

RESPON PERTUMBUHAN DAN HASIL TANAMAN BAWANG MERAH (*Allium ascalonicum* L.) TERHADAP BERBAGAI DOSIS NPK DAN KONSENTRASI PUPUK ORGANIK CAIR RUMPUT LAUT COKELAT (*Sargassum* sp.)

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ABSTRAK

Produksi bawang merah dipengaruhi oleh berbagai faktor, salah satunya adalah ketersediaan unsur hara dalam tanah. Penggunaan pupuk anorganik seperti NPK secara berlebihan berpotensi menimbulkan dampak negatif terhadap lingkungan. Rumput laut cokelat diketahui mengandung berbagai macam nutrisi makro dan mikro, serta zat pengatur tumbuh alami yang dapat meningkatkan pertumbuhan tanaman. Penelitian bertujuan untuk mengetahui pengaruh aplikasi pupuk NPK dan POC rumput laut cokelat terhadap pertumbuhan dan hasil tanaman bawang merah. Penelitian merupakan percobaan lapangan menggunakan Rancangan Acak Lengkap (RAL) dua faktor dan satu kontrol. Faktor pertama adalah dosis pupuk NPK 16:16:16 dengan dosis per tanaman 0,75 g, 1,5 g, dan 3 g. Faktor kedua adalah konsentrasi POC rumput laut cokelat (*Sargassum* sp.) dengan konsentrasi 1%, 3% dan 5%. Perlakuan kontrol yaitu dengan pemberian NPK dengan dosis 6 g/tanaman. Hasil penelitian menunjukkan kombinasi perlakuan tidak terdapat beda nyata dengan kontrol pada semua parameter. Kombinasi dosis NPK dan konsentrasi POC rumput laut cokelat terdapat interaksi pada jumlah daun 35 HST, jumlah anakan 42 dan 49 HST serta jumlah umbi. Perlakuan seluruh dosis NPK memberikan hasil baik pada semua parameter. Perlakuan konsentrasi 5% POC rumput laut cokelat memberikan hasil terbaik pada parameter tinggi tanaman 42 dan 49 HST, bobot segar umbi per rumpun, bobot kering umbi per rumpun dan bobot kering umbi per petak.

Kata Kunci : Bawang Merah, NPK, Rumput Laut Cokelat.

"RESPONSE OF GROWTH AND YIELD OF SHALLOT PLANTS (*Allium ascalonicum* L.) TO VARIOUS DOSES OF NPK AND CONCENTRATIONS OF BROWN ALGAE LIQUID ORGANIC FERTILIZER (*Sargassum* sp.)"

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ABSTRACT

Shallot production is influenced by various factors, one of which is the availability of nutrients in the soil. Excessive use of inorganic fertilizers such as NPK can potentially cause negative environmental impacts. Brown algae are known to contain various macro and micronutrients, as well as natural plant growth regulators that can enhance plant growth. This study aimed to determine the effects of NPK fertilizer and brown algae liquid organic fertilizer (*Sargassum* sp.) application on the growth and yield of shallot plants. The research was conducted as a field experiment using a Completely Randomized Design (CRD) with two factors and one control. The first factor was the dose of NPK 16:16:16 fertilizer at rates of 0,75 g, 1,5 g, and 3 g per plant. The second factor was the concentration of brown algae liquid organic fertilizer at 1%, 3%, and 5%. The control treatment consisted of NPK fertilizer at a dose of 6 g per plant. The results showed that the combination treatments were not significantly different from the control in all observed parameters. However, interactions between NPK doses and brown algae fertilizer concentrations were found in the number of leaves at 35 days after planting (DAP), number of tillers at 42 and 49 DAP, and number of bulbs. Treatment of all NPK doses gave good results on all parameters. The treatment of 5% brown algae liquid fertilizer gave the best results in plant height at 42 and 49 DAP, fresh bulb weight per clump, dry bulb weight per clump and dry bulb weight per plot.

Keywords: Shallots, NPK, Brown Algae.