RESEARCH ARTICLE

EFFECT OF PLANT GROWTH REGULATORS AND CULTIVARS ON FLOWERING AND YIELD OF AFRICAN MARIGOLD (*TAGETES ERECTA* L.) IN CHHATTISGARH PLAINS

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Abstract: Currently the marigold flower is well spread around the world due to their social and religious values. We do prefer it in all our social gatherings and rituals as important mean due to their specific colors and fragrance. Looking to their wide demand a very less area is taken under cultivation in Chhattisgarh due to lack of awareness which compelling them to buy it from other states. The productivity can be enhanced in Chhattisgarh by the incorporating suitable varieties and use of PGR's, which can prove to be better option for the farmers of Chhattisgarh. In this context, an experiment was conducted to investigate the effect of different levels of growth promoter and retardant on growth and flower yield of different cultivars of African marigold in Chhattisgarh plains condition at College of Agriculture and Research Station, Kanker, IGKV, Raipur in the year 2014-15 and 2015-16. The experiment was laid out in factorial RBD comprising treatment combination of two PGR (GA_3 and Cycocel) and two marigold cultivars (Pusa Narangi Gainda and Pusa Basanti Gainda). The result indicated that the growth and flower yield were significantly influenced by different plant growth regulators and cultivars. The maximum number of secondary branches plant^{-1}, minimum period for days taken to first bud emergence and 50 per cent flowering, maximum number of flowers and flower yield ha^{-1} was recorded with Pusa Narangi Gainda. While, maximum flower diameter was recorded with Pusa Basanti Gainda. Among the growth regulators treatments, GA_3 300 ppm (25 DAT) + GA_3 300 ppm (45 DAT) recorded early initiation of flower bud and earliest 50 per cent flowering and maximum flower diameter. However, maximum number of secondary branches, number of flowers plant^{-1} and flower yield ha^{-1} was noticed with treatment GA_3 300 ppm (25 DAT) + CCC 1500 ppm (45 DAT).

Keywords: Marigold, PGR, Gibberellic acid (GA_3), Cycocel (CCC). Pusa Narangi Gainda, Pusa Basanti Gainda

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