

**Penentuan Alternatif Lokasi Industri Pengolahan Kangkung Di Kabupaten
Sidoarjo Menggunakan Analisis *Location Quotient* Dan *Analytical Hierarchy
Process***

Cindiah Syahnaz S. Agr., M.P. Selaku Dosen Pembimbing

Meidi Indah Sari

Program Studi Manajemen Agroindustri
Jurusan Manajemen Agribisnis

ABSTRAK

Penelitian ini dilatarbelakangi oleh pentingnya penentuan alternatif lokasi terbaik dalam pengembangan industri pengolahan kangkung di Kabupaten Sidoarjo guna mendukung pemanfaatan potensi produksi secara maksimal. Penelitian ini bertujuan untuk mengidentifikasi lokasi basis produksi kangkung menggunakan metode *Location Quotient* (LQ), memvisualisasikan sebaran lokasi basis produksi kangkung secara spasial menggunakan *Geographic Information System* (GIS), serta menentukan alternatif lokasi terbaik menggunakan metode *Analytical Hierarchy Process* (AHP). Metode yang digunakan adalah deskriptif kuantitatif dan kualitatif dengan pendekatan analisis LQ dan AHP, serta didukung oleh visualisasi spasial menggunakan GIS. Data yang digunakan berupa data produksi kangkung tahun 2022–2024 serta penilaian dari *expert* terkait. Hasil analisis LQ menunjukkan bahwa Kecamatan Krembung, Kecamatan Candi dan Kecamatan Tulangan merupakan lokasi basis yang konsisten. Visualisasi GIS menunjukkan bahwa persebaran lokasi basis dan non-basis tidak merata dan terkonsentrasi pada lokasi tertentu. Hasil AHP menunjukkan bahwa ketersediaan bahan baku memiliki bobot tertinggi (0,521), diikuti tenaga kerja (0,201), infrastruktur (0,176), dan kedekatan pasar (0,102). Berdasarkan hasil prioritas alternatif, Kecamatan Candi merupakan lokasi terbaik dengan nilai 0,527, diikuti Kecamatan Tulangan (0,318) dan Kecamatan Krembung (0,155). Hasil penelitian ini diharapkan dapat menjadi dasar dalam penentuan alternatif lokasi industri pengolahan kangkung terbaik dan berbasis potensi lokal di Kabupaten Sidoarjo.

Kata kunci: LQ, GIS, AHP, Lokasi Industri, Kangkung

Determination Of Alternative Locations For The Water Spinach Processing Industry In Sidoarjo Regency Using Location Quotient Analysis And Analytical Hierarchy Process

Cindiah Syahnaz S. Agr., M.P. as a chief concelor

Meidi Indah Sari

*Agroindustrial Management Study Program
Department of Agribusiness Management*

ABSTRACT

This study was motivated by the importance of determining the most suitable alternative location for the development of a water spinach processing industry in Sidoarjo Regency to optimize the utilization of local production potential. The objectives of this study were to identify water spinach production base areas using the Location Quotient (LQ) method, to visualize the spatial distribution of production Water Spinach base areas using a Geographic Information System (GIS), and to determine the most suitable alternative location using the Analytical Hierarchy Process (AHP) method. This study employed a quantitative and qualitative descriptive approach using LQ and AHP analyses, supported by spatial visualization through GIS. The data used consisted of water spinach production data from 2022 to 2024 and expert assessments. The results of the LQ analysis indicated that Krembung District, Candi District, and Tulangan District consistently served as production base areas. The GIS visualization showed that the distribution of base and non-base areas was uneven and concentrated in specific locations. The AHP analysis revealed that the availability of raw materials had the highest priority weight (0.521), followed by labor availability (0.201), infrastructure availability (0.176), and proximity to the market (0.102). Based on the priority ranking of alternative locations, Candi District was identified as the most suitable location with a priority value of 0.527, followed by Tulangan District (0.318) and Krembung District (0.155). The findings of this study are expected to serve as a reference for determining the most suitable alternative location for the water spinach processing industry based on local production potential in Sidoarjo Regency.

Keywords: *LQ, GIS, AHP, Industrial Location, Water Spinach*