

**UTILIZATION OF ORGANIC MULCH AND PGPR APPLICATION ON THE
GROWTH, YIELD, AND QUALITY OF CHRYSANTHEMUM FLOWERS
(*Dendranthema grandiflora* Tzvelev)**

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ABSTRACT

The selling price of chrysanthemums was influenced by yield and quality of flowers produced by farmers. This study investigated the impact of organic mulch and PGPR concentrations on growth, yield, and quality of chrysanthemums. Completely Randomized Block Design (CRBD) with factorial arrangement (3 x 3) + 1 was employed for field experiment. The first factor was type of organic mulch (rice straw, banana stems, and elephant grass), while the second factor was concentration of PGPR (25, 50, and 75 mL/L). Control treatment utilized MPHP mulch with no addition PGPR. Analysis was conducted using ANOVA, followed by DMRT at 5% significance level. Orthogonal contrast tests were employed to compare treatments with control. Results indicated that the combination treatments outperformed the control in terms of flowering time, root volume, flower count per plant, and flower diameter. Interactions were observed in plant height at 56 DAP, petiole length, and flower count per plant. Among the organic mulch treatments, rice straw exhibited the best results for leaf count at 28 DAP and spray stem count. Additionally, a PGPR concentration of 75 mL/L yielded the best outcomes for plant height at 42 DAP, leaf count at 28 DAP, stem diameter, root volume, and spray stem.

Keywords: *Chrysanthemum, Organic Mulch, PGPR*