

ABSTRACT

Mung bean (*Vigna radiata* L.) is one of the most favored legume crops in Indonesia after soybean and peanut. However, its production has been declining in recent years. This decline is mainly due to the use of unsuitable varieties and low soil fertility. To improve mung bean yield, the application of superior varieties and fertilizers is essential to enhance nutrient availability in the soil. This study aimed to evaluate the effects of variety and KCl fertilizer application on the growth and yield of mung bean. The research was conducted in Pulo Rungkom Village, Dewantara Sub-district, North Aceh Regency, from April to June 2025. A two-factor Randomized Complete Block Design (RCBD) with three replications was used. The first factor was variety, consisting of four levels (Vimil-1, Vima-2, Vima-3, and Vima-4), and the second factor was KCl fertilizer dosage with three levels (0, 75, and 150 kg/ha). Observed parameters included both vegetative and generative growth components. The results showed that variety had a highly significant effect on plant height at 14 DAP, stem diameter at 14 DAP, leaf chlorophyll content, number of branches, flowering time, harvest time, number of pods, pod length, and 100-seed dry weight, and a significant effect on plant height at 21 DAP. Vima-2 resulted in the best performance for pod length and 100-seed dry weight, while Vimil-1 produced the best results for flowering and harvest time. KCl fertilizer had a highly significant effect on pod length, and a significant effect on chlorophyll content, flowering time, harvest time, and 100-seed dry weight. The optimal dose was 75 kg/ha for chlorophyll content and 100-seed dry weight. No interaction was found between variety and fertilizer treatments.

Keywords: Yield, Fertilization, Growth, Variety.