Abstract

Meeting the high demand for poultry products calls for the use of artificial egg hatcheries but the backyard and small-scale poultry farmers are constrained by the dependence on natural incubation or on commercial hatcheries for young birds for breeding. In this paper an incandescent bulb heat source incubator is designed and constructed to hatch 14000 quail eggs (4500 chicken egg equivalent). The incubator system is an Arduino microcontroller-based, which controls the heaters, air circulation fans and the mechanism for turning the trays, through relays. The prevailing conditions in the incubator (temperature and the humidity) are displayed on a 16x2 LCD screen. The objective of the design is to help produce a low cost, energy efficient incubator for hatching Japanese quail eggs.

References


Index Terms

Computer Science
Circuits and Systems
Keywords

Temperature, Humidity, Incubation, Arduino microcontroller,