

## Comparative study of various chemicals with stalk length on vase life of rose cv. GLADIATOR

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### SUMMARY

The treatment of sucrose 2% + 8 HQC (100ppm) showed maximum and significant influence on all the quality parameters including the per centage of opened petals, per centage of absised petal, flower diameter and vase life. In comparison, with all other chemical preservatives treatment lowest quality parameters diameter of bud, length of bud, number of opened petals, absised petal and vase life were recorded by distilled water.

Key words : Rose, Stalk length, Vase life, Sucrose.

Rose is indisputably the top ranking cut flower and comprises nearly 60 to 70 per cent share in the internal flower trade. Gladiator and paradise are important rose varieties which are famous as cut flower due to their attractive petal size, shape and colour. The cluster is a living entity, when detached from the plant the cut stalk is deprived of its natural sources of food, water, minerals, hormones and carries out its life processes at the expense of reserve food material it contains. It is estimated that nearly 30% of the flowers were perished during post harvest handling (Singh *et al.* 2001) until recently vase life was not considered a major quality factor and flowers were judged on the basis of colour, flower development, size, appearance, length of stalk and quality of leaves. Today, great emphasis of being placed on the ability of cut flower to last for long time in a vase (Higginson, 1999).

Hence considering the above views, present investigation entitled "Comparative Study of Various Chemicals with Stalk Length of Vase Life of Rose cv. GLADIATOR was under taken at P.G. Research Laboratory, Department of Horticulture, N.M. College of Agriculture, Navsari Agricultural University during the year 2003 - 04".

### MATERIALS AND METHODS

The experiment on the comparative study of various chemical with stalk length of vase life of rose cv. GLADIATOR was lender taken at P.G. research laboratory, Department of Horticulture, N.M. college of Agriculture, Navsari agricultural University during the summer season 2003-04, the cut flower of rose variety cv. GLADIATOR of uniform and matured flowers were harvested at the stage when one to two petals were out

curved from tight bud tip by retaining four leaflets from the apex from the stem. The out flowers were immediately kept in the bucket of water to avoid air bubble inside the stem. The experiment was designed in factorial randomized block design consisting of two factors as treatments of chemicals and 3 stalk length replicated thrice. The treatment details were factor A chemicals – C<sub>1</sub>- sucrose 2%, C<sub>2</sub> – D - fructose 4%, C<sub>3</sub> – sucrose 2% + 8HQC (100 ppm), C<sub>4</sub> - sucrose – 2% + aluminium sulphate 50 ppm, C<sub>5</sub> – D - fructose 4 % +8HQC (100 ppm), C<sub>6</sub> – D- fructose 4% + aluminium sulphate 50 ppm, C<sub>7</sub> – distilled water.

Factor B consisted of stalk length L<sub>1</sub> - 10cm, L<sub>2</sub> - 20cm, L<sub>3</sub> - 30cm thus total 21 treatments combinations and their interaction effect on initial bud diameter, final bud diameter, bud length, opening of petals, obsistation and shelf life characters were studied. The data were collected and statistically analyzed.

### RESULTS AND DISCUSSION

Bud length and initial bud diameter of cut roses was not affected significantly because the cut rose under all treatments were cut at same stage. Maximum flower diameter was observed under C<sub>3</sub> treatment (9.96 cm) where the vase solution consist of sucrose 2% + 8HQC (100 ppm) followed by treatment C<sub>4</sub>, which were at par with each other. The lowest flower diameter (9.20 cm) was recorded under treatment C<sub>7</sub>, which was at par with treatment C<sub>2</sub> (Table 1). This indicated that sucrose in combination with 8 HQC has pointed role in development of flower alone. Carbohydrate supply and water balance are two factors which are responsible for flower development. Micro organism can influence directly

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