



Research Paper

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Effect of organic manure, drying methods on flower yield and carotenoid contents in marigold (*Tagetes erecta* L.)

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ABSTRACT : A study was undertaken to evaluate the effect of farm yard manure, vermicompost and drying methods on flower yield and carotenoid contents in marigold (*Tagetes erecta* L.) at Instructional farm, Department of Floriculture College of Horticulture and Forestry, Pasighat, Arunachal Pradesh during October 2009 to September 2010. Two varieties viz., Pusa Basanti Gaiinda and Pusa Narangi Gaiinda, three levels of nutrition viz., 0 kg ha⁻¹ (control), FYM (25 t ha⁻¹) and vermicompost (10 t ha⁻¹), three levels of drying methods viz., sun drying, ventilated shade drying and hot air oven drying at 50°C were used, for investigation. The experiment was laid out in Factorial Randomized Complete Block Design with three replications. Seedlings of marigold cultivars were transplanted in the respective plots under different treatments in the month of November at spacing 30x30cm. Significant response in vegetative and flowering characters in Pusa Basanti Gaiinda with respect to Pusa Narangi Gaiinda except carotenoid contents was observed. Highest plant height (47.46cm), more number of flower buds per plant (23.19), increased flower diameter (66.80mm) and dry weight of single flower (1.38g) and enhanced flower yield (204.64 q ha⁻¹) was observed in cultivars Pusa Basanti Gaiinda. However, maximum plant spread (24.98 cm), advanced flower bud initiation (35.67 days), increased carotenoid content in fresh petals (285.84µg g⁻¹) and dried petals (30.47µg g⁻¹), highest dried petal yield (11.98q ha⁻¹) was noticed in cultivar Pusa Narangi Gaiinda. Organic manure showed significant response especially well rotten farm yard manure against vermicompost. Flower yield (206.83 q ha⁻¹), carotenoid content in fresh petal (166.04g) and dried petal (16.53g) was responded by farm yard manure, whereas, vermicompost showed maximum dry weight of single flower (1.38g) and dried petal yield (12.83q ha⁻¹).

KEY WORDS : Marigold, Nutrition, Variety, Drying, Carotenoid contents, Yield

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