The Asian Journal of Horticulture, December 2007, Vol. 2 (2) : 107-109

EFFECT OF CERTAIN CHEMICALS ON VASE LIFE OF ROSE (*Rosa hybrida* L.) cv. FIRST RED GROWN UNDER GREEN HOUSE

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Accepted : October, 2007

ABSTRACT

The present investigation was carried out to study the effect of 8-HQC, Al_2SO_4 in combination with Sucrose on vase life of rose flowers. Among all the chemicals, 8-HQC of 250 mg/l + Sucrose 4 % found effective in the various qualitative parameters like fresh weight as well as the vase life of cut rose cv. 'First Red'.

Key words : Rose, Al_2SO_4, 8-HQC, Sucrose.

The rose belonging to the family, Rosaceae, is one of the most important flower crops. The rose has not only maintained its position as the "King of flower" and the world favourite flower but also continue to grows in popularity because of its magnificent blooms and pleasing fragrance beside wide array of colours (Biswas, 1983). The flowers are used in all occasion of festivals, religious or social functions.

The loss due to post-harvest handling is about 40-50 per cent (Bhattacharjee, 1999). This loss can be minimized by adopting improved post-harvest handling methods. Though the prolonging of the vase life of cut flowers began as an amateur interest in the recent years, it is being practiced on a commercial scale based on scientific principles. Even simple, post harvest handling operations would add the value to the product assuring better values for growers. Therefore, the present investigation was carried out to find out the best chemical combination and their concentration to improve vase life and quality of rose cut flowers cv. First Red.

MATERIALS AND METHODS

The present experiment was conducted at Post Graduate Research Laboratory, Department of Horticulture, N. M. College of Agriculture, Navsari Agricultural University, Navsari during March 2005 on rose flower cv. 'First Red'. Nearly equal stalk length (40 cm) of rose cut flower having solid stems at tight bud stage flowers were selected from the green house for the experiment. The experiment was laid out in Completely Randomized Design with three repetitions. Data on all the parameters were analysed statistically and results are presented in Table 1.

RESULTS AND DISCUSSION

Opening of petals (%):

The treatment combination of 8- HQC at 250 mg l^{-1} with sucrose 4 per cent gave the highest percentage of opening of petals per flower (88.77%). This might due to sucrose helped in the continuation of normal metabolic activity of the flower buds after harvest which resulted in the complete development and opening the cut rose buds (Bhattacharjee, 1995). Similar results were also obtained by Goszczynska and Reid (1985) and Goszczynska *et al.* (1989).

Abscission of petals (%):

The minimum abscission of petals (2.11%) was obtained with 8-HQC at 250 mg l^{-1} + sucrose 4 per cent holding solution. The lower abscission of petals of cut roses were observed due to role of sucrose is mainly attributed to decrease in moisture stress, translocated sugar was found accumulate in the flower bud increasing, these maintaining the turgidity (Gowda, 1986).

Diameter of flowers (cm) :

The maximum diameter of flower was noted when rose cut flower stalks were kept in vase solution of 8-