

RINGKASAN

Jagung kristal merupakan jagung dengan bentuk kecil dan lancip yang biasa untuk konsumsi pakan ternak khususnya burung peliharaan. Pengaturan waktu pemberian dan pemberian dosis pupuk diharapkan dapat meningkatkan hasil tanam jagung. Pengaturan waktu pemberian diharapkan dapat memberikan pemilihan waktu yang baik untuk melakukan pemupukan. Pupuk NZEO-SRPlus dirakit menggunakan zeolit 70 kg, urea 50 kg, monmorilonit 5 kg, abu sekam 5 g, dan kapur 5 g. Penelitian ini bertujuan untuk mengetahui pengaruh waktu pemberian dan dosis pupuk NZEO-SRPlus terhadap sifat kimia tanah, Serapan N oleh tanaman, dan hasil tanaman jagung kristal.

Penelitian telah dilaksanakan dilahan Exfarm Fakultas Pertanian Universitas Jenderal Soedirman, 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 dari 2 faktor dengan 3 ulangan. Faktor pertama adalah dosis pupuk N yang terdiri atas 5 taraf, dan faktor kedua adalah waktu pemberian yang terdiri atas 2 taraf, sehingga perlakuan yang dicobakan sebanyak $2 \times 5 = 10$ kombinasi. Setiap perlakuan dilakukan sebanyak 3 kali ulangan, sehingga petak lahan yang digunakan sebanyak $10 \times 3 = 30$ petak percobaan. Variabel pengamatan penelitian antara lain: pH KCl, C-Organik, N-total, P-total, K-total tanah, Serapan N oleh tanaman, bobot basah tongkol jagung tanpa kelobot dan bobot biji saat simpan.

Hasil penelitian ini menunjukkan bahwa pengaturan waktu pemberian pupuk tidak dapat meningkatkan hasil tanaman jagung kristal. Pemberian dosis pupuk NZEO-SRPlus sangat berpengaruh nyata terhadap C-Organik, N-total tanah, dan Serapan N oleh tanaman serta pada hasil bobot jagung tanpa kelobot dan bobot biji saat simpan. Dosis pupuk NZEO-SRPlus memberikan pengaruh nyata terhadap variabel P-total tanah. Dosis pupuk NZEO-SRPlus memberikan pengaruh tidak nyata terhadap variabel K-total tanah. Tidak ada interaksi antara dosis pupuk NZEO-SRPlus dan waktu pemberian pupuk terhadap bobot jagung tanpa kelobot, bobot biji saat simpan, pH KCL, C-Organik, N-total, P-total, K-total tanah, dan Serapan N oleh tanaman.

SUMMARY

Crystal corn is corn with a small and sharp shape which is usually used for animal feed consumption, especially for pet birds. Timing of application and dose of fertilizer is expected to increase maize yields. Timing of application is expected to provide a good timing for fertilization. NZEO-SRPlus fertilizer was assembled using 70 kg of zeolite, 50 kg of urea, 5 kg of montmorillonite, 5 g of husk ash, and 5 g of lime. The aim of this study was to determine the effect of time and dose of NZEO-SRPlus fertilizer on soil chemical properties, N uptake by plants, and yield of crystal corn.

The research has been carried out in the Exfarm field, Faculty of Agriculture, Jenderal Sudirman University, 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 using a Completely Randomized Block Design (CRBD) consisting of 2 factors with 3 replications. The first factor is the dose of N fertilizer which consists of 5 levels, and the second factor is the time of application which consists of 2 levels, so that the treatment that was tried was $2 \times 5 = 10$ combinations. Each treatment was repeated 3 times, so that the plots of land used were $10 \times 3 = 30$ experimental plots. The research observation variables were: Soil Acidity (pH), C-Organic, N-total, P-total, K-total, N uptake by plants, wet weight of corn cobs without husks and weight of seeds during storage.

The results of this study indicated that the timing of fertilizer application could not increase the yield of crystal corn. Dosage of NZEO-SRPlus fertilizer had a significant effect on C-Organic, N-total soil, and N uptake by plants as well as on the yield of unhulled corn and seed weight during storage. The dose of NZEO-SRPlus fertilizer had a significant effect on the total soil P-variable. The dose of NZEO-SRPlus fertilizer had no significant effect on the K-total soil variable. There was no interaction between the dose of NZEO-SRPlus fertilizer and the time of application of fertilizer to the weight of corn without husks, seed weight at storage, Soil Acidity (pH), C-Organic, N-total, P-total, K-total soil, and N uptake by plants.