The effect of certain agricultural postharvest treatments on some ornamental plants

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Nowadays, with Egypt participation in General Agreement Tariffa Trade (GATT), cut flowers is considered one of the most important products for export to foreign markets. Also, cut flowers occupy an important position in the local and foreign markets. Because of their importance as a source of national income. Tuberose (polianthes tuberose L.) and bird of paradise (Strelitzia reginae Ait) cut flowers are very important flower crops for local and foreign markets.This study was conducted at postharvest laboratory of Horticulture Department, Faculty of Agriculture, Benha University during the two seasons (2007-2008 , 2008-2009). The aim of this study was to investigate the effects of some chemical preservative as preharvest and postharvest combined with cold storage, pulsing and Holding solutions as well as their interaction treatments on (Polianthes tuberosa L. and Strelitzia reginae Ait. plants in order to improve quality , shelf life periods and postharvest characters.This study includes two main parts:-The first part (Polianthes tuberosa)The first part of this study can be divided into twoexperiments:The first experiment: (growth regulators andstorage periods)The present work study two factors and their interactions. The first factor was growth regulators treatmentsSummary and Conclusion - 371 -i.e., GA3 at 200 and 300ppm, BA at 25 and 50ppm and kinetin at 50 and 100ppm.whereas, the second factor was storage period treatments, since tuberose cut flower spikes were stored at 4±1°C for 0, 7, 14 or 21days.In addition, the data recorded were vegetative growthmeasurements (number of leaves/plant, plant height / cm, freshweight of leaves /g and dry weight of leaves /g) , floweringgrowth measurements (number of floret/spike, length of flowerstalk , the thickness flower stalk, fresh weight of total flowerstalk, fresh weight of flower stalk with floret, fresh weight offlower stalk without floret, fresh weight of the third floret, dryweight of total flower stalk, dry weight of flower stalk withfloret, dry weight of flower stalk without floret , dry weight ofthe third floret, Chemical composition determinations (Chlorophyll a, Chlorophyll b, caroteniods, total nitrogen, phosphorus and potassium content in leaves), postharvest characters (longevity; floret opening and wilting percentages and change percentage in fresh weight of cut flower spike), water relation characters (water uptake, water loss and water balance), and some chemical constituents (chlorophyll ”a”, chlorophyll ”b”, carotenoids in leaves/spike, the percentages of each of total, reducing and non reducing sugars, total phenols ,total nitrogen, total protein, total phosphorus and potassium in petals and flower stalks) as well as correlation coefficients between some preharvest and post harvest characters, water relation characters, and chemical constituents of tuberose cut flower spikes as affected by growth regulators treatments ,storage periods, as well as and their interaction treatments.