

Measuring Poul Yield

Aviagen Turkeys Ltd ®

Definition

Poult yield is the poult weight expressed as a percentage of the egg weight before incubation.

Poult yield is a useful indicator of whether:

- Poults are recently hatched (green or fresh) or old and dehydrated.
- The hatch timing is advanced or delayed.

Typically poult yield is between 66 – 68%.

Low yields (< 65%) indicate the hatch time is advanced whereas high yields (> 70%) indicate that hatch time is delayed.

Objectives

To measure poult yield so that it can be used to achieve the production of quality poults that can be delivered to the commercial farm in optimum condition:

- If hatch timing is incorrect then this may be caused by inappropriate setting times or because of incorrect incubation conditions.
- Low yields indicate that the poults have been hatched for a long time before take-off and have become dehydrated.
- High yields indicate that the poults have only recently hatched and are possibly too green to go to the farm immediately.

If very young or old poults are delivered to the brooder farm this can result in early poult mortality problems and an increased incidence of flip overs

Poult yield can provide a numerical record of the status of the poult in the hatchery that can then be used to help resolve poult start problems.

Procedure

1. You will require a weighing balance that can weigh a whole tray of eggs with a readability of at least 5g. Typically the balance should be able to weigh up to 20kg.
2. At setting, weigh an empty setter tray and record its weight.
3. Identify the tray so that it can be found again at transfer.
4. Fill the tray with eggs from one flock, reweigh and record its weight.
5. Calculate the average fresh egg weight (FEW):

$$\text{FEW} = (\text{Full tray weight} - \text{empty tray weight}) \div \text{No. of eggs on tray}$$



Figure 1: Weighing empty egg tray.



Figure 2: Weighing full egg tray.

1. At transfer, make sure that all the eggs from the weighed tray are transferred into one hatcher basket and the basket identified so it can be found again at take-off. Infertile and early dead germs can be removed from the tray, if required, at transfer or earlier if these eggs are not being used for egg water loss measurement.
2. At take-off, weigh an empty poult box and record its weight.
3. Count the number of poults from the identified hatcher basket into the poult box and weigh the full box. Record weight and number of poults.
4. Calculate the average poult weight (PW):

$$\text{PW} = (\text{Full box} - \text{empty box}) \div \text{number of poults}$$

5. Calculate the poult yield (PY%):

$$\text{PY}\% = (\text{Ave. poult weight (PW)} \div \text{Ave. egg weight (FEW)}) \times 100$$

6. Normally a sample of 5 trays per flock at each hatch will give a good indication of the poult yield.



Figure 3: Weighing empty poult box.



Figure 4: Weighing full poult box.

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