ABSTRACT

Hatching egg using conventional machines is still rarely used by farmers due to lack of knowledge and knowledge in utilizing technological developments. Temperature and humidity are important factors in hatching eggs, namely 37ºC to 40ºC and optimal humidity of 55% to 65%. Conventional machines in the form of incubators are installed with hardware devices used, namely DHT22 as a temperature sensor and ESP8266 as a connecting device with WiFi and utilizing the Arduino IDE application and Thingspeak as a monitor. How to work so that the temperature and humidity of the incubator in hatching eggs remain stable is the on and off of incandescent lights using an automatic relay. The results of using the incubation machine are proven to increase the number and reduce the risk of bacterial contamination of eggs because it does not depend on the hen and the weather because the temperature in the machine is always stable. The results of errors that occur in the machine are only 0.4% and there is no packet loss and WiFi network delivery delay of 0.00000135565 s or less than 1 second.

Keywords : *Temperature, Wifi, DHT22, ESP8266*