

ABSTRACT

A large demand for eggs and meat duck are not comparable with the number of ducks. This is due to the difficulty of the farmers incubate duck eggs because the Duck does not want to incubate its eggs. The beginner farmer was very difficult to incubate duck eggs although use incubator tool wear. Egg incubator on the market today still use the Lamps so that the temperature is not evenly spread, still need discipline to reverse the eggs every day and change the water in the container to get the humidity.

In this final project will be realized the egg incubator that can reverse eggs every day, spread evenly distributed temperature and humidity. Egg incubator consists of a linear motor to reverse the eggs every day, heating, cooling, fan and water spray to control the system in order to deploy a uniform prevalent temperature and humidity. Microcontroller as the system controller commands heaters, fans and water spray. Microcontroller get the data to control the system from sensor SHT11 and to order linear motor overturn eggs each day the data obtained from RTCDS1307.

To get a tool can incubate duck eggs then in the final project will be designed and realized a control system of humidity, temperature and motor on the appliance with the method of fuzzy egg incubator. From the test results for 29 days, the percentage of eggs hatching success as much as 84% with the number of eggs hatched 42 of 50 eggs.

Keywords: Microcontroler, RTC DS1307, sensor SHT11, *fuzzy logic*