

Effects of hatching system on broiler activity measured individually by an ultra-wideband tracking system



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Background

The aim of this study was to assess the effects of 3 different hatching systems on individual broiler activity in general and after the challenging situation of vaccination.

Animals, materials & methods

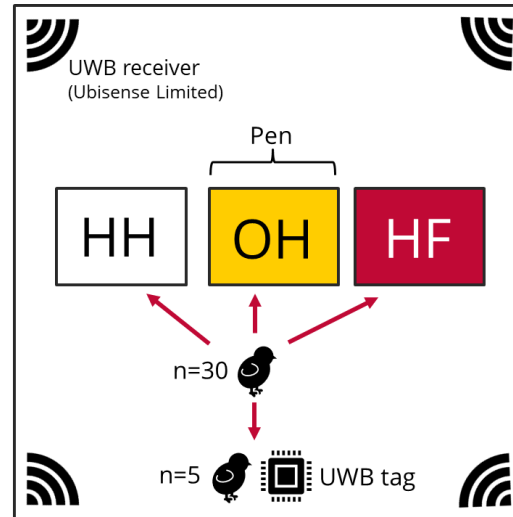
The chickens (Ross 308) hatched either

- ✓ conventionally in the hatchery (HH),
- ✓ in a system providing feed and water in the hatcher (HF)
- ✓ or in their home pens (OH).

The animals were reared in 3 floor pens and were tracked by an ultra-wideband (UWB) system between d15 and d34. Individual vaccination against Infectious Bronchitis took place at d28.

Set up proof-of-principle experiment

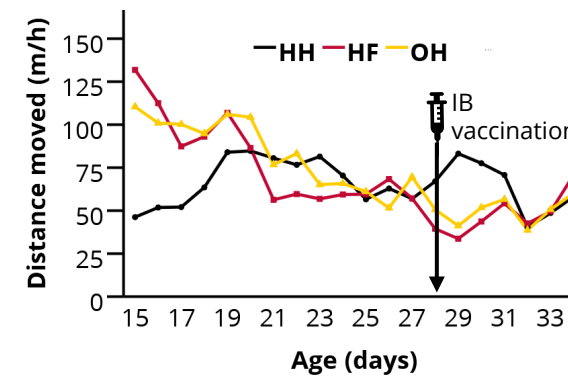
- ✓ Four receivers in each corner of the room, UWB tags (on the chickens' backs, 23.4 g)
- ✓ Recording of coordinates of the tags
- ✓ Recording sessions: 4 x 1h/d, during the light phase



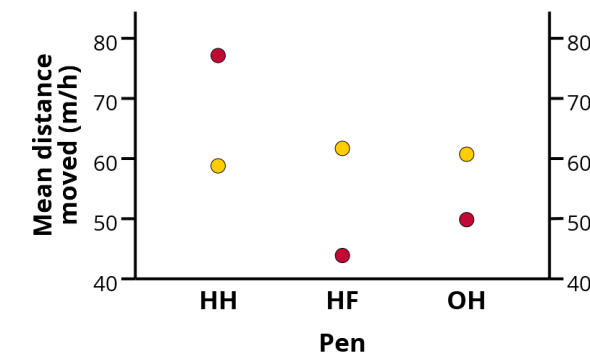
TrackLab software
(Noldus Information
Technology)

- ✓ Processing of recorded coordinates by the software:
Distance moved (m/h)

Results



Distances moved (m/h) by chickens from the 3 hatching systems (HH, HF, OH) during rearing (d15 - d34).



- Mean distance moved (m/h) 3 days before vaccination
- Mean distance moved (m/h) 3 days after vaccination
- ✓ HH moving more after challenge, HF and OH less

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