

## Effects of different levels of hemicellulose in sow diet during late gestation and lactation on milk quality and piglet performances

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Dietary fibers (DF) inclusion in sow diet is interesting to modify milk quality and improve litter performances. The DF increase bacterial fermentations, enhancing thereby the production of volatile fatty acids (VFA) in the large intestine, which are a source of energy for the animal. Some VFA, such as butyrate, are important for intestinal health. The aim of this study was to evaluate the effect of different contents of hemicellulose (He) during late gestation and lactation on sow performances, offspring development and on the VFA profile in milk. Four diets were formulated: T12% (He: 120g/kg), T11% (He: 108g/kg), T9% (He: 86g/kg) and T7% (He: 72g/kg). Sows had access to one of the four diets from 110 day of gestation to weaning (approximately 28 d post farrowing). Their weights, backfat thickness and body condition scores were recorded at 110 d of gestation, at farrowing and at weaning. Milk was collected at 3 and 17 d of lactation. Piglets were weighed at birth, 5 and 16 d after birth, at weaning and then 7 and 14 d post-weaning. Results showed that the T7% diet positively affected post-weaning performances of the low birthweight piglets, resulting in a heavier body weight ( $P=0.01$ ) on 14 d post-weaning than the other dietary treatments. Furthermore, T7% diet increased butyrate proportion in milk ( $P=0.02$ ) compared to T12% diet. The present findings highlighted the importance of DF in the maternal diet to modify milk quality and piglet development.