

SEMIAUTOMATIC EGG INCUBATOR MACHINE

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ABSTRACT

The main objective of this paper is to develop a machine which costs minimum and be easier for small poultry farmers the poultry farmers facing a challenging task hatching the eggs. Due to older and traditional methods the production of chick's is getting lower and which will be effect the demand of market .Due to Lower production of chick's the cost becomes higher so to overcome this effect the semiautomatic egg hatching machine is developed which would increase the production and reduces the cost of hatching and this difficult task of producing chicken from eggs will becomes much more easier.

Keywords: Hatching, semiautomatic, arduino , incubator

1. INTRODUCTION

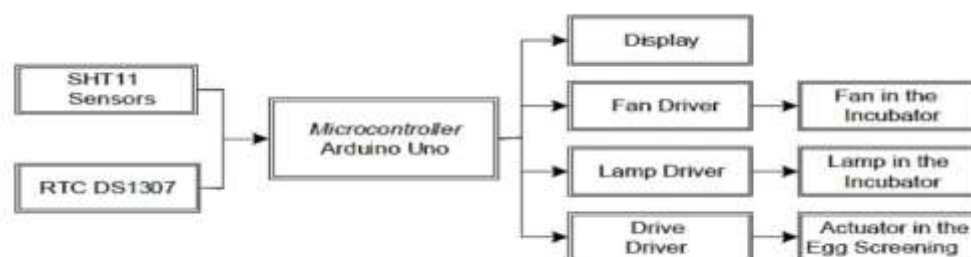
Farmers generally use poultry farm for the production of eggs, meat and making more profit from these products. Millions of chickens are produced in the world as a best source of food from their eggs and meat. Hatching chicken from eggs is a 21-day process and requires an egg incubator machine to control temperature, humidity and egg turning. Hatching of egg is a challenging task and there is lower percentage of production by older methods. Now a day's this area requires demand for automation in poultry Farming. Due to automation human effort for hatchings goes on decreasing by using these kind of machines. This machine includes automatic temperature controller and turning of eggs due to which the percentage of yield increases and poultry industry.

2. LITERATURE REVIEW

Ngnassi Djami Aslain Brisco, 1] Design of a Semi-Automatic Artificial Incubator They have tried to create a setup that will decrease human effort and succeeded to an extent by using the low cost automation system from Incubation of eggs. Improve and rise in speed of hatching and decrease the cycle time. Restrictions will be there due to the practical complications in programming of the project according the availability of the resources and apparatuses. This setup can be further improved by various sensors.

Mr.Pravin Kalumbre. 2] Hatching Eggs Automatically .In this paper they have using the DHT11 as a temperature and humidity sensor .Lamp as the source of light, fan is used for ventilation purpose and a system with arduino acts as a main controller if this system .The geared motors are used for turning the eggs .the temperature would be shown on the LCD screen. This system can be modified by various ways.

3. BLOCK DIAGRAM OF THE SYSTEM



BLOCK DIAGRAM

ARDUINO



The arduino is used as the main controller of this system. The arduino UNO board is used which controls the whole system by analyzing the parameters which are collected by sensor. The fan and lamp is interfaced with the arduino which controls the heating and ventilation action. When the temperature is increased the fan gets on and light gets off. In this way the temperature is controlled by arduino.

LAMP



A lamp is used for heating purpose. An incandescent light bulb, incandescent lamp or incandescent light globe is an electric light with a wire filament heated until it glows. The filament is enclosed in a glass bulb with a vacuum or inert gas to protect the filament from oxidation. This will provide light and heat is generated

FAN



Fans are used to draw cooler air into the incubator from the outside, and to remove warm air outside and move air in and out to maintain the temperature

GEARED MOTORS



The geared motors are used for turning of eggs. The 12v DC Gear motors are used having less rpm for turning of eggs twice a day.

4. CONCLUSION



This system is very useful for small poultry farmers. The production, yield of hatching of eggs is increased. This is low cost and durable systems. The efforts are reduced and this challenging task becomes much more easier and convenient

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