

**PEMETAAN BEBERAPA SIFAT KIMIA LAPISAN OLAH
TANAH SAWAH PADA FISIOGRAFI PEGUNUNGAN
DI KABUPATEN SOLOK**

SKRIPSI

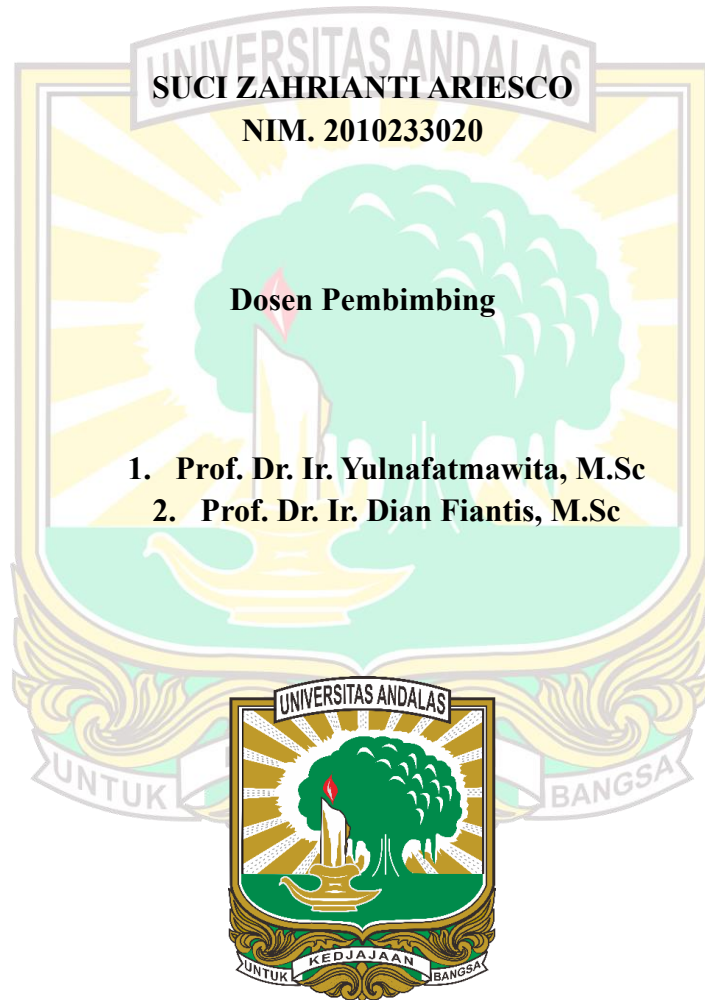
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ABSTRAK

Sawah fisiografi pegunungan di Kabupaten Solok (6.584,5 ha) yang tersebar di Kecamatan Junjung Sirih, X Koto Singkarak, Kubung, X Koto Diatas, IX Koto Sungai Lasi, Bukit Sundi, Gunung Talang, Hiliran Gumanti, dan Kecamatan Tigo Lurah belum diketahui sifat kimia tanahnya. Penelitian ini bertujuan untuk menganalisis dan memetakan beberapa sifat kimia lapisan olah tanah sawah pada fisiografi pegunungan serta mengkaji kualitas air sawah dan irigasi. Penelitian menggunakan metode survei, sampel tanah diambil secara *Stratified Sampling* berdasarkan fisiografi sawah. Sampel tanah diambil sebanyak 27 sampel pada lahan sawah irigasi pada kondisi pasca panen serta sebanyak 27 sampel air sawah dan 27 sampel air irigasi. Parameter yang dianalisis di laboratorium meliputi pH (H_2O dan KCl, pH air sawah dan irigasi), EC dan TDS (elektrometrik), C-organik (*Walkley and Black*), N-total (*Kjeldahl*), P-tersedia (Bray I), K-dd (*Leaching*). Hasil penelitian menunjukkan nilai pH H_2O tanah berkisar antara 3,04-6,70 dan pH KCl tanah 2,51-6,60, pH air sawah 5,30-7,97 dan pH air irigasi 5,41-7,55, EC tanah 92-532 $\mu S/cm$, EC air sawah (202-603 $\mu S/cm$, EC air irigasi 200-563 $\mu S/cm$, TDS tanah 46-265 ppm, TDS air sawah 100-290 ppm, TDS air irigasi 112-307 ppm, C-organik 1,10-4,32%, N-total 0,045-0,292%, P-tersedia 2,050-10,919 ppm, dan K-dd 0,26-0,80 cmol/kg. Sebaran spasial beberapa sifat kimia lapisan olah tanah sawah fisiografi pegunungan menunjukkan bahwa rata-rata sifat kimia terbaik terdapat pada wilayah Barat.

Kata kunci : *Fisiografi Pegunungan, Lahan Sawah, Pemetaan Tanah, Sifat Kimia Tanah Sawah*



MAPPING OF SEVERAL CHEMICAL PROPERTIES AT PLOWED LAYER OF PADDY SOIL IN THE MOUNTAINOUS PHYSIOGRAPHY IN SOLOK REGENCY

ABSTRACT

The chemical properties of the soil at paddy fields in the mountainous physiographic region of Solok Regency cover an area of 6,584.5 hectares and are spread across the districts of Junjung Sirih, X Koto Singkarak, Kubung, X Koto Diatas, IX Koto Sungai Lasi, Bukit Sundi, Gunung Talang, Hiliran Gumanti, and Tigo Lurah, are still unknown. This research was aimed to analyze and map several chemical properties of paddy soils at the plowed layers in the mountainous physiography and to assess the quality of water and irrigation of paddy fields. The research employed a survey method, with soil samples were taken using Stratified Sampling based on the physiography of the paddy fields. A total of 27 soil samples were taken from irrigated paddy fields in post-harvest conditions, as well as 27 samples of water in the paddy field and 27 samples of irrigation water. The parameters analyzed in the laboratory included pH (H₂O and KCl, paddy field and irrigation water), EC and TDS (Electrometric), organic-C (Walkley and Black), Total-N (Kjeldahl), P-available (Bray I), and exchangeable-K (Leaching). The research results showed that the pH values of soil were between 3.04-6.70 for H₂O and 2.51-6.60 for KCl, pH of paddy field water were 5.30-7.97 and the irrigation water were 5.41-7.55. The EC values of the soil were between 92-532 μ S/cm, the paddy field water were 202-603 μ S/cm, and the irrigation water were 200-563 μ S/cm. TDS values of the soil were 46-265 ppm, the paddy field water were 100-290 ppm and the irrigation water were 112-307 ppm, the organic-C were 1.10-4.32%, the total-N were 0.045-0.292%, the P-available were 2.050-10.919 ppm, and the K-exchangeable were 0.26-0.80 cmol/kg. The spatial distribution of several chemical properties of soil at the plowed layers in paddy fields within mountains physiography showed that the best average chemical properties were found in the Western regions.

Keywords : *Chemical Properties of Paddy Soil, Mountains Physiography, Paddy Fields, Soil Mapping.*