DOI：10.6991/JTLR.202212_55(4).0007

The effects of providing perch and foot sterilization equipment on white Muscovy duck's growth and animal welfare traits [1]

Chin-Hui Su [2] Jung-Hsin Lin [2] Hsiu-Chou Liu [2] and Chih-Hsiang Cheng [2] [3]

Received: Aug. 4, 2022; Accepted: Nov. 14, 2022

Abstract

The aim of this experiment was to investigate the effects of providing white Muscovy ducks with perch and foot sterilization facility on their growth and animal welfare-related traits. The ducks were randomly allocated into 12 pens with or without perch and foot sterilization facility (4 treatments x 3 replicates) in a non-open duck house at 3 weeks of age. Each replicates had 10 male and 10 female Muscovy ducks; a total 240 ducks were used in the experiment. The experiment was 16 weeks. Animal welfare-related traits including footpad dermatitis score, feather score, and gait score were determined from 4 weeks of age. Three fixed drakes' corticosterone concentration in the blood was determined as a stress indicator at 4, 8, 12, and 16 weeks of age. The experiment results indicated that there were no effects of the perch and the sterilized facility on duck's body weight; the results of animal welfare-related traits showed that perch significantly reduced drakes foot pad dermatitis score at 10 weeks of age ($P < 0.05$), nevertheless, the sterilized facility increased it at 12 and 14 weeks of age ($P < 0.05$). Feather and gait scores in the whole experiment period didn't show a significant difference between the groups, nor did the 4 different Muscovy drakes blood corticosterone collecting time. The results showed that the perches and foot sterilized facility in the experiment didn't significantly change the animal welfare related traits of 4 to 16 weeks of age of white Muscovy ducks. The female white Muscovy ducks performed well in animal welfare related traits during the experiment, however, the poor feather condition of white Muscovy drakes from 7 to 12 weeks of age and the few individuals with poor gait during the experiment still need to be alleviated by combining more management and nutritional strategies.

Key words: Perch, Sterilization, White Muscovy duck.

(1) Contribution No. 2725 from Livestock Research Institute, Council of Agriculture, Executive Yuan.
(2) Ilan Branch, COA-LRI, Ilan 26846, Taiwan, R. O. C.
(3) Corresponding author, E-mail: chcheng@mail.tlri.gov.tw.