

## **EFFECT OF *Rhizobium* spp. APPLICATION ON GROWTH AND YIELD OF MAIZE (*Zea mays* L.)**

Supervised by Tirto Wahyu Widodo, S.P., MP

**Sabrina Cintia Maha Dewi**

Study Program of Food Crop Production Technology  
Department of Agricultural Production, Jember State Polytechnic

### **ABSTRACT**

*Rhizobium* spp. besides being able to associate with legumes through the formation of root nodules, it also has the potential to stimulate the growth of non-legume plants through direct and indirect mechanisms. This study aims to examine the effect of the application of *Rhizobium* spp. on maize growth and yield. This research was conducted in June - September 2022 in Tegalgede, Jember (altitude 146 (masl) and average air temperature 21°C to 34°C). The experiment was designed using a non-factorial completely randomized design (CRD) consisting of 5 doses of *Rhizobium* spp. (A: 0 g, B: 0.2 g; C: 1 g; D: 2 g; E: 10 g cropping). The results showed that *Rhizobium* spp. with a dose of 10 g showed better results at the height of 28 days after planting with a mean (83.7 cm), 56 days after planting an average (184.32 cm), while at a dose of 2 g the weight of cobs with an average (421.6 g), weight of cob without cob with a mean (299 g), dry seed with an average (156.4 g) compared to the control treatment. Application of *Rhizobium* spp. in corn plants can increase the growth and yield of corn better, because *Rhizobium* spp. acts as a biofertilizer that has the potential to stimulate plant growth by producing phytohormones (IAA) and can dissolve P so that it can extend roots and absorb more nutrients when compared to plants that are not applied to *Rhizobium* spp.

**Keywords:** Biofertilizer, Corn, *Rhizobium*