IMM-025

COMPARATIVE STUDY TO EVALUATE IMMUNITY INDUCED BY *E. COLI*-CLOSTRIDIUM VACCINES

M. Ferrer [1], M. Jiménez [2], M. Marcos [2], R. Menjón [2].

[1] ARS ALENDI, Zaragoza, Spain; [2] MSD Animal Health, Madrid, Spain.

Introduction

Colostrum immunoglobins are a source of protection against microbial infections and confer passive immunity to the piglets until they have a mature immune system.The purpose of this study was to compare safety and humoral immunity of different *E. coli* vaccines by measuring specific antibodies (IgG) against the main virulence factors in sows vaccinated with Porcilis® ColiClos or a competitor vaccine with the same indication (vaccine A).

Material &Methods

In a Spanish farm (1,500 sows), 22 primiparous sows were randomly allocated in 2 groups. Prior to farrowing, sows were vaccinated with either Vaccine A (Ginseng adjuvant) or Porcilis® ColiClos, according to manufacturer's instructions. Three blood samples were collected from the sows prior to first and second vaccine dose and 2 weeks after 2nd dose and from piglets (54 piglets, 3 per litter). As a measure of vaccine efficacy antibody titers against specific *E. coli* antigens were measured with an ELISA test (internal MSD AH test). Safety of the vaccine was evaluated based on changes in body temperature and any adverse reactions and efficacy was based on antibody titers. Linear Method (GLM: program SPSS 15.0) was used for the statistical analysis.

Results

Safety: Feed intake was not impacted and no other adverse systemic or local reactions were observed.

Humoral immunity: Antibody titers were in Porcilis® ColiClos versus Vaccine A group, in primiparous sows (2 weeks after 2nd dose): (987P: 8.8 vs 7.43 p=0.05; K88ab: 9.87 vs 9.11 p=0.932; K88ac: 9.3 vs 9.19 p=0.947; K99: 8.04 vs 6.51 p=0.229; LT: 7.11 vs 6.16 p=0.312) and in the piglets of those sows: 987P: 9.67 vs 7.72 p=0.03; K88ab: 11.14 vs 9.75 p=0.03; K88ac: 10.65 vs 9.66 p=0.01; K99: 9.16 vs 7.34 p=0.11; LT: 8.23 vs 6.52 p<0.001).

Discussion & Conclusion

Porcilis® ColiClos was safe and induced higher and more homogenous titers against every *E.coli* antigen than Vaccine A in piglets with vaccinated sows. Achieving a high post-vaccination immunity in sows is important to ensure sufficient transfer of passive immunity to the current large litters.