Growth heterogeneity and welfare;
Behavioural differences in small and large broiler breeder females

Linköping University
expanding reality

Johan Jönsson
Contact: johjo892@student.liu.se
Supervisor: Jordi Altimiras
IFM Biology, Linköping University

AVIAN
Behavioural Genomics and Physiology group

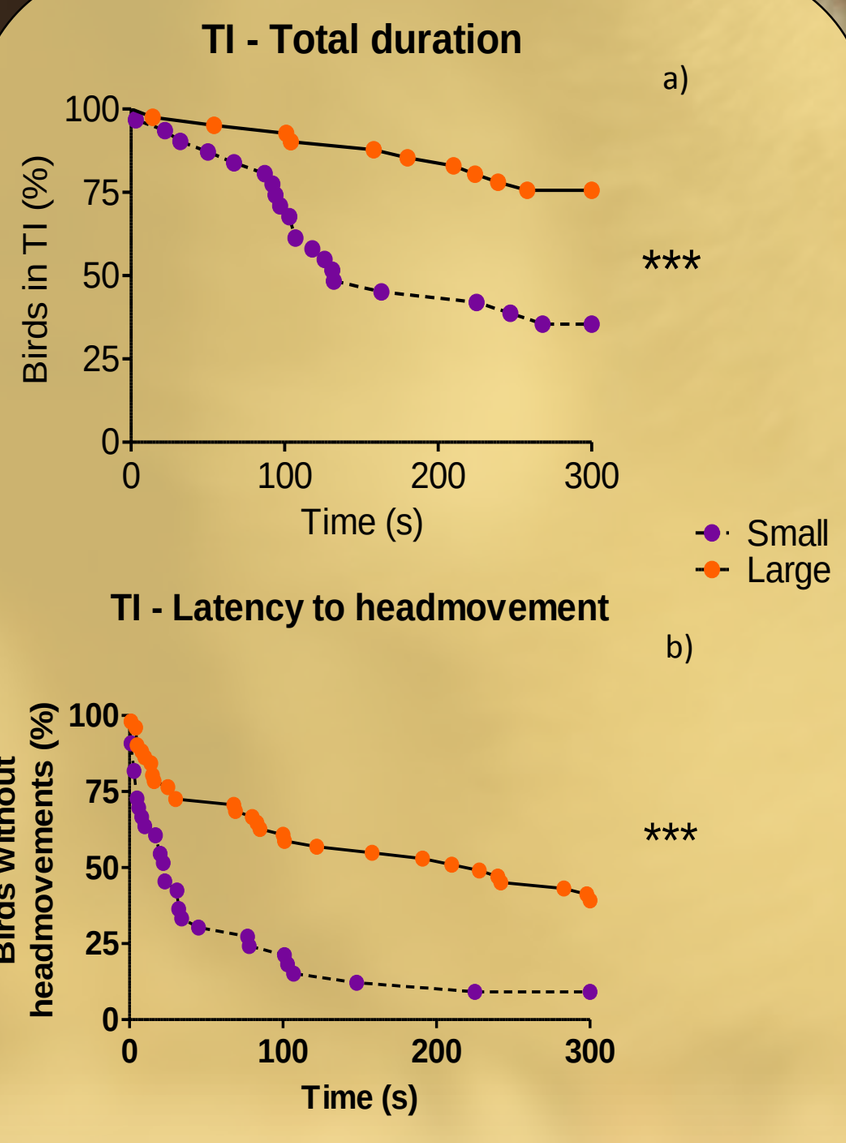
Background & Aim

Feed restriction during broiler breeder rearing give rise to various welfare challenges. This study focused on growth heterogeneity development, and the concern that reduced growth may indicate poorer welfare.

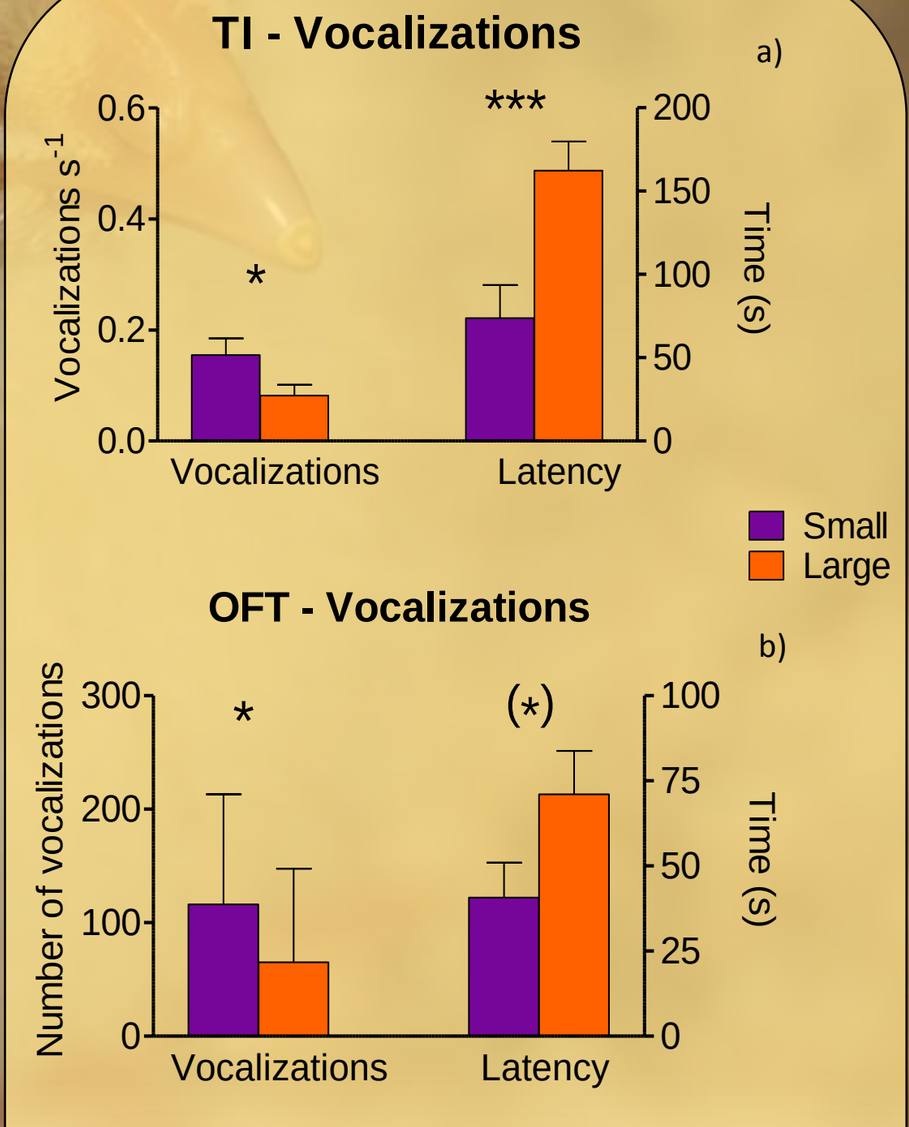
The aim - To investigate welfare differences within a flock by characterising the stress coping ability of small and large birds through a set of behavioural tests.

Conclusion

This study did not indicate poorer welfare in smaller birds. On the contrary, the behavioural responses of small broiler breeders indicate an increased potential to successfully cope with a feed restricted, multi-bird environment.



Proportion of birds; a) still in tonic immobility b) without head movement, during a 5 minute TI-test.



Vocalization performance (quantity & latency); a) during the TI-test b) during a 5 minute OF-test. (Mean ± SD)

Reduced fearfulness in small broiler breeders

Small broiler breeders showed a lower level of fearfulness through shorter tonic immobility duration and latency to first head movement during TI. This is indicative of a lower stress level in this group.

High sociality in small broiler breeders

Small broiler breeders vocalized both more and sooner during both a TI test and an OF test. This is indicative of increased social dependence and social motivation in this group.

Method

The study was carried out at a commercial farm and included 124 broiler breeder females (62 small & 62 large) at 4 weeks of age. All individuals were tested in a 5 minute Open Field Test (OF) followed by a 5 minute Tonic Immobility test (TI). The small and large size groups were defined by a body weight falling in-between 1-2 standard deviations below or above mean flock weight.