

DESIGN AND BUILD OF ARDUINO UNO BASED PINANG SEED DRYER

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ABSTRACT

Areca nut is a type of monocot plant which is classified as paleman. This tree is a plant with high economic value and potential. Areca fruit is also used as a complement to the betel culture in various regions in Indonesia. In addition, areca nut can also be used as a natural red coloring agent. The drying process of areca nuts, which is generally carried out by drying them directly under the hot sun, is proven ineffective in this way because it requires a long time, a large area, sunlight, at night or when it rains the drying process cannot be carried out. Areca seed dryer based on Arduino uno is made to make it easier for users to dry the areca nut. This tool is controlled using an Arduino Uno R3 ATmega 328p microcontroller. The working system of this tool is that each component is supplied with a supply. Press Pushbutton start to start the system, the incandescent lamp and the dc motor will be active, the DHT11 sensor will detect temperature and humidity, the sensor output will be sent to the microcontroller then the microcontroller will send data to the LCD. After reaching the 20% humidity setpoint, the drying process of the areca nuts is complete and the system will automatically turn off. By using this areca seed dryer the average time needed is 2 hours 5 minutes compared to using the sun's heat for 2 days.

Keyword: Sensor DHT11, Mikrokontroller Arduino Uno, Areca nuts