KAJIAN BEBERAPA UNSUR HARA MIKRO (Fe, Mn, Cu, Zn) PADA TANAH SAWAH DI NAGARI PAMUATAN KECAMATAN KUPITAN KABUPATEN SIJUNJUNG

SKRIPSI

OLEH :

DESWITA MAHARANI
NIM. 2110232033

Dosen Pembimbing:

1. **Prof. Dr. Ir. Azwar Rasyidin, MSc**
2. **Prof. Dr. Ir. Aprisal, MP**

FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2025

KAJIAN BEBERAPA UNSUR HARA MIKRO (Fe, Mn, Cu, Zn) PADA TANAH SAWAH DI NAGARI PAMUATAN KECAMATAN KUPITAN KABUPATEN SIJUNJUNG

ABSTRAK

Penurunan produktivitas padi dipengaruhi oleh faktor internal yaitu varietas padi yang digunakan dan faktor eksternal yaitu ketersediaan unsur hara pada tanah. Penggenangan sawah dan input yang diberikan seperti pupuk, air irigasi, dan pengembalian jerami dapat mempengaruhi ketersediaan unsur hara mikro (Fe, Mn, Cu dan Zn). Tujuan penelitian ini adalah untuk mengetahui status unsur hara mikro (Fe, Mn, Cu, dan Zn) pada tanah sawah di Nagari Pamuatan Kecamatan Kupitan Kabupaten Sijunjung. Metode yang digunakan yaitu survei dengan pengambilan sampel secara *purposive sampling* berdasarkan letak embung sawah (sawah atas, tengah dan bawah). Sampel tanah sawah diambil pada tiga titik lokasi dengan kedalaman 0–20 cm sebanyak 3 kali pengulangan. Parameter yang dianalisis yaitu pH tanah, KTK, BV, C–Organik, unsur mikro (Fe, Mn, Cu, dan Zn). Hasil penelitian menunjukkan bahwa nilai pH tanah sawah agak masam hingga netral (tertinggi 6,6 di sawah atas). Nilai KTK tinggi (35,85 cmol/kg di sawah bawah). Nilai BV berkisar rendah hingga tinggi (1,09 g/cm^3 di sawah satas). Nilai C–Organik rendah hingga sedang (tertinggi 2,72% di sawah bawah). Kandungan Fe cenderung tinggi (200 ppm di sawah bawah), Mn cenderung sedang (7,50 ppm di sawah tengah), Cu sangat rendah (2,85 ppm di sawah bawah), dan Zn sedang disetiap lokasi sawah. Lokasi sawah terbaik yaitu pada sawah bagian bawah yang ditandai dengan pH tanah sawah, kadar C-Organik, KTK, BV dan unsur hara mikro yang mendukung pertumbuhan tanaman padi. Diperlukan upaya penambahan pupuk mikro untuk sawah yang defisiensi hara seperti penambahan pupuk mikro metalik yang mengandung 0,87% Cu, 0,86% Zn, 5,0% Mn dan 1,7% Fe, serta pupuk kandang untuk mensuplai bahan organik di tanah sawah.

Kata Kunci: Padi, Sifat Kimia Tanah, Tanah Sawah, Unsur Hara Mikro

STUDY ON MICRO NUTRIENTS (Fe, Mn, Cu, Zn) AT PADDY SOILS IN NAGARI PAMUATAN KUPITAN DISTRICT SIJUNJUNG REGENCY

ABSTRACT

The decline in rice productivity is influenced by internal factors, namely the rice variety used and external factors, namely the availability of nutrients in the soil. Paddy soil flooding and inputs such as fertilizers, irrigation water, and straw return can affect the availability of micro nutrients (Fe, Mn, Cu, and Zn). The objective of this study was to determine the status of micronutrients (Fe, Mn, Cu, and Zn) in paddy soil in Nagari Pamuatan, Kupitan District, Sijunjung Regency. The research conducted employed survey method with the soil was sampled based on the location of paddy soil embankments (upper, middle, and lower paddy soils). Soil samples were collected from each locations at 0–20 cm depth, with three replicates. The parameters analyzed were soil pH, CEC, BD, organic–C, and micronutrients (Fe, Mn, Cu, and Zn). The results showed that the pH values ranged from slightly acidic to neutral (with the highest value was 6.6 in the upper paddy soil). The CEC values were high (35.85 cmol/kg in the lower paddy soil). The BD values ranged from low to high (with the highest value was 1.09 g/cm^3 in the upper paddy soil). The organic–C values ranged from low to moderate (with the highest value was 2.72% in the lower paddy soil). Fe content tended to be high (200 ppm in the lower paddy soil), Mn was moderate (7.50 ppm in the middle paddy soil), Cu was very low (2.85 ppm in the lower paddy soil), and Zn was moderate in all soil locations. The best paddy soil location was in the lower paddy soil, characterized by soil pH, organic–C, CEC, BD, and micronutrients that support rice plant growth. Therefore, it was needed to add micronutrient fertilizers to fields deficient in nutrients, such as metallic micronutrient fertilizers containing 0.87% Cu, 0.86% Zn, 5.0% Mn, and 1.7% Fe, as well as manure to supply organic matter to the paddy soil.

Keywords: Rice, Soil Chemical Properties, Paddy Soil, Micro Nutrients