UNIVERSITY OF ILLINOIS EXTENSION
College of Agricultural, Consumer and Environmental Sciences

report on
PLANT
DISEASE

RPD No. 946 (New)
December 2001

DEPARTMENT OF CROP SCIENCES
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

PLECTOSPORIUM BLIGHT OF CUCURBITS

Plectosporium blight (Mirodochium 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 1988. It was subsequently reported from most of the pumpkin growing areas in the United States. 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 squash.

Figure 1. Plectosporium blight of pumpkin, caused by Plectosporium tabicinum. 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, caused by Plectosporium tabacinum.

Figure 3. Stem lesions of pumpkin, caused by Plectosporium tabacinum.

On fruit, the fungus causes white, tan, or silver russeting. Individual lesions are less that 1/4 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).

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DISEASE CYCLE

Plectosporium tabacinum occurs in soil and decaying plant material. 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.

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

DISEASE MANAGEMENT

No resistant pumpkin variety to Plectosporium blight has been reported. Rotation with noncucurbit crops should help reduce disease incidence. The disease is readily controlled by an application of fungicides. Chlorothalonil (e.g., Bravo) and trifloxystrobin (e.g., Flint) have been reported to 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 number C1373, "Midwest Vegetable Production Guide for Commercial Growers". This publication is available from ITCS, University of Illinois P345, 1917 S. Wright St., Champaign, IL 61820 or call 1-800-345-6087.

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