



**HAL**  
open science

## IMPACT OF EARLY-LIFE CHANGES ON PIGS' HEALTH, GROWTH AND WELFARE IN A COMMERCIAL FARM

S Gavaud, K Haurogné, A Buchet, I Garcia-Vinado, M Allard, M Leblanc-Maridor, J Bach, C Belloc, B Lieubeau, J Hervé

► **To cite this version:**

S Gavaud, K Haurogné, A Buchet, I Garcia-Vinado, M Allard, et al.. IMPACT OF EARLY-LIFE CHANGES ON PIGS' HEALTH, GROWTH AND WELFARE IN A COMMERCIAL FARM. 14th European Symposium of Porcine Health Management, ESPHM, May 2022, Budapest, Hungary. hal-04350594

**HAL Id: hal-04350594**

**<https://hal.inrae.fr/hal-04350594>**

Submitted on 18 Dec 2023

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Immunology and vaccinology

## **IMPACT OF EARLY-LIFE CHANGES ON PIGS' HEALTH, GROWTH AND WELFARE IN A COMMERCIAL FARM.**

S. Gavaud<sup>1</sup>, K. Haurigné<sup>1</sup>, A. Buchet<sup>2</sup>, I. Garcia-Vinado<sup>3</sup>, M. Allard<sup>1</sup>, M. Leblanc-Maridor<sup>4</sup>, J. Bach<sup>1</sup>, C. Belloc<sup>4</sup>, B. Lieubeau<sup>1</sup>, J. Hervé<sup>1</sup>

<sup>1</sup>IECM, USC 1383, Oniris, INRAE

<sup>2</sup>COOPERL INNOVATION, Pôle innovation en Sciences Animales, 1 Rue de la Gare, 22640 Plestan, France

<sup>3</sup>HYOVET, 5 PA Penthièvre, 22640 Plestan, France

<sup>4</sup>BIOEPAR, INRAE, Oniris, 44307, Nantes, France

### **Background and Objectives**

In pig husbandry, weaning is a stressful period, critical for piglets that are abruptly separated from their mother and mixed with unfamiliar congeners in an unknown environment. This often leads to conflicts for the establishment of a novel hierarchy. Piglet growth is consequently slowed down at this period and the risk of gastrointestinal disease and associated mortality is increased. In this context, this project aimed at comparing, in a conventional commercial farm, the consequences of alternative rearing conditions, compared to standard ones, on pigs' health, performances and welfare, from day 10 to slaughter.

### **Material and Methods**

We followed 155 pigs, raised under standard (n=75) and alternative (n=80) conditions. Alternative conditions included birth in free-farrowing pens, early-socialization from postnatal day 9 and maintenance of early-constituted social groups until slaughter. Also, piglets were not tail-docked in this group. Visits were made throughout pigs' life to evaluate individual growth and health. Body and tail lesions were scored as proxy measures of aggressiveness. Blood and bristle samples were periodically collected to evaluate stress, inflammation and immune competence.

### **Results**

The overall performances of pigs were similar among groups. At weaning, piglets reared under alternative conditions exhibited fewer and less severe body lesions than standard pigs. Also, their numbers of circulating leukocytes were significantly higher. One week after, cannibalism occurred mainly in the alternative group and was associated with higher concentrations of serum CRP and hair cortisol at day 36 and haptoglobin at day 66. Vaccination against PCV2 at weaning was efficient in both groups.

### **Discussion and Conclusion**

Early-socialization may have better prepared piglets for weaning. However, the whole-life maintenance of early-established social groups was not sufficient to prevent cannibalism in whole-tail pigs despite the enrichment provided into pens. This demonstrates the importance of field studies to assess the transposability of alternative rearing practices and their relevance to pigs' health and welfare.