## EFFECT OF ORGANIC AND INTEGRATED SOURCES OF NUTRIENT ON GROWTH AND FLOWERING OF FRENCH MARIGOLD (TAGETES PATULA L.) UNDER NORTH WESTERN PLAIN ZONE OF UTTER PRADESH

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**Abstract:** An experiment was conducted at Horticultural Research Canter, Sardar Vallabhbhai Patel University of Agriculture &Technology, Meerut, Uttar Pradesh, India during 2019-2020, to evaluate the performance of French Marigold var. 'Pusa Arpita' with organic and integrated sources of nutrients. The results revealed that maximum plant height(57.47 cm), diameter of stem(18.21 mm), number of primary branches per plant (21.96), number of flowers per plant(143.89), spread of plant (41.17 cm), circumference of flower (12.64cm), minimum days took to first flowering (41.39 days), maximum number of flowers per plant (38.56), flower yield per plant(133.58g), flower yield per plot (5.98 kg), yield of flower per ha (402.09q), flowering duration (60.68 days), number of florets per flower (136.55), length of flower stalk (6.44cm) and vase life of flowers(7.47days) were recorded with half recommended dose of 150:60:60 kg/ha(N:P:K) with half dose of PSB and half dose of vermicompost which was significantly superior to the other treatments and control

Keywords: PSB, Vermicompost, RDF, NPK

## REFERENCES

**Bose, T.K. and Yadav, L.P.** (1993). Commercial flower. Naya Prakashan, Kolkatta.

Gomez, K. A. and Gomez, A. A. (1984). Statistical procedure for Agricultural research (2nd Ed.). A Wiley Int. Sci. Pub., New York. pp. 20-30.

Kumar, S., Singh, J.P., Mohan, B. and Nathiram, Rajbeer (2013). Influence of integrated nutrient management on growth, flowering and yield parameters of marigold (*Tagetes erectaL.*) cv. Pusa Basanti Gainda. Asian Journal of Horticulture,8(1):118-121

**Kumar, M.** (2015). Flower and bulb production in tuberose (*Polianthes tuberosa* L.) cv. "Vaibhav" as influenced by different nutrients sources. *HortFlora Res.* Spect 4(1): 56-59

**Kumar, M.** (2014). Effect of different sources of nutrients on growth and flowering in gladiolus (*Gladiolus hybridus* Hort.) cv. Peater Pears. *Annals of Horticulture* 7(2): 154-158

**Kumar, M.** (2014). Effect of different sources of nutrients on growth and flowering in tuberose (Polianthes tuberosa l.) cv. "Vaibhav". *Progressive Research 9 (Special):* 872-875.

**Kumar, M.** (2015). Flower and corm production in gladiolus (*Gladiolus hybridus* Hort.) cv. "Peater pears" as influenced by different nutrients sources. *Annals of Horticulture*, 8(1): 99-102.

**Kumar, M.** (2015). Impact of different sources of nutrients on growth and flowering in chrysanthemum (*Chrysanthemum morifolium* ramat.) cv Yellow Gold. *Journal of Plant Development Sciences* 7(1): 49-53

Kumar, M. and Chaudhary, V. (2018). Effect of integrated sources of nutrients on growth, flowering,

yield and soil quality of floricultural crops: A review. *Int. J. Curr. Microbiol. App. Sci.* 7(03): 2373-2404

**Panse, V. G. and Sukhatme, P. V.** (1985). *Statistical methods for Agricultural workers*. ICAR, Pusa, New Delhi, 157-165

**Rolaniya, M. K., Khandelwal, S. K., Choudhary, A. and Jat, P. K.** (2017). Response of African marigold to NPK, bio fertilizers and spacing. *Journal of Applied and Natural Science*. 9(1)

Singh, R., Kumar, M., Raj, S. and Kumar, Sanjay (2013). Effect of Integrated Nutrient Management (INM) on growth and flowering in gladiolus (Gladiolus grandiflorus L.) cv. "White Prosperity. Annals of Horticulture 6 (2): 242-251

**Singh, R., Kumar, M., Raj, S. and Kumar, Sanjay** (2014). Flowering and corm production in gladiolus *(Gladiolus grandiflorus L.)* cv. "White Prosperity" as influenced by Integrated Nutrient Management (INM). *Annals of Horticulture*. 7 (1): 36-42

Singh, P., Prakash, S., Kumar, M., Kumar, S and Singh, M.K. (2015). Effect of integrated nutrient management (INM) on growth, flowering and yield of marigold (*Tagetes erecta* L), Pusa Basanti. *Annals of Horticulture*, 8(1): 73-80.

Sunitha, H. M., Hunje, R., Vyakaranahal, B.S and Bablad, H. B. (2007). Effect of plant spacing and integrated nutrient management on yield and quality of seed and vegetative growth parameters in African marigold (*Tagetes erecta L.*). Journal of Ornamental Horticulture, 10(4):245-249

**Tiwari, H., Kumar, M. and Naresh, R.K.** (2018) Effect of nutrient management and gibberellic acid on growth, flowering and nutrients availability in post-harvested soil of Marigold (*Tagetes erecta* L.) cv. Pusa Narangi Gainda. *International Journal of Chemical Studies*; 6(4): 510-514

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Tiwari, H., Kumar, M., Naresh, R.K., Singh, M.K., Malik, S., Singh, S.P. and Chaudhary, V. (2018). Effect of organic and inorganic fertilizers with foliar application of gibberellic acid on productivity, profitability and soil health of marigold (*Tagetes erecta* L.) cv. Pusa Narangi Gainda. *Int. J. Agricult. Stat. Sci.*, 14 (2): 575-585

Verma, S. K., Angadi, S. G., Patil, V. S., Mokashi, A. N., Mathad, J. C. and Mummigati, U. V. (2011). Growth, Yield and quality of Chrysanthemum (Chrysanthemum morifolium Ramt.) cv. Raja as influenced by integrated nutrient management. *Karnatka Journal of Agricultural Science*, 24(5):681-683