













**Figure 5** - Evolution au cours de la journée du pourcentage de temps passé en agression (moyenne ajustée ± écart-type de la moyenne).

Les histogrammes sans lettre commune diffèrent significativement ( $P < 0,05$ ). Les nuances de gris ont pour but de simplifier la lecture des différences entre les heures : du noir (valeurs les plus faibles) au blanc (valeurs les plus élevées).

### RÉFÉRENCES BIBLIOGRAPHIQUES

- Andersen H.M.-L., Dybkjær L., Herskin M.S., 2014. Growing pigs' drinking behaviour: number of visits, duration, water intake and diurnal variation. *Animal*, 8, 1881-1888.
- Canario L., Labrune Y., Bompas J.-F., Billon Y., Ravon L., Reignier S., Bailly J., Ricard E., 2018. Mise au point et validation d'un système embarqué pour mesurer l'activité posturale des truies allaitantes ? Journées Rech. Porcine, 50, 329-330.
- Cornou C., Lundbye-Christensen S., Kristensen A.R., 2011. Modelling and monitoring sow's activity types in farrowing house using acceleration data. *Comput. Electron. Agr.*, 76, 316-324.
- Dehaer L.C.M., Merks J.W.M., 1992. Patterns of daily food-intake in growing pigs. *Anim. Prod.*, 54, 95-104.
- FAREWELLDOCK, 2013-2016. Ending tail docking and tail biting in the EU - Hazard characterization and exposure assessment of a major pig welfare problem. <http://farewelldock.eu/>. Projet financé par l'Era-Net ANIWHWA.
- Fredriksen B., Hexeberg C., 2009. The effect of removing animals for slaughter on the behaviour of the remaining male and female pigs in the pen. *Res. Vet. Sci.*, 86, 368-370.
- Larsen M.L.V., Andersen H.M.-L., Pedersen L.J., 2016. Can tail damage outbreaks in the pig be predicted by behavioural change? *Vet. J.*, 209, 50-56.
- Marcon M., Salaun M.-C., Le Mer M., Rousselière Y. 2017. Accelerometer technology to perform precision feeding of pregnant sows and follow their health status. In: D. Berckmans & A. Keita (Eds), *Precision Livestock Farming '17 (ECPLF)*, pp. 666-673, Nantes, France.
- Martinez-Aviles M., Fernandez-Carrion E., Lopez Garcia-Baones J.M., Sanchez-Vizcaino J.M., 2017. Early Detection of Infection in Pigs through an Online Monitoring System. *Transbound Emerg Dis*, 64, 364-373.
- Matthews S.G., Miller A.L., Clapp J., Plotz T., Kyriazakis I., 2016. Early detection of health and welfare compromises through automated detection of behavioural changes in pigs. *Vet. J.*, 217, 43-51.
- Meunier-Salaun M.C., Guerin C., Billon Y., Sellier P., Noblet J., Gilbert H., 2014. Divergent selection for residual feed intake in group-housed growing pigs: characteristics of physical and behavioural activity according to line and sex. *Animal*, 8, 1898-1906.
- Ni J.Q., Liu S.L., Radcliffe J.S., Vonderohe C., 2017. Evaluation and characterisation of Passive Infrared Detectors to monitor pig activities in an environmental research building. *Biosys. Eng.*, 158, 86-94.
- Pastell M., Hietaoja J., Yun J., Tiusanen J., Valros A., 2016. Predicting farrowing of sows housed in crates and pens using accelerometers and CUSUM charts. *Comput. Electron. Agr.*, 127, 197-203.
- Prunier A., Brillouët A., Merlot E., Meunier-Salaun M.C., Tallet C., 2013. Influence of housing and season on pubertal development, boar taint compounds and skin lesions of male pigs. *Animal*, 7, 2035-2043.
- PIGWATCH, 2016-2018. Combining the 'eye of the stockman' and precision farming techniques to improve pig welfare. <https://pigwatch.net/fr/>. Projet financé par l'Era-Net ANIWHWA.
- R Core Team, 2013. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>.
- Viazzi S., Ismayilova G., Oczak M., Sonoda L.T., Fels M., Guarino M., Vranken E., Hartung J., Bahr C., Berckmans D., 2014. Image feature extraction for classification of aggressive interactions among pigs. *Comput. Electron. Agr.*, 104, 57-62.