



- **Measurements after hatching directly:**

These qualities measured in 1 day old, the chicks weighed by a delicate digital balance and then take the average of the five treatments. And also broken all the non-hatched eggs and then calculate the number of fertilized eggs.

After hatching completed **dead embryos** and **unfertilized eggs** removed, good chicks directly transferred to the field for the purpose of rearing.

The manager should calculate **the number of good, abnormal** and **dead chicks** to obtain the percentages of **fertility** and **hatchability**.

The fertility percentage also calculated in the following equation:

$$\text{* Fertility (\%)} = \frac{\text{Number of fertilized eggs}}{\text{Total number of eggs}} \times 100$$

- **Fertilized egg=( Normal+ Abnormal+ Dead embryo)**

Also the percentage of hatched chicks calculated at the end of the day 21 of hatching, the percentage of hatching calculated from fertilized eggs and total eggs as in the following equations:

$$\text{1- Hatchability\% (fertilized eggs)} = \frac{\text{Number of hatched chicks}}{\text{Number of fertilized eggs}} \times 100$$

$$2\text{- Hatchability\% (total eggs)} = \frac{\text{Number of hatched chicks}}{\text{Number of total eggs}} \times 100$$

- **Hatched chicks = (Normal + Abnormal) – Dead embryo**

### Example

You have a hatchery with capacity of 60,000 chicks after the eggs hatched:

- \* The number of hatched eggs is 46,200 eggs
- \* The number of dead embryos is 3,000 embryos
- \* The number of fertilized eggs is 49,200 eggs
- \* The number of unfertilized eggs is 10,800 eggs
- \* The number of good chicks is 41,580 chicks
- \* The number of abnormal chicks is 2772 chicks
- \* The number of dead chicks is 1848 chicks

find the following

- 1- Fertility (%)
- 2- Hatchability (%) (fertilized eggs)
- 3- Hatchability (%) (total eggs)