

**RESPON PERTUMBUHAN DAN HASIL TANAMAN BAWANG MERAH
(*Allium ascalonicum* L.) PADA PEMBERIAN *PLANT GROWTH
PROMOTING RHIZOBACTERIA* DAN PUPUK NPK**

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ABSTRAK

Bawang merah (*Allium ascalonicum* L.) merupakan komoditas hortikultura unggulan. Namun, teknik budidayanya masih belum optimal. Penggunaan *Plant Growth Promoting Rhizobacteria* (PGPR) dan pupuk NPK menjadi alternatif dalam memperbaiki produksi bawang merah. Penelitian ini bertujuan mengkaji respon tanaman bawang merah terhadap pemberian konsentrasi PGPR dan dosis pupuk NPK. Penelitian menggunakan Rancangan Acak Kelompok Lengkap (RAKL) yang terdiri atas dua faktor (3×3) + 1 kontrol. Faktor pertama, konsentrasi PGPR yaitu 10, 20, dan 30 mL/L. Faktor kedua yaitu dosis pupuk NPK yaitu 5, 10, dan 15 g/tanaman. Kontrol merupakan perlakuan tanpa penambahan PGPR dan NPK. Data dianalisis menggunakan sidik ragam (ANOVA) 5% dan dilanjutkan uji DMRT 5%. Perbedaan antara perlakuan dan kontrol dianalisis menggunakan Uji *Contrast Orthogonal*. Hasil penelitian menunjukkan terdapat interaksi pada parameter jumlah daun umur 35 HST, jumlah anakan umur 14, 21, dan 35 HST, dan panjang akar. PGPR konsentrasi 30 mL/L menunjukkan hasil terbaik pada parameter jumlah daun umur 14, 21, dan 28 HST, jumlah anakan umur 28 HST, bobot akar segar per petak, dan bobot akar kering per petak. NPK terbaik dosis 10 g/tanaman pada parameter tinggi tanaman umur 14, 21, dan 35 HST, jumlah daun umur 21 dan 28 HST, jumlah anakan umur 28 HST, jumlah umbi per petak, bobot umbi segar per tanaman, bobot umbi segar per petak, bobot umbi kering per petak, bobot akar segar per petak, dan bobot umbi kering per hektar.

Kata kunci: Bawang Merah, PGPR, Pupuk NPK, *Rhizobacteria*

RESPONSE TO GROWTH AND RESULTS OF RED SHALLOTS (*Allium ascalonicum* L.) PLANT GROWTH PROMOTING RHIZOBACTERIA AND NPK FERTILIZER

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ABSTRACT

Shallot (*Allium ascalonicum* L.) is an important horticultural commodity. However, its cultivation practices are still not optimal. The use of Plant Growth Promoting Rhizobacteria (PGPR) and NPK fertilizer is an alternative to improve shallot production. This study aimed to evaluate the response of shallot plants to several concentrations of PGPR and doses of NPK fertilizer. The experiment was conducted using a Randomized Complete Block Design (RCBD) consisting of two factors (3×3) + 1 control. The first factor was PGPR concentration (10, 20, and 30 mL/L), and the second factor was NPK fertilizer dose (5, 10, and 15 g per plant). The control treatment was without the application of PGPR and NPK. Data were analyzed using analysis of variance (ANOVA) at the 5% significance level, followed by Duncan's Multiple Range Test (DMRT) at 5%. Differences between treatments and control were analyzed using orthogonal contrast. The results showed that there was an interaction effect on the parameters of number of leaves at 35 DAP, number of tillers at 14, 21, and 35 DAP, and root length. PGPR at a concentration of 30 mL/L showed the best results on the parameters of number of leaves at 14, 21, and 28 DAP, number of tillers at 28 DAP, fresh root weight per plot, and dry root weight per plot. The best NPK dosage was 10 g/plant on the parameters of plant height at 14, 21, and 35 DAP, number of leaves at 21 and 28 DAP, number of tillers at 28 DAP, number of bulbs per plot, fresh bulb weight per plant, fresh bulb weight per plot, dry bulb weight per plot, fresh root weight per plot, and dry bulb weight per hectare.

Key words: Shallot, PGPR, NPK Fertilizer, Rhizobacteria