Abstract:

Tuberose is one of the tropical and subtropical bulbous cut flowers cultivated extensively in most floricultural regions of Iran. Due to its delicate fragrance, Iranians use it in all seasons for flower arrangements. Although tuberose has a high potential for a long vase life after harvesting, it declines rapidly at home. In order to overcome this problem an experiment was conducted in order to find a suitable preservative which provides the longest vase life for tuberose. The experiments were carried out by applying the carelessness of most consumers: not recutting stem ends nor changing the vase solutions. In the first experiment the preservative solutions were: sucrose (1, 2 and 3%), silver thiosulphate (0.4, 0.8 and 1.2 mM), silver nitrate (50, 100 and 150 mg l^{-1}), citric acid (150, 300 and 450 mg l^{-1}) and tap water as the control. In the first days of the experiment, silver thiosulphate caused severe burning of the florets; silver nitrate caused wilting of the florets and bent the end of the flower spikes; and sucrose didn't have any useful effect, it decreased the vase life. The longest vase life belonged to citric acid, followed by the control (tap water). The second experiment was conducted for determining the role of the water quality. In this part the treatments were: sterilized distilled water, citric acid made with sterilized distilled water (150, 300 and 450 mg l^{-1}) and tap water as the control. The longest and the shortest vase life belonged to sterilized distilled water and the control (tap water), respectively. The citric acid prepared with sterilized distilled water had a desirable effect on the vase life of cut tuberose flowers. This effect increased with the increment of the acid up to 450 mg l^{-1}.