

3rd lecture

Egg

Egg

Is a single-cell biological view with naked eye, and the biological value is 99-100%.

1- Rules of Egg Collection in the Farm:

- 1- Wash hands before collecting eggs.
- 2- Collect eggs at least three times a day.
- 3- Collect clean nest eggs first, without touching any dirty, cracked or floor eggs.
- 4- Collect the dirty nest eggs, cracked eggs and floor eggs separately.
- 5- Clean by remove any dirt and focal material and disinfect the nests and egg collecting pads regularly.
- 6- Cool eggs to below 25°C after collection.
- 7- Clearly identify the naturally clean eggs to the hatchery.

* Could we send dirty eggs and floor eggs to the hatchery?

They should be cleaned and segregated from the naturally cleaned eggs so the hatchery can set them in a separate setter or in the bottom trays on trolleys so if they do explode they cannot contaminate clean eggs.

2. Rules of Egg Selection to the hatchery:

- 1- The best eggs for the hatchery are those that are naturally clean, a good oval egg shape and collected from clean nests.
- 2- Small and large eggs do not hatch as well as medium-sized eggs.
- 3- Round eggs (spherical) tend to hatch less than oval shaped eggs.
- 4- Dirty eggs and floor eggs will hatch less than naturally clean nest eggs and may spread contamination in the hatchery.
- 5- Any shell color is acceptable for hatching.

* **Abnormal eggs for hatchery:** (unsuitable eggs for hatching):

Broken eggs - Toe hole -pitted or (hairline-cracked) - Distorted – small size - large size - prolonged – Spherical (Rounded) - double yolk - Poor shells and tainted eggs with feces.

3. Rules of Egg Storage:

- 1- Weight of egg must not be less than the weight of 50 g for eggs. As the weight of chick represent two-thirds the weight of the egg. Chick weight and less than 33g is not acceptable to educators and delayed growth.
- 2- Never put wet eggs into the egg store. Allow them to dry thoroughly.
- 3- Do not set eggs on arrival at the hatchery; allow them to rest after transportation for 24 hours (Holding room).
- 4- Egg storage room temperature is 14-18 °C and relative humidity 70-75%, place a clean sterile eggs and hatching eggs should not be stored more than one week.
- 5- Direct away the air from air coolers to the eggs.
- 6- Use the appropriate temperature, humidity and pre-warming before setting.
- 7- The humidification system should not wet the eggs.
- 8- During storage the tip of the egg should be to the bottom and the head broad to the top.

*** Storage process effects on hatchability:**

Stored eggs take longer to hatch (about one hour per day of storage) and hatchability will be reduced.

4. Egg sweating:

'Sweating' of eggs refers to the phenomenon of condensed water sitting on the egg shell surface. This occurs when cold eggs (example: storage eggs) are suddenly transported to a higher environmental temperature (example: incubator machine).

To prevent egg sweating the trolleys of eggs should set in a room which is temperature about 25 °C with good air circulation for several hours before transferring from cold area to warm area.

Tab. 1 Hatching period in different birds

Item	Chicken/ day	Turkey/ day	Duck Muscovy/ day	Duck/ day	Goose/ day	Guinea/ day	Peafowl/ day
Inch Period (days)	21	28	28	35-37	28-34	28	28-30