PENGARUH ASOSIASI Rhizobium sp. DAN BAKTERI PELARUT FOSFAT TERHADAP PERTUMBUHAN DAN HASIL TANAMAN KEDELAI (Glycine max L) DI TANAH PODSOLIK MERAH KUNING

Effect of Association Rhizobium sp. and Phosphate Solvent Bacteria on Growth and Yield of Soybean in Red-Yellow Podsolik Soil

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ABSTRACT

The experiment purposed to examine the association of Rhizobium sp. and Phosphate Solvent Bacteria on growth and yield of soybean in Red-Yellow Podsolik soil and establishing suitable inoculum associations for soybean development in Red-Yellow Podsolik land. The research was conducted in Soil Laboratory, Agro-biotechnology Laboratory, Research Laboratory and Experimental area of Agriculture Faculty, Muhammadiyah University of Yogyakarta, at November 2017 until May 2018. The research was carried out by field experimental method, using a single factor experiment design with 4 treatments i.e.: without Inoculum, Rhizobium inoculum sp., Phosphate Solvent Bacteria inoculum and Rhizobium inoculum sp.withPhosphate Solvent Bacteria, compiled in Completely Randomized Design (CRD) planted in a Red-Yellow Podsolik soil. Observational variables were performed on nodulation activity, population dynamics of Phosphate solvent bacteria, root growth, vegetative growth and yield. The results showed that Rhizobium sp.-Bacterium of Phosphate Solvent simultaneously for soybean cultivation on Red-Yellow Podsolik soil significantly increased root growth, vegetative growth and seed yield reached 11.50 tons /ha.

Keywords: Soybean, Rhizobium sp., Phosphate Solvent Bacteria, Red-Yellow Podsolik Soil.