

## Response of rose varieties to different chemicals for vase life

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### ABSTRACT

An experiment was conducted to investigate the effect of chemicals on vase life of Rose varieties at K.K. Wagh College of Agriculture and Research, Nashik during December 2007-08. The results indicated that, initial bud of flower and diameter of flower was found non-significant. The final flower diameter was found maximum at the end of vase life in variety paradise, kept in vase solution containing chemicals –D-fructose 3% + citric acid 0.3%. Significantly the maximum weight of cut flower and maximum weight loss were recorded in the variety Gladiator along with same solution. Maximum total uptake of solution by rose cut flower and vase life of cut flower was recorded in variety Gladiator along with solution of D-fructose 3% + lime acid 0.03%.

**Key words :** Rose, Varieties, Vase life

The Horticulture consistency of cultivation and trade of loose flower, cut flowers, potted plants, garden bedding plants, garlands, boquests, planting material, services etc. which has become an important sector, experiencing rapid change the world over. Utilization of flowers in most of the countries are increasing associated with income development. The term cut flower is used to define the flower which is cut along with the portion of stem for the purpose of display in exhibitions of domestic purpose. The demand of cut blooms in the global market is increasing at the rate of 10 to 15% each year (Singh *et al.*, 2000). 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 stem and quality of leaves. Today, great emphasis is being placed on the ability of cut flowers to last for long time in vase (Higginson, 1994). Rose is indisputably the top ranking cut flower and comprises nearly 60 to 70 per cent share in the international flower trade. Gladiator and paradise are important rose varieties which are famous as cut flower due to their attractive colour and more vase life period. Considering the above views present investigation was carried out.

### MATERIALS AND METHODS

An experiment was carried out at K.K. Wagh College of Agriculture and Research, Nashik during December 2007-08 to study the effect of chemicals on vase life of rose varieties. The experiment was conducted in Factorial Completely Randomized Block Design with four replications. The treatment comprised of two factors, factor A consists of rose varieties ( $V_1$  – Gladiator and  $V_2$  – Paradise) and various concentrations of chemicals ( $C_1$  – D-fructose 3% + citric acid 0.03%,  $C_2$  – D-fructose 3% + ascorbic acid 500 ppm,  $C_3$  – D-fructose 3% + Nickel

chloride 200 ppm,  $C_4$  – D-fructose 3% + 8-hydroxyquinonien citrate 300 ppm,  $C_5$  – D-fructose 3% + aluminum sulphate 300 ppm,  $C_6$  – control (distilled water) and these were tried in combination with each other. The cut flower of rose varieties gladiator and paradise of same uniformity and maturity were harvested at the stage when 1-2 petals were outcamed from the bud tip by retaining four leaflets from the apex of the stem. The vase solution were prepared as per specifications given in the treatments and accordingly observations were recorded on various parameters.

### RESULTS AND DISCUSSION

The data presented in Table 1 indicated that, the initial bud length and diameter of flower were found non-significant differences amongst varieties and all the combinations of concentrations of chemicals. The final diameter of flower at the end of vase life was found maximum (9.42 cm) in variety paradise placed in vase solution containing D-fructose 3% + citric acid 0.03% ( $V_2C_1$ ) and found at par (9.33) with the variety Gladiator placed in same solution of chemicals ( $V_1C_1$ ) further, it was recorded minimum (5.89 cm) in the variety gladiator while placed in ( $V_2C_6$ ). Significantly the maximum weight of cut flower at the end vase life (11.59 g) and minimum weight loss at the end of vase life 1.46 g were recorded. As regards to weight of cut flower at the end of vase life it was significantly maximum (11.59 g) with vase solution of D-fructose 3% + citric acid 0.03% with variety gladiator ( $V_2C_6$ ). While, minimum weight of cut flower at the end of vase life were recorded in the variety gladiator with vase solution of D-fructose 3% + citric acid 0.03% ( $V_1C_1$ ). Moreover these were found at with the treatment combination of  $V_1C_2$  *i.e.* variety Gladiator in vase solution of D-fructose 3% + L-Ascorbic acid 500 ppm. While,