

ABSTRACT

Peanut (*Arachis hypogaea* L.) is one of the most important food crops in Indonesia after soybean. However, its productivity remains relatively low due to limited soil fertility. One approach to improving peanut growth and yield is the application of mycorrhizae combined with the use of superior varieties. This study aimed to determine the effects of mycorrhizal application, four peanut varieties, and their interaction on the growth and yield of peanut. The research was conducted at the Experimental Field and Laboratory of the Faculty of Agriculture, Malikussaleh University, from December 2025 to March 2026. A factorial Randomized Block Design (RBD) with two factors was employed. The first factor was mycorrhizal application consisting of M0 (without mycorrhiza), M1 (7.5 g plant⁻¹), and M2 (15 g plant⁻¹). The second factor was peanut variety consisting of Tuban, Bison, Talam 1, and Hypoma 2. The data were analyzed using analysis of variance (ANOVA), followed by Duncan's Multiple Range Test (DMRT) at the 5% significance level. The results showed that mycorrhizal application significantly affected plant height at 8 weeks after planting (WAP), flowering time, number of flowers, number of gynophores, fresh biomass weight, dry biomass weight, and number of root nodules. Peanut varieties significantly affected plant height at 2 and 6 WAP, stem diameter at 2 WAP, number of branches at 2 and 8 WAP, flowering time, number of flowers, number of pods per plant, pod weight per plot, seed weight per plot, number of root nodules, and yield. A significant interaction between mycorrhizal application and peanut varieties was observed only for flowering time.

Keywords: Root infection, Tuban, Bison, Talam 1, Hypoma 2