HHM – Herd Health Management

BACILLUS SP. PB6 ENHANCES SOW REPRODUCTIVE PERFORMANCE UNDER FIELD CONDITIONS: A CASE STUDY

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Background and Objectives

Late gestation and lactation are physiologically demanding periods for sows. Emerging evidence suggests that these stages are associated with changes in the structure and function of the sow's intestinal microbiota. Additionally, clinically significant pathogens, such as Clostridium perfringens, can be transmitted to piglets from the sow. As a result, effective microbiota management strategies could be crucial in enhancing the health of both sows and their suckling piglets. This field trial aimed to assess the impact of a Bacillus probiotic on sow reproductive performance under practical conditions.

Material and Methods

This field trial was carried out in a 500-sow farrow-to-finish farm managed in a 10-batch system in Brittany, France. Cases of diarrhea were observed in piglets. Testing was done on 10 litters 2 to 3 days after birth, selecting 3 piglets per litter, with a Rainbow piglet Scours BIO K 402 (BioX diagnostics, Belgium) and revealed the presence of C. perfringens in 25 piglets out of 30. Sow microbiota management consisted in adding Bacillus sp. PB6 (CLOSTAT[®], Kemin Europa NV) at 4×10^8 CFU/kg of feed to the diets fed to 10 batches of 44 sows during gestation and lactation. Reproductive performance and piglet growth were measured until 21 days of age and compared to historical data.

Results

Compared to batches from the past 12 months, PB6 resulted in a reduction in the number of litters experiencing diarrhea per batch (3 versus 10) and decreased the percentage of piglets treated with antibiotics (6% versus 23%). Additionally, PB6 led to an increase litter weight at weaning (78.7 kg versus 71.3 kg).

Discussion and Conclusion

This case study demonstrates that PB6 enhances sow performance during lactation as well as growth in suckling piglets. Additionally, the findings suggest that microbiota management with PB6 has the potential to mitigate neonatal diarrhea associated with C. perfringens.