

Growth and Yield Response of Mung Bean (*Vigna radiata* L.) to Different Doses of Legin and Gibberellin Concentrations

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ABSTRACT

The productivity of mung bean in Indonesia remains relatively low, necessitating improved cultivation practices. This study aimed to examine the interaction between legin dosage and gibberellin concentration, compare treatments with a control, and determine the optimal combination for yield improvement. The research was conducted at the Wedomartani Practice Field, Ngemplak, Sleman, Yogyakarta, from April to June 2024. A Randomized Complete Block Design (RCBD) was used with two treatment factors and one control. The first factor was legin dosage (5 g/kg, 10 g/kg, and 15 g/kg of seeds), and the second was gibberellin concentration (100 ppm, 150 ppm, and 200 ppm), along with a non-treated control. Data were analyzed using analysis of variance (ANOVA) at a 5% significance level, followed by DMRT 5% and orthogonal contrast tests to compare treatments with the control. The results showed significant interactions for flowering age, plant dry weight, number of pods per plant, dry seed weight per plant, and weight of 100 dry seeds. A legin dosage of 10 g/kg produced the best results for plant height, number of root nodules, number of pods per plant, and 100-seed weight. A gibberellin concentration of 200 ppm yielded the best results for flowering age and root volume.

Keywords: Mung bean, Legin, Gibberellin