

The effect of the nest type on the nest egg ratio of the white Roman geese ⁽¹⁾

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Abstract

In the geese production, the floor egg often exhibited a high total plate count on the surface of eggshell, one of the pollutant source was from the nest material. In order to reduce ratio of the nest egg and total plate count of eggshell of white Roman goose, the egg laying facilities were designed for study. One hundred and eight white Roman geese were randomly divided into 3 groups, the ratio of male and female was 1:3, and three repeats were applied on each group. The three facilities were applied during laying period: the plastic basin arranged the rice hull (A control), the designed nest box (B treatment), and the plastic basin arranged the rice hull within the designed nest box (C treatment), respectively. Number of the floor eggs and the eggs within different laying facilities were recorded every day from August (2017) to February (2018), and the total plate count of eggshell were also sensed. The results showed that the ratio of nest egg for 3 treatments (A, B, and C) were 53.4 ± 27.1 %, 10.7 ± 4.2 %, and 60.1 ± 13.5 % (mean \pm SD), respectively. The B treatment presented the lowest ratio (10.7 %) and the C treatment was the highest (60.1 %). The result indicated that the acceptance of geese for the designed nest boxes was low. The total plate count of eggshell surface for the floor egg was 6.70 ± 0.43 log CFU / g (mean \pm SD). The designed nest box (B treatment) showed the significantly lower value than other designed nest boxes (A and C treatments) and the floor egg with a total plate count for 4.95 ± 0.98 log CFU/g. In summary, the usage of designed nest box (B treatment) could effectively reduce the total plate count of eggshell surface, but the acceptance of geese for the designed nest boxes was low. The results showed that the designed nest box was required to be improved. It was suggested that the results might provide information to design the laying facility for geese.

Key words: Geese, Nest box, Nest egg, Total plate count.

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