

Timing of Fungicide Sprays to Prevent Azalea Web Blight Symptoms[®]

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Rhizoctonia web blight affects azaleas, as well as other plant genera such as hollies, in nurseries in the southern and eastern U.S.A. Our research is demonstrating how little is known about some plant pathogens that infect ornamental plants in nurseries. Binucleate *Rhizoctonia* fungi grow and survive on azalea stems throughout the canopy and in the rooting media 12 months of the year, although plant damage only occurs in July to September. In a typical year, only about a quarter or fewer of the infected plants develop severe damage.

Several fungicides will control web blight, but guidelines about when to spray have not been clearly understood. Previous research has shown that maximum daily temperatures greater than 35 °C (95 °F) and minimum daily temperatures less than 20 °C (68 °F) slow web blight development. Unfortunately, weather conditions have not provided a precise prediction of when rapid blight will develop, despite the fact that moisture is critical for the development of all plant diseases. Apparently daily irrigation creates regular moisture conditions favorable for slow to moderate disease development and interferes with distinct patterns needed for predictions.

Disease starts building up weeks ahead of afternoon rains, which were not a consistently dependable weather pattern for predicting the rapid appearance of blight. Analysis is in progress that may still help identify temperature and moisture patterns that influence rapid web blight development.

Decision criteria are another approach sometimes used to select fungicide timing dates. With three years of research at two locations (Poplarville, Mississippi, and Mobile, Alabama), applying fungicides on scheduled calendar dates (around 10 July and 1 Aug.) was the most reliable criterion for suppressing blight development on 'Gumpo White' azalea. This is an easy approach to follow. Since azalea cultivars vary in susceptibility, only the more susceptible azaleas should be sprayed at the same time as 'Gumpo White'. The less susceptible cultivars could be sprayed 2 weeks later. A problem in timing still exists because web blight develops at different rates each year, at each nursery and in different blocks at the same nursery. Scouting provides a way to adjust to that variability. Scouting could allow fungicides to be applied a week or so earlier or later than the scheduled date and should take only 5 to 10 min per block of plants of the same cultivar and age. Scouting is done by spreading branches so you can take a quick count of the number of dead leaves present in the inner canopy (not ones on the surface of the bark medium). Count dead leaves

in at least six scattered plants. Small plants could have 5 to 30 dead leaves. Large plants could have 10 to 50 dead leaves. The important point is to spray when there is an increased count of 10 to double the number of dead leaves per plant from the previous week. Scouting should not be the main decision criterion, because rapid blight can develop later in the same week plants were scouted. It is primarily a way to adjust to the variability in when blight develops. By checking several blocks it will be obvious which blocks of plants have more advanced symptoms and when disease has advanced. Also decide risk of web blight based on your past experiences (cultivar, plant age, spacing, placement in nursery, and weather).

Fungicides are most effective when sprayed days to 1 week in advance of infection periods. Fungicides are a sophisticated technology and should be used wisely. Fungicides inhibit pathogen colonization of plant tissue and prevent (limit) symptom development, but do not eliminate the pathogen. Fungicides from different fungicide classes should alternatively be used and sometimes tank mixed to minimize the development of fungicide resistance.