

ANALISA TORSI MOTOR DAN KONSUMSI DAYA RANCANG BANGUN ALAT PENGERING PINANG OTOMATIS BERBASIS *ARDUINO UNO*

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Abstract

Areca nuts are currently very attractive to farmers, because in addition to the price of areca nut which is currently getting higher for the economy, areca fruit can also be used as medicines and cosmetics. Drying betel nuts is still done manually or traditionally, therefore the author wants to create a useful tool for areca farmers, so that areca farmers do not depend on nature, whose weather conditions are uncertain. This areca drying device makes it easier for farmers to process betel nuts during the day and at night and to maximize processing yields and accelerate the drying of the betel nuts. As for past research with the Kansei Engineering Method with a constant temperature of 45°C for 16 hours. In this study the authors designed a betel nut dryer entitled Analysis of Motor Torque and Power Consumption Design of an Arduino Uno based Automatic Areca Dryer. After conducting the testing process for the design of a betel nut dryer using solar heat and artificial heat from incandescent lamps, it can be obtained that the areca nut drying process is hot in 18 hours. It can dry the areca nut from the initial period of 3500 grams to 1560 grams, while using various incandescent heat (45°C to 51°C) within 20 hours it can dry areca nuts from the initial period of 3500 grams to 1560 grams and with a load of 5 Kg, a torque of 30.10 Kg.cm is obtained and the power consumption of R1 is Rp. 8,358.41, - for 20 hours of use.

Keywords: *areca nuts, torque, power, arduino uno.*