

## ABSTRACT

Food processing industry is growing and the requirement for corn is increasing as well. But one important problem in the effort to increase the production of corn is biotic disturbances which are grouped into two, namely the disturbance caused by macro organisms and microorganisms. Symptoms of the disease can be seen from the changes that occur in corn leaves. Farmers (expert) must have been aware about the symptoms of the disease on the leaves of horticultural corn. It will be a problem when farmers (expert) is not in field so that the corn plants were exposed to the disease can not be prevented.

In general, the detection of the disease on the leaves of the corn plant is composed of four main parts, namely: preprocessing, Color extraction, feature extraction and Classification. Feature extraction used is Color Moments as the extraction of color and GLCM (Gray-Level Co-occurrence Matrix). Classification method on these systems using KNN (K Nearest Neighbor) by way of classification of objects based on learning data that were located closest to the object. Classification in this system consists of four classes of neutral, leaf blight, leaf spot disease, and leaf rust disease on the leaves of corn plants.

This system is already capable of detecting the disease leaves of corn plants based on symptoms that found in the leaves of the corn plants with the best accuracy is 89.375% by using Euclidean distance where the value of k is 1.

**Keywords : Corn Plant, Color Moments, GLCM, KNN**