ABSTRACT

GMB series tea clones are superior clones produced from plant breeding activities coordinated by PPTK (Tea and Quinine Research Center). The development of these clones is felt to be too slow because replanting program has not become a necessity in a garden, this makes the productivity of tea plantations difficult to increase. Then for employees it is difficult to identify which GMB 1 clone is and which other GMB clones. Until now agronomists have had limited limitations in identifying the types of gastric serial clones to workers. Because it must require researchers to be able to help identify.

In this thesis the author makes a digital image based software. This software can help identify and classify in terms of texture analysis and accuracy values for the hull series clones. This stage is in the form of digital image acquisition which is then carried out preprocessing, then feature extraction using the Gabor Wavelet method and classification using the Support Vector Machine (SVM) method.

A system that can classify the clones of the series GMB 1, GMB 2, GMB 3, GMB 4, and GMB 5. In this study there were 225 training data and 150 test data. The best parameters are obtained with a frequency scale value of 8, orientation 4, downsampling 8 and the type of linear kernel using the SVM OAO parameter. From the results of tests conducted, obtained an accuracy of 90% and 0.8808 seconds of computing time.

Keywords: Gambung series tea clones, Digital Image, Gabor Wavelet, Support Vector Machine