

Title Effects of silver thiosulfate and sucrose on tuberose cut flowers vase life
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Abstract

A pulse treatment of sucrose at 0, 20, 40, 60, 80, 100, and 120 g L⁻¹ in combination with 8-hydroxyguinoline sulfate (HQS) at 200 mg L⁻¹ for 10 h was evaluated daily for its effect on the vase life and flower quality of cut tuberose flowers. The pulse treatment of sucrose at above 80 g L⁻¹ produced a vase life of 6 to 8 days, while at below 80 g L⁻¹ vase life was maintained for 5 days on average. The pulse treatment of silver thiosulfate (STS) at 0.2 mM for 2 h or STS for 2 h followed by sucrose at 120 g L⁻¹ supplemented with HQS for 10 h extended the vase life of cut tuberose flowers to about 9 and 10 days, respectively. On the other hand, a pulse treatment with sucrose or distilled water in combination with HOS maintained vase life for 7 and 3 days, respectively. Flower quality of specimens treated with STS followed by sucrose in combination with HQS was better than that of those treated with STS alone. Although visual quality could be maintained for up to 13 days in STS followed by sucrose in combination with HQS, flower quality decreased notably after 10 days. Ethylene production was greatest in untreated tuberose flowers (about 3 h after harvest) and decreased after treatment with chemical solutions. Inhibition of ethylene production was greater in flowers treated with sucrose in combination with HQS than with STS or STS followed by sucrose along with HQS, although the effectiveness of the latter treatment for maintaining tuberose vase life was better than the former.