

Effect of Phosphorus on Growth and Flowering of Marigold (*Tagetes Erecta*)

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Abstract

A field experiment to study “Effect of phosphorus on growth and flowering of Marigold (*Tagetes erecta*)” was conducted at the Mid-Western Academy and Research Institute, Campus of Live Sciences, Tulsipur, Dang. This study was carried out to find the best economic dose of phosphorous in marigold variety: Karma orange. The experiment was laid out in Randomized Complete Block Design (RCBD). Data were collected using simple random sampling without replacement. In the experiment marigold plants were fertilized with seven different doses of phosphorous 0, 20, 40, 60, 80, 100, 120 kg/ha. Dose of nitrogen 200 kg/ha and potash 90 kg/ha was constant throughout the field. Result revealed that application of phosphorous significantly affected the various yield governing parameters like number of branches, number of flowers per plant, flower diameter and flower weight. Maximum number of branches were at 100 kg/ha, maximum number of flowers per plant at peak bloom stage was 42 at 80 kg/ha, fresh flower diameter 7.55 cm at 100 kg/ha and fresh flower weight 15.96 gm at 100 kg/ha. Maximum yield obtained in three successive harvesting was 622.39 gm/plant at 100 kg/ha and the minimum yield was 349.43 gm/plant at control treatment. Benefit cost ratio (B:C) analysis revealed that marigold cultivation was profitable as the B:C was found to be 6.23 at 100 kg/ha phosphorus. From this experiment we can conclude that 100 kg/ha dose of phosphorus might be best for obtaining maximum yield of Marigold at Tulsipur, Dang condition.

Keywords: *Benefit-Cost ratio, Marigold, Phosphorus, Tulsipur, Yield*