

Title: RubberSOL: Android Based Rubber Tree Leaf Disease and Treatment Recommendation for Denaga's Farm Using OpenCV's Image Processing Algorithms.

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EXECUTIVE SUMMARY

Agriculture has always been a vital element in a country's economics. It plays a function that is significant in the entire life of a given economy in which one of its key importance is to provide food and raw materials for people. The Philippines is one of the countries that have the largest number of exporting rubber products. That is why more farmers are changing their farm plantations to rubber tree plantation for fast harvesting. Therefore, many farmers that are just starting on cultivating rubber tree need orientation on how to grow rubber trees. The farmers cannot avoid problems on their plants like pests, change of weather, etc., to which these results in having deficiencies and diseases of their plants. Because of these problems, the researchers developed an application in an Android platform using image recognition approach and methods that could lessen the efforts of the rubber tree cultivator's farmers on detecting and acquiring knowledge of rubber tree diseases. The application not only includes the detection of some diseases and deficiencies found here in the Philippines but also, it has treatment and prevention; as well as features, that will help the users in growing their rubber tree plants.

Keywords: ORB, Brute Force, SQLite, File Base, Image Processing, Android Application, Image Noise Filtering, Matrix.