

**KAJIAN UNSUR HARA MAKRO PADA LAHAN SAWAH
BEKAS BANJIR LAHAR DINGIN DI NAGARI LIMO KAUM
KECAMATAN LIMA KAUM KABUPATEN TANAH DATAR**

SKRIPSI

OLEH:

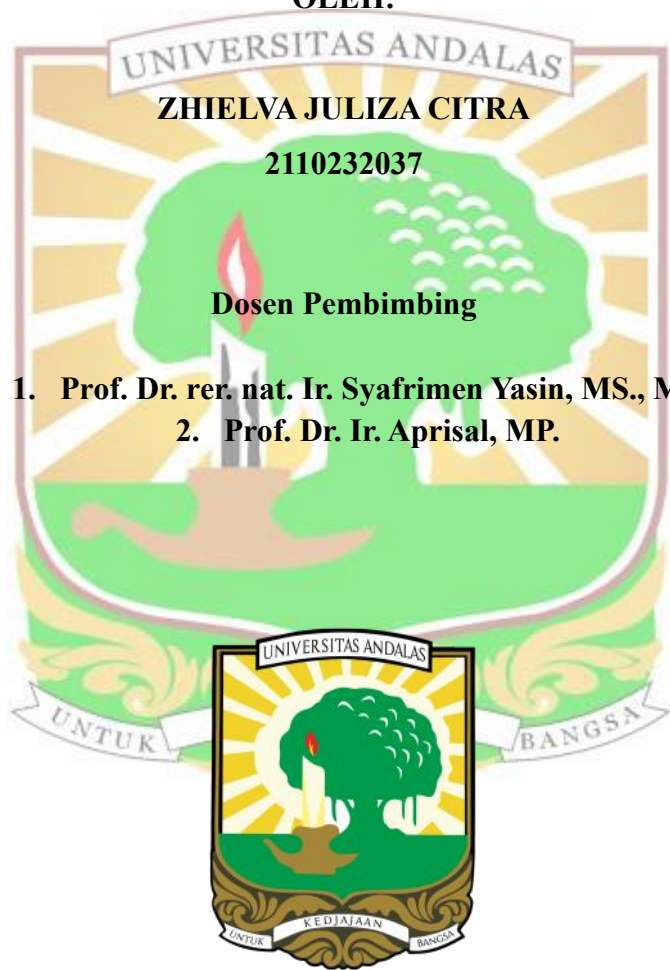
UNIVERSITAS ANDALAS

ZHIELVA JULIZA CITRA

2110232037

Dosen Pembimbing

- 1. Prof. Dr. rer. nat. Ir. Syafrimen Yasin, MS., MSc.**
- 2. Prof. Dr. Ir. Aprisal, MP.**



**FAKULTAS PERTANIAN
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ABSTRAK

Penelitian unsur hara makro pada lahan sawah bekas banjir lahar dingin telah dilaksanakan di Nagari Limo Kaum Kabupaten Tanah Datar dari bulan Oktober sampai Maret 2025. Penelitian ini bertujuan untuk mengkaji dan menganalisis kandungan unsur hara makro (N, P, K, Ca, Mg, dan S) pada lahan sawah yang terdampak banjir lahar dingin di Nagari Limo Kaum, Kecamatan Lima Kaum, Kabupaten Tanah Datar. Penelitian ini dilakukan menggunakan metode survei. Pengambilan sampel tanah diambil secara *purposive random sampling* pada lahan endapan banjir lahar dingin (L2, L3, dan L4), lahan sawah yang terkena aliran air banjir tetapi tidak terjadi endapan (L5), dan sebagai pembanding lahan sawah tidak terdampak banjir lahar dingin (L1). Sampel diambil sebanyak 3 kali ulangan setiap Lokasi pada kedalaman 0-20cm. Parameter yang dianalisis adalah pH, C-organik, N-total, P-tersedia, KTK, Kation-dd (Ca, Mg, dan K), dan sulfat tersedia. Hasil penelitian pada endapan banjir lahar dingin di Lokasi 2, 3, dan 4 memiliki kandungan K-dd (me/100g) secara berurutan yaitu 1,15; 2,16; dan 1,02. Nilai Sulfat tersedia (ppm) sebesar 294,01; 261,58; dan 292,94 yang tergolong tinggi hingga sangat tinggi. Sifat kimia endapan banjir lahar telah terjadi penurunan dari L1 dan L5 seperti pH, C-organik, N-total, P-tersedia, KTK, Ca-dd, dan Mg-dd. Hal ini disebabkan endapan banjir lahar dingin didominasi material vulkanik yang belum melapuk dan memiliki kandungan bahan organik yang rendah.

Kata Kunci: Banjir Lahar Dingin, Lahan Sawah, Unsur Hara Makro



STUDY OF MACRONUTRIENTS IN PADDY FIELDS AFFECTED BY COLD LAVA FLOODS IN NAGARI LIMO KAUM, LIMA KAUM DISTRICT, TANAH DATAR REGENCY

ABSTRACT

A study on macronutrient content in paddy fields affected by cold lava floods was conducted in Nagari Limo Kaum, Tanah Datar Regency, from October 2024 to March 2025. The aim of this research was to assess and analyze the content of macronutrients (N, P, K, Ca, Mg, and S) in paddy fields impacted by cold lava deposited in Nagari Limo Kaum, Lima Kaum District, Tanah Datar Regency. The study was carried out using a survey method. Soil sampling was performed using a purposive sampling technique based on lava sediment deposition (Locations 2, 3, and 4), and without sediment deposition (Location 5). Paddy fields unaffected by lava flooding (Location 1) was also sampled as a control. Samples were collected in triplicate at each location at 0-20cm soil depth. The parameters analyzed included soil pH, organic-C, total-N, available-P, CEC, exchangeable cations (Ca, Mg, and K), and available sulfate. The results showed that the exchangeable K content was 1.15, 2.16, and 1.02 cmol/kg respectively for lava affected locations (L2, L3, and L4). The available sulfate content was 294.01, 261.58, and 292.94 ppm, categorized as high to very high. In contrast, several soil chemical properties such as soil pH, organic-C, total-N, available-P, CEC, Ca, and Mg were lower in lava-deposited sites than to the others (L1 and L5). This decline in soil fertility was attributed to the dominance of unweathered volcanic materials with low organic matter content in the lava deposits.

Keywords: Macronutrients, Paddy Field, Cold Lava Floods

