Title Effect of 6-benzyl adenine and silver thiosulfate on some quality traits of tuberose (*Plianthes Tuberosa* cv. Double)

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Abstract

Important post harvest traits of tuberose are opening of florets and their longevity during storage. Today, Plant growth regulators and preservative solutions are used to increase flower longevity, to delay the senescence and to reduce of ethylene production of cut flowers. In an attempt to increase post harvest longevity of tuberose, and the percentage of opening florets and to decrease ethylene production, a factorial experiment was conducted in Mashed in 2003; it was based on a randomized complete design block in three replications Tuberose corms were soaked in 0, 50, 100 or 150 ppm 6-benzyl adenine (6-BA) for 24 hours. After planting and picking the spikes, they were treated with 0, 400, 800 or 1200 ppm of silver thiosulfate (STS) and stored at 5°C. All three traits measured the results were influenced by, 6-BA, STS and the interaction between them. The most significant affect on floret opening and longevity was obtained with 150 ppm 6-BAP. The combination of 50 ppm 6-BA and 400 ppm STS induced 33.8% of florets to open. The greatest longevity of flowers of 11.0 days occurred with 150 ppm 6-BA plus 400 ppm STS. Using gas chromatography showed, florets produced the least ethylene (1.9 ppm) following 100 ppm 6-BA with 100 ppm. Thus by using a combination of plant growth regulators, preservative solution and cold storage the longevity and percentage of opening florets can be increased and ethylene production reduced.