

***Identifiaction Of Cocoa Fruit Disease Fruit Image-Based Using K-Nearest
Neighbors Method (K-NN)***

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ABSTRACT

Cocoa (Theobroma cacao L.) is one of the plantation commodities besides coffee that is suitable for smallholder plantations, because this plant can produce throughout the year, so it can be a source of daily or weekly income for cocoa farmers. One of the factors affecting productivity decline is pests and diseases. The development of technology is characterized by the proliferation of technological devices used in various aspects of life. Identification system is a system to determine the results of identification with a specified count in the form of desktop or website applications. To overcome these problems, an identification system is made to identify the type of disease using the K-NN method with the calculation of GLCM parameters. K-NN method to calculate the closest distance K with Euclidean distance calculation. And GLCM feature extraction to calculate the image determines the identification results, so that the search for results from identification using GLCM feature extraction will be more accurate with the certainty value of the K-NN method. With the value of $n = 3$, the highest model accuracy is 84.6%.s

Keywords: Cocoa Fruit, Disease Type, GLCM, Identification, K-NN