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TITLE
COMPARATIVE STUDY TO EVALUATE IMMUNITY INDUCED BY ACTINOBACILLUS PLEURONEUMONIAE VACCINES

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CONTENT

Background and Objectives
Pleuropneumonia is a word-wide disease causing substantial economic loss to the swine industry. The disease is characterized by hemorrhagic, fibrinous and necrotic lung lesions. The most accepted control measure for this disease is the generation of immunity in animals through vaccination. Nowadays, different types of vaccines are available in the market. The purpose of this study was to compare immunity response based on antibodies to the toxins and outer membrane protein (OMP) of different commercial APP vaccines.

Material &Methods
The trial was conducted in a Spanish farm (1,500 sows), where an APP serotype 4 was diagnosed (no ApxI expression) At 9 weeks of age, piglets (3000 per group) were vaccinated in 3 sequential batches (different vaccine every batch), Group A (Autovaccine serotype 4), (Porcilis® APP) Group B or Group C (bacterin based in serotype 1,2), and revaccinated 3 weeks later, according to maternal antibodies levels. Blood samples were collected from the piglets 4 weeks after 2nd dose (10 piglets per group). Antibody titers against specific antigens (toxins ApxI, ApxII,ApxII and OMP) were measured with ELISA tests, internal MSD AH test and to ApxIV (Idexx APP)

Results
Piglets in group A had negative or very low seroconversion (log2 titer) to every antigen (ApxI 6,32, ApxII 7,44, AxIII 7,71, OMP 8,14), group B had similar antibodies results to every antigen (ApxI 11,34, ApxII 11,95, ApxIII 11,2, OMP 10,78), and group C had variable results (ApxI 7,39, ApxII 11,14, ApxIII 10,26, OMP 8,99). In ApxIV response, group A had 0%, group B 50% and group C 90% of seropositive results (maybe had contact with the field agent)

Discussion & Conclusion
The Porcilis® APP vaccinated pigs showed a significant and homogeneous response in the toxins and OMP antigens and antibody titers were larger in Porcilis® APP group.