

EFFECTS OF FLOOR AND NEST EGGS ON INCUBATION AND CHICK QUALITY PARAMETERS

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Broiler breeders influence the quantitative and qualitative parameters of eggs and day old chicks. Floor and nest eggs are used by commercial layer farms to perform incubation. This study was carried out to evaluate the eggs and chick quality parameters between floor and nest eggs of broiler breeders. The experiment was conducted at the hatchery, Bairaha Farms PLC in a Complete Randomized Design (CRD) with two treatments. Five replicates were maintained for each treatment and each replicate consisted of 90 eggs. Nine hundred eggs from MX male x Cobb 500 female (35 - 40 weeks of age) were collected from the breeder farm. Eggs were incubated at *Petersime* commercial multi-stage (MS) incubator. Egg quality parameters; initial egg weight and shape index were measured just before the setter period. Egg weight reduction was calculated during incubation period. Live chicks and hatch residues were collected separately at the end of incubation period. Chick quality parameters such as chick weight, chick length and pasgar score were measured. Breakout test was conducted with hatch residues. Data was statistically analyzed using two sample t-test in SAS. Results revealed that there was a significant difference ($p < 0.05$) on hatchability between two types of eggs. Nest eggs reported the highest hatchability (90.0%) compared to floor eggs. Initial egg weight, egg shape index, moisture loss, hatch of fertile, chick weight, chick length, chick yield and pasgar score did not show any significant difference ($p > 0.05$) between two types of eggs. Break out analysis showed that higher embryo mortality and contamination occurred in floor eggs compared to nest eggs. Therefore, it can be concluded that hatchability of nest eggs is better than those of floor eggs. However, floor eggs should be kept separately in the commercial hatcheries to minimize the contamination.

Keywords: Chick yield, Fertility, Hatchability, Hatch of fertile