Expert System for Determining Food Crops Based on Land Suitability in
Situbondo Regency Using the Certainty Factor Method
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ABSTRACT

Indonesia faces significant challenges in maintaining food security due to climate change and the limited knowledge of farmers in selecting suitable crops according to land conditions. This research develops an expert system using the certainty factor method to assist agricultural extension workers and farmers in determining the appropriate food crops based on land suitability. The research focuses on food crops with a growing period of 3 to 4 months to facilitate farmers' adaptation to climate change. System testing results show 100% accuracy on 10 test data, where the determination results are in accordance with manual calculations and have been validated by experts. Therefore, this system is proven valid and feasible to be used as a decision support tool in selecting appropriate food crops and contributes to national food security efforts.

Keywords*: Expert System, Certainty Factor, Food Crops, Land Suitability.*