Effectiveness of an ametoctradin-dimethomorph formulation to control brown rot on postharvest lemons

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Abstract

Brown Rot (BR), caused by *Phytophthora* spp., is a citrus postharvest disease. In Argentina, world leader in lemon production, BR management is based on cultural practices and chemical control using inorganic salts of limited efficacy. Commercial formulations containing ametoctradin plus dimethomorph (A + D) and ametoctradin plus methiran (A + M) have been recommended against *Phytophthora infestans* in potato crops; however, their use on citrus is unexplored. The aim of this work was to evaluate the effectiveness of A + D and A + M to inhibit a *Phytophthora citrophthora* local isolate and to control BR in lemons by pre- and postharvest applications. A + D affected zoospore structure and motility, and inhibited mycelial growth and sporangia formation more efficiently than A + M. In applications on postharvest lemons, A + D presented BR preventive activity (90% incidence reduction), while it lacked curative action. A field treatment with A + D reduced 50% of BR incidence in lemons harvested and inoculated up to 21 d post-application. Our results encourage the incorporation of the commercial A + D formulation into the management strategies to reduce or avoid citrus BR.