

Comparison of vase life, soluble carbohydrates content and ethylene production rate in different cut rose cultivars

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Abstract

An experiment was carried out to compare the vase life and factors affecting the longevity of 10 cut rose cultivars imported to Iran. The vase lives of these cut rose cultivars were compared in preservative solution containing hydroxyquinoline citrate (HQC) plus sucrose. Results showed that there was significant difference among cultivars in vase life, time of flowering, water uptake, evaporation rate, ethylene production and carbohydrate content. Maroussia flowers had the longest vase life (18.3 days) and 'Black magic' had the shortest vase life (7.6 days). Cultivars with longer vase life had higher concentrations of soluble carbohydrates (fructose, glucose and sucrose) in petals as compared with cultivars that had shorter vase life. Also, short-lived cultivars produced higher ethylene rate than long-lived cultivars.

Keywords: Carbohydrate content, Ethylene, Longevity.

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