

## Studies on prolonging vase life of tuberose variety SHRINGAR

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**T**uberose is one of the tropical and subtropical bulbous cut flowers cultivated extensively in most floriculture region of India. Although it has a high potential for long vase life after harvest, tuberose declines rapidly at home as well as during storage before marketing. In order to find a solution to this problem an experiment was conducted to study the effect of different combination of selected chemicals on prolonging the vase life of tuberose variety Shringar. It was found that spikes held in the solution containing sucrose and  $AlSO_4$  and sucrose and HQC had maximum vase life.

Tuberose (*Polianthus tuberosa* L.) is herbaceous perennial commercially grown for its fragrant cut flowers in India, New Zealand, Japan and Mexico. It is also cultivated for the perfumes industry in India and France. Florets are borne in 15 to 20 pairs to form a terminal spikes 70 to 80 cm long, with leaves attached on the lower 15 to 20 cm of the flower stem; they are tubular, waxy white in colour and have a distinct fragrance.

Florets open from the base upwards, and spikes are harvested when the lowest florets have just opened. Unopened flower buds scarcely open after harvest, and thus display quality of tuberose spikes is limited

Allah Bakhsh *et al.* (1999) reported that the Vase life was increased three times by a solution containing 200 ppm silver nitrate ( $AgNO_3$ ) and 4m M silver thiosulfate (STS). Another experiment conducted by Jowkar and Salehi (2006) reported the vase solution containing different concentration of citric acid (150, 300 and 450 mg l<sup>-1</sup>) showed the maximum vase life of tuberose spikes.

The vase life of flowers is studied to improve the quality of flowers in vase,

increasing the water uptake, maintaining better water balance and higher fresh weight and delaying the loss of fresh weight. Thus chemicals individually or in combination are used to improve the overall quality of flowers.

Investigation have been carried out to prolong the vase life of tuberose spikes. The present study was carried out to understand influence of different chemicals combination on the post harvest physiology of tuberose variety Shringar

Tuberose was grown in the Floriculture Unit of the Department of Horticulture, Dr. Balashaheb Sawant Konkan Krishi Vidyapeeth, Dapoli (dist-Ratnagiri), following recommended cultural practices. Tuberose spikes were cut when one or two basal florets opened to a stem length of 45 cm. The test solutions having different combination in distilled water in 250 ml conical flask were arranged in Randomized Block design. Uniform flower spikes were put in the flasks randomly and the treatments were replicated thrice. The stalks end were cut about 1 cm every day under water to avoid clogging of vascular bundles. Spikes were observed daily to record the opening of florets. The number of days up to which florets on the spikes remained in good condition (till top most 4 florets remain unopened) was considered as the end of the longevity of the spikes. The uptake of solution was calculated at the end of vase life of each spike.

The results of the present investigation are presented in Table 1.

### Vase life:

The spikes held in the solution having sucrose and  $Al_2SO_4$  ( $T_5$ ) and sucrose and 8 HQC ( $T_7$ ) lasted for 10.33