

**KAJIAN BEBERAPA UNSUR HARA MIKRO (Fe, Mn, Cu, Zn)
PADA LAHAN SAWAH TERASERING TADAH HUJAN DI
NAGARI SUNGAI GAYO LUMPO KECAMATAN IV JURAI
KABUPATEN PESISIR SELATAN**

Skripsi

Oleh:



**FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2026**

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**Kajian Beberapa Unsur Hara Mikro (Fe, Mn, Cu, Zn) Pada Lahan
Sawah Terasering Tadah Hujan Di Nagari Sungai Gayo Lumpo
Kecamatan IV Jurai Kabupaten Pesisir Selatan**

ABSTRAK

Lahan sawah tadah hujan berterasering memiliki kendala utama berupa perubahan pasokan air dan risiko ketimpangan unsur hara akibat pengaruh topografi serta pengelolaan drainase yang buruk. Penelitian ini bertujuan untuk mengetahui status ketersediaan beberapa unsur hara mikro esensial (Fe, Mn, Cu, Zn) pada lahan sawah tadah hujan berterasering di Nagari Sungai Gayo Lumpo, Kecamatan IV Jurai, Kabupaten Pesisir Selatan. Metode yang digunakan adalah survei lapangan dengan pendekatan Purposive Random Sampling berdasarkan posisi teras (atas, tengah, bawah) dan dua kedalaman tanah (0–20 cm dan 20–40 cm) dengan total 18 sampel tanah terganggu, ditambah pengamatan 3 minipit profil tanah. Hasil penelitian menunjukkan ketersediaan Fe (27,48–47,48 ppm) dan Mn (9,53–16,58 ppm) berada pada kriteria tinggi di semua tingkatan teras akibat kondisi reduksi saat penggenangan. Status Zn tergolong sedang hingga tinggi (3,00–12,20 ppm), sedangkan Cu berada pada kriteria rendah hingga sedang (4,84–8,58 ppm). Secara spasial, posisi teras bawah memiliki akumulasi hara mikro tertinggi serta pH terendah (5,27) akibat proses pencucian (runoff) dan drainase yang terhambat. Kesimpulan penelitian menunjukkan bahwa topografi terasering dan sistem drainase secara signifikan memengaruhi sebaran serta akumulasi hara mikro, di mana area teras bawah berpotensi mengalami cekaman toksisitas Fe dan Mn. Disarankan untuk melakukan manajemen lahan melalui pengembalian sisa panen (jerami) guna meningkatkan C-organik tanah serta melakukan perbaikan sistem drainase, khususnya pada bagian teras bawah, untuk mengendalikan kelarutan besi dan mangan.

Kata Kunci: *Hara Mikro, Sawah Tadah Hujan, Sungai Gayo Lumpo, Terasering.*



**Assessment of Selected Micronutrients (Fe, Mn, Cu, and Zn) in Terraced
Rainfed Paddy Fields in Nagari Sungai Gayo Lumpo, IV Jurai District,
Pesisir Selatan Regency**

ABSTRACT

Terraced rainfed paddy fields are characterized by major constraints associated with variations in water availability and the risk of uneven micronutrient distribution resulting from topographic conditions and inadequate drainage management. This study aimed to assess the availability status of selected essential micronutrients, namely iron (Fe), manganese (Mn), copper (Cu), and zinc (Zn), in terraced rainfed paddy fields located in Nagari Sungai Gayo Lumpo, IV Jurai District, Pesisir Selatan Regency. The research employed a field survey using a purposive random sampling approach based on terrace position (upper, middle, and lower) and two soil depths (0–20 cm and 20–40 cm). A total of 18 disturbed soil samples were collected, complemented by observations of three soil profile minipits. The results showed that the availability of Fe (27.48–47.48 ppm) and Mn (9.53–16.58 ppm) was classified as high across all terrace positions, primarily due to reducing conditions during flooding. Zinc (Zn) availability ranged from moderate to high (3.00–12.20 ppm), whereas copper (Cu) was classified as low to moderate (4.84–8.58 ppm). Spatially, the lower terrace exhibited the highest accumulation of micronutrients and the lowest soil pH (5.27), which was attributed to runoff-induced nutrient transport and restricted drainage. The findings indicate that terrace topography and drainage conditions significantly influence the spatial distribution and accumulation of soil micronutrients, with the lower terrace having a greater potential for Fe and Mn toxicity. Therefore, it is recommended that land management practices include the incorporation of rice straw residues to enhance soil organic carbon content and improvements in the drainage system, particularly in the lower terrace, to reduce the solubility of iron and manganese.

Keywords: *Micronutrients, Rainfed Paddy Field, Sungai Gayo Lumpo, Terraces.*