Taiwan Livestock Res. 54(2)：82-90, 2021
DOI：10.6991/JTLR.202106_54(2).0002

# The effects of stocking density on the growth performance and carcass traits of the mule ducks indoor (1)

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Received: Feb. 24, 2021; Accepted: Jul. 16, 2021

## Abstract

The aim of this experiment was to investigate the effects of stocking density on the growth, carcass traits, feather growth condition, and foot pad injury score in mule ducks, and establish a suitable model for rearing mule ducks indoors. Two hundred and ten male and female each of the two-way crossbred mule ducks, 3 weeks of age, were selected for the experiment. Mule ducks were randomly allocated into four feeding densities (1, 1.5, 2 and 2.5 duck/$m^2$, respectively). Each treatment contained three pens of 20 m2 area as the replicates, with a total of 12 pens used in the experiment. The growth and carcass traits, feather growth condition, and foot pad injury score were determined in the experiment. One male and one female duck from each pen, at 12 weeks of age, were chosen randomly and sacrificed for carcass traits determination. The results of duck's body weights revealed that the average of all treatments fell in the range of 3,083 to 3,174 g. Ducks reared under density 1 and 1.5 duck/$m^2$ resulted in significantly heavier body weight ($P < 0.05$), namely 3,195g and 3,174 g respectively, compared with the 3,083g and 3,086g of ducks reared under density 2 and 2.5 duck/$m^2$ respectively. The average foot pad injury score among the treatments fell between 3.07 to 4.20, the score of density 1 and 1.5 duck/$m^2$ were both 3.07 and significantly better than the score 4.09 and 4.20, of density 2 and 2.5 duck/$m^2$ ($P < 0.05$) respectively. The average feed conversion ratio for ducks aged 3-12 weeks, the primary feather length, carcass weight and dressing percentage of ducks aged 12 weeks did not show significant difference between the treatments. Based on the results of this experiment, it is recommended to rear mule ducks with area density of 1.5 duck/$m^2$ when duck body weight, feed conversion ratio and foot pad injury were taken into account concurrently. . When assessed by increased production, the area density of 2.5 duck/$m^2$ is recommended for maximum production capacity.

Key words: Carcass traits, Growth performance, Mule duck, Stocking density.

(1) Contribution No. 2672 from Livestock Research Institute, Council of Agriculture, Executive Yuan.
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