



Effect of different holding solutions on post harvest life of Asiatic hybrid lily cv. 'APELDOORN'

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● ABSTRACT ●

The investigation entitled, "Effect of different holding solutions on post harvest life of Asiatic hybrid lily cv. Apeldoorn" was carried out in the field laboratory of Department of Floriculture and Landscaping, Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni – Solan in the year 2007-08. The experiment was laid out in Completed Randomized Design (CRD) with sixteen treatments replicated thrice. It was observed that holding solution comprising of 2 per cent sucrose + 200 ppm 8-HQC + 50 ppm GA₃ resulted outstanding improvements in most of economical characters such as flower diameter (16.44 cm), opening of all flower buds, vase life (16.00 days), weight gain (18.31 %) and amount of holding solution consumed (125.50 ml) by the cut stems.

KEY WORDS : Asiatic hybrid lily, Holding solutions, Vase life

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● INTRODUCTION ●

The genus *Lilium* belongs to the family *Liliaceae*. The lilies are the showiest flowers of the plant world and being grown in borders, beds and pots. These are excellent cut flowers of magnificent appearance and beautiful colours. They are one of the leading cut flowers, occupying 4th position by turn over in cut flower trade (Sharma, 2007). Hybrid lilies are 'low volume' and 'high value' flower crops for growers to get considerably higher returns in short time periods. Most cut flowers have limited vase life owing to their moisture content, delicacy and tenderness. Due to high perishability, cut flowers are vulnerable to large post harvest losses upto 50 % of the farm value (Singh *et al.*, 2007). In recent years, a considerable progress has been made in the study of postharvest physiology and development of postharvest technology for extending longevity and improvement in the quality of cut flowers.

In order to preserve the best quality flowers after harvest and making them tolerant to fluctuations in the environmental conditions, treatments with floral preservations have been recommended. These treatments can be given to the flowers during the entire marketing chain from growers to wholesalers, retail florists and finally to the ultimate users. Floral preservatives affect the quality of cut flowers by extending the vase life, increasing the flower size and maintaining the colour of leaves and petals. Commonly most preservative solutions consists of carbohydrates, germicides, ethylene inhibitors, growth regulators and some mineral compounds. Carbohydrates are the main source of nutrition for cut flowers and thus support the process fundamental in prolonging vase life *i.e.* maintainance of mitochondrial structure and functions and improvement in water balance by regulating transpiration. Keeping in view the above facts, the present study was therefore, undertaken to find out the best holding solution for prolonging post-harvest life of Asiatic hybrid lily cut flowers cv. APELDOORN.

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● MATERIALS AND METHODS ●

Under Nauni condition, the Asiatic hybrid lily cv. 'Apeldoorn' came into bloom during the first week of May, 2007. The stems were harvested about 15 cm above the ground level on 5th May, 2007, when the lowermost bud was fully coloured. One hundred and forty four good cut