SISTEM PAKAR IDENTIFIKASI HAMA DAN PENYAKIT PADA TUMBUHAN KAKAO MENGGUNAKAN METODE *BFS (Breadth First Search)* DAN *CERTAINTY FACTOR* BERBASIS ANDROID.

EXPERT SYSTEM IDENTIFICATION OF PEST AND DISEASE IN COCOA PLANT USING BFS (Breadth First Search) METHOD AND CERTAINTY FACTOR BASED ON ANDROID.

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ABSTRACT

Cocoa (Theobroma cacao L.) is a plantation commodity other than 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 that affect the decline in productivity is pests and diseases. Diseases and pests of cocoa plants can be distinguished based on signs and symptoms. Symptoms of pests and diseases can be observed with the naked eye which characterizes the type that causes these pests and diseases. Technological developments are marked by the proliferation of technological devices used in various aspects of life, one of which is expert systems. An expert system is a form of application of artificial intelligence that has the ability to solve problems like an expert or expert. To overcome these problems, an expert system was created to identify diseases and pests on cocoa plants using the BFS (Breadth First Search) method and certainty factor. The BFS (Breadth First Search) method is used in the manufacture of this system because it can perform periodic search for symptoms and search broadly for each symptom. In addition, the certainty factor method is added to the making of this system to calculate the certainty value of the identification results, so finding conclusions or results from identification using the BFS (Breadth First Search) method will be more accurate with the certainty value of the certainty factor method.

Key words : Cocoa,Expert System,BFS(Breadth First Search),Certainty Factor