EVALUATION OF LAND SUITABILITY FOR CEMPEDAK (*Artocarpus campeden* Spreng) IN BATU MANDI AND SOUTH PARINGIN DISTRICTS, BALANGAN REGENCY, SOUTH KALIMANTAN

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By

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RINGKASAN

MUHAMMAD RAYHAN GHIFFARI. Evaluasi Kesesuaian Lahan untuk Cempedak (*Artocarpus campeden* Spreng) di Kecamatan Batu Mandi dan Paringin Selatan, Kabupaten Balangan, Kalimantan Selatan, dibimbing oleh Ibu Nurlaila, S.P., M.P.

Penelitian ini bertujuan untuk mengevaluasi potensi perubahan kelas kesesuaian lahan untuk meningkatkan perencanaan tata guna lahan dan penataan spasial, khususnya untuk mendukung pengembangan budidaya cempedak di Kabupaten Batu Mandi dan Paringin Selatan, Kabupaten Balangan, Provinsi Kalimantan Selatan. Penelitian ini dilakukan dari Mei hingga Agustus 2025 dengan menggunakan metode pencocokan (*matching*) untuk menghubungkan karakteristik lahan dengan kriteria kesesuaian lahan tanaman cempedak, yang kemudian dianalisis secara deskriftif kuantitatif dan disajikan dalam bentuk peta melalui *ArcGIS.*

Hasil menunjukkan kedua kecamatan tersebut memiliki potensi yang cukup besar untuk pengembangan cempedak, meskipun kondisi saat ini termasuk dalam kelas tidak sesuai (N) dan sesuai marginal (S3). Di Kecamatan Batu Mandi, kesesuaian aktual adalah S3 seluas 11.238,48 ha, dan N seluas 1.541,61 ha. Di Kecamatan Paringin Selatan, kesesuaian cempedak juga S3, seluas 6.953,21 ha. Faktor pembatas utama meliputi tekstur tanah yang kurang sesuai, kejenuhan basa rendah, pH tanah yang asam, dan ketersediaan unsur hara P_2O_5 dan K_2O yang rendah. Upaya perbaikan berupa rekomendasi peningkatan yang melibatkan penambahan kompos pelet dan pengapuran dengan pengelolaan tingkat tinggi, serta pemupukan dengan pengelolaan tingkat sedang menggunakan *triple superphosphate* dan KCl dapat meningkatkan kesesuaian dari S3 menjadi S2 atau bahkan S1. Oleh karena itu, lahan tersebut berpotensi menjadi daerah penanaman cempedak dan menghasilkan produktivitas maksimal.

SUMMARY

MUHAMMAD RAYHAN GHIFFARI. Evaluation of Land Suitability for Cempedak (*Artocarpus campeden* Spreng) in Batu Mandi and South Paringin Districts, Balangan Regency, South Kalimantan, supervised by Ms. Nurlaila, S.P., M.P.

This study evaluates potential changes to land suitability classes to improve land-use planning and spatial rearrangement, notably to support the development of cempedak cultivation in Batu Mandi and South Paringin Districts, Balangan Regency, South Kalimantan Province. The research was conducted from May to August 2025 using a matching method to link land characteristics to suitability criteria for cempedak, and the results were presented as ArcGIS maps.

Results show both districts have considerable potential for cempedak development, although current conditions fall within unsuitable (N) and marginally suitable (S3) classes. In Batu Mandi District, actual suitability is S3 covering 11,238.48 ha, and N covering 1,541.61 ha. In South Paringin District, cempedak suitability is also S3, covering 6,953.21 ha. The main limiting factors include unsuitable soil texture, low base saturation, acidic soil pH, and low nutrient availability of P_2O_5 and K_2O. Improvement efforts involving adding pelleted compost and liming with high cultivation, and fertilising with moderate cultivation of triple superphosphate and KCl can increase suitability from S3 to S2 or even S1. Therefore, the land has the potential to become a cempedak planting area and produce maximum productivity.

VERIFICATION PAGE

Title	: Evaluation of Land Suitability for Cempedak (*Artocarpus campeden* Spreng) in Batu Mandi and South Paringin Districts, Balangan Regency, South Kalimantan
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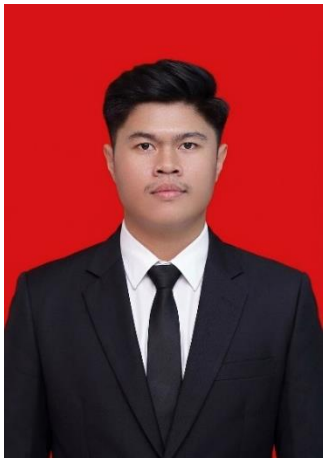
CURRICULUM VITAE



The author is named Muhammad Rayhan Ghiffari, the second child of Mrs Noor Syahida Rahmi, A.Md.Keb., and Mr H. Budi Haryanto, S.Kep., Ns., M.M., who was born in Barabai on June 30, 2002, is an Indonesian citizen and a Muslim man, and is a student at Lambung Mangkurat University with NIM 2210512310026. Before continuing his studies in the Department of Agroecotechnology, Faculty of Agriculture, Lambung Mangkurat University, Banjarbaru, he studied at SDN Haur Gading for elementary school, SMPIT Al-Khair Barabai for junior high school, and MA Negeri 1 Hulu Sungai Tengah for senior high school. The author's real address is Haur Gading Village, RT.004/RW.002, North Batang Alai District, Central Hulu Sungai Regency, South Kalimantan. The residential address is Bumi Berkat Street, V Block C No.14, Sungai Besar, South Banjarbaru District, Banjarbaru City, South Kalimantan. Email: 2210512310026@mhs.ulm.ac.id.

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During his lectures, the author actively participated in the HIMAGROTEK organization of the Faculty of Agriculture from 2024-2025 as a member of the Department of Education and Reasoning. During his lecture time, the author also served as a practicum assistant several times, namely for the Basic Plant Ecophysiology and Plant Propagation Engineering courses in the odd semester of the 2025/2026 academic year.

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This final report was prepared as one of the steps toward meeting the requirements for a bachelor's degree in the Agroecotechnology study program at the Faculty of Agriculture, Lambung Mangkurat University. The completion of this final report is inseparable from the help, guidance, and prayers of various parties. With great humility, the author expresses his gratitude to:

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The author realizes that this final report is still far from perfect and there are many shortcomings. Therefore, the author sincerely welcomes constructive criticism and suggestions for improving this writing in the future. The author hopes this research will benefit all of us.

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