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VOLUTELLA BLIGHT OF PACHYSANDRA

Volutella blight is one of the most common and destructive diseases of pachysandra. The disease causes leaf blight and stem cankers, resulting in large brown patches in pachysandra beds (Figure 1). The disease also attacks cuttings and transplants in greenhouse and nursery settings (Figure 2), which is an important source of primary inoculum for new pachysandra beds.

SYMPTOMS AND DIAGNOSTICS

Leaves, stems, and stolons can be affected. On leaves, the initial symptom appears water-soaking spots, and then they become circular dark-brown lesions with concentric rings at the center (Figure 3). As the disease progresses, lesions enlarge and coalesce, causing an entire leaf collapse. On stems and stolons, symptoms start with water-soaked spots, and then become dark-brown to black lesions (Figure 4). When lesions girdle a

stem or stolon, the entire shoot may wilt and die (Figure 5). The characteristic sign of the disease is orange- to salmon-colored conidia (asexual spores) masses on lesions (Figure 6).

DISEASE DEVELOPMENT

The pathogen, *Volutella pachysandricola*, has a narrow host range and infects pachysandras and sweet box. The fungus survives in diseased plants and plant debris. The spread of the disease between plants is via rain splash, overhead irrigation, and human activities. Movement of infected cuttings or transplants is a means for a long-distance dispersal of the pathogen. Wet and humid weather conditions in late spring and summer favor disease development. Plants that are stressed from winter injury, overexposure to the full sun, drought, heat, insect infestations, and transplant shock are at greater risk of the disease.

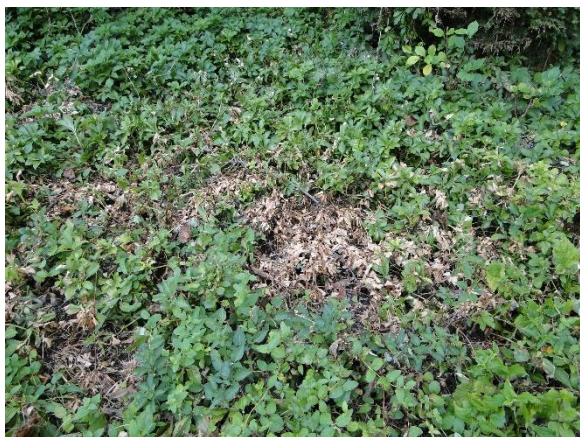


Figure 1. Brown patches in a pachysandra bed.



Figure 2. Necrosis of leaves on pachysandra cuttings in a greenhouse.



Figure 3. Brown lesions with concentric rings.



Figure 4. Black canker girdling the stem.

MANAGEMENT

Cultural practice: Select a shaded or partially shaded area for a new pachysandra bed. Start new beds with disease-free plant materials. Space new plantings and thin existing plants properly to promote a good air circulation. Water plants during periods of drought especially in the summer. If possible, water plants early in the day to allow leaves to dry quickly during the day. Remove and destroy severely infected plant materials.

Fungicide: Fungicide treatments are preventative, but not curative. Apply fungicides in the spring when new growth starts. Repeat fungicide applications at the 7- to 21-day intervals when weather conditions are conducive. Ensure good spray coverage.



Figure 5. Wilting and dying of plants in a pachysandra bed.

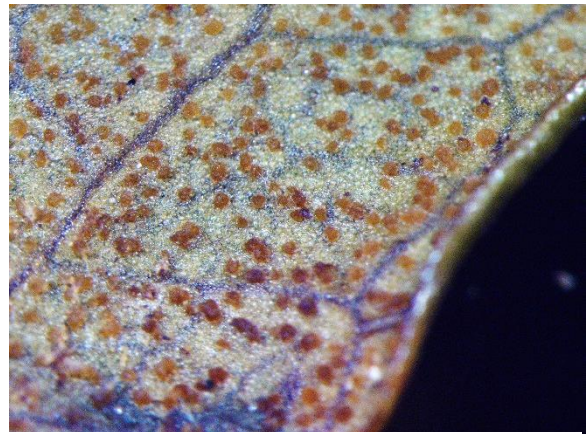


Figure 6. Orange-brown spore-bearing fungal masses on the lower surface of a leaf.

Common fungicides that are registered to protect pachysandra from the disease include potassium bicarbonate, copper-based products, chlorothalonil, and thiophanate-methyl + chlorothalonil.

