

The effect of different rearing environment on laying performance and floor laying rate of Brown Tsaiya ducks ⁽¹⁾

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Abstract

The purpose of this experiment was to investigate the effect of different rearing environments on laying performance and floor egg rate of Brown Tsaiya ducks. Brown Tsaiya ducks were fed with the diet formulated by the Duck Nutrient Requirement Manual during 0 - 14 weeks of age. Layer diet was provided after 14 weeks of age. Tsaiya ducks were allocated randomly at 80 days of age and reared at four different environments respectively (i.e. indoor duck house with stainless steel mesh ground, indoor duck house with rice hull on ground, non-open duck house with cement ground and non-open duck house with slatted wood). Each treatment has three replicates, each one has 20 ducks, with a total of 240 ducks. Feed and water were given *ad libitum* during the experiment. Ducks' laying performance was determined from 20 to 40 weeks of age. Feed intake, egg weight, egg shell breaking strength, laying performance, feed conversion ratio and floor egg rate were collected for five continuous days every four weeks from 20 to 40 weeks of age. The results indicated that no difference on feed intake among treatments in the experimental period was found. Nevertheless, ducks reared in indoor duck house with mesh ground showed a trend of reduced feed intake. For the egg weight, ducks bred in the duck house with cement ground tend to lay heavier egg than other treatments. No difference was found on the laying performance. However, ducks reared in non-open duck house with cement ground tend to have higher laying performance than other treatments. For the feed conversion ratio, no difference was found among treatments. Nevertheless, ducks reared on non-open duck house with cement ground tend to have better conversion ratio than other treatments. In the floor egg rate, there was no difference among treatments, however, ducks reared on non-open duck house with cement ground tend to lower less floor egg rate than other treatments. In conclusion, ducks reared in non-open duck house with cement ground had better egg weight, egg laying performance, feed conversion ratio and floor egg rate. Considering the egg weight, laying performance, feed conversion ratio, floor laying rate and the visual cleanness of ducks, ducks reared on non-open duck house with cement ground is recommended.

Key words: Rearing environment, Brown Tsaiya, Floor laying rate.

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