Title Using paclobutrazol to delay the growth of *Botrytis cinerea* isolated from *Chamelaucium*

uncinatum

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Abstract

Botrytis blight, caused by *Botrytis cinerea* infection, is the most significant fungal disease in Geraldton waxflower (*Chamelaucium uncinatum*). Paclobutrazol, a gibberellin biosynthesis inhibitor, is often used with potted ornamental plants to control their growth and provide more compact plants. Paclobutrazol falls within a group of chemicals classed as triazoles, which have been recommended for use as both fungicides and plant growth regulators. It was, therefore, thought that paclobutrazol might be effective in the control of *B. cinerea* in plants. To this effect, paclobutrazol (0, 0.05, 0.25, 1.25 and 6.25 mg per dish) was added to dishes containing *B. cinerea* isolated from *C. uncinatum* plants collected in south-east Spain, and the inhibition of growth was studied *in vitro*. The effect of a gibberellic acid spray (346 mg/L) on fungal growth and its interaction with paclobutrazol was also studied. All five doses of paclobutrazol tested decreased fungal growth in a dose-dependent manner, reducing the size of the conidia and the number of sclerotia. The highest paclobutrazol dose eliminated conidiation, completely inhibited the formation of sclerotia and provoked irreparable injuries in the mycelium. Gibberellic acid did not affect fungal growth but the number of sclerotia increased with this hormone. Additional keywords: grey mould, hyphal growth.

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