

**APPLICATION OF VARIOUS CONCENTRATIONS OF
PACLOBUTRAZOL AND COMPOSITION OF GROWING MEDIA ON
GROWTH AND YIELD OF MARIGOLD PLANTS (*Tagetes erecta* L.)**

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ABSTRACT

Marigold plants that grow tall and therefore do not match the characteristics of potted ornamental plants can have their height growth suppressed through the application of paclobutrazol, balanced with the appropriate growing media composition. This study aims to determine the effects of paclobutrazol concentration and planting media composition on marigold plants. The research was conducted in Dukuh Demen, Pakembinangun, Pakem District, Sleman, Special Region of Yogyakarta. The research method used a two-factor Completely Randomized Block Design (CRBD). The first factor was paclobutrazol concentration at 50, 150, and 250 ppm. The second factor was the composition of the planting media consisting of soil, cow manure, and compost in ratios of 2:1:1, 1:2:1, and 1:1:2. Data were analyzed using ANOVA at a 5% level, orthogonal contrast test, and further tested using DMRT. There was an interaction between paclobutrazol concentration and planting media composition on the leaf area parameter. Plants treated with different paclobutrazol concentrations and media compositions showed significant differences compared to the control. A paclobutrazol concentration of 250 ppm produced favorable results for plant height at 39, 46, 53, and 60 days after transplanting (DAP), internode length at 39, 46, and 53 DAP, number of internodes at 53 and 60 DAP, and days to flowering. The 2:1:1 planting media composition yielded good results for internode length at 39, 46, and 53 DAP, number of internodes at 39 DAP, and number of flowers at 74 DAP.

Keywords: Marigold, Paclobutrazol, Growing Media.