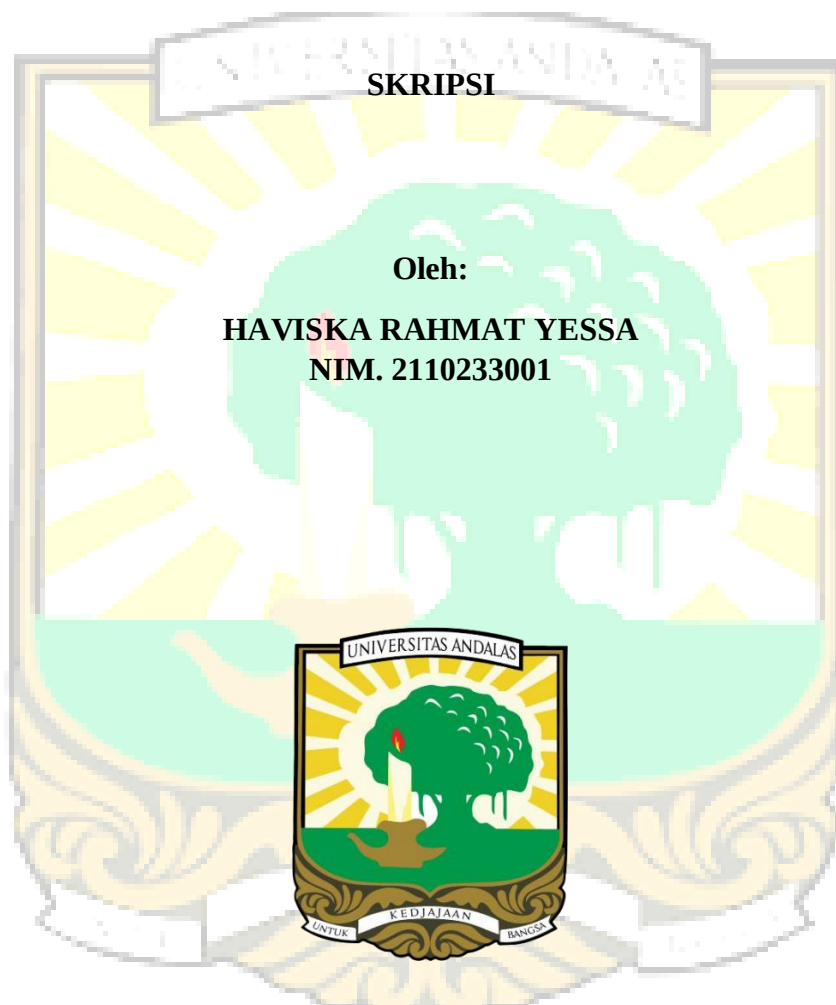


**ANALISIS STATUS KESUBURAN KIMIA TANAH PADA
LAHAN SAWAH TADAH HUJAN DI NAGARI SUNGAI
GAYO LUMPO, KECAMATAN IV JURAI, KABUPATEN
PESISIR SELATAN**



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ANALISIS STATUS KESUBURAN KIMIA TANAH PADA LAHAN SAWAH TADAH HUJAN DI NAGARI SUNGAI GAYO LUMPO, KECAMATAN IV JURAI, KABUPATEN PESISIR SELATAN

ABSTRAK

Lahan sawah merupakan hal yang sangat penting dalam mendukung swasembada pangan terutama beras. Namun dari hasil penelitian menunjukkan bahwa produktivitas lahan sawah cenderung menurun dan bervariasi antar daerah. Penelitian tentang analisis status kesuburan kimia tanah telah dilakukan pada lahan sawah tadah hujan di Nagari Sungai Gayo Lumbo, Kecamatan IV. Jurai, Kabupaten Pesisir Selatan. Penelitian ini bertujuan untuk mengetahui status kesuburan tanah dan unsur hara makro pada 3 jenis pengelolaan lahan sawah; tadah hujan MTOT (Mulsa Tanpa Olah Tanah; tadah hujan konvensional; irigasi MTOT. Metode yang digunakan dalam penelitian ini yaitu metode survey dengan teknik *purposive sampling* secara komposit pada 3 kedalaman tanah (0-20 cm, 20-40 cm, 40-60 cm). Parameter yang dianalisis yaitu C-organik, N-total, K-total, K-dd, Ca-dd, Mg-dd, Na-dd, KTK, Kejenuhan Basa, Al-dd. Hasil penelitian menunjukkan nilai N-total pada sawah tadah hujan MTOT kriteria sedang (0,23-0,30 %) cenderung sama antar kedalaman tanah, nilai K-total tergolong kriteria sedang (27,22 mg/100g) hingga tinggi (41,41 mg/100g). Sawah irigasi dengan MTOT memiliki N-total pada semua kedalaman dengan kriteria sangat rendah (0,09%) hingga sedang (0,21%), kandungan K-total dengan kriteria rendah (17,92 mg/100g) hingga sedang (28,83 mg/100g). Sawah tadah hujan konvensional nilai N-total pada semua kedalaman dengan kriteria sedang (0,31-0,41%), kandungan K-total kriteria rendah (18,11 mg/100g) hingga sedang (21,79 mg/100g). Kesuburan tanah pada 3 jenis pengelolaan lahan sawah berkriteria rendah. Perlu adanya pengelolaan bahan organik secara berkelanjutan, seperti penerapan mulsa jerami secara konsisten, untuk meningkatkan kandungan C-organik dan unsur hara makro dalam tanah, yang terbukti membantu peningkatan status kesuburan tanah sawah tadah hujan.

Kata Kunci: Kesuburan tanah, Sawah tadah hujan, Sifat kimia tanah, Pesisir selatan

ANALYSIS OF SOIL CHEMICAL FERTILITY STATUS IN RAINFED RICE FIELDS IN NAGARI SUNGAI GAYO LUMPO, DISTRICT OF IV JURAI, PESISIR SELATAN REGENCY

ABSTRACT

Paddy fields play a crucial role in supporting food self-sufficiency, particularly rice. However, research has shown that the productivity of paddy fields tends to decline and varies across regions. A study on the analysis of soil chemical fertility status was conducted on rainfed lowland rice fields in Nagari Sungai Gayo Lumbo, IV Jurai Subdistrict, Pesisir Selatan Regency. The aim of this study was to determine the soil fertility status and the availability of macronutrients under three types of paddy field management: rainfed MTOT (Mulch Without Tillage), conventional rainfed, and irrigated MTOT. The method used in this study was a survey method with purposive composite sampling at three soil depths (0–20 cm, 20–40 cm, 40–60 cm). The parameters analyzed included organic-C, total-N, total-K, exchangeable K, exchangeable Ca, exchangeable Mg, exchangeable Na, CEC, base saturation, and exchangeable Al. The results showed that the total-N content in rainfed MTOT rice fields was in the medium category (0.23–0.30%) and tended to be consistent across soil depths, while the total-K content ranged from medium (27.22 mg/100g) to high (41.41 mg/100g). In irrigated MTOT rice fields, the total-N content at all depths ranged from very low (0.09%) to medium (0.21%), with total-K ranging from low (17.92 mg/100g) to medium (28.83 mg/100g). In conventional rainfed rice fields, the total-N content at all depths was in the medium category (0.31–0.41%), while the total-K content was in the low (18.11 mg/100g) to medium (21.79 mg/100g) category. Soil fertility status under the three paddy field management types was classified as low. Therefore, sustainable organic matter management is necessary, such as the consistent application of rice straw mulch, to increase organic C and macronutrient content in the soil, which has been proven to enhance the fertility status of rainfed lowland rice fields.

Keywords: Pesisir Selatan, Rainfed rice fields, Soil chemical properties, Soil fertility.