

# DIETARY FIBRE FOR PREGNANT SOWS REDUCED AGGRESSION IN THEIR OFFSPRING PRIOR TO WEANING

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## INTRODUCTION

Pregnant sows are often subjected to food restriction, which can compromise their welfare and performance. Limited information is available on the consequences of sow hunger during pregnancy on welfare outcomes for their piglets. High fibre diets can mitigate the feeling of hunger (RÉRAT, 1996) and improve sow welfare (HOLT et al, 2006) and productivity (VEUM et al, 2009). The aim of this study was to assess the consequences of feeding gilts with high fibre diets (HFD) during pregnancy on agonistic behaviour and indicators of fear in their piglets at weaning.

## MATERIALS AND METHODS

Twenty-two pregnant gilts were fed either HFD, 12,86% of crude fibre or low fibre diet (LFD), 2,53% of crude fibre. HFD sows received 2.4 kg of food per day, and LFD sows received 2.0 kg per day. The source of fibre was soybean hulls. We investigated the impact of HFD and LFD on behaviour and performance measures in the piglets. Skin lesions are a validated methodology to access the aggressive behaviour (GUY et al, 2009) and it was evaluated before and after weaning in 156 piglets, and 142 piglets were subjected to an open field and novel object test.

## ANALYSIS

Statistical analyses were performed using the MIXED procedure of SAS, in a randomized block design. The data were submitted to analysis of variance, the treatment effect was the fixed effect and the block was the random effect.

## RESULTS AND DISCUSSION

There was no treatment effect on the piglets performance. Piglets born from gilts that received HFD had fewer skin lesions before weaning than the offspring of LFD pregnant gilts. In the open field and novel object tests, there was no treatment effect on the behaviour of piglets. These results indicate that piglets born from gilts fed with HFD showed fewer aggressive behaviour prior to weaning than the offspring of LFD fed animals.

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