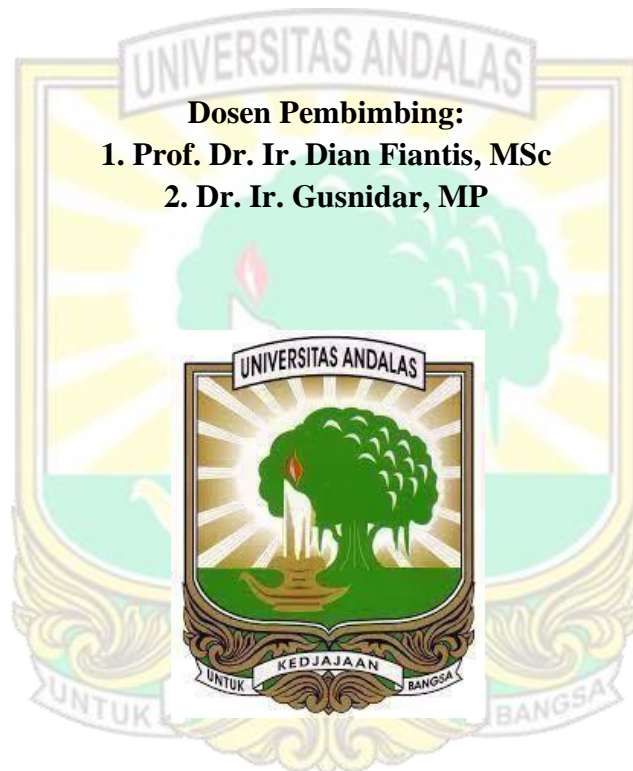


**SEBARAN SPASIAL BEBERAPA SIFAT KIMIA TANAH SAWAH  
FISIOGRAFI ALUVIAL PADA LAPISAN OLAH (*PLOWED LAYER*)  
DI KABUPATEN SOLOK**

**SKRIPSI**

**Oleh**

**MUHAMMAD IKHSAN  
NIM. 2010231026**



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**FAKULTAS PERTANIAN  
UNIVERSITAS ANDALAS  
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**Sebagai salah satu syarat untuk memperoleh gelar  
Sarjana Pertanian**

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**ABSTRAK**

Sawah fisiografi aluvial dengan luas 3.102,9 ha tersebar di Kabupaten Solok yang terdapat di beberapa kecamatan, diantaranya Kecamatan Junjung Sirih, X Koto Singkarak, Kubung, dan Bukit Sundi. Penelitian bertujuan untuk memetakan sifat kimia tanah sawah fisiografi aluvial dan kualitas air sawah dan irigasi. Metode *ordinary kriging* diterapkan untuk memprediksi sifat kimia tanah sawah dan distribusinya pada wilayah di luar titik sampel. Sebanyak 22 sampel tanah diambil dengan sistem *stratified sampling* pada kedalaman 0-20 cm dan 22 sampel air sawah dan irigasi yang diambil pada pintu pertama lahan sawah tersebar di Utara, Selatan, Timur dan Barat wilayah penelitian. Parameter yang dianalisis di Laboratorium meliputi; pH (H<sub>2</sub>O, KCl, air sawah dan irigasi), EC dan TDS (Elektrometrik), C-Organik (Walkley and Black), N-Total (Kjeldahl), P-Tersedia (Bray I), K-dd (Pencucian NH<sub>4</sub>OAc pH 7 1N), dan Rasio C/N. Hasil penelitian menunjukkan nilai pH tanah (H<sub>2</sub>O dan KCl) berkisar antara (5,38-7,73 dan 4,09-6,3), pH air sawah dan irigasi (5,3-7,22 dan 5,25-7,01), EC tanah (61-307  $\mu$ S/cm), EC air sawah dan irigasi (68-464 dan 78-396  $\mu$ S/cm), TDS tanah (31-154 ppm), TDS air sawah dan irigasi (34-231 dan 39-184 ppm), C-Organik (2,71-6,09%), N-Total (0,11-0,7%), P-Tersedia (6,0-9,8 ppm), K-dd (0,31-0,41 me/100g), dan Rasio C/N (8,5-28,9). Analisis diskriminan linier menunjukkan bahwa terdapat perbedaan nilai sifat kimia tanah sawah fisiografi aluvial pada sektor Utara dengan Timur dan Selatan namun bernilai sama dengan Barat.

*Kata kunci : Fisiografi Aluvial, Lahan Sawah, Pemetaan Tanah Digital, Sifat Kimia Tanah.*



# SPATIAL DISTRIBUTION OF SOME CHEMICAL PROPERTIES OF ALLUVIAL PHYSIOGRAPHIC RICE FIELD SOILS IN THE PLOWED LAYER IN SOLOK REGENCY

## ABSTRACT

Alluvial physiographic rice fields with area of 3.102,9 ha are spread in Solok Regency in several sub-districts, including Junjung Sirih, X Koto Singkarak, Kubung, and Bukit Sundi. The study aims to map the chemical properties of alluvial physiographic paddy field soil and the quality of paddy field water and irrigation. Ordinary kriging method was applied to predict the chemical properties of paddy field soil and its distribution in areas outside the sample points. A total of 22 soil samples were taken with a stratified sampling system at a depth of 0-20 cm and 22 samples of paddy field water and irrigation were taken at the first gate of the paddy field spread in the North, South, East and West of the research area. Parameters analyzed in the laboratory to determine pH (H<sub>2</sub>O, KCl, rice field water and irrigation), EC and TDS (Electrometric), C-Organic (Walkley and Black), N-Total (Kjeldahl), P-Available (Bray I), K-dd (NH<sub>4</sub>OAc pH 7 1N leaching), and C/N Ratio. The results showed soil pH values (H<sub>2</sub>O and KCl) ranged from (5.38-7.73 and 4.09-6.3), pH of paddy and irrigation water (5.3-7.22 and 5.25-7.01), soil EC (61-307  $\mu$ S/cm), EC of paddy and irrigation water (68-464 and 78-396  $\mu$ S/cm), TDS of soil (31-154 ppm), TDS of paddy and irrigation water (34-231 and 39-184 ppm), C-Organic (2.71-6.09%), N-Total (0.11-0.7%), P-Available (6.0-9.8 ppm), K-dd (0.31-0.41 me/100g), and C/N Ratio (8.5-28.9). Linear discriminant analysis showed that there were differences in the values of chemical properties of alluvial physiographic rice fields in the North sector with the East and South but the same value with the West.

*Keywords* : *Alluvial Physiography, Rice Fields, Digital Soil Mapping, Soil Chemical Properties.*

