

RINGKASAN

Jagung manis merupakan salah satu sayuran yang banyak dikonsumsi manusia karena memiliki rasa yang enak, kandungan karbohidrat, protein, vitamin serta kadar gula relatif tinggi tetapi kandungan lemaknya rendah. Oleh sebab itu kebutuhan akan jagung terus meningkat. Pengaturan jarak tanam dan pemberian dosis pupuk yang tepat diharapkan dapat meningkatkan produksi tanaman jagung. Pengaturan jarak tanam diharapkan dapat mengurangi persaingan antar tanaman dalam memperoleh unsur hara, cahaya, air. Pupuk NZEO-SR Plus sendiri pupuk yang terbuat dari zeolit 70 kg, urea 50 kg, monmorilonit 5 g, abu sekam 5 g, dan kapur 5 g. Penelitian ini bertujuan untuk mengetahui pengaruh jarak tanam dan dosis pupuk NZEO-SRPlus terhadap sifat kimia tanah, serapan Si dan bobot segar jagung manis di tanah Inceptisol.

Penelitian telah dilaksanakan di Desa Pliken, Kecamatan Kembaran, Kabupaten Banyumas, Laboratorium Tanah dan Sumberdaya Lahan, Laboratorium Agronomi dan Holtikultura, Fakultas Pertanian, Universitas Jenderal Soedirman, Purwokerto. Penelitian ini berlangsung selama 5 bulan. Penelitian ini dilakukan dengan Rancangan Acak Kelompok Lengkap (RAKL) yang terdiri atas 2 faktor dengan 3 ulangan. Faktor pertama adalah dosis pupuk N yang terdiri dari 5 taraf yaitu D0 0 kg N/ha; D1 50 kg N/ha; D2 100 kg N/ha; D3 150 kg N/ha; D4 200 kg N/ha dan faktor kedua adalah jarak tanam yang terdiri dari 2 taraf yaitu J1 75x20 cm² dan J2 50x20 cm², sehingga banyaknya perlakuan yang dicobakan ada sebanyak $2 \times 5 = 10$ kombinasi. Setiap perlakuan dilakukan sebanyak 3 ulangan, sehingga petak lahan yang digunakan sebanyak $10 \times 3 = 30$ petak percobaan. Variabel penelitian terdiri atas pH KCl, Daya Hantar Listrik, N-tersedia, KTK, Si-tersedia tanah, serapan Si oleh tanaman dan bobot segar jagung manis berkelebot.

Hasil penelitian ini menunjukkan bahwa pemberian pupuk NZEO-SR Plus tidak dapat meningkatkan pH KCl, DHL, N-tersedia, KTK, Si-tersedia tanah, serapan Si oleh tanaman, tetapi dapat meningkatkan bobot segar jagung manis. Pengaturan jarak tanam 75x20 cm² dan 50x20 cm² tidak memberikan pengaruh terhadap pH KCl, DHL, N-tersedia, KTK, Si-tersedia tanah, serapan Si oleh tanaman dan bobot segar jagung manis. Tidak terdapat interaksi antara jarak tanam dan dosis pupuk NZEO-SR Plus terhadap pH KCl, DHL, N-tersedia, KTK, Si-tersedia tanah, serapan Si oleh tanaman dan bobot segar jagung manis.

SUMMARY

Sweet corn is one of the most consumed vegetables by humans because it has a good taste, carbohydrate, protein, vitamin content and relatively high sugar content but low fat content. Therefore, the need for corn continues to increase. The space setting and the application of fertilizer doses are expected to increase maize crop production. The spacing is expected to reduce competition between plants in obtaining nutrients, light and water. NZEO-SRPlus fertilizer itself is a fertilizer made from 70 kg of zeolite, 50 kg of urea, 5 g of montmorillonite, 5 g of husk ash, and 5 g of lime. This study aimed to determine the effect of spacing and dose of NZEO-SRPlus fertilizer on soil chemical properties, Si absorption, and fresh weight of sweet corn in Inceptisol soil.

This research had been carried out in Pliken Village, Kembaran District, Banyumas Regency, Laboratory of Soil and Land Resources, Laboratory of Agronomy and Horticulture, Faculty of Agriculture, Jenderal Sudirman University, Purwokerto. This research lasted for 5 months. This research was conducted in a Completely Randomized Block Design (CRBD) consisting of 2 factors with 3 replications. The first factor is the dose of N fertilization, which consists of 5 levels, namely D0 0 kg N/ha; D1 50 kg N/ha; D2 100 kg N/ha; D3 150 kg N/ha; D4 200 kg N/ha and the second factor is the spacing of the plants, which consists of 2 levels, namely J1 75x20 cm² and J2 50x20 cm², so that the number of treatments tried is $2 \times 5 = 10$ combinations. Each treatment was carried out in 3 replications, so that the plots of land used were $10 \times 3 = 30$ experimental plots. The research variables consisted of pH KCl, Electrical Conductivity, N-available, CEC, Si-available soil, Si uptake by plants and fresh weight of sweet corn.

The results of this study showed that the application of NZEO-SR Plus fertilizer could not increase to the pH of KCl, EC, N-available, CEC, soil-available Si, Si uptake by plants, but significantly increased the fresh sweet corn's weight. The spacing settings of 75x20 cm² and 50x20 cm² did not affect the pH of KCl, EC, N-available, CEC, Si-available soil, Si uptake by plants and the weight of the fresh sweet corn. There was no interaction between spacing and dose of NZEO-SR Plus fertilizer on pH KCl, EC, N-available, CEC, Si-available soil, Si uptake by plants and the weight of the fresh sweet corn.