

RINGKASAN

Daerah pantai yang merupakan tanah Entisol biasa ditanami oleh masyarakat dengan tanaman seperti padi. Sebagai lahan marginal yang memiliki luasan lahan yang besar jika tanah Entisol pantai dimanfaatkan secara maksimal dapat menambah jumlah produksi padi di Indonesia. Pupuk NS-ZSR (Nitrogen Sulfur Zeolite Slow Release) mengandung bahan amelioran serta unsur hara makro yang dapat digunakan untuk memperbaiki sifat tanah Entisol. Bahan amelioran yang terdapat dalam pupuk NS-ZSR yaitu zeolit, kapur dan biochar arang sekam serta unsur hara yang ada didalamnya yaitu nitrogen dan sulfur. Tujuan penelitian ini yaitu: 1) mengetahui pengaruh macam pupuk NS-ZSR terhadap karakter agronomi padi, 2) mengetahui pengaruh dosis pupuk NS-ZSR terhadap karakter agronomi padi, 3) mengetahui interaksi antara macam pupuk dan dosis pupuk NS-ZSR terhadap karakter agronomi padi.

Penelitian dilakukan di *screen house* Fakultas Pertanian Universitas Jenderal Soedirman. Penelitian ini dilaksanakan mulai Maret sampai dengan September 2022. Rancangan yang digunakan adalah rancangan faktorial dengan rancangan lingkungan Rancangan Acak Kelompok Lengkap 3 kali pengulangan. Perlakuan terdiri dari dua faktor, faktor pertama yaitu macam pupuk NS-ZSR (20% N + 10% S, 20% N + 15% S, dan 25% N + 15% S) dan faktor kedua yaitu dosis pupuk NS-ZSR (0, 250, 500, 750 kg/ha). Variabel yang diamati meliputi tinggi tanaman, jumlah daun tanaman, jumlah anakan tanaman per rumpun, jumlah malai tanaman, bobot basah tanaman, bobot basah akar tanaman, bobot basah tajuk tanaman, bobot basah malai, panjang akar, panjang malai per tanaman, dan jumlah biji per malai.

Hasil penelitian menunjukkan bahwa Macam pupuk NS-ZSR memberikan peningkatan pada karakter agronomi padi yaitu pada tinggi tanaman, jumlah anakan per rumpun, bobot basah tanaman dan bobot basah tajuk. Dosis pupuk NS-ZSR memberikan peningkatan pada karakter agronomi padi yaitu pada bobot basah tanaman, bobot basah akar, dan bobot basah tajuk. Terdapat interaksi antara pemberian macam dan dosis pupuk NS-ZSR pada karakter agronomi yaitu pada panjang akar tanaman sebesar 22,7 cm dengan interaksi antara macam dan dosis pupuk NS-ZSR perlakuan F1D1 (20% N dan 10% S + 250kg/ha).

SUMMARY

The coastal area, which is Entisol soil, is commonly cultivated by the community with crops like rice. As a marginal land with a large expanse, if the coastal Entisol soil is utilized to its maximum potential, it can increase rice production in Indonesia. The NS-ZSR fertilizer (Nitrogen Sulfur Zeolite Slow Release) contains ameliorative materials and macro-nutrients that can be used to improve the characteristics of Entisol soil. The ameliorative materials found in NS-ZSR fertilizer are zeolite, lime, and biochar from rice husks, as well as the nutrients nitrogen and sulfur. The objectives of this research are: 1) to determine the effect of different types of NS-ZSR fertilizer on rice agronomic traits, 2) to determine the effect of NS-ZSR fertilizer doses on rice agronomic traits, 3) to understand the interaction between the type and dose of NS-ZSR fertilizer on rice agronomic traits.

The research was conducted in the screen house of the Faculty of Agriculture at Universitas Jenderal Soedirman. The study was carried out from March to September 2022. The design used was a factorial design with a Randomized Completely Block Design in a full 3 replications. The treatments consisted of two factors: the first factor was the type of NS-ZSR fertilizer (20% N + 10% S, 20% N + 15% S, and 25% N + 15% S), and the second factor was the dose of NS-ZSR fertilizer (0, 250, 500, 750 kg/ha). The observed variables included plant height, number of leaves per plant, number of tillers per clump, number of panicles per plant, plant wet weight, root wet weight, shoot wet weight, panicle wet weight, root length, panicle length per plant, and number of seeds per panicle.

The results of the research showed that the type of NS-ZSR fertilizer led to an improvement in rice agronomic traits such as plant height, number of tillers per clump, plant wet weight, and shoot wet weight. The dose of NS-ZSR fertilizer contributed to an improvement in rice agronomic traits, particularly in terms of plant wet weight, root wet weight, and shoot wet weight. There was an interaction between the type and dose of NS-ZSR fertilizer on agronomic traits, specifically in the case of root length, which was 22.7 cm with the interaction between the type and dose of NS-ZSR fertilizer treatment F1D1 (20% N and 10% S + 250 kg/ha).