

Abstract

Phoenix roebelenii has export potential as cut leaves. However, it shows wilting 3 days after harvesting. This study was conducted to maintain leaf freshness and postharvest handling of Phoenix during transportation and storage. Experiments were conducted at Tropiflora company in Sri Lanka to investigate the effect of hydration solutions (Florissant 400C, water) with wax treatment, harvesting time (6.00, 8.00, 10.00 a.m., 12.00, 2.00, 4.00 and 6.00 p.m.) and irrigation (irrigated and non irrigated), preservative solutions (Citric acid, Vinegar, Sugar and Phyzan) and commercial floral preservatives (Chrysal instant pac, Chrysal food pac, Chrysal professional 01 and Florissant 400C) on keeping quality of cut leaves. Water was used as the control and all experiments were arranged as CRD with 4 replicates. The vase life (14.75 days) was significantly affected by hydration in water and wax treatment. No significant differences of leaf freshness or vase life of leaves harvested at 6.00 a.m. and 6.00 p.m. from irrigated fields. Results indicate that leaves placed in preservative solutions of 5 % Sugar, 200 ppm Phyzan and 500 ppm Citric acid increased vase life (13 days) than leaves placed in water. Immersing in 25 ppm GA₃ + 25 ppm BAP had beneficial effect on vase life (19 days) of Phoenix. Among the floral preservatives, Chrysal professional 01 showed longer freshness. Combination of horizontal hydration and vertical hydration in preservative solutions showed significantly ($\alpha \leq 0.05$) longer vase life than only vertical hydration. Hydrated in Chrysal professional 01 (horizontal 6 h and vertical 12 h) and wax treated leaves gave the highest vase life (27 days) and longest leaf freshness.