

Title The effect of different temperature and chemical substances treatments for extend vase life of Iranian rose cultivars

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Abstract

Rose flower in the big amount for the propose of cut rose flower is produced in the world. In Iran also cultivation and sales of cut flower are very important. With regards that the additional longevity and quality of post harvest flower from economic point of view are very important. This study was designed with a completely random plan statistical with two cultivar of roses. Cut rose flowers were picked up at the tight bud stage and placed in different preservative solution: 1- Silver nitrate 150ppm + Sucrose 3% + Citric acid 100ppm; 2- Aluminum sulphate 500ppm + Sucrose 3% + citric acid 100ppm; 3- Sodium thiosulphate 800ppm + Sucrose 3% + citric acid 100ppm; 4-8-hydroxy quinoline sulphate 300ppm + Sucrose 3% + citric acid 100ppm; 5-Distilled water. Cut rose were kept for 24 hours in the different solution then brought out and kept in the distilled water in the temperature of 4°C and 22°C. Effect of applied treatments were evaluated using different measurement like flower longevity, fresh weight, flower diameter, number of yellow leaves, bent neck flower and percentage of flower of flower opening. This study shows that in the both cultivar the temperature 4°C gives significant results as compared with the temperature of 22°C in longevity and flower diameter, also in the number of yellow leaves and percentage of bent neck flower were significantly less then the cut flowers were kept in the temperature of 22°C. Also in the Golestan vase life, flower diameter, increased significantly in compared Mohammady but percentage of bent neck flower were significantly less than the cultivar of Mohammady. Chemical treatment like Silver nitrate, Aluminum sulphate or Sodium thiosulphate also significantly increased the cut flower longevity and flower diameter, but this Chemical had bed effect on the bent neck disordered. This study also shows that the reduction of fresh weight of cut flower had direct relation ship with the senescence of cut roses with different chemical treatments and temperature of 4°C cut roses increased in their fresh weight as a results caused additional longevity of cut roses. In the cultivar of Golestan longevity increased significantly, also fresh weight increased more than the Mohhamady.