

Title Thidiazuron effects on *Dianthus caryophyllus* 'Lunetta'
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Abstract

Experiments were conducted to determine the effects of Thidiazuron (TDZ) applied preharvest under glasshouse conditions on *Dianthus caryophyllus* 'Lunetta'. Thidiazuron at 0, 1, 10, 100, and 1000 μM was applied as a foliar spray in two separate experiments. 15 plants were used for each concentration in both experiments. Experiments were arranged in completely randomized designs. Time to flowering was recorded, and relative stem length, total nitrogen, and tissue water content were measured at harvest. Postharvest vase life, relative fresh weight changes, and solution uptake changes were also measured. TDZ treatments sometimes decreased relative stem length compared to the control (0 μM). TDZ treatment tended to decrease total nitrogen and water content of tissues slightly, but not significantly ($P > 0.05$). In the first experiment, TDZ at 100 μM significantly increased the vase life of cut carnation flowers compared to the control. In the second experiment, TDZ applied preharvest at both 10 and 100 μM significantly increased their vase life. TDZ treated flowers tended to maintain higher relative fresh weight, with positive differences for the 100 μM TDZ treatment being apparent at days 5, 7 and 9 of vase life. Solution uptake was sometimes higher in TDZ treated flowers.