

DESIGN OF POULTRY EGG INCUBATOR WITH HATCHING NOTIFICATION USING NODEMCU ESP8266 AS MICROCONTROLLER

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ABSTRACT

The increasing awareness of the Indonesian people about the importance of nutritional intake has encouraged the consumption of protein-based foods, including eggs, which are affordable animal food. The egg hatching process can be done naturally by the mother bird or using an artificial method with an incubator. Incubators were originally simple tools that used lamps to generate heat, but along with the development of technology, modern incubators have been developed to increase the efficiency and ease of monitoring egg hatching. This study aims to design and create a poultry egg incubator equipped with a notification feature that the eggs have hatched. This tool is designed to make it easier for farmers to hatch eggs from various types of poultry efficiently in one device. This incubator is equipped with a fan that will activate if the temperature exceeds 39.50, and the fan will also automatically turn off if the temperature is less than 36.50, the use of a fan in this incubator is to maintain an optimal temperature between the temperature range of around 37 - 38.50. In addition, this tool uses a PIR sensor that detects when the eggs hatch and will automatically sound the buzzer and send an automatic message to Telegram as a notification. This innovation is expected to increase the productivity and efficiency of poultry farmers in the egg hatching process.

Keywords: *Egg Hatching, Egg Incubator, Hatching Notification, PIR Sensor*