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EFFECT OF DIETARY NUCLEOTIDE SUPPLEMENTATION IN SOWS DURING LACTATION: DEVELOPMENT OF PIGLETS AT WEANING PERIOD

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Introduction

The porcine placenta is epitheliochorial, which is impermeable to different substances such as immunoglobulins or nucleotides. Nursing pigs receive nucleotides from the diet via colostrum and milk. The milk of the sow is the only direct source of nucleotides for piglets. This is the reason whereby the amount of nutrients, such as nucleotides, that are transferred during lactation they are critical to protect newborns from future intestinal disorders and immune function. Therefore, piglets could benefit from nucleotide supplementation in sows. The objective of this study was to evaluate the effects of supplementing sows with nucleotides during lactation on performance and mortality rate of piglets during weaning and post weaning period.

Material & Methods

1 week before farrowing and during lactation period, sows received a diet supplemented with 500 ppm of a nucleotide formulation specifically designed for pigs. At weaning and post weaning, several parameters were evaluated in 420 piglets from 32 multiparous sows distributed into 2 treatments; piglets from sows that had received nucleotides (experimental diet) and sows that were fed a commercial diet without nucleotides, used as control group. The Statistical Analysis System (SAS) was used for the statistical analyses and alpha significance level was set at 0.05.

Results

When groups were compared, piglets from sows that had received nucleotides showed significant increases in weaned period ($p < 0.05$) in average daily gain (296.59 vs 257.90 g/d); in on consumption (320.92 vs 290.08 g/d). At the end of weaned period; a significant but not statistically ($p = 0.09$) increase in average daily gain and average weight ($p = 0.07$) were observed.

Discussion & Conclusion

These results suggest that dietary nucleotide supplementation in sows 1 week before farrowing and during lactation results in transmission of nucleotides to their piglets, allowing a significantly improvement in performance of weaned pigs.

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