

ABSTRACT

Mung bean (*Vigna radiata* L.) is an important food crop with nutritional and economic value. Its productivity can be improved through nutrient management. Mycorrhizal biofertilizer helps increase water and nutrient uptake through the root system, while NPK fertilizer provides essential macronutrients for growth and yield. This study aimed to determine the effects of mycorrhizal biofertilizer and NPK fertilizer and their interaction on mung bean growth and yield. Research was conducted in Pulo Rungkom Village, Dewantara District, North Aceh Regency, from November 2025 to January 2026. A factorial Randomized Complete Block Design with three replications was used. Mycorrhizal biofertilizer levels were 0, 10, and 15 g plant⁻¹, and NPK levels were 0, 50, 100, and 200 kg ha⁻¹. Parameters included growth, yield components, and root infection. The results showed that mycorrhizal biofertilizer significantly affected height at 15 days after planting, stem diameter, root length, and root nodule number. NPK fertilizer significantly affected fresh biomass weight, root nodule number, seed weight per plot, and 100-seed weight. Interaction significantly affected stem diameter at 15 days after planting and seed weight per plot. The M1P2 treatment (10 g plant⁻¹ mycorrhiza and 100 kg ha⁻¹ NPK) produced the highest seed weight per plot of 253.40 g.

Keywords: infection, nodulation, nutrients, productivity, roots.