

ANDROID BASED AUTOMATIC WATERING AND MONITORING SYSTEM FOR PALM SEEDS

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ABSTRACT

The quality of oil palm fruit is very important. Effective seed care is one technique for producing quality oil palm seeds. However, seed care is often hampered by watering, because the seed owner cannot control the palm seedlings all the time. The aim of this research is to create a tool and mobile application used to control soil moisture and automatic watering based on Android. In this research, sensor testing and interviews were used as data collection methods. The sensor used in this system is a soil moisture sensor. Then the NodeMCU ESP8266 microcontroller will process the data obtained from the sensor, after which the data will be stored in real time in the Firebase realtime database. Android applications created with the Java programming language can be used for monitoring. This system can make it easier for oil palm seed owners to control and water the seedlings, even when traveling, the seed owner can control the oil palm seedlings using the Android application, so that regular care of the seeds will produce quality oil palms.

Keywords: Android, Palm Oil Seeds, IoT, Nodemcu, Sensor