

INTISARI

Penelitian dilakukan untuk mengevaluasi kesuburan tanah dengan metode *omission trial* di inceptisols, Kalibawang, Kulon Progo pada budidaya jagung putri serta mengevaluasi pengaruh biochar terhadap kekurangan hara N, P, dan K pada tanah inceptisol, Kalibawang, Kulon Progo. Penelitian dilakukan di lahan persawahan di Dusun Klepu, Desa Banjararum, Kecamatan Kalibawang, Kabupaten Kulon Progo pada bulan Mei-Oktober 2021 dan Laboratorium Tanah, Fakultas Pertanian, Universitas Gadjah Mada. Adapun varietas jagung yang digunakan yaitu Bonanza F1. Rancangan percobaan menggunakan Rancangan Acak Lengkap (RAL) faktorial yang terdiri atas dua faktor dan tiga blok atau ulangan. Faktor pertama yaitu dosis biochar yang terdiri atas B0 : biochar 0 ton/ha dan B1 : biochar 10 ton/ha. Faktor yang kedua yaitu macam hara yang terdiri atas P0 : tanpa pupuk, NP : pupuk urea dan pupuk SP-27, PK : pupuk SP-27 dan pupuk KCl, NK : pupuk urea dan pupuk KCl serta NPK : pupuk urea, pupuk SP-27 dan pupuk KCl. Hasil penelitian menunjukkan bahwa tanah inceptisol yang berada di Kecamatan Kalibawang, Kabupaten Kulon Progo mengalami kekurangan unsur hara N. Adapun pemberian biochar berpengaruh terhadap peningkatan KPK tanah serta volume akar tanaman jagung putri serta penurunan berat volume tanah.

Kata kunci: biochar sekam padi, jagung putri, *omission trial*, pupuk NPK, tanah inceptisol.

ABSTRACT

The purpose of this research was to evaluate soil fertility in inceptisol soils, Kalibawang, Kulon Progo, using an omission trial, and to evaluate the effects of biochar on N, P, and K nutrient deficits in inceptisol soils, Kalibawang, Kulon Progo. From May to October 2021, the research was carried out in rice fields in Klepu Hamlet, Banjararum Village, Kalibawang District, Kulon Progo Regency, and the Soil Laboratory, Faculty of Agriculture, Gadjah Mada University. Bonanza F1 was the corn variety used. A factorial Completely Randomized Design (CRD) with two factors and three blocks or replications was applied in this research. The first factor is the biochar dose, which is divided into two categories: B0: 0 ton/ha biochar and B1: 10 ton/ha biochar. The second factor is nutrient type, which includes P0 (no fertilizer), NP (urea and SP-27 fertilizer), PK (SP-27 fertilizer and KCl fertilizer), NK (urea and KCl fertilizer), and NPK (urea fertilizer, SP-fertilizer 27, and KCl fertilizer). The findings revealed a shortage of N nutrients in the inceptisol soil in Kalibawang District, Kulon Progo Regency. The use of biochar increases the CEC of the soil and the volume of the female corn plant's roots while lowering the weight of the soil volume.

Keywords: rice husk biochar, female maize, *omission trial*, NPK fertilizer, inceptisol soil.