

Zulia Dwi Rahmawati. (200311100080). Pengaruh Jumlah Tanaman dan Jenis Pelapis Urea Terhadap Pertumbuhan dan Produksi Jagung Sayur di Madura. Dibawah Bimbingan: Ir. Slamet Supriyadi, M.Si dan Syaiful Khoiri, S.P., M.Si.

ABSTRAK

Pupuk urea merupakan pupuk sumber nitrogen (N) yang mudah larut dan juga hilang karena tercuci dan/atau menguap sehingga perlu dilakukan pelapisan untuk mengurangi kehilangan tersebut. Biochar dan biochar kompos dapat digunakan sebagai bahan pelapis pupuk urea guna mencegah dan/atau mengurangi kehilangan N sehingga dapat meningkatkan efisiensi penggunaan pupuk. Penelitian bertujuan untuk mengetahui pengaruh urea berpelapis biochar dan urea berpelapis kompos biochar terhadap pertumbuhan dan produksi jagung sayur dengan jumlah tanaman yang berbeda. Penelitian dilaksanakan di *Green House* dan di Laboratorium Pengujian Program Studi Agroekoteknologi Universitas Trunojoyo Madura, terletak pada ketinggian ± 5 m DPL, dari bulan Desember 2023 – Februari 2024. Penelitian dilakukan menggunakan Rancangan Acak Lengkap (RAL) Non Faktorial dengan 9 taraf perlakuan yaitu P1 (pupuk urea tanpa pelapis dengan 1 tanaman), P2 (pupuk urea berpelapis biochar sekam padi dengan 1 tanaman), P3 (pupuk urea berpelapis kompos biochar dengan 1 tanaman), P4 (pupuk urea tanpa pelapis dengan 2 tanaman), P5 (pupuk urea berpelapis biochar sekam padi dengan 2 tanaman), P6 (pupuk urea berpelapis kompos biochar dengan 2 tanaman), P7 (pupuk urea tanpa pelapis dengan 3 tanaman), P8 (pupuk urea berpelapis biochar sekam padi dengan 3 tanaman), P9 (pupuk urea berpelapis kompos biochar dengan 3 tanaman). Anova pada α 5% menunjukkan perbedaan antar rata-rata yang ditunjukkan oleh DMRT α 5%. Hasil penelitian menunjukkan bahwa perlakuan berpengaruh nyata terhadap pertumbuhan dan hasil jagung sayur, kecuali pada parameter volume akar dan kadar protein. Perlakuan P1 (urea tanpa pelapis) cenderung memberikan hasil terbaik, namun tidak berbeda nyata dengan perlakuan P3 (urea berpelapis kompos biochar). Pemberian urea lebih efektif dalam pembentukan tongkol muda pada jumlah tanaman 1 dibandingkan 2 dan 3 tanaman.

Kata kunci: *Biochar, Jagung Sayur, Kompos biochar, Urea*

Zulia Dwi Rahmawati. (200311100080). Effect of Plant Number and Urea-Coating Material Types on Growth and Yield of Baby Corn in Madura. Supervised by: Ir. Slamet Supriyadi, M.Si dan Syaiful Khoiri, S.P., M.Si.

ABSTRACT

Nitrogen from urea fertilizer is easily to loss via leaching and/or volatilization. Such losses could be reduced by coating of urea. Biochar and biochar compost can be used as coating materials for urea fertilizer to prevent and/or reduce nitrogen loss, thereby increasing fertilizer use efficiency. The objective of this study was to investigate the effect of biochar- and biochar compost-coated urea on growth and yield of baby corn with different plant numbers. This research was carried out in the Greenhouse and Laboratory of the Agroecotechnology Study Program, Trunojoyo Madura University, located at the altitude of ± 5 meters above sea level, from December 2023 to February 2024. Treatments in this research were arranged on a Non-Factorial Completely Randomized Design (CRD). There were 9 treatments namely P1 (uncoated urea fertilizer with 1 plant), P2 (rice husk biochar-coated urea with 1 plant), P3 (biochar compost-coated urea with 1 plant), P4 (uncoated urea fertilizer with 2 plants), P5 (rice husk biochar-coated urea with 2 plants), P6 (biochar compost-coated urea with 2 plants), P7 (uncoated urea fertilizer with 3 plants), P8 (rice husk biochar-coated urea with 3 plants), and P9 (biochar compost-coated urea with 3 plants). ANOVA at α 5% was employed and the difference among means was determined by DMRT α 5%. The results showed that treatments significantly affected almost all parameters of plant growth and yield except root volume and protein content. Treatment of P1 had similar result compared to P3, indicates that biochar compost had better performance as coated material for urea compared to biochar. The application of urea is more effective in forming young cobs in plots with one plant compared to those with two or three plants.

Keywords: Biochar, , Biochar compost, Vegetable corn, Urea.