

Effect of nest box closure and bottom material on Brown Tsaiya duck's nesting location preferences ⁽¹⁾

Chih-Hsiang Cheng ⁽²⁾ Chin-Hui Su ⁽²⁾⁽³⁾ Jung-Hsin Lin ⁽²⁾ and Jeng-Fang Huang ⁽²⁾

Received: Sep. 14, 2015; Accepted: Apr. 1, 2016

This study was to investigate the effect of nest box closure degree and bottom material on Brown Tsaiya duck's nesting location preference and egg quality. Experiment was a factorial arrangement design with main effects of nest box material to provide different closure degree (metal wire and wooden box) and bottom material in the nest box (metal wire and green artificial turf), to estimate the impacts on flooring laying ratio and cleanness of eggshell. In this test, a total of 264 4-week-old Brown Tsaiya ducks were adopted, and they were randomly assigned to four groups of test pens in a semi-open house. Each group had two replicates of test pen, in each pen 33 ducks were raised. A small bathing area and nipple drinkers were offered in the pen, and a 25-Lux-light was given in the night. During the experiment feeds and water were under ad libitum and the location of ducks laying in the pen were recorded every day. The result showed that: in the beginning, very high proportion of ducks laid their eggs on the floor. Following increase of age, ducks transferred to lay in the nest boxes and floor-laying rate decreased significantly. Both of nest box closure and bottom material, wooden nest boxes were with higher concealment and had significant impact on Brown Tsaiya duck's nesting location preference. In the groups of metal wire nest boxes, artificial turf can decrease duck's floor laying rate. In the aspect of egg's cleanness, eggs laid in the nest box had lower total plate count on the eggshell.

Key words: Brown Tsaiya duck, Nest box, Nesting.

(1) Contribution No. 2409 from Livestock Research Institute, Council of Agriculture, Executive Yuan.

(2) Ilan Branch, COA-LRI, Ilan, Taiwan, R.O.C.

(3) Corresponding author, E-mail: chsu@mail.tlri.gov.tw.