

Développement d'une méthode de mesure de la posture des porcs pour l'évaluation du bien-être

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Development of a method to measure body posture of pigs to evaluate their welfare

To some extent, body posture reflects the internal state of an animal but it has never been objectively measured in pigs. However, it could be a good indicator and useful in evaluating their welfare; the concept has already been developed for use in horses. In this study, we used geometric morphometrics to develop an objective and precise method to analyse the body posture of pigs. The science of geometric morphometrics consists of describing shapes of an organism using the coordinates of a series of homologous landmarks placed on the body. We compared the body posture of 48 growing pigs reared in two conditions: 24 isolated in individual pens and 24 penned in groups of four. A human caretaker interacted regularly with the pigs, stroking them and talking to them, in order to facilitate handling. After two weeks, we measured their posture in a testing pen. Based on the morphology of the animals, we chose seven landmark sites and identified those landmarks with a pencil mark. Two of the landmarks were excluded due to a lack of reliability in their positioning. Preliminary analyses showed that body posture measures were greatly affected by curvature of the back and the distance between the scapula and the third rib ($P < 0.05$). Individually penned ("isolated") animals were more contracted between the scapula and the third rib than those penned in groups ($P < 0.05$). In conclusion, body posture was slightly influenced by rearing environment. Improvements in this method are still needed (i.e. number of markers) and further validation is also needed (i.e. effects of different emotional states) but, as an indicator of pig welfare, it does show promise.