Perching Behavior of Fast- and Slow-Growing Broilers

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Introduction

- Broiler chickens have been genetically selected for rapid growth which has led to health issues and decreased welfare
- Environmental enrichments are used to increase complexity and provide a better quality of life
- Perches can help broilers exhibit their natural behavior, improve bone health and reduce leg problems (Akşit et al., 2017)
- Fast-growing broiler strains have higher incidence of contact dermatitis, cardiovascular disease, leg deformity, inactivity, and mortality compared to slow-growing broilers (Hartcher & Lum, 2020)
- Using slower growing strains, and/or providing a complex environment may stimulate normal perching behavior in broilers

Objective

Determine how much fast- and slow-growing broilers interact with perches as they gain weight and age

Materials and Methods

- 600 birds: Ross 708 (fast-growing) and Hubbard Redbro (SG) (**Fig. 4**).
- 50 birds/12 pens
- 3 replicates per treatment
- Observed 12 pens

Treatment
- Simple environment: NO PERCH
  - Litter, feeders and drinkers
- Complex environment: PERCH
  - Permanent: Litter, feeders, drinkers, perches, and dust bath with sand
  - Temporary: Seeds, mirrors, oats, strings, cabbage, and hay

Measurements
- Video recordings at 16, 27, 30, 33, 42 days of age and 0.5, 1.5, and 2.5kg
- Video recording scanned twice a day, at 7AM and 8PM, at 5-minute intervals
- Recorded number of birds in perching zone (**Fig. 1**).

Figure 1. *Simple (top) and complex (bottom) environments. The red highlighted areas represent the perching zone.*

Results

Number of birds in the perching zone did not differ between housing treatments (NO PERCH vs PERCH; **fig. 2)**.

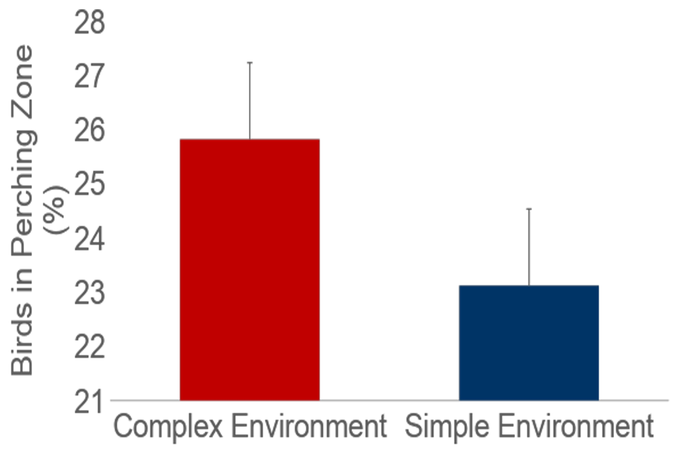

Figure 2. *Mean (SEM) percentage of birds in perching zone by environmental complexity treatment (complex PERCH versus simple NO PERCH).*

More slow-growers at 2.5 kg body weight were observed in the perching zone compared to fast-growers at the same body weight **(fig. 3)**. More slow-growers were found in the perching zone at 2.5 kg body weights compared to slow- and fast-growers at 0.5 kg body weights.

Figure 3. *Mean (SEM) percentage of broilers in perching zone by body weight and strain*

Figure 4. *Fast-growing Ross 708 (left) and slow-growing Hubbard Redbro (right).*

Discussion

- We expected more broilers within the perching zone in the complex pens compared to the simple pens without perches. However, there was no difference.
- Fast-growing and slow-growing broilers equally interacted with the perching zone until they reached 2.5 kg in body weight.
- Fast-growing broilers interacted less with the perching zone at 2.5kg than the slow-growers, due to inactivity as they gain weight (Tickle et al., 2018). Difficulty moving may lead to a desire to stay close to the feeders and waterers.
- Perch design may have impacted the lack of interest in either strain (**Fig. 5**)

Figure 5. *Broilers using the perch enrichment*

Conclusions

- Providing perches had no impact on the number of birds within the designated perching zone
- Slow-growing broilers may be more motivated to interact with environmental enrichment as they have higher levels of activity compared to fast-growing broilers
- Perch design could be improved to increase interest

Literature Cited

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