

عنوان مقاله:

Effects of Hatching and Feeding Times and Hatchery Temperature on Body and Organs' Weight of Post-hatched Chicks

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خلاصه مقاله:

BACKGROUND: In commercial hatcheries, chicks are deprived of feed and water for up to ۷۲ h, which is a detrimental effect on growth performance. **OBJECTIVES:** Two experiments were designed to investigate the effect of hatching parameters and feeding time on the body and organ weights of chickens. **METHODS:** In the first experiment, ۳۰۰ of both early- and later-hatched broiler chicks received feed immediately after hatching or ۴۸ h later and were divided into four experimental groups. The body and internal organ weights of chicks were determined for up to seven days. In the second study, ۳۷۰ embryos, which were incubated in a setter until the ۱۸th day, were transferred to two hatchers, which differed their air and eggshell temperatures. Then, hatching and post-hatched parameters were followed. **RESULTS:** Comparing early-hatched chicks, later-hatched chicks had significantly greater weight ($p < 0.05$) on day ۳ and better yolk utilization and higher relative liver and intestine ($p < 0.01$) weights on day ۲. However, early-fed chicks indicated significantly higher body weight ($p < 0.0001$) until day ۷ and early yolk utilization and higher internal organ weights than later-fed chicks. In the second experiment, when the air temperature of hatcher A (control) was kept at ۳۷.۵°C, its eggshell temperature was determined at ۳۸.۵°C, while the eggshell temperature of hatcher B was optimized at ۳۷.۵°C, and its air temperature showed ۳۶.۵°C. Earlier hatchability was higher in the control hatcher (۴۶.۸%) than hatcher B (۲۷.۱%), but later hatchability was reversed. However, final hatchability was lower in hatcher B (۹۶.۶%) than the control hatcher (۹۸.۳%). **CONCLUSIONS:** Later-hatched and early-fed chicks showed greater body and internal organ weights, indicating better maturation of these chicks. The results of the second study indicated that the hatching window could be shorter and also shifted to the end of the incubation time by reducing the egg temperature.

کلمات کلیدی:

Chicks, Eggshell, feed, Hatch, temperature

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