DESIGN OF AUTOMATIC BOX FOR MERPATI BOX CLEANING AND TEMPERATURE CHECKING SYSTEM WITH NodeMCU ESP8266 CONTROLLER AND TELEGRAM APPLICATION

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ABSTRACT

There are various main problems in the livestock sector that are of concern, namely the cleanliness of the stables which still use direct labor. Cleaning the cage requires quite a long time, in reality the cleaning is done twice a day where the cleaning of the cage is done per box. This study aims to provide information about the automation system for cleaning manure and controlling pigeon box temperature through the Telegram application. The automatic dirt cleaner was designed by the author to compare the time efficiency between before and after using the automatic system. From the tests carried out, the percentage of time efficiency obtained from the manual cleaning system with the automatic cleaning system has a percentage of 60%. By using highly efficient automation systems to shorten cleaning time. Not only cleaning the box, the author has developed an aspect to keep the pigeons comfortable in the cage, namely by adding a box temperature control system, where the system will later function as pigeon treatment in terms of comfort, especially for championship pigeons. Testing the box temperature system was carried out by comparing the DHT11 temperature sensor with a thermometer. The test is carried out to determine the difference or temperature error on the two temperature measuring instruments. From the test results there is a difference in accuracy or temperature error of 3.4%.

Keywords: Time efficiency, Box temperature, Thermometer.