ACADEMICIA: An International Multidisciplinary Research Journal
ISSN: 2249-7137 Vol. 12, Issue 04, April 2022 SJIF 2022 = 8.252
A peer reviewed journal

LEVEL OF INCUBACATION OF EGGS IN DIFFERENT INCUBATOR CABINETS

Gaibnazarov D.A*; Mamanov R; Mamatov Kh.A*****

*Master,
Samarkand Institute of Veterinary Medicine,
Samarkand, UZBEKISTAN
Email id: gaibnazarov@gmail.com

**A gifted Student,
Samarkand Institute of Veterinary Medicine,
Samarkand, UZBEKISTAN

***Senior Teacher,
Samarkand Institute of Veterinary Medicine,
Samarkand, UZBEKISTAN

DOI: 10.5958/2249-7137.2022.00268.3

ABSTRACT

The article focuses on the weight, shape, and look of the egg, as well as the state of the shell, when determining the egg's quality. "Universal-55" and Chinese "HB-22528" incubators are used to incubate eggs. The form and condition of an egg's shell are taken into consideration while analyzing its appearance. Weight, shape, component ratios, protein and yolk height, thickness, and hardness of the shell are all used to determine egg quality.

KEYWORDS: *Eggs, Incubation, Incubator, Avascope, Ventilation.*

INTRODUCTION

As stated in the Presidential Resolution of the Republic of Uzbekistan on November 13, 2018 PD-4015 "On additional measures for further development of poultry" consistent measures are being taken in our country to develop the poultry sector and increase the volume and variety of finished products for export, as well as to provide the population with locally produced quality and affordable poultry products.

Further development and comprehensive support for poultry farming in the country, including the introduction of advanced technologies and innovative developments in the industry, as well as deepening the processing of poultry products, expanding their range and export, and producing competitive poultry products at stable and reasonable prices. **[1]**

Object of research and methods used. The study took place in the "Agrokompleks" poultry farm in Samarkand's Taylak district. Huge volumes of incubated eggs are delivered to farms from large hatcheries and moved to an egg sorting shop, where they are sorted.

Weight, shape, component ratios, protein and yolk height, thickness, and hardness of the shell are all used to determine egg quality. Examining an egg's appearance, weighing it, measuring its

size, and examining the eggs by illuminating them with a light source are all used to assess its quality.

The form and condition of an egg's shell are taken into consideration while analyzing its appearance. An egg's shape is determined by its size, the ratio of its diameters, or its percent index. With a radius of 1.32 between the major and minor radii and a shape index of 76 percent, the straight-shaped egg is elongated. The diameter of the large egg is divided by two, and the shape index is close to 50%. A large and small diameter are measured using a barbell compass and their ratio is determined to determine the meter's circumference ratio. **[2]**

Results obtained and its analysis. The index of the egg's shape is determined using a special instrument indexer called the IM-1. The eggshell is smooth and pristine, with no cracks or pits. The mucin membrane is intact and the egg is relatively fresh, as seen by the clear color of the shell. In an incubator, eggs with a deformed shape, shattered shells, or iridescent eggs with two yolks are unsuited for hatching.

The above shortcomings are not only unsuitable for incubation, but also not recommended for consumption as food, so in poultry farms try to grow eggs of the same shape and color of the shell, clean surface, smooth and unbreakable .

During storage, the air inside the egg expands as a result of the evaporation of its contents.

The new egg is 3 mm high and 17 mm in diameter. In eggs stored for more than two weeks, the height of the air gap increases from 7 mm to 25-30 mm in diameter.

TABLE 1 MODEL OF INCUBATORS ON THE EXPERIMENTAL FARM AND INDOOR ENVIRONMENT INDICATORS.

Incubator models	**Incubator temperature**	**Humidity inside the incubator**	**Ventilation**	**Rotate**	**Egg weight**	**First biological control**	**Second biological control**	**Third biological control**
Chinese "HB-22528"	37,5-37,7	45%	150cm/s	At 45 degrees every 1 hour	14000	7^{th} day	11^{th} day	18^{th} day
"Universal-55"	37,5-37,7	45%	150cm/s	At 45 degrees every 1 hour	8000	7^{th} day	11^{th} day	18^{th} day

Place the eggs in the incubator

It is a set of conditions necessary for the development of poultry eggs from the incubator

When placed in an incubator, the "Universal-55" incubator can hold 8,000 eggs, and the Chinese "HB-22528" incubator can hold an average of 14,000 eggs.

Air temperature: The average temperature for the development of aphid is 37.5 degrees Celsius in modern incubators. Low temperatures adversely affect the growth and development of the

ovary and cause various disorders in the body during the incubation period. Excessive temperature also accelerates the process of tissue change, leading to disruption of the formation of organs.

High temperatures often lead to the death of aphids. In the first half of the incubation period, the heat demand of the egg increases. In the second half, with a decrease in metabolism, the physiological temperature in the uterus changes, which has a specific effect on the temperature during the incubation period? In the middle of the incubation period, the temperature and humidity are reduced, and air exchange is increased. **[3]**

(Figure 1. The process of pre-processing eggs on the farm and placing the eggs in the incubator cabinet.)

During the hatching period, the internal temperature of the egg can rise to 38.7-41.00 degrees. Therefore, in order to prevent the eggs from overheating, it is necessary to increase the air exchange rate in the incubator. The minimum temperature required for the development of the bud is 26-27 degrees.

When viewed on an ovoscope, the boundary of the air space is drawn with a pencil and its height is measured with a circular meter. The height of the air gap can be determined at the level of the center of the circle, which extends beyond the central axis of the ring. **[4]**

The height and diameter of the air gap can be determined using a special stencil made of millimeter paper glued to cardboard.

The yolk sac is located in the center, and when exposed to light, it appears as a black spot.

The color of egg yolk is usually explained by the presence of carotenoids, which increase the biological value of eggs. indicates the integrity of the lamellae. If one of the ligaments is broken, the egg yolk vibrates a lot and does not return to the center, moving in the opposite direction from the broken ligament. The movement of the egg yolk indicates a low protein density and poor quality. **[5]**

CONCLUSION

The maximum temperature that can cause a change in the development of the ovary is 41 degrees. At some stages of bud development, their temperature increases significantly. Thus, the incubation period of the ovary sensitive to high temperatures is increased from the 15th day. Humidity is an alternative if the egg loses 0.5-0.6% of its weight per day during the 5-6 days of incubation..

REFERENCES

1. Presidential Decree of the Republic of Uzbekistan PD-4947 of February 7, 2017 "On the Strategy for further development of the Republic of Uzbekistan." Collection of Legislation of the Republic of Uzbekistan, 2017, No. 6, Article 70. Available at: https://cis-legislation.com/
2. Presidential Resolution of the Republic of Uzbekistan PR 4015 "On measures for the development of poultry farming". Tashkent, November 13, 2018 Available at: https://cis-legislation.com/
3. Kuznetsov AF. Promyshlennoe ptitsevodstvo. Publishing house: KVADRO. St. Petersburg; 2017.
4. Romanov VG. Some ecological features of incubation chicken eggs. "Kyiv". Ukraine; 2020.
5. Khamraqulov B. Increasing the efficiency of poultry production. Magazine "Uzbek Agriculture" . 2012;(2).