The effect of different concentrations of sugars on post-harvest vase life and anthesis of cut bird of paradise

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Abstract Strelitzia or bird of paradise (strelitzia reginae) is a monocotyledonus, perennial plant family of strelitziaceas and order of zingiberales. It is propagated for the production of cut-flowers in greenhouse. The effect of four sugars (sucrose, glucose, fructose, honey) at two concentrations of 2 and 4% were studied on post-harvest life of bird of paradise cut flowers in a CRD. The recorded traits included vase life, florets' opening percentage, fresh weight, water uptake, dry matter percentage, sepal carotenoid, ethylene, stem and petal solution carbohydrates concentration, respiration and activities of peroxidase, catalase, measurement of membrane lipid peroxidation, and ion leakage. The treatment of glucose 4% was found to be the most appropriate for vase life, brix reduction, fresh weight reduction, respiration, ethylene, and catalase enzyme. Also, the treatment of Sucrose 2% was the most appropriate for dissolved sugar of petal, the shortest time to flowering, and dry matter, the treatment of sucrose 4% for MDA and POD, the treatment of honey 2% for carotenoid pigment, the treatment of honey 2% for flower opening, the treatment of glucose 2% for shortest time to flower opening and ion leakage, the treatment of fructose 2% for water uptake, and the treatment of fructose 4% for stem-end sugar.

Keywords : Keywords: Bird of paradise, vase life, sucrose, glucose, fructose, honey.