

**Effect of Mycorrhizal Fertilizer and Rock Phosphate on Growth and Yield of
Sweet Waxy Corn
(*Zea mays* L.)**

Research by Anik Suhartanti

Supervised by:

Oktavia Sarhesti Padmini and M. Husain Kasim

ABSTRACT

The use of mycorrhizal biofertilizers and rock phosphate in stimulating the growth of corn plants has been widely developed. This study aims to increase the growth and yield of sweet waxy corn by application of mycorrhizae and rock phosphate fertilizers. The research was conducted in Sengir, Sumberharjo, Prambanan, it was a field experiment with factorial randomized complete block design (RCBD) consisting of 2 treatment factors. The first factor is the dose of mycorrhizal biofertilizer which consisting 3 levels, namely no mycorrhizal, 5 g, and 10 g mycorrhizal per plant. The second factor is rock phosphate fertilizer dosage, consisting 4 levels, namely without rock phosphate, with rock phosphate 100 kg/ha, 200kg/ha, and 300 kg/ha. Each treatment was repeated 3 times. Observational data were analyzed using Anova and Post Hoc test with DMRT at a level of 5%. The results showed that there was an interaction between giving micorrhizae with rock phosphate on plant dry weight, root volume, and root dry weight, the best was on combination og mycorrhizal 10g/plant with rock phosphate 200 and 300kg/ha. Independently, mycorrhizae can increase plant height, stem diameter, cob length, cob diameter, and cob weight. While rock phosphate can increase the number of leaves, stem diameter, cob length, cob diameter, and cob weight.

Keywords: *Mycorrhizae, rock phosphate, waxy corn*