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Effect of bioenzymes on flower quality, yield and vase life of rose (*Rosa indica* L.) cv. GLADIATOR

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ABSTRACT

An experiment was conducted to study the effect of bioenzymes on flower quality, yield and vaselife of rose at Department of Horticulture, Marathwada Agricultural University, Parbhani during the year 2007-08. The treatment T_2 (Synzyme 3 ml/L) produced maximum length of flower bud (6.55 cm), highest diameter of flower bud (4.83 cm), maximum pedicel length (8.84 cm), more number of petals per flower (66.36), highest mean weight of flower (35.50 g), maximum number of flowers per hectare (1.82 lakh) and highest vase life of cut flower (10.90 days) followed by treatment T_6 (Biozyme 3 ml/L), while the lowest performance was observed in treatment T_7 (control).

Key words : Bioenzymes, Quality, Yield, Vase life and rose

Rose is an ornamental shrub with upright or climbing stem, usually prickly. The leaves are alternate, compound, oddly pinnate, with stipules adherent to leaf stalks. Flowers are solitary or in corymbs. The rose, because of its utility, occupies a predominant place amongst the flower crops and is one of the oldest of fragrant flowers to be cultivated by man. Rose has many different types of beautiful flowers of exquisite shape, different sizes, bewitching colours and most delightful fragrance.

In recent year, the interest of growing roses has been developed in India because of economic and aesthetic value. Rose are used as cut flowers, for preparation of rose water, rose oil, rose perfume, Gulkhand, Pankhuri, Gulroghan hair oil. Cut flowers are used for making garlands, offering in temples. Cut roses with stem are used for bouquets, interior decoration, religious and social functions and floral arrangements.

Roses are of various types *viz.*, Hybrid-Tea-rose, Floribunda, Miniature, Hybrid perpetual, Grandiflora, Polyantha, Climbers and Ramblers, etc but Hybrid-Tea-roses have commercial value. In Hybrid-Tea-roses cultivar gladiator has great demand and scope because of attractive colour and big attractive size and shape. The flowers are having demand for cut flowers, having good vaselife and long pedicel or stem length.

Bioenzymes influence various stages of plant growth from vase life, flower quality and flower yield of aster (Dhutraj, 2002). Bioenzymes are found to increase the flower yield in marigold var. Bhawani (Borkar, 2007).

With this view point, the present study entitled "Effect of bioenzymes on flower quality, yield and vase life of rose (*Rosa indica* L.) cv. GLADIATOR" was undertaken.

MATERIALS AND METHODS

The present investigation entitled "Effect of bioenzymes on flower quality, yield and vase life of rose (*Rosa indica* L.) cv. GLADIATOR" was conducted at Department of Horticulture, Marathwada Agricultural University, Parbhani (M.S.). A field experiment was laid out during 2007-08 in Randomised Block Design with seven treatments *viz.*, T_1 (Synzyme 2 ml/L), T_2 (Synzyme 3 ml/L), T_3 (Zymegold 2 ml/L), T_4 (Zymegold 3 ml/L), T_5 (Biozyme 2 ml/L, T_6 (Biozyme 3 ml/L) and T_7 (control) water spray and three replications.

The spraying of each treatment was carried out first at 30 days after pruning and second at 45 days after pruning. The observations on various characters were recorded and subjected to statistical analysis.

RESULTS AND DISCUSSION

Analysis of variance was carried out for all characters as indicated in Table 1 revealed significant differences among all the treatments.

Length of flower bud :

The treatment T_2 (Synzyme 3 ml/L) produced maximum increase in length of flower bud. Treatments T_6 (Biozyme 3 ml/L), T_4 (Zymegold 3 ml/L) and T_3 (Zymegold 2 ml/L) were at par with T_2. The treatment T_7 (control) was found with minimum length of flower bud.

Sadanand *et al.* (2002) recorded maximum length