

## ABSTRAK

**Syifa Aulia Putri. 2025. Efektivitas Pemberian Bakteri Pelarut Fosfat (Bpf) Dan Pupuk Kandang Ayam Pada Tanah Pasca Galian Batuan Terhadap Pertumbuhan Dan Hasil Tanaman Bawang Merah Varietas Batu Ijo (*Allium ascalonicum* L.). Di bawah bimbingan. Budy Frasetya Taufik Qurrohman dan Cecep Hidayat.**

Bahan galian batuan dimanfaatkan untuk pembangunan, namun penambangannya sering menyebabkan kerusakan lingkungan dan tanah miskin hara. Untuk merehabilitasi lahan, dilakukan revegetasi dengan tanaman bawang merah yang membutuhkan fosfor tinggi, sehingga dibutuhkan strategi seperti aplikasi Bakteri Pelarut Fosfat (BPF) untuk meningkatkan ketersediaan P. Penelitian ini bertujuan untuk mengkaji interaksi dosis isolat BPF dan pupuk kandang ayam terhadap pertumbuhan dan hasil bawang merah di tanah pasca penambangan batuan. Metode yang digunakan adalah eksperimen dengan Rancangan Acak Kelompok (RAK) faktorial, terdiri dari dua faktor: isolat BPF (tanpa BPF, 10 ml/polybag, 20 ml/polybag) dan pupuk kandang ayam (0, 70, 140, 210, 280 g/polybag) total 15 kombinasi perlakuan diulang tiga kali. Hasil penelitian menunjukkan adanya interaksi nyata terhadap panjang daun 14 HST, jumlah anakan umbi, dan berat segar umbi. Kombinasi BPF 10 ml dan pupuk kandang ayam 140 g *polybag*<sup>-1</sup> memberikan hasil terbaik dengan peningkatan panjang daun, dan berat segar umbi optimal sebesar 25,00 g per rumpun. Perlakuan ini dinyatakan sebagai dosis efektif dalam mendukung pertumbuhan vegetatif dan generatif tanaman bawang merah secara signifikan.

**Kata kunci:** Bakteri Pelarut Fosfat, Bawang Merah, Pupuk Kandang Ayam, Rehabilitas, Tanah Pasca Galian Batuan

## ABSTRACT

**Syifa Aulia Putri. 2025. Effectiveness Of Phosphate-Solubilizing Bacteria (Psb) And Chicken Manure Application On Post-Quarry Soil For The Growth And Yield Of Shallot Variety Batu Ijo (*Allium ascalonicum* L.). Supervised by Budy Frasetya Taufik Qurrohman and Cecep Hidayat.**

Rock minerals are widely utilized for infrastructure development, yet their extraction often leads to environmental degradation and nutrient-deficient soils. To restore such degraded lands, revegetation using high-value crops like shallots (*Allium ascalonicum* L.), which have a high phosphorus (P) demand, can be implemented. However, the limited nutrient availability in post-mining soils necessitates strategies to enhance P availability, such as the application of Phosphate Solubilizing Bacteria (PSB). This study aimed to evaluate the interaction between different doses of PSB isolates and chicken manure on the growth and yield of shallots in post-rock mining soils. A factorial experiment was conducted using a Randomized Complete Block Design (RCBD) with two factors: PSB isolates (no PSB, 10 ml/polybag, 20 ml/polybag) and chicken manure (0, 70, 140, 210, and 280 g/polybag), resulting in 15 treatment combinations replicated three times. The results showed significant interactions affecting leaf length at 14 days after planting (DAP), number of bulb tillers, and fresh bulb weight. The optimal results were obtained from the combination of 10 ml PSB and 140 g chicken manure per polybag, which significantly increased leaf length and fresh bulb weight, reaching 25.00 g per clump. This treatment is considered the most effective in enhancing both vegetative and generative growth of shallots in degraded post-mining soils.

**Keywords:** Chicken Manure, Phosphate Solubilizing Bacteria, Post Mining Soil, Rehabilitation, Shallot.