

Abstract

Treatment of cut freesia var. Cote d'Azur flowers with methyl jasmonate (MeJA, $0.1 \mu\text{l MeJA l}^{-1}$) vapour suppressed petal specking caused by *Botrytis cinerea* infection. MeJA efficacy was concentration and incubation temperature dependent. Disease severity, lesion numbers and lesion diameters decreased with increasing MeJA concentration from 0.025 to $0.1 \mu\text{l MeJA l}^{-1}$. However, there were no significant ($P > 0.05$) differences among MeJA concentrations examined. MeJA was more effective in reducing *B. cinerea* flower specking at 20°C than at 12°C . MeJA treatment was ineffective at 5°C . At 20°C , MeJA treatment at $0.1 \mu\text{l MeJA l}^{-1}$ reduced disease severity, lesion numbers and lesion diameters by 58, 50 and 48%, respectively, as compared to untreated controls. In a repeat experiment, disease severity, lesion numbers and lesion diameters on MeJA vapour treated flowers after 12 h of incubation were reduced by 68, 56 and 50%, respectively. MeJA did not exert direct antifungal activity in-vitro, suggesting that treatment in-vivo reduced *B. cinerea*-induced flower specking by induction of host defence responses. MeJA at $0.1 \mu\text{l MeJA l}^{-1}$ significantly ($P < 0.05$) increased vase life of cut freesia flowers and delayed senescence judged by lower wilt scores and higher fresh weights as compared to untreated controls.