IDENTIFICATION OF MYCORRHIZA FROM CAbBIYA VILLAGE, POTERAN ISLAND, SUMENEP MADURA AND ITS APPLICATION AS BIOFERTILIZER ON PIGEON PEA (Cajan us cajan)

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Abstract.

Increasing pigeon pea’s productivity as a substitute of soybeans require mycorrhiza as biofertilizer needed. This research aims to know type of mycorrhiza from Cabbiya Village, Poteran Island, Sumenep Madura, number of inoculum mychorriza which effective to be biofertilizer, also biomass of pigeon pea after being inoculated with mycorrhiza.

Identification is done up to the genus level based on morphological characters (shapes, colours, and ornament) using “Working with Mycorrhizas in Forestry and Agriculture” guide book, also firmed by website of INVAM. The main growth parameter is biomass, then supporting parameter used is percentage of root infection, each on control negative, control positive, 25 g, 50 g, 75 g, and 100 g inoculum mychorriza from Cabbiya village. Biomass data result was analyzed using Anova suited at 90% confidence level and continued by Tukey test.

There were genus of Glomus, Gigaspora, Acaulospora, and Scutellospora based on identification results. The lowest biomass was 0,1809 g on control negative (without mycorrhiza) treatment, and the highest was 0,4542 g on 100 g of inoculum mycorrhiza treatment. Inoculum mycorrhiza which effective to be biofertilizer reached ± 3200 spore/100 g of soil.

Keywords : Biofertilizer, biomass, pigeon pea (C. cajan), mycorrhiza, percentage of root infection.