

ABSTRACT

The final project is about how to design a device that is designed to facilitate a chicken farmer in maintaining the quality of their chicken. The quality of laying hens can be improved by keeping the warmth, light, and good sanitation of the chicken coop from the germs that can decrease the production of laying hens.

In this final project has been created automatically roof's system based on microcontroller . The microcontroller is programmed before by C Programming Language that connected with light dependent resistor (LDR), water sensors, and Real Time Clock which is used to detect the pre-defined parameters. With DC motors, the roof will be opened the cage and stop automatically if it touches the limit switch. In the otherwise the roof will be closed on the time and conditions that determined before.

The system of the open / close roof in the cage is already done and can maintain the quality of laying hens . In use of this tool has been able to move on its own without the presence of a particular button. The voltage is equal to 8.6125 v on DC's motor one ,and 8.7225 v on DC's motor 2. The voltage of light sensor after light exposure is 0 v , while the voltage of the water sensor after the water is exposed to 3.91 v .

Keywords: laying hens, microcontroller, lights sensors, water sensors, Real Time Clock, DC motors and limit switches