

PENENTUAN LOKASI ALTERNATIF UNTUK INDUSTRI PENGOLAHAN BAYAM DENGAN METODE LQ DAN AHP DI KABUPATEN SIDOARJO

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ABSTRACT

Sidoarjo Regency has great potential in the agricultural sector, especially spinach as one of the horticultural commodities. This condition provides an opportunity to develop a spinach processing industry. Selecting the right industrial location is important by considering several criteria, including accessibility, operational costs, competitors, and the availability of raw materials. This study aims to determine the best alternative location for a spinach processing industry in Sidoarjo Regency using the Location Quotient (LQ), Geographic Information System (GIS), and Analytical Hierarchy Process (AHP) methods. This study used a descriptive qualitative method with a quantitative data approach. Quantitative data on spinach production and vegetable production in Sidoarjo Regency from 2022 to 2024 were obtained from the Central Bureau of Statistics (BPS) of Sidoarjo Regency. Qualitative data were collected through questionnaires distributed to experts selected using purposive sampling, consisting of representatives from the government, academics, and business sector. The LQ analysis showed that Krembung, Prambon, Sidoarjo, and Tanggulangin Sub-districts are the main spinach production areas. GIS visualization showed that the production base areas are concentrated in the central and southern parts of Sidoarjo Regency, while non-base areas are mostly located in the eastern and western parts. Based on the LQ results, Krembung, Sidoarjo, and Prambon Sub-districts were selected as alternatives for the AHP analysis because they showed an increasing trend in spinach production during 2022–2024. The global priority results of the AHP analysis showed that Krembung Sub-district is the best location for developing the spinach processing industry, with a priority value of 32.40%. The results of this study are expected to support local governments and business actors in planning the development of the spinach processing industry in Sidoarjo Regency.

Keywords: *Spinach, Processing Industry, LQ, GIS, AHP, Sidoarjo Regency*