



REPUBLIC OF KENYA



HATCHING EGG MANAGEMENT PRACTICES



Introduction

It is essential to recognize that the quality of eggs cannot be enhanced after laying. To achieve superior hatchability and maintain high chick quality, the focus must be on establishing and maintaining ideal conditions throughout the egg production process. By prioritizing the creation of optimal environments, we can significantly contribute to the production of high-quality eggs that lay the foundation for successful hatching and robust chick development.

Key factors influencing quality hatching eggs

1. Parental flock criteria

- Consider the age, body condition, and health of the parental flock.
- Collect eggs from mature, healthy chicken aged 25 weeks and above, each weighing 45 g or more.

2. Feed, water, and medication

- Monitor the quality of medication, feed, and water.
- Be cautious of disease-causing organisms transmitted through contaminated feeds and water.
- Observe withdrawal periods after administering medicine to the chicken.

3. Housing conditions

- Evaluate the type and condition of the chicken house.
- Maintain a dry, well-ventilated environment with ample lighting consistently.

4. Hygiene in laying nests

- Emphasize good hygiene in laying nests.

- Provide clean nesting materials to facilitate the collection of uncontaminated eggs.

5. Climatic considerations

- Consider prevailing climatic conditions.
- Maintain moderate temperature and humidity levels for optimal egg quality.

6. Mating ratio

- Ensure an appropriate mating ratio.
- Provide 1 cock to 10 hens to achieve optimal fertility.

7. Egg collection and storage

- Implement a regular egg collection routine (every two hours).
- Store collected eggs in a cool, dry place to maintain their integrity.

8. Egg surface cleaning

- Clean egg surfaces using a dry cloth.
- Apply suitable fumigation methods to ensure cleanliness and prevent contamination.

Egg collection

NOTE

Egg quality cannot be improved after lay

Reduce losses by adopting best standard practices

Train hens to use nests

Store the pointed end of the egg facing downward

Collect eggs 4-5 times a day especially before noon

Wash/sanitize hands prior to eggs collection

Disinfect the egg trays

Eggs collected from the floor are not deemed suitable for hatching purposes, due to their contact with beddings, which typically harbour a higher concentration of microorganisms. Collecting eggs from the floor poses a significant biosecurity risk, as the increased microbial presence can compromise the overall health and safety of the hatching eggs. To maintain optimal hygiene and reduce the likelihood of contamination, it is crucial to avoid using eggs obtained from the floor for hatching purposes.

Egg collection and packaging

Store

Store hatching eggs in the coolest part of the house

- (Temp. 18-20°C and RH of 55-60%)

Wash/sanitize

Wash/sanitize your hands when handling hatching eggs. Do not use oily hands.

Reject

Reject all dirty big, small, calcium deposit, double Yolk, broken and cracked eggs.

Laying nest hygiene

- Utilize dry nesting materials.
- Conduct disinfection of laying nests using nest tabs every two weeks.
- Promptly replace nest materials when they become soiled or wet to maintain a clean and conducive laying environment.



Laying nest

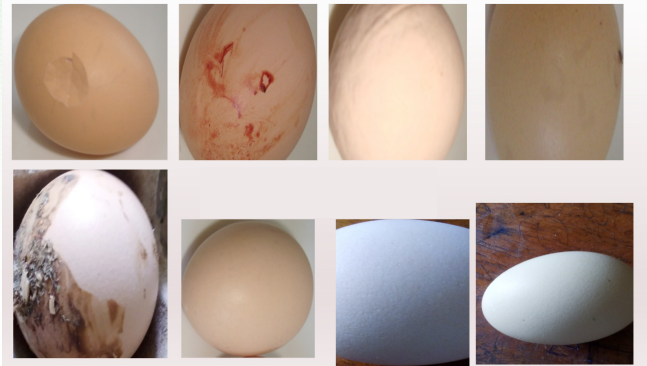
Handling of eggs for hatching

While the inherent quality of eggs remains constant after laying, it is feasible to mitigate potential losses by adhering to standard procedures:

- Employ clean and disinfected nesting materials.
- Train hens to utilize nests for egg laying by introducing them to the nesting area early in the laying cycle.
- Implement regular collection of hatching eggs throughout the day.
- Instruct attendants to wash and sanitize their hands before egg collection.
- Ensure egg trays are devoid of organic material and subjected to regular disinfection procedures.

Criteria for selecting quality eggs for hatching

1. Clean eggshell
 - Absence of litter, blood, defecation, or albumen from other broken eggs.
2. Uniformity in weight and size
 - Weight between 45 and 60 grams.
 - Size should be medium and uniform.
3. Well-shaped and normal dimensions
 - Oval shape with normal length-to-width proportions.
4. Disease-free origin
 - Eggs should originate from a flock that is certified as disease-free.
5. Smooth shell
 - No abnormalities, roughness, or calcium deposits on the shell.
6. Clean and dry nest
 - Laid in a clean, dry nest free from dust.
7. No double yolk
 - Eggs should not contain double yolks. Such eggs appear bigger than normal egg size.
8. Solid shell
 - Shell should be solid and intact.
9. No cracks, perforations, or fragile shell
 - Eggs should have no cracks, perforations, or fragile shells.
10. Uniform color
 - Color should be uniform, varying based on the age and flock.



Eggs suitable for hatching

Egg storage guidelines

- Place eggs in a cool, dry, and well-ventilated room.
- Position eggs in trays with the sharp end facing downward.
- Consider that both storage temperatures and duration have an impact on the quality of hatching eggs.

Storage time

- 0-4 days
- 5-8 days
- 9-10 days

Storage temperature

- 20[°]C
- 16[°]C
- 14[°]C



Hatching eggs stored in a temperature-controlled room

Sources of hatching eggs

- From own breeder flock
- From other breeder farms
- From other hatcheries

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