ABSTRACT

Strawberry is a fruit that is easy to find and has various benefits for the human body. However, strawberries can be harmful to the human body if they contain pesticides. The impact of consuming fruit that contains pesticides is dizziness, nausea, and poisoning if the fruit contains high pesticides.

In this final project discuss the process of detecting pesticides on strawberries. The image data that be used is strawberry skin, and be used as training image data and test image data. After receive the image data, perform pre-processing, namely changing from an RGB image to a grayscale image. The next stage involves using the Gray Level Co-occurrence Matrix (GLCM) method for feature extraction and classifying image data using the K-Nearest Neighbor (K-NN) method.

The experiment conducted in this final project use a system that can differentiate between strawberries containing pesticides and strawberries that not contain pesticides achieves the highest accuracy rate of 94% when the K-Nearest Neighbor (K-NN parameter is set to K=1.

Keywords: *Strawberry*, *Gray Level Co-occurrence Matrix* (GLCM), *K-Nearest Neighbor* (K-NN).