

## **Effect of Simultaneous Injection of Classical Swine Fever Virus Vaccine and *Mycoplasma hyopneumoniae* Vaccine on Immune Response of Swine**

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### **Abstract**

Objectives of this study were (1) to compare sero-conversion in pigs following simultaneous and separate vaccination against Classical Swine Fever (CSF) and *Mycoplasma hyopneumoniae* and (2) to determine safety of CSF and *M. hyopneumoniae* vaccines when given simultaneously. Twenty-four weaned pigs were divided into 3 groups of 8 heads. Groups were designated as non-simultaneous vaccinated group, simultaneous vaccinated group and negative control, respectively. Vaccines used in study were *M. hyopneumoniae* vaccine (SPRINTVAC<sup>®</sup>MH) and CSF vaccine (PESTIFFA<sup>®</sup>). IDEXX ELISA test kit (HerdChek M hyo) and LSIVET SUIS HC/PPC Blocking ELISA test kit were used to detect antibody titre on weekly basis. Sero-conversion rate of CSF antibody titre and M.hyo antibody titre were calculated. Result showed both simultaneous vaccination and non-simultaneous vaccination for CSF antibody titre reached 100% sero-conversion rate at 5 weeks post vaccination. Therefore, simultaneous vaccination was able to accomplish similar results as in non-simultaneous vaccination. Sero-conversion rate for CSF antibody titre in non-simultaneous group was slower before it reached 5 weeks post vaccination. 12.5% of animal from negative control group sero-converted at 5 weeks post vaccination due to false-positive result or field infections. *M. hyopneumoniae* antibody titre sero-conversion rate in both simultaneous vaccination and non-simultaneous vaccination reached 100% sero-conversion rate after 6 weeks post vaccination. Control group showed negative result for *M. hyopneumoniae* antibody titre throughout whole experiment. Vaccines used in trial did not cause any adverse effect after post vaccination when given simultaneously.

**Keywords:** classical swine fever, *Mycoplasma hyopneumoniae*, sero-conversion, ELISA, simultaneous injection