

1. Effect of light intensity on the exploratory, social, playing and abnormal behaviours of growing-finishing pigs

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Light is known to influence the behaviour of animal species. Finishing pigs have shown increased agonistic behaviours at low light intensity, and preference for bright areas to perform active behaviours and for dimmer areas to rest. Clearly, light intensity can influence the behaviour of pigs, but it remains unclear to what extent exactly. Therefore, the objective of the present study was to explore effects of light intensity on different behaviours of growing-finishing pigs.

An experiment was conducted at a commercial farm where LED-based luminaires were used to create four light intensity treatments: low (45 lux), medium (198 lux) and high (968 lux). The fourth treatment provided a spatial gradient of light intensity ranging from 71 to 303 lux. Behavioural observations included exploration, positive and negative social interactions, play (social, object and locomotory) and abnormal behaviours (ear and tail manipulating behaviour, belly-nosing and other stereotypies). Per treatment, 56 pigs were observed every two weeks during their finishing phase, for 1 hour divided in 3 blocks of 20 minutes using a 0-1 sampling method. Generalised linear mixed models were used to compare the frequency of each behaviour between treatments.

Preliminary results show that pigs in the medium intensity expressed more play behaviour than in the other intensities, especially social and individual locomotory play. An interaction between light and observation week was found for exploration, positive and negative social interactions and ear manipulating behaviour. In conclusion, both positive and negative behaviours can be affected by light intensity depending on the age of pigs.