

# **KAJIAN KADARP & K PADI SAWAH DENGAN PERLAKUAN BRIKET BIOCHAR TEMPURUNG KELAPA DAN KOTORAN DOMBA PADA ENTISOL POTORONO, BANGUNTAPAN, YOGYAKARTA**

Oleh : Dodit Aldi Riansyah

Dibimbing Oleh : Susila Herlambang

## **ABSTRAK**

Kalurahan Potorono di Kabupaten Bantul memiliki potensi pertanian berupa hamparan sawah produktif. Tanah Entisol di wilayah ini mengandung hara tinggi, namun kadar lempung dan bahan organik rendah, sehingga unsur hara mudah terlindi. Pemberian nutrisi dan amelioran dalam bentuk briket berbahan biochar tempurung kelapa dan kotoran domba diharapkan dapat meningkatkan ketersediaan hara dan penyerapan unsur fosfor (P) dan kalium (K) pada tanaman padi.

Penelitian ini bertujuan mengetahui pengaruh dosis, waktu, dan kombinasi keduanya terhadap kadar hara P dan K. Penelitian menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dua faktor, yaitu dosis briket (3 taraf) dan waktu pemberian briket (3 taraf), dengan tiga ulangan. Parameter yang diamati meliputi kadar hara P dan K tanaman padi bagian atas dan bawah. Data dianalisis menggunakan ANOVA, dilanjutkan dengan uji DMRT pada taraf 5%.

Hasil menunjukkan bahwa pemberian 3 briket (K3) meningkatkan kadar hara P dari 10,10% menjadi 18,10% dan kadar hara K dari 9,62% menjadi 11,83%. Perlakuan waktu terbaik (A3) memberikan hasil kadar tertinggi, dan kombinasi terbaik terdapat pada perlakuan kotoran domba 326,7 g ditambah biochar tempurung kelapa 32,67 g dengan aplikasi minggu pertama serta minggu kesepuluh (A3K3) dengan nilai kadar hara P meningkat 10,10% menjadi 18,10% secara presentase meningkat 79,2%. Kadar hara K meningkat dari 9,62% menjadi 11,83% secara presentase meningkat sebesar 22,9%.

**Kata Kunci** : Amelioran, Biochar, Briket, Entisol, Kotoran Domba, Tanaman Padi

# **A STUDY OF PHOSPHORUS AND POTASSIUM UPTAKE IN LOWLAND RICE WITH COCONUT SHELL BIOCHAR AND SHEEP MANURE BRIQUETTE TREATMENTS ON ENTISOL SOIL IN POTORONO, BANGUNTAPAN, YOGYAKARTA**

By : Dodit Aldi Riansyah

Supervised by : Susila Herlambang

## **ABSTRACT**

Potorono Village in Bantul Regency has agricultural potential in the form of productive rice fields. The Entisol soil in this area contains high nutrient levels but has low clay and organic matter content, making nutrients susceptible to leaching. The application of nutrients and soil amendments in the form of briquettes made from coconut shell biochar and sheep manure is expected to increase nutrient availability and the absorption of phosphorus (P) and potassium (K) in rice plants.

This study aimed to determine the effect of dosage, timing, and their combination on P and K nutrient content. The research used a factorial Randomized Complete Block Design (RCBD) with two factors: briquette dosage (3 levels) and application time (3 levels), each with three replications. Observed parameters included the P and K nutrient content in the upper and lower parts of the rice plants. Data were analyzed using ANOVA, followed by DMRT at a 5% significance level.

The results showed that the application of 3 briquettes (K3) increased P content from 10.10% to 18.10% and K content from 9.62% to 11.83%. The best timing treatment (A3) produced the highest nutrient levels. The best combination was found in the treatment using 326.7 g of sheep manure and 32.67 g of coconut shell biochar, applied in the first and tenth weeks (A3K3), which increased P content from 10.10% to 18.10%, representing a 79.2% increase. K content increased from 9.62% to 11.83%, representing a 22.9% increase.

***Keywords:*** Ameliorant, Biochar, Briquette, Entisol, Rice Plant, Sheep Manure