Sistem Pakar Diagnosis Hama dan Penyakit Tanaman Jeruk Menggunakan Metode *Certainty Factor* (*Expert System for Diagnosis of Citrus Pests and Diseases Using Certainty Factor Method*)

Pembimbing (1 orang).

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ABSTRACT

Oranges are one of the most important horticultural commodities with the fourth highest consumption level in the world after mangoes, tomatoes and bananas, and the second largest in Indonesia after bananas. The value of citrus production in Indonesia in 2019 was 2,543,485 tons. In 2019, the value of national citrus imports increased by 137,585 tons, up 88.5% compared to 2018 due to the increasing national consumption level. This does not guarantee an increase in farmer profits, because thousands of citrus trees belonging to around 500 farmers in the southern and western regions of Jember Regency must be destroyed due to pests and diseases. In Sidomulyo Village, 40% of farmers from farmer groups have difficulty recognizing the types of pests and diseases that attack plants due to their ignorance. The absence of counseling from the relevant agencies makes it difficult for farmers to determine the appropriate drugs to eradicate pests and diseases that attack. So, to overcome these problems, the researcher designed an expert system that can be used to diagnose citrus pests and diseases. The results of the expert system accuracy test in this study were 96%.

Keywords: Expert System, Certainty Factor, Citrus, Agriculture