



IMM-003

## **BOOSTER VACCINATION OF SOWS WITH A MODIFIED LIVE ATTENUATED PRRS VACCINE IMPROVES REPRODUCTIVE PERFORMANCE AFTER PRRSV CHALLENGE**

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### **Introduction**

Gilts in acclimation period usually receive several doses of the main swine breeding vaccines, before they are allowed to enter the herd as part of the reproductive stock. In the case of PRRSV, it is a common practice to vaccinate them twice. The objective of the study was to evaluate the efficacy of a double vaccination of gilts with PRRS MLV vaccine at 16 weeks after the first administration, against challenge with the PRRSV-1 strain Olot/91 at 79-91 days of pregnancy.

### **Materials and methods**

Twelve PRRSV seronegative gilts were divided into two groups. One group (6 gilts) was kept as negative control, and the other group (6 gilts) was vaccinated with Suvaxyn PRRS MLV; 112 days later (time that would have required a complete reproductive cycle), they received a second dose. Four to five weeks after the 2nd administration gilts were mated. At 79-91 days of pregnancy, gilts were challenged with PRRSV. At farrowing, litters were evaluated and piglets were clinically observed until weaning. Gilt data after challenge consisted of clinical observations and rectal temperatures, viremia and shedding, reproductive performance and detection of PRRSV in lung exudates of born dead piglets. Piglet data included clinical observations and rectal temperatures, piglet viremia at birth and at weaning, lung scoring at necropsy and detection of PRRSV in bronchoalveolar lavage samples collected at necropsy.

### **Results**

A significant increase in the % of born alive (88% versus 45%), born healthy (86% versus 42%) and weaned piglets (76% versus 41%), and a significant reduction in the % of stillborns (8% versus 52%) and incidence of transplacental infections (virus load in piglet serum at birth - 4 log reduction, at weaning - 4 log reduction, and lung lavages at necropsy - 3 log reduction) were observed in vaccinated gilts, compared to controls. The % of pigs with lung lesions and % of lung with lesions at necropsy were significantly reduced (3% versus 0%). Efficacy was supported by significant reduction of viral load in gilt serum (4 log reduction), nasal (2 log reduction) and oral swabs (1 log reduction).

### **Conclusions**

The administration of two doses of Suvaxyn PRRS MLV to gilts was able to reduce the impact of PRRSV infection during pregnancy, as seen by the positive effects of vaccination in reproductive performance and in virological data from gilts and piglets.

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