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Evaluation of fungicides and application intervals for the control of black leaf spot of rose

Black leaf spot of rose caused by the fungus *Diplocarpon rosae* is considered to be an important disease in rose production. This disease can cause a substantial impact on the market value of the plants that are under severe infection. The fungus thrives in wet environments and can spread spores via splash or wind. Through leaf debris and cane infection sites, the fungus can overwinter. The disease causes black spots to develop on the leaf surface and can cause the leaf to yellow. Eventually, this causes the plant to drop leaves and possibly increase the risk of winter injury. The purpose of this study was to evaluate the efficacy of fungicides at different application rates and intervals in reducing the black leaf spot disease in rose cultivars Queen Elizabeth and Coral Drift. Black leaf spot disease was developed from natural inoculum. Six single-plant replications per treatment were arranged in a completely randomized design in a shade house under 56% shade at the Otis L. Floyd Nursery Research Center in McMinnville, TN. Roses were treated with the fungicides at 2 or 4-week intervals, and all plants were evaluated every 7 days. Postiva was applied at three rates (14, 20, 28 fl oz/100 gal) while Mural WG was applied at a single rate (7 fl oz/100 gal). The severity of the black leaf spot was assessed using a scale of 0-100% foliage area affected. All treatments significantly reduced disease severity and disease progress (AUDPC) compared to the non-treated control plants in both trials. All Postiva treatments and the 2-week interval Mural treatment provided the most significant decrease in disease severity in the Queen Elizabeth trial. All treatments in the Coral Drift trial were similar in their disease severity control. AUDPC in their respective trials were similar between treatments. These treatments would be beneficial to include in a rotation program for management of black leaf spot of rose.