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EFFECT OF THREE ADJUVANTS USED FOR AUTOVACCINE PRODUCTION AGAINST *ACTINOBACILLUS PLEUROPNEUMONIAE* ON SEROLOGICAL PARAMETERS WHEN USED ON FIELD

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Introduction

Actinobacillus pleuropneumoniae (App) Autovaccine is complementary to the commercial vaccines in herds with recurrent troubles. Extent of inflammatory response and subsequent immunization is influenced by the chosen adjuvant. In this study, different formulations are assessed (with and without App antigen) in order to optimize safety without compromising immune response, in an infected farm environment.

Materials and methods

This controlled, randomized and blinded trial was conducted in accordance with GCP principles. One batch of 200 piglets was included on a commercial farm where an App autovaccine was usually administered (biovar 1, serovar 2). At 9 weeks, healthy subjects were randomized into 8 treatment groups: complete vaccines (App antigen and the 3 tested adjuvants – mineral oil, water based gel, and micro-emulsion) were administered to 3 groups, whereas 3 control groups received these adjuvants without antigen. One control group received only NaCl solution and another one the antigen solution with no adjuvant. Blood samples were performed on 10 animals per group on D0 -3, then D1, D3, D14, D28, D56, D84 and D112. Inflammatory response was monitored by ELISA PigMap and immune response by ELISA App serovar 2.

Results

At D1 and D3, significant differences in PigMap titres are found between all groups, the highest levels being observed with the first adjuvant (associated with Ag or not). Afterwards, titres became similar between groups.

At D14, the App antibody response is appearing for vaccinated animals, and at D28, the observed level for animals vaccinated with the first adjuvant has risen significantly when compared to control (antigen alone). Between D56 and D84, all groups show a marked seroconversion.

Discussion and Conclusion

Whatever the adjuvant, serological parameters after vaccination show an effective immune stimulation, with significant App-antibody response and a PigMap peak, particularly when mineral oil adjuvant is used.