

## 31. Honeysuckle Blight

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### Hosts

Most species and varieties of native and introduced honeysuckle are susceptible to honeysuckle blight, caused by the fungus *Insolibasidium deformans*.

### Distribution

The disease is widespread in at least 14 Northeastern and North Central States (fig. 31-1).

### Damage

Infected seedlings become discolored and defoliate prematurely. Severe defoliation results in stem dieback and reduced growth so that stock may have to be retained in the nursery for an additional year.

### Diagnosis

This disease appears in the spring on newly emerging leaves. Look for yellowing of infected veinlets and leaf tissues bounded by veinlets. These tissues become tan to brown and finally become necrotic and dry. Brown areas cover the entire leaf or a large portion of it (fig. 31-2). The leaves are often rolled and twisted and drop prematurely (fig. 31-3). Infection may be widespread in the seedling beds (fig. 31-4).

The first sign of the pathogen is a thin, white layer of basidia and basidiospores on the lower leaf surface, often followed by a white, powdery mass of conidia.

Honeysuckle blight can be distinguished easily from infections caused by powdery mildews (see chapter 36), which produce white, powdery mycelia and black fruiting bodies that develop principally on the upper surface of nonrolled leaves in late summer.

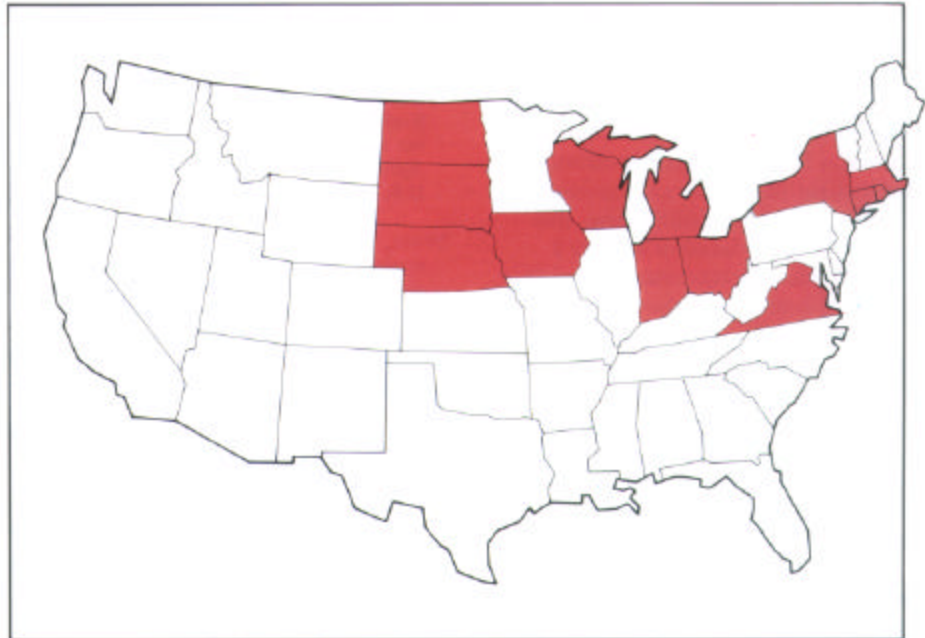


Figure 31-1—Distribution of honeysuckle leaf blight.



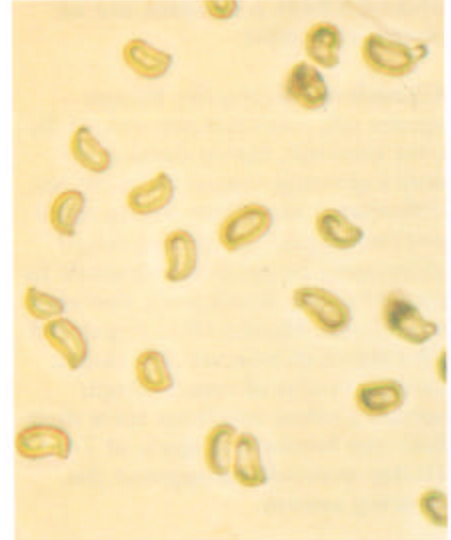
Figure 31-2—Symptoms of blight on leaves of honeysuckle. (Photo courtesy of Robert W. Stack, North Dakota State University.)



**Figure 31-3**—Curled and rolled leaves of honeysuckle seedling infected with *I. deformans*. (Photo courtesy of James A. Walla, North Dakota State University.)



**Figure 31-4**—Nursery beds of honeysuckle severely affected by leaf blight.



**Figure 31-5**—Basidiospores of *I. deformans*.

In the laboratory, two spore states may be found on the same diseased leaf tissues. Basidiospores arise from curved, transversely septate basidia. They are hyaline and cylindrical with rounded ends, except for an apiculus at the attached end (fig. 31-5). Basidiospores are 8.9-12.9 x 5.2-7.5 microns (average 10.9 x 6.6 microns). Conidia frequently develop near or among the basidia on the lower leaf surface. The conidia are hyaline, globose, warty, 8-17 microns in diameter, and form three pairs to a cluster (fig. 31-6).

## Biology

*Insolibasidium deformans* overwinters as mycelium or basidiospores in dead leaves. Basidiospores are the primary inoculum source. They infect developing leaves of the first foliage flush and also cause secondary infections,



**Figure 31-6**—Cluster of three pairs of *I. deformans* conidia.

which occur during the remainder of the year.

Infection is intensified when the temperature is 60 to 65 °F, the relative humidity is near or at 100 percent during sustained periods for at least 2 days, and the leaves are less than 20 days old. Below-normal temperatures and high humidity in August and September enhance disease development, resulting in premature loss of foliage and growth reduction.

The function of conidia remains unknown, although they are presumably resting spores.

## Control

**Prevention**—Honeysuckle in landscape, windbreak, and nursery plantings may become infected. Because these plants may be a source of *I. deformans* inoculum, honeysuckle should not be used in windbreaks or in other plantings on nursery grounds. Any cultural practice that destroys or removes overwintering foliage from seedbeds will reduce inoculum sources.

**Cultural**—Growing seedlings at high densities in seedbeds reduces aeration and increases humidity—conditions that favor disease development. Where possible, reduce seedbed density or grow seedlings as row crops to improve aeration and reduce humidity. Schedule irrigation so that periods of high moisture and free water in and

around foliage and stems are as short as possible.

**Chemical**—Protective foliage sprays will minimize the risk of disease damage. Spray during the entire growing season because basidiospores are dispersed throughout this period. Protective fungicides must be applied frequently to protect newly developing, susceptible foliage. Mancozeb is registered for control of honeysuckle blight. Cover to point of runoff. Begin spraying when seedlings have their first new leaves and apply at 7- to 10-day intervals throughout the growing season.

### Selected References

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- Oberwinkler, F.; Bandoni, R. 1984. *Herpobasidium* and allied genera. Transactions of the British Mycological Society. 83:639-658.
- Riffle, Jerry W.; Watkins, John E. 1986. Honeysuckle leaf blight. In: Riffle, Jerry W; Peterson, Glenn W., tech. coords. Diseases of trees in the Great Plains. Gen. Tech. Rep RM-129. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station: 26-29.