EVALUATION OF THE IMMUNE RESPONSE INDUCED BY AN ATTENUATED LIVE VACCINE AND AN INACTIVATED VACCINE (PNEUMOSUIVAC B) AGAINST PIG PLEUROPNEUMONIA

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SUMMARY

The goal of our research was to compare the following two vaccines used to prevent pig pleuropneumonia:

- an attenuated live vaccine, produced by us, which contains a nonpathogenic TM 501 strain which, cultivated in usual conditions, had no hemolysis, but this had been isolated in different conditions (no pleuropneumonia infection at the farm), by other authors over 25 years ago.
- Pneumosuivac B (S.N. Pasteur Institute, Bucharest), an inactivate vaccine, which contains A. pleuropneumoniae strains serotypes 9, 2, and 5 and Pasteurella multocida strains 511 and 616, adjuvanted.

Two groups of young pigs (between 2 and 3 weeks of age) are studied. These pigs (Landrace – Big White hybrid) belong to a farm in which pig pleuropneumonia with Actinobacillus pleuropneumoniae are endemic. The vaccination against this disease is not included in vaccination schedule. Evaluation of the immune response was made by indirect ELISA with CIVTEST suis APP (Laboratories HIPRA, Spain).

The live vaccine, containing TM 501 strain with Diluvac forte induces an intense immune response right after the first inoculation, the mean value of titers increasing significantly from 0.369 O.D. to 0.703 O.D. The second inoculation, performed after three weeks from the first inoculation determined a continuous increase of O.D., obtaining maximum levels in the 30th day (0.820 O.D.), after which the titer decreased, maintaining at high levels (0.686 O.D.) until the end of monitoring period.

In lot vaccinated with Pneumosuivac B it was found a continuous increase of mean titer of antibodies right after the first antigenic stimulus, reaching a maximum level (O.D.=0.646) after 3 weeks from the second inoculation, slowly decreasing later (O.D.=0.598) toward the end of the two months of observation.

Comparative research on immunogenity of these tested vaccines against pig pleuropneumonia showed that both are immunogene, but not in equal proportion and determine significant increases (p<0.01) of antibody titers during the observation period.