



Compared immunity between two modified live Classical Swine Fever vaccines: Thiverval strain versus C strain CL

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Introduction:

Classical Swine Fever is a viral disease that affects the viability of the swine production. Moreover it is classified in the A list of the International Organization of Epizootics (OIE). Vaccination provides an effective protection against the disease and allow the farms to keep their productivity. This field trial aims to compare two different commercial modified live vaccines measuring the neutralizing antibodies synthesized after the vaccination and the protection hence expected.

Materials and methods:

In a farrow to finish farm of 1 500 sows in the Philippines, two groups of 30 piglets each, of the same age, were constituted after weaning with the same average weight. They were raised side by side in the same building, during the nursery period as well as during the growing one. The animals were vaccinated at 35 and 56 days old with: for the first group (G1) COGLAPEST® (Thiverval strain); for the second group (G2) by a commercial vaccine containing a C strain CL produced on cell culture.

Before the trial, 30 piglets of 10 days old had a blood sample to measure the level of maternal derived antibodies (MDA) for vaccination timing determination [1]; the sows were vaccinated 4 weeks before farrowing with the same vaccine as G2.

Blood samples were collected on all the animals at 33, 54, 70, 84, 98, 112 days old. A serum-neutralization (SN) test was performed to determine, each time, the level of antibodies (expressed in log 2). A statistical analysis of the results was done using the t-test.

Results:

At 10 days old, the SN mean titre was 5.4 (Standard deviation of 1.5). This allows the first vaccination between 3 and 6 weeks of age.

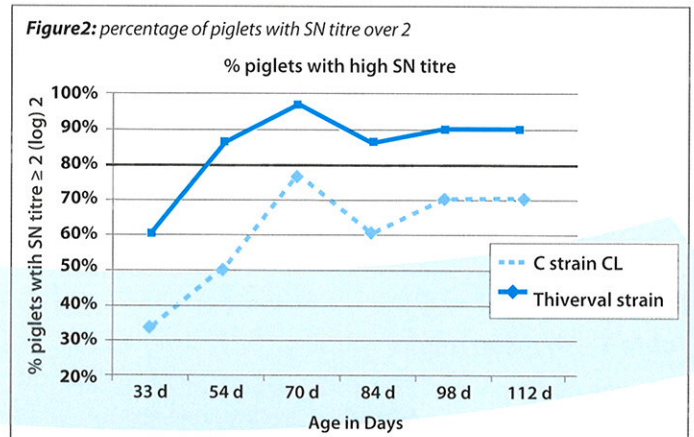
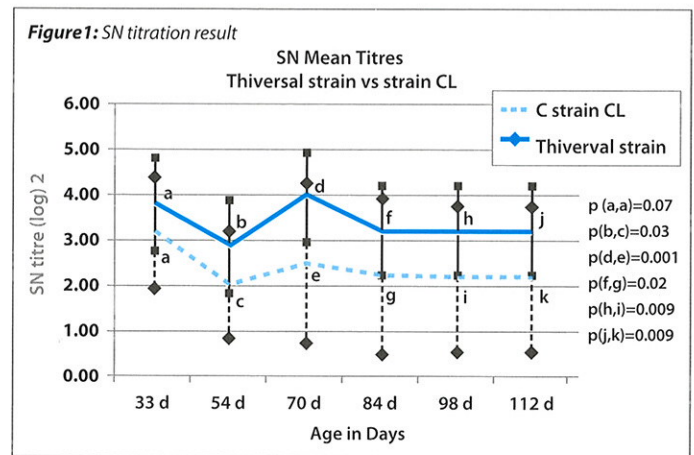
At 33 days old (before the first vaccination), the SN mean titres for the G1 and the G2, respectively 3.8 and 3.2, were comparable (no significant difference) – figure 1. From 54 until 112 days, the G1 showed a significantly higher mean titre than the G2.

Discussion:

The MDA measurement at 10 days old is coherent with a vaccination at 35 and 56 days old.

The G1, vaccinated with COGLAPEST® shows a significantly higher level of neutralizing antibodies than the G2 vaccinated with a C strain CL.

Considering the SN titre 2 as the minimum protecting titre against the disease [2], from 54 days old the G1 had more than 80% of the piglets over this threshold while this ratio was only 50 to 77% for G2 (figure 2).



In this trial, COGLAPEST® induces a significantly higher level of serum neutralizing antibodies than the C strain CL vaccine.

References:

- 1 – S. Suradhat et al. – Vet. Micro. – (2003) 92: 187-194
- 2 – M. Launais et al. – Vet. Micro. - 3 (1978) 31-43

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