Identifikasi Tingkat Kematangan Buah Naga (*Hylocereus SPP)* Menggunakan Metode *Learning Vector Quantization*

Identification of Maturity Level Dragon Fruit (Hylocereus SPP) Using a Learning Vector Quantization

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ABSTRACT

Dragon fruit is a fruit that is classified as a horticultural fruit (Fruitkultura). where horticultural fruit has its own advantages, namely high selling value, various types, and the potential for market uptake that continues to increase domestically and internationally. As time goes by, the selling price of dragon fruit begins to decline, causing the income of dragon fruit farmers to decrease. The cause is the unproductive age of dragon fruit due to disease attacks which cause the quality of the fruit to decrease. So far, the process of identifying dragon fruit has been carried out by workers manually. By utilizing technology that has been developed, researchers are trying to create a system to determine the maturity level of dragon fruit using the LVQ method. This method is used to identify the level of maturity of dragon fruit into four types of classes, namely green, green red, red, red yellow. This research uses color features and texture features as input parameters of the LVQ method. The data used in this research was 200 data which was divided into 180 training data and 20 test data. By using the LVQ method the accuracy obtained was 81% with a learning rate value of 0.1, number of epochs 10, and goal 0.1 for training data and an accuracy of 85% was obtained with four different learning rate values, number of epochs, and goals for test data..

Key Words : Dragon Fruit, RGB, GLCM, LVQ.