindrical and slightly curved spores. The spores are likely spread by rain-splash and wind and initiate infection upon landing on host tissues. Warm, wet weather favors disease development.

DISEASE MANAGEMENT

No resistant pumpkin variety to *Plectosporium* blight has been reported. Rotation with noncucurbit crops for 3-4 years helps to reduce disease incidence. The disease is readily controlled by fungicide sprays. Chlorothalonil (e.g., Bravo) and pyraclostrobin (Cabrio) provide effective control of *Plectosporium* blight in pumpkin fields. For up-to-date information on management of *Plectosporium* blight, refer to the current edition of publication “Midwest Vegetable Production Guide for Commercial Growers”.



Figure 3. Stem symptoms of pumpkin plants, caused by *Plectosporium tabacinum*.



Figure 4. Lesions on leaf veins of pumpkin, caused by *Plectosporium tabacinum*.



Figure 5. Silver russeting on fruit and fruit stem of pumpkin, caused by *Plectosporium tabacinum*