

ABSTRACT

This research aims to review symbiosis between Rizobacteri, Kompazolla and Mycorrhizae on growth and yield of rice Segreng Handayani on ground Regosol and Determine the best dose combination between NPK, Kompazolla and Mycorrhizae on growth and yield of rice Segreng Handayani inoculated with Rhizobacteri indegenous osmotoleran Merapi on the ground Regosol with drought stress. This research were conducted in the experimental field of Faculty of Agriculture, University of Muhammadiyah Yogyakarta from July to December 2015.

This research is compiled in a completely randomized design with one factor treatment. The treaments are Paddy of Segreng Handayani inoculated by Rhizobacteri indegenous osmotoleran Merapi with addition of some fertilizers as follows: NPK 100% recommended doses (urea = 250 kg / h , SP - 36 = 150 kg / h and KCl=150kg/h), NPK75% recommended doses + Kompazolla (19,62 g/polybag), NPK 75% recommended doses + Mycorrhizae (40 g crude/polybag) and NPK 75% recommended doses + Kompazolla (19,62 g) + Mycorrhizae (40 g crude). Every treatment was repeated 3 times with 3 plants victims , 3 sample plants and one reserve of the plant , so there are 84 polybag, plus correction of plants as much as $20 \times 2 = 40$ plants and watering once a week.

The results of this study Showed that the combination treatment NPK75 % of recommended doses + kompazolla + mycorrhizae provide results better plant growth Compared to NPK 100 % of recommended doses in rice of Segreng Handayani were inoculated Rhizobacteri indigenous of Merapi isolates MB + MD with watering once a week, but on the parameters of grain yield (t / h) has not been able to provide potential rice yield in accordance with the average grain yield of rice Segreng Handayani generally is as much of 3-4 ton / h and treatment NPK 100 % of recommended doses tend to give better results (2,40 ton / h) than the combination treatment NPK75 % of recommended doses which added with Azolla and mycorrhizae.

Key word: Paddy of Segreng Handayani, Rhizobacteri indegenous of Merapi vulcanic, NPK, Kompazolla and Mikoriza.