

EFFECT OF CHEMICAL PRESERVATIVES AND COLOURING SOLUTIONS ON VASE LIFE OF CANDYTUFT CUT FLOWERS (*Iberis umbellata* L.)

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ABSTRACT

The present investigation was conducted with a view to enhance the post harvest life and quality as well as value addition by dyeing of white flowers of candytuft. Between two harvesting stages 50 per cent opened flowers recorded higher weight per cent (145.58%, 152.53% and 147.49%) on 5th day, 9th day and at cent per cent senescence stage, respectively the maximum solution uptake (42.79 ml), maximum useful vase life (9.25 days) and total vase life (10.42 days). It also maintained good quality of flowers for longer time. In all chemical preservatives, AgNO₃ (25mg/lit) + sucrose 2% recorded the maximum weight (165.03%, 181.48%, and 169.00%) on 5th day, 9th day and at cent per cent senescence stage, the maximum solution uptake (57.96 ml), maximum useful vase life (12.00 days) and total vase life (13.67 days) along with excellent flower quality, high turgidity and freshness. The interaction of 50 per cent opened flowers with 25 mg/lit AgNO₃ significantly influenced the post harvest life of candytuft. In second part, the most light colour shades were obtained in D1C1 and the dark shades were obtained in D₆C₃. The darkest shade observed in the Yellow dye was Yellow-2, in the Orange Red dye it was Indian Red-1, in the Falsa Blue dye it was Steel Blue-2, Apple Green dye had Yellow Green-1, in Pink Rose dye it was Light Pink-2 and for Kalakhatta dye it was Rosy Brown-3. There was no significant ill effect of edible dyes on the vase life of flowers of candytuft. The average vase life of the flowers ranged from 4.36 days to 5.15 days. C.B.R. is also more after dyeing the flowers than that of white flowers.

Key words : Candytuft Flower, Vase Life, Colouring solutions, Chemical Preservatives.

Cut flower trade is one of the most rapidly expanding and dynamic global enterprises in today's world. In this trade post harvest handling methods of cut flowers are a fascinating and rewarding subject to study. The improvement of keeping quality and vase life of cut flowers is of considerable economic importance. Candytuft is an important winter annual cut flower plant. The plants are useful for massing in beds, in annual borders and edging along paths. The flowers of candytuft are used as cut flower in bouquets and flower arrangements. Flowers and their colours symbolize different human moods. The impact of colour is so tremendous in our mind that the name itself is able to draw our attention to attributes to thing that is resembled by that colour. In nature, unlike other cut flowers candytufts are found in white colour. They normally last for 4-5 days in water. This white colour limits the floral acceptability and may not recover high value. Colouring these inflorescences with edible dyes can really enhance the value of these flowers and helps the farmers in earning more from their produce. It can also provide a great variety of colours for aesthetic

beautification. However, many attempts have been made but information on specific preservatives at effective concentration, proper stage of harvesting and colouring with edible dyes are still lacking for candytuft flowers. The present investigation was undertaken to screen out the relative effectiveness of harvesting stages and chemical preservatives as well as effect of different concentration and time duration of immersion on vase life and quality of candytuft cut flowers.

MATERIALS AND METHODS

The present investigation was carried out in the month of February, 2005 at the Research Laboratory, Department of Floriculture and Landscaping, ASPEE College of Horticulture and Forestry, N.A.U., Navsari (Gujarat). The flowers of candytuft were harvested at two stages viz., 50 per cent opened flowers (H₁) and 100 per cent opened flowers (H₂). Uniform stalks of 20 cm with 5-6 branches in compound umbel inflorescence were taken for studies. Basal leaves were removed before keeping them in vase containing chemical preservatives (100 ml in each flask). The chemical preservatives used were sucrose 2%, Al₂(SO₄)₃ (50 mg/lit, 75 mg/lit and 100 mg/lit) + sucrose 2%, AgNO₃ (25 mg/lit, 50 mg/lit and 75