RESEARCH LABORATORY TECHNICAL REPORT

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Entomosporium Leaf Spot

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Entomosporium leaf spot, caused by the fungus *Diplocarpon mespili,* is a common disease of landscape ornamentals in the rose family, and certain fruit trees such as pears and apples. Entomosporium, meaning "insect-like," is descriptive of the fungal spores (Figure 1).

Symptoms

Disease caused by *D. mespili* generally starts as small, red or purple spotting of new growth. These spots enlarge and often coalesce over time (Figure 2). As the spots expand, leaf tissue in the middle becomes necrotic (brown or tan) and small, raised, spore-producing structures form in the necrotic region (Figure 3). In some hosts, the disease causes minor to significant leaf spotting while other hosts, such as Indian hawthorn (*Raphiolepis indica*) and photinia (*Photinia* spp.), may suffer significant defoliation and eventual dieback [1, 2].

Figure 1: *Diplocarpon mespili* spores appear "insect-like"

Figure 2: Infected foliage of Indian hawthorn

Range and Hosts

Entomosporium leaf spot can be found across North America and throughout the world. While all members of the rose family are considered susceptible, significant differences in disease severity exist among species and even among cultivars of the same species [3]. Evergreen species such as photinia, Indian hawthorn, and evergreen pear tend to be the most severely impacted, in part because infected leaves are not shed each year and can serve as a source of inoculum when new growth and favorable environmental conditions are present. Other hosts commonly infected in the landscape are apples, pears, hawthorn (*Crataegus* spp.), serviceberry (*Amelanchier* spp.), and toyon (*Heteromeles arbutifolia*).

Disease Spread

New growth is most susceptible to infection, and disease progresses rapidly when spring rains keep new foliage wet for extended periods of time. However, disease can develop at any time of year when there is new growth and sufficient moisture. Disease is often most severe on sites with overhead (spray) irrigation that regularly wets foliage and splashes spores to uninfected leaves. Leaf wetness combined with temperatures between 60˚ and 80˚F are most favorable for infection and disease development [2].

Management

Prior to planting, select disease-resistant cultivars and inspect new plants for leaf spot. Cultural methods to reduce Entomosporium leaf spot involve sanitation and adjustment of irrigation. Remove infected, fallen foliage. Use drip or other ground-level emitters to avoid wetting foliage. Prune canopies or remove whole plants to reduce density and improve air flow and sunlight penetration. This will also speed leaf-drying times and reduce disease pressure.

In areas with heavy disease pressure, foliar-applied fungicides may be required to maintain aesthetics or privacy in the case of screen or hedge plantings. Fungicides should be applied preventatively anytime that new growth is present and leaf wetness is unavoidable [4]. Contact your Bartlett Arborist Representative to learn more about management options.

Figure 3: Raised, spore-producing structures in the center of the necrotic region

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References

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