



## Studies on the growth and quality attributes of different African marigold (*Tagetes erecta* L.) genotypes under Marathwada condition

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### ABSTRACT

The genotypes under study showed significant variations for different growth and quality attributes. The genotype Pakharsangavi Local had significantly maximum plant height (114.64 cm) as compared to other genotypes, whereas, African Giant Double Mixed had the lowest (87.98 cm). Maximum spread of plant (64.48 cm) was observed in genotype Tuljapur Local-2, whereas, minimum (51.98 cm) was observed in genotype Marigold Orange Bunch. Significantly maximum stem girth (5.37 cm) was recorded in genotype Pakharsangavi Local, whereas, Marigold Orange Bunch had showed minimum (4.00 cm) stem girth. Maximum number of branches (21.46) were recorded in genotype Tuljapur Local-1, whereas, it was minimum (14.26) in genotype Latur Local. The maximum flower diameter (7.83 cm) and weight of single flower (12.56 g) was recorded in genotype Mulegaon Local, whereas, genotype Marigold Orange Bunch recorded minimum flower diameter (5.70 cm) and weight of flower (5.79 g). In visual quality ratings, the maximum score (4.16) was given to genotype Tuljapur Local-1 and it was minimum (2.84) in genotype Akolner Local. The vase life was maximum (8.87 days) in genotype African Marigold Double Orange and it was minimum (6.20 days) in genotype Marigold Orange Bunch. In storage studies, the flower stored at room temperature (open condition) remained in good condition for two days, while in paper bag storage for four days. However, flower stored in cold of storage were in good condition for ten days of storage period.

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India is bestowed with diverse agro-climatic and ecological conditions, which are favourable to grow all types of commercially important flowers generally found in different parts of the world. About 115,921 hectares of area was under floriculture producing 654,837 tonnes of loose flowers, whereas, production of cut flowers was 19,515 lakh number (Anonymous, 2007). The major flower growing states are Karnataka, Tamil Nadu and Andhra Pradesh in the South, West Bengal in East, Maharashtra in West and Rajasthan, Delhi and Haryana in North. Flowers of African Marigold can be used for extraction of l-lemoene, ecomene, l-linylacetate, l-linauol. An extract obtained from the flower is mixed with other ingredients in the preparation of an ointment which is used in curing ulcer. Orange colour marigold has emerged as rich source of carotenoid pigments namely xanthophyll, which is widely used as dietary supplement in poultry industry to enhance the chicken skin colour and egg yolk pigmentation (Naik *et al.*, 2004). Flowers are sold in the domestic

market loose as well as cut flowers. The loose flowers are mostly used for garlands. An investigation was, therefore, conducted to study the growth and quality attributes of different African Marigold (*Tagetes erecta* L.) genotypes under Marathwada Condition.

### MATERIALS AND METHODS

The present investigation was carried out at Instructional-cum-Research Farm, Department of Horticulture, College of Agriculture, Latur, from June 2008 to December 2008. The experiment was laid out in Randomized Block Design with ten treatments and three replications. For the investigation, four improved and six local genotypes of African Marigold were used. In all ten African Marigold genotypes namely African Marigold Double Orange, Marigold Orange Bunch, Orange Bloom, African Giant Double Mixed, Tuljapur Local-1, Tuljapur Local-2, Pakharsangavi Local, Mulegaon Local, Akolner