ABSTRACT

Mung beans are one of the most popular food crops among the Indonesian population. However, green bean production remains low, and soil fertility levels are also low, necessitating efforts to increase green bean yields through the use of organic materials such as rice husk charcoal and mycorrhizal biofertiliser. This study aims to investigate the growth and production responses of green beans following the application of rice husk charcoal and mycorrhizal biofertiliser. The study was conducted at the Experimental Farm of the Faculty of Agriculture, Malikussaleh University, Reuleut, North Aceh, from March to May 2025, using a two-factor Randomised Block Design (RBD) with three replications. The first factor was the application of rice husk charcoal at three levels (0, 1.44 and 1.92 kg/plot), and the second factor was the application of mycorrhizal biofertiliser at four levels (0, 5, 10 and 15 g/plant). The results of the study showed that the application of rice husk charcoal had a very significant effect on stem diameter at 14 days after sowing (DAS), flowering age, number of pods, pod length, and root volume, and had a significant effect on flowering age, pod length, and root volume at the rice husk charcoal dose of 1.92 kg/plot (A2). Mycorrhizal biofertiliser had a very significant effect on plant height at 35 days after sowing, stem diameter at 14 days after sowing, flowering age, number of pods with seeds, seed weight per plot, yield per hectare, root volume, and root infection and had a significant effect on plant height at 14, 21, and 28 days after sowing.

Keywords: Husk charcoal, mung bean, mycorrhiza, growth, production