THE ROLE OF TYPES OF BIOLOGICAL AGENTS AND NPK FERTILIZER TO THE GROWTH AND YIELD OF PEANUT

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ABSTRACT

Application of Mycorrhiza, *Rhizobium* sp and NPK fertilizer is an effort to increase the yield of peanuts. This study aims to determine the interaction between Mycorrhiza sp, Rhizobium sp and NPK fertilizer doses for the growth and yield of peanut plants. The research was conducted from September 2022 to December 2022 in Tawangsari Village, Tembarak District, Temanggung Regency, Central Java Province. The experimental method used a factorial design (3x3) + 1 control prepared with RCBD consisting of the first factor, namely the type of biological agent (*Mycorrhiza* sp, *Rhizobium* sp and Mycorrhiza + *Rhizobium* sp) and the second factor, namely the dose of NPK fertilizer (150 kg/ha, 300 kg /ha and 450 kg/ha). The data were using analysis of variance at a 5% level, then tested further with DMRT at a 5% level. To determine the real difference between the control and the treatment combination, an Orthogonal Contrast test at 5% level was carried out. The results of the research showed that plants with a combination of treatments of giving biological agent and doses of NPK fertilizer had better growth than control plants, there was no interaction between giving biological agent and dose of NPK fertilizer, giving biological agent gave the best growth and results on Mycorrhiza sp 2.5 g/polibag+Rhizobium sp 5 g/kg seeds and NPK fertilizer provided the best growth and results at a dose of 450 kg/ha.

Keywords: *peanuts, Mycorrhiza sp, Rhizobium sp, NPK fertilizer*