

INTISARI

Entisol merupakan jenis tanah muda subur yang berasal dari pelapukan material letusan gunung berapi. Ketersediaan hara di Entisol tergolong rendah sehingga perlu adanya penambahan bahan organik. Kandungan selenium di tanah pun juga tergolong rendah, namun akan bersifat toksik untuk tanaman jika bernilai terlalu tinggi. Penelitian ini bertujuan untuk mengamati pengaruh pemberian pupuk selenium terhadap pertumbuhan tanaman padi (*Oryza sativa* L.), serapan nitrogen tanaman pada masa tanam vegetatif maksimum, dan hasil tanaman padi di Entisol. Penelitian ini dilaksanakan dengan menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan dua faktor dan blok sebagai ulangan. Faktor pertama yaitu dosis pemberian Selenium terdiri dari tiga aras perlakuan yaitu Se0, Se1 (0,75 gr/plot), dan Se2 (1,5 gr/plot). Faktor kedua yaitu pemberian bahan organik berupa pupuk kandang terdiri dari tiga aras perlakuan, yakni M0, M1(10 ton/ha), dan M2(20 ton/ha). Pengamatan lapangan dilakukan dua minggu sekali dengan melakukan pengamatan agronomi meliputi tinggi tanaman dan jumlah anakan. Analisis dilakukan terhadap sifat fisika dan kimia antara lain kadar lengas, pH aktual, pH potensial, bahan organik, KPK, kation tersedia, N total, N tersedia, serapan nitrogen, dan tekstur tanah. Hasil penelitian menunjukkan bahwa tidak terdapat interaksi antara pemberian pupuk selenium dan pupuk kandang pada sebagian besar data sifat fisika-kimia tanah, dan data agronomi. Penambahan pupuk selenium dan pupuk kandang memberikan pengaruh terhadap serapan N akar sebesar 918,95 mg/tan, serapan N tajuk sebesar 2448,31 mg/tan, serta serapan N tanaman sebesar 3291,55 mg/tan. Pemberian perlakuan meningkatkan serapan N pada akar maupun tajuk tanaman, dan nilai produktivitas tanaman padi. Pemberian pupuk selenium tidak menghambat pertumbuhan, serapan Nitrogen, dan hasil tanaman padi.

Kata kunci : entisol, padi, selenium, serapan nitrogen

ABSTRACT

Entisol is a young fertile soil that comes from weathering of volcanic eruption material. The availability of nutrients in Entisol is in a low level, so it is necessary to add the organic matter. The content of selenium in the soil is also relatively low, but it will be toxic to plants if the value is too high. This study aimed to observe the effect of selenium fertilizer application on the growth of rice plants (*Oryza sativa* L.), nitrogen uptake of plants during the maximum vegetative planting period, and yield of rice plants in Entisol. This study was carried out using a Randomized Completely Block Design (RCBD) with two factors and blocks as replication. The first factor was the dose of Selenium which consisted of three treatment levels, namely Se0, Se1 (0.75 g/plot), and Se2 (1.5 g/plot). The second factor is the provision of organic matter in the form of manure consisting of three treatment levels, namely M0, M1 (10 tons/ha), and M2 (20 tons/ha). Field observations were carried out every two weeks by conducting agronomic observations including plant height and number of tillers. Analysis was carried out on physical and chemical properties including moisture content, actual pH, potential pH, organic matter, KPK, available cations, total N, available N, nitrogen uptake, and soil texture. The results showed that there was no interaction between the application of selenium fertilizer and manure in most of the soil physico-chemical properties data, and agronomic data. The addition of selenium fertilizer and manure gave an effect on root N uptake of 918,95 mg/tan, canopy N uptake of 2448,31 mg/tan, and plant N uptake of 3291,55 mg/tan. The treatment increased N uptake in the roots and shoots of plants, and the productivity value of rice plants. The application of selenium fertilizer did not inhibit the growth, nitrogen uptake, and yield of rice plants.

Keywords: entisol, rice, selenium, nitrogen uptake