ABSTRACT

The purpose of this research for isolation and characterize and to learn the association of Rhizobium sp, Rhizobakteri and Mycorrhizae with local varieties soybean in soil drought resistant Mediterranean, Simo, Boyolali.

The research was conducted degan two methods: obsevation methods and experimental exploration methods. Observasion carried out in the land of the Mediterranean, the village of Simo, District Simo, Boyolali and exploratory research experiment conducted in the Laboratory Agrobioteknology and Soil Laboratory, Faculty of Agriculture, University of Muhammadiyah Yogyakarta. The research was conducted in September-December 2015. The survey method is performed on drought resistant soybean cultivation in the Mediterranean lands, Simo, Boyolali and exploration of experimental methods to study the characteristics of the soil and the association Rhizobium sp, Rhizobakteri and Mycorrhizae with soybean plants dryland

*From the results of isolation found eight isolates of Rhizobium sp, that R5, R6, R7, R8, R9, R10, R13, R15 with cell shape and are gram-negative bacilli and eight isolates of Rhizobakteri that Rb1, RB3, RB4, RB5, RB6, RB8, Rb9, Rb10, Rb11 with cell shape and negative cocci, as well as Mycorrhizae's spores and as much 20,46x106 spores/ml. This indicates between association Rhizobium sp, Rhizobakteri and Mycorrhiza to soy Petek who live in the land of the Mediterranean in Simo, Boyolali with pH 7,*6, *KL-Kl 18,92%, and water condition in area is 1,97% from 17,92% and Soybean yield is 0,60 t/ha..*

Keywords: Association, Rhizobium sp, Rhizobakteri, Mycorrhizae, Mediterranean's soil, Petek's Soybean.