

IN VITRO SENSITIVITY OF COLLETOTRICHUM SPP. ASSOCIATED WITH CITRUS SINENSIS TO TRIAZOIS FUNGICIDES (DMI) AND THEIR COMBINATIONS WITH STROBILURINS (QOI)

III Simpósio Internacional de Atualização em Genética e Melhoramento de Plantas, 0ª edição, de 24/05/2021 a 26/05/2021
ISBN dos Anais: 000

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RESUMO

Colletotrichum species coexist in pathogenic, endophytic and saprophytic forms on hundreds of species of fruit, cereal, grain, vegetable and ornamental plants. In citrus it is responsible for postharvest losses and especially during the flowering of sweet orange trees, which under favorable environment can cause huge yield decreases. In Brazil, *Colletotrichum abscissum* and *C. gloeosporioides* sensu stricto are responsible for the postbloom fruit drop (PFD). There are indications of other species also associated with the disease, especially *C. karstii*. The control of the disease is done by applications of the fungicides tebuconazole and difenoconazole (DMIs), or their combination to strobilurins (QoI), especially trifloxystrobin and azoxystrobin. In this work, the in vitro sensitivity of *Colletotrichum* species associated with sweet orange trees in São Paulo State was evaluated. The fungicides evaluated were tebuconazole, difenoconazole, and commercial formulations of these fungicides associated with azoxystrobin and trifloxystrobin, at concentrations of 0.01, 0.1, 1, 10 and 100 µg mL⁻¹. The evaluation consisted in determining the growth inhibition of colonies, from which the percentage of growth inhibition of colonies, and effective inhibitory concentration were determined. Regression analysis of the data was also applied to interpret the results. It was found that all *Colletotrichum* species evaluated were highly sensitive to the fungicides evaluated, proving their efficiency *in vitro*. All *Colletotrichum* species were more sensitive to the combinations of trifloxystrobin and tebuconazole than to the triazoles alone. These results indicate that, despite the recurrent and systematic use of DMI and QoI fungicides in the control of several citrus-associated diseases in São Paulo State, such as PFD and Citrus black spot (*Phyllosticta citricarpa*), their efficiency remains unchanged in the management of *Colletotrichum* species associated with *Citrus sinensis*.

PALAVRAS-CHAVE: Postbloom fruit drop, fungitoxicity, demethylation inhibitors, quinone oxidase inhibitors

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