

Abstract:

Cut inflorescences of *Lupinus* species have potential as specialty cut flowers, but their sensitivity to ethylene varies widely among species and even in selections within a species. In some species (e.g., *L. havardii*) flower abscission, is particularly sensitive to the presence of ethylene. In contrast, we observed that in cut inflorescences of *L. densiflorus*, even in the presence of a relatively high concentration of 2-chloroethylphosphonic acid (CEPA), flowers did not exhibit any abscission, although flower senescence was hastened considerably. This investigation was initiated to study the effect of thidiazuron (TDZ), alone or in combination with sucrose, silver thiosulfate (STS) and 1-methylcyclopropene (1-MCP), on flower senescence of 'dark yellow' and 'light yellow' flowered lines of *L. densiflorus*. Incorporation of TDZ in the holding solution delayed the onset of flower senescence in both lines of *L. densiflorus*. The senescence of flowers was also delayed by the addition of sucrose or by pretreatment with STS or 1-MCP. Sucrose and TDZ, in combination, proved even more effective in delaying senescence of flowers. Both sucrose and TDZ, like STS and 1-MCP, also partially counteracted the flower senescence- accelerating effect of CEPA. These results suggest that, in addition to its cytokinin-like activity, TDZ may also have some role in modulating the effects of ethylene in cut inflorescences of *L. densiflorus*.