GROWTH AND FLOWERING RESPONSE OF SPRAY-TYPE POTTED CHRYSANTHEMUM (Dendrathema grandiflora Tzvelev) TO DIFFERENT PINCHING TIMES AND DURATION OF SUPPLEMENTARY LIGHTING

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ABSTRACT

The chrysanthemum plant (*Dendrathema grandiflora* Tzvelev) is a potted ornamental plant. A common problem in the field is that potted chrysanthemums often struggle to produce uniformly blooming flowers. To address this issue, pinching and extended lighting durations can be applied. This research aims to determine the most appropriate pinching time and additional lighting duration for the growth and flowering of chrysanthemums. The experiment used a Split Plot Design with three replications. The main plot was the duration of additional lighting with three levels: 3, 4, and 5 hours. The sub-plot was the pinching time with three levels: 6, 10, and 14 days after plant (DAP). Data were analyzed using Analysis of Variance (ANOVA) at a 5% significance level, followed by Duncan's Multiple Range Test (DMRT) at a 5% level. The results showed that the interaction between pinching at 10 DAP and 4-hour additional lighting significantly affected flower diameter. Pinching at 14 DAP resulted in the tallest plants at 28 and 35 DAP, the highest number of leaves at 28 and 35 DAP, the most productive branches, the most flowers per plant, the widest flower cluster diameter, and the longest stem length. The 4-hour additional lighting treatment produced the earliest flower emergence, the highest number of flowers per plant, and the widest flower cluster diameter.

Keywords*: Potted chrysanthemum, pinching time, duration of supplementary lighting*