DESIGN AND DEVELOP AN AUTOMATIC CHICKEN FEEDING EQUIPMENT USING IOT-BASED ARDUINO

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ABSTRACT

In raising chickens, regular feeding and drinking is a must so that the chickens do not lack nutrition which can result in death. But in reality, providing time to provide feed is not easy, especially if you have other activities. To overcome these negative impacts, chicken feeding can be done automatically by setting the time interval for chicken feeding. Chicken feeding activities can be carried out by utilizing the Internet of Things, Arduino MEGA and ESP8266 micro controllers as the main controllers, RTC DS3231 as time input, servo to open the reservoir so that the feed can fall into the weighing then weighed using a load cell, ultrasonic sensors to monitor feed availability on the reservoir and DHT11 to monitor the temperature of the cage. The process of feeding and monitoring can be done via a web so that farmers do not need to go to the cage. After testing the tool to monitor feed, monitor temperature with an accuracy of 99.5454%, and the feeding process with a feed weighing accuracy value of 99.075% so that a percentage success rate of the tool is obtained by 100%, it can be concluded that this IoT-based automatic feeder can work well Good.

Keywords: raising chickens, feeding, IoT, feed monitoring, feed weighing.