Application of Solid Organic Fertilizer and PGPR (Plant Growth Promoting Rhizobacteria) to Increase Peanut Plant Growth and Production (Arachis hypogaea) Rabbit Varieties

Rizki Putri Rahayu
Study Program Production Technology of Food Crops
Department of Agricultural Production

ABSTRACT

The aim of this research is to know the effect of Application of Solid Organic Fertilizer and PGPR (Plant Growth Promoting Rhizobacteria) To Increase Peanut Growth and Production Plant (Arachis hypogaea) Rabbit Varieties. This research was conducted in Antirogo Village, Sumbersari District, Jember District, East Java Province. The timing of the research was conducted from August to November 2017. The research method used Randomized Block Design (RAK) 2 factorial. The first factor is the application of solid organic fertilizer (D) with 3 levels: without giving of solid organic fertilizer 0 gram/plant (D0), giving of solid organic fertilizer with concentration 45 gram/plant (D1), giving of solid organic fertilizer with concentration 90 gram/plant (D2). The second factor was the use of PGPR (R) with 3 levels: without PGPR 0 ml/L (R0), PGPR with concentration 10 ml/L (R1), PGPR with concentration 15 ml/L (R2). The results showed that the best treatment was solid organic fertilizer 90 gram / plant and had a significant effect on plant height 30 HST, the number of nodules, and the number of empty pods. The best concentration of PGPR was 15 ml / L and had significant effect on plant height of 30 HST, weight of sterilization, wet weight of pod on sample, production of dry pods on plot, weight of pod on sample, seed weight, 100 seed weight, nodule number and pod number.

***Keywords**: Peanut (Arachis hypogaea) Rabbit Variety, Solid Organic Fertilizer, PGPR (Plant Growth Promoting Rhizobacteria).*

Aplikasi Pupuk Organik Padat Dan PGPR (*Plant Growth Promoting Rhizobacteria*) Untuk Meningkatkan Pertumbuhan Dan Produksi Tanaman Kacang Tanah (*Arachis hypogaea*) Varietas Kelinci

Rizki Putri Rahayu
Program Studi Teknologi Produksi Tanaman
Pangan Jurusan Produksi Pertanian

ABSTRAK

Penelitian ini dilakukan untuk mengetahui pengaruh **Aplikasi Pupuk Organik Padat Dan PGPR (*Plant Growth Promoting Rhizobacteria*) Untuk Meningkatkan Pertumbuhan Dan Produksi Tanaman Kacang Tanah (*Arachis hypogaea*) Varietas Kelinci**. Penelitian dilaksanakan di Desa Antirogo, Kecamatan Sumbersari, Kabupaten Jember, Provinsi Jawa Timur. Waktu pelaksanaan penelitian dilakukan pada bulan Agustus sampai dengan bulan November 2017. Metode penelitian menggunakan Rancangan Acak Kelompok (RAK) 2 faktorial. Faktor pertama adalah pemberian pupuk organik padat (D) dengan 3 taraf: tanpa pemberian pupuk organik padat 0 gram/tanaman (D0), pemberian pupuk organik padat dengan konsentrasi 45 gram/tanaman (D1), pemberian pupuk organik padat dengan konsentrasi 90 gram/tanaman (D2). Faktor kedua adalah penggunaan PGPR (R) dengan 3 taraf: tanpa pemberian PGPR 0 ml/L (R0), pemberian PGPR dengan konsentrasi 10 ml/L (R1), pemberian PGPR dengan konsentrasi 15 ml/L (R2). Hasil penelitian memperlihatkan perlakuan terbaik pada pemberian pupuk organik padat 90 gram/tanaman dan berpengaruh nyata terhadap tinggi tanaman 30 HST, jumlah nodul, dan jumlah polong hampa. Konsentrasi PGPR terbaik adalah 15 ml/L dan berpengaruh nyata terhadap tinggi tanaman 30 HST, berat brangkasan, berat basah polong per sampel, berat kering polong per sampel, produksi polong kering per plot, berat biji, berat 100 biji, jumlah nodul dan jumlah polong.

Kata Kunci: *Kacang Tanah (Arachis hypogaea) Varietas Kelinci, Pupuk Organik Padat, PGPR (Plant Growth Promoting Rhizobacteria*