Simultaneous Vaccination of Pigs with Sprintva® and Pestiffa®

HC Lim¹, BK Lim², PY Choo³, HL Too⁴

¹Rhone Ma Malaysia (M) Sdn Bhd, Selangor, Malaysia, ²Vet Food Agro Diagnostic (M) Sdn Bhd, Selangor, Malaysia, ³Asia Pacific Special Nutrients (M) Sdn Bhd, Selangor, Malaysia, ⁴Merial Asia Pte. Ltd

HangChern.Lim@merial.com

Introduction
The administration of different vaccines simultaneously often gives rise to concerns about safety and efficacy. A previous study on the simultaneous use of Merial vaccines in sows showed no adverse effects on safety and efficacy (1). However, there has been no study on the simultaneous use of Mycoplasma hyopneumoniae (M hyo) vaccines with swine fever vaccines in piglets. The present study was conducted to evaluate the safety and the seroprofiles after injections of SPRINTVAC and PESTIFFA used for the control of swine enzootic pneumonia (SEP) and classical swine fever (CSF) respectively following simultaneous administration to piglets.

Materials and Methods
Twenty four 4-week old weaners from a farm known to be free of Aujeszky’s disease, Porcine Respiratory and Reproductive Syndrome (PRRS) and CSF were randomly allotted to 3 experimental groups (Table 1). When simultaneous vaccination was performed, the vaccines were injected on opposite sites of the neck region. All pigs were housed in adjacent pens and managed in same manner throughout the trial period.

Table 1 Groups of experimental pigs.

<table>
<thead>
<tr>
<th>Group</th>
<th>Vaccination</th>
<th>No of animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>S (Simultaneous)</td>
<td>SPRINTVAC® and PESTIFFA® on same day at 4 weeks of age</td>
<td>8</td>
</tr>
<tr>
<td>NS (Non simultaneous)</td>
<td>Vaccinate PESTIFFA® 5 days after SPRINTVAC vaccination</td>
<td>8</td>
</tr>
<tr>
<td>Control</td>
<td>None</td>
<td>8</td>
</tr>
</tbody>
</table>

Weekly serum samples from 4 to 10 wks of age and at 12 and 20 weeks of age were tested for antibodies to M. hyo and CSF using IDEXX M. hyo test, and Hipra CIV swine fever test kit respectively. The effects of local site reactions and anorexia were observed for up to 3 weeks after vaccination.

Results and Discussion
There were no adverse local reactions to the vaccinations or anorexia observed post-vaccinations. The serological profiles for mycoplasma and swine fever antibodies are shown in Figures 1 and 2. Seventy five percent of pigs from Group S seroconverted at three weeks post vaccination. CF antibodies were detected in all pigs at 4 weeks (Group S) and 5 weeks (Group NS) post vaccination.

Figure 1 Swine fever antibody serological profiles

Figure 2 M. hyo antibody serological profiles

Three (37.5%) of the pigs from NS group seroconverted two weeks following SPRINTVAC® 2 vaccination while all but one (87.5% ) of the pigs from S group seroconverted 3 weeks post vaccination. Seroconversion rate for both groups at 5 weeks post vaccination remain above 90% until the age of 20 weeks old. Seventy-five per cent of pigs from the control group seroconverted at the age of 20 weeks old which indicates evidence of field challenge of M. hyo.

Conclusion
In this study, no adverse local reactions or anorexia were observed with the simultaneous vaccination SPRINTVAC® and PESTIFFA®. Conversely to no CSF challenge, pigs face a late M hyo exposure. Serological profiles were similar in both simultaneous and non-simultaneous vaccination group.

References

®SPRINTVAC and PESTIFFA are registered trademarks of Merial Ltd and Merial SAS, respectively.