

**GROWTH AND YIELD OF CHRYSANTHEMUM
(*Chrysanthemum* sp.) WITH VARIOUS DURATIONS OF LIGHT
AND GIBBERELIN APPLICATION**

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ABSTRACT

The addition of light is expected to provide optimal photosynthesis, and gibberellin is expected to support the growth of chrysanthemums. The study aims to determine the best time span for adding lights and the best concentration of gibberellin for the growth and yield of chrysanthemum flowers. This study is an experiment using a split-plot design. The main plots involved light addition for 4 hours during the first 2, 4, and 6 weeks. The subplots involved gibberellin addition at concentrations of 15, 30, and 45 ppm. Data were analysed using ANOVA at the 5% level and further tested using DMRT at the 5% level. The results showed an interaction between the duration of light exposure and gibberellin application on the number of flowers. The best combination of interactions is a 4-week irradiation period with the addition of 45 ppm gibberellin. At six weeks of light exposure resulted in good growth and yield in stem diameter at 20 HST and 30 HST, fresh plant weight, and plant yield per plot. A 6-week and 4-week light exposure duration provided good growth and yield for stem diameter at 40 HST and 50 HST, vase life, root volume, and flower diameter. The application of gibberellin at a concentration of 45 ppm resulted in the fastest flowering time. The application of gibberellin at concentrations of 30 or 45 ppm provided the best growth and yield for vase life, root volume, and flower diameter.

Keywords: *chrysanthemum, light, gibberellin*