

ABSTRACT

Experiments were carried out during the winter seasons of 2006/2007 at a private farm, Sharkia Governorate to study the effect of some different parameters on the performance of two incubators (local and developed incubators) during hatching different kinds of poultry eggs.

The objectives of this investigation are:

- 1-Developing semi-mechanical incubator for small egyptian projects.
- 2-Optimizing some different parameters affecting the performance of both the local and the developed incubators.
- 3-Comparing the developed incubator with the local semi-mechanical incubator from the economical point of view.

Experiments were carried out to study the effect of some operating parameters on the performance of two incubators (local and developed incubators) during hatching different kinds of poultry eggs. Performance was experimentally investigated as a function of change in temperature, humidity, turning number, kind of egg and light regime in terms of hatching ratio, loss ratio and hatching cost.

The experimental results reveal that hatching ratio was maximum (90 %), while both loss ratio (12 %) and hatching cost (1.15 L.E/chicken) were minimum under the following conditions:

- Use of the developed incubator.
- Temperature of about 37.5°C.
- Humidity of about 55%.
- Turning number of 12, times per day.
- Under dark regime.

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