ABSTRACT

Red dragon fruit is a type of dragon fruit that has dark red skin. This fruit has a ball-like shape with spiny skin and consists of several scales. Small black seeds are found in the flesh of the fruit. So far, red dragon fruit has been selected one by one using manual measuring instruments to determine the weight criteria requested by importers. The parameters required by importers are the weight of dragon fruit weighing more than 3.5 ounces, a deep red color with greenish dragon fruit scales, and dragon fruit that is not diseased Manual selection has many disadvantages. One of them is the relatively long time required, and the criteria for red dragon fruit are not relevant due to fatigue, limited human vision, and differences in perception of fruit quality..

Based on the problems above, researchers implemented a system that can classify the weight, color and texture of red dragon fruit effectively to meet the criteria of importers. This research aims to classify red dragon fruit using the Naive Bayes Classifier method. The data used in this research was 1000 red dragon fruit data as input data and processed with grayscale color conversion and GLCM (Gray Level Co-Occurrence Matrix) feature extraction then classified using the Naive Bayes Classifier method. A total of 200 red dragon fruit image data were used as testing data or test data consisting of 70 good class red dragon fruit image data, 70 bad class red dragon fruit image data, and 60 diseased/smallpox class dragon fruit image data. The test results show that the method used in this research is suitable for use, producing an accuracy rate of 82%. This system is expected to help farmers find out the weight of red dragon fruit requested by importers more accurately.

Keywords: Classification, Red Dragon Fruit, GLCM, NaiveBayesClassifier