

ABSTRAK

Ahmad Chandra Nugraha, 2012. Pemanfaatan Pupuk Hayati dan Takaran Bahan Organik Berbeda untuk Meningkatkan Pertumbuhan dan Hasil Tanaman Kentang Kultivar Granola, dibawah bimbingan Cecep Hidayat dan Dikayani.

Penelitian yang bertujuan untuk mengetahui pengaruh pupuk hayati (*Glomus sp.* dan *P. diminuta*) dengan pemberian takaran bahan organik berbeda terhadap pertumbuhan dan hasil tanaman kentang telah dilakukan di screen house penangkaran kentang Kayu Ambon Lembang dari bulan Januari 2012 sampai dengan April 2012, menggunakan Rancangan Acak Lengkap (RAL) pola faktorial dengan tiga kali ulangan yang terdiri atas dua faktor. Faktor pertama adalah pupuk hayati yang terdiri atas : (1) tanpa inokulasi pupuk hayati (2) *Glomus sp.* (3) *P. diminuta* (4) *Glomus sp.* + *P. diminuta*. Faktor kedua adalah takaran bahan organik yang terdiri atas : (1) 0 ton/ha (2) 10 ton/ha (3) 20 ton/ha (4) 30 ton/ha, dengan parameter pengamatan meliputi persentase infeksi akar, serapan N dan P, tinggi tanaman, nisbah pupus akar dan bobot umbi kentang. Hasil penelitian menunjukkan bahwa terjadi interaksi antara pupuk hayati (*Glomus sp.* dan *P. diminuta*) dengan pemberian takaran bahan organik berbeda terhadap persentase infeksi akar dan serapan P. Inokulasi *Glomus sp.* dan pemberian bahan organik 10 ton/ ha menghasilkan infeksi akar tertinggi. Inokulasi *P. diminuta* menghasilkan nilai serapan P tertinggi. Secara mandiri pemberian dosis bahan organik 10 ton/ha memberikan pengaruh terbaik terhadap nisbah pupus akar. Inokulasi *Glomus sp.* dan pemberian bahan organik 30 ton/ha menghasilkan tinggi tanaman tertinggi sebesar 90 cm. Inokulasi *P. diminuta* dan pemberian bahan organik 30 ton/ha menghasilkan bobot umbi tertinggi sebesar 468,17 gram (22,3 ton/ha).

Kata Kunci : *Glomus sp.*, *P. diminuta*, takaran bahan organik dan tanaman kentang

ABSTRACT

Ahmad Chandra Nugraha, 2012. Utilization of Biological Fertilizer and different organic material dosage to Improve Plant Growth and Yield Potato Cultivars Granola, supervised by Cecep Hidayat and Dikayani.

The purpose of this research were to know the influence of biological fertilizer (*Glomus sp.* And *P. diminuta*) with different dosage of organic materials on crop growth and yield of potato has completed in a screen house of potato breeding Kayu Ambon Lembang from January 2012 to April 2012, the experimental design used was Completely Randomized Design (CRD) factorial pattern with three replications consisting of two factors. The first factor was the biological fertilizer consisting of : (1) without inoculation (2) *Glomus sp.* (3) *P. diminuta* (4) *Glomus sp.* + *P. diminuta*. The second factor was the dosage of organic material consisting of : (1) 0 ton/ha (2) 10 ton/ha (3) 20 ton/ha (4) 30 ton/ha, the parameter measured were the root infection degree, N and P uptake, plant height, shoot root ratio and weight of potatoes. The results showed there was interaction between biological fertilizers (*Glomus sp.* and *P. diminuta*) with different organic material dosage to the shoot root ratio and uptake of P. Inoculation *Glomus sp.* and the application of organic materials 10 tons/ha produced the highest root infection. Inoculation of *P. diminuta* produced the highest P uptake. Independent effect of organic materials 10 tons/ha gave the best effect on the shoot root ratio. Inoculation *Glomus sp.* and the application of organic materials 30 tons/ha produced the highest plant height that was 90 cm. Inoculation *P. diminuta* and the application of organic materials 30 tons/ha produced the highest weight of potatoes that was 468,17 g (22,3 ton/ha).

Keywords : *Glomus sp.*, *P. diminuta*, organic material dosage and plant potatoes