

Preference and Welfare Status of Broilers Exposed to Different Litter Substrates

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Abstract

Behaviour and welfare of broilers are affected by the type and the quality of litter substrate. Objective of the study was to determine the most suitable litter material for broilers in terms of preference, welfare indicators and growth performance. In experiment 1, preference for paddy husk (PH), saw dust (SD), wood shavings (WS), refused tea (RT) and dry leaves (DL) as litter materials was evaluated using 4 armed foraging social mazes (FSM). The experiment followed a RCBD with 6 replicate FSMs, each housed 5 birds. Presence of birds on the respective substrate and the behaviour were recorded for 54 hrs. adopting scan sampling method. Most preferred 4 litter materials were selected and each assigned randomly into 6 replicate cages in experiment 2, to assess welfare indicators; foot pad dermatitis (FPD), breast blisters (BB) and hock burning damage (HBD). Preference for different substrates was significantly ($p < 0.05$) affected by the type of litter material where 57.0 ± 2.2 (%) of birds presence was observed in SD. DL (4.4 ± 2.2 %) was the least preferred litter type. Litter type significantly altered certain behaviours such as eating, drinking, walking, standing, preening, lying, litter eating, dozing, wing flapping, vocalization, wing/leg stretching and dust bathing but not scratching floor, idling, bird interaction and other behaviours. Leg strength as determined by latency-to-lie (LTL) was highest (361.7 ± 35.4 seconds) for the birds on SD while those on RT recorded the lowest (270.5 ± 61.7). The incidence of FPD and HBD were significantly low among the birds on SD litter, compared to those kept on other litter materials. BB were also absent among the birds on SD litter. Weight gain and mortality were not affected by the litter type. It is concluded that SD is the most suitable litter material for broilers in terms of preference and welfare.

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