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Bergen, Norway

5th-9th August, 2019

Proceedings of the
53rd Congress of the ISAE

ANIMAL LIVES WORTH LIVING

edited by:

Ruth C. Newberry

Bjarne O. Braastad



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Reduce damaging behaviour in laying hens and pigs by developing sensor technologies to inform breeding programs

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The COST Action GroupHouseNet aims to facilitate the prevention of damaging behaviour in group-housed pigs and laying hens. One area of focus is on how genetic and genomic tools can be used to breed for animals that are less likely to develop damaging behaviour. The behaviours we are focusing on are feather pecking in laying hens and tail biting in pigs. Both species are kept in groups, and identifying actual performers of this behaviour (peckers and biters), and tracking them at the individual level remains challenging, but is essential for breeding programs. It is possible to use traditional behavioural observation, but this is time-consuming and costly. Sensor technology is a rapidly developing field and may offer solutions for phenotyping animals at the individual level. We propose that sensor technology combined with genomic methods may be useful in solving the problems of damaging behaviour in group-housed pigs and laying hens. When evaluating the sensor technologies used until now, for laying hens RFID and accelerometer-based approaches seem most promising. In pigs, computer vision is already used to record technical performance, and there seems to be potential for expanding this approach to the recording of damaging behaviour. If sensor signatures and genomic fingerprints of individual animals can be combined, this would significantly improve our possibilities to reduce damaging behaviour through genetic selection.