Influence of preincubation egg storage duration on egg quality, hatchability, embryonic mortality and viability of Dandarawi chicks.

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Abstract:

The aim of this study was to identify the optimal storage duration of incubated eggs of Dandarawi hens on embryonic mortality, hatchability, one-day chick weight and viability of chicks at 14 days of age. Eggs were collected 4 times daily for 15 consecutive days and stored at 16°C and 70% RH until sorted into treatments and then were incubated for 21 d under standard incubation conditions. The 15 experimental groups and control group were as follows: The fresh eggs as control incubated in the same day of lay, while eggs of one to fifteen experimental groups (G1 to G15) were stored from d 1 to 15, respectively. Three replications of 80 eggs per group treatment per incubation setting (total of 3,840 eggs) were studied. The results showed that, the albumen height, Haugh units and egg yolk index were lower (P≤0.05) in eggs stored from 1 to 15 d than in fresh eggs, but the egg yolk percentage (EYP) was higher (P≤0.05). At 0 to 5 d of storage had no effect on viability of chicks at 14 days of age (VC), but storage periods of more 5 d decreased (P≤0.05) VC. Day-old chick weights and chick weights at hatch as percentage of egg weights increased slightly when storage days increased. The hatchability of eggs was lower (P≤0.05) with longer periods of storage, but the embryonic morality percentage increased (P≤0.05) during the periods from 0 to 6 d and from 13 to 21 d of incubation. Present results suggest that hatchability declines with presetting storage start 1 d after lay, possibly due to deterioration in egg quality.

Keywords:

Eggs storage length, hatchability parameters, viability of chicks

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