

Sistem Identifikasi Penyakit Daun Tanaman Mentimun (*Cucumis Sativa L.*)

Menggunakan Metode *K-Nearest Neighbor*

*(Identification System of Cucumber Plant Leaf (*Cucumis sativa L.*) Using a
K-Nearest Neighbor)*

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ABSTRACT

*Cucumber plant (*Cucumis sativa L.*) is one of the most widely consumed fruit vegetables in Indonesia. Cucumber production in Indonesia experiences production instability every year. This is caused by several factors, including disease problems. Most of the symptoms of cucumber disease are visible on the leaves. So that with a symptom on the leaves, several diseases can be identified. Downy Mildew disease and powdery mildew disease in cucumbers have similar symptoms on the leaves, namely yellow-brown spots on the leaf surface. The method used in this study is the *K-Nearest Neighbor* algorithm with Red color parameters obtained from RGB images, while texture-based feature extraction uses the Gray Level Co-Genesis Matrix (GLCM) Contrast, IDM (Inverse Difference Momentum) and Correlation with angles of 0°, 45°, 90° and 135°. The percentage of accuracy of the *K-Nearest Neighbor* method is able to classify and serve cucumber leaf disease. The cucumber leaf disease program was 70% with value of $k=19$.*

Keywords: *Cucumber, GLCM, K-Nearest Neighbor.*