

# FIELD PERFORMANCE OF UNISTRAIN® PRRS AGAINST TYPE 2 PORCINE REPRODUCTIVE AND RESPIRATORY SYNDROME VIRUS (PRRSV2) IN PIG HERDS IN THAILAND

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## INTRODUCTION

PRRS is the disease with the highest impact on the swine industry worldwide. Owing to its endemic distribution and the high mortality caused by both types (PRRSV1 and PRRSV2), immunization of the pigs is required to minimize the economic and productive impact on affected farms[1]. Immunization through modified live vaccines (MLV) has proved to be effective in controlling PRRSV1 and PRRSV2 infection[2]. However, variable results are observed especially when a heterologous PRRSV isolate is circulating[3]. The purpose of this study was to evaluate the field efficacy of UNISTRAIN® PRRS against PRRSV2 strain, widely present in intensive pig herds in Thailand.

## MATERIALS AND METHODS

The performance of 14-day-old piglets from four commercial pig farms in Ratchaburi province (Thailand) was evaluated for 6 months after vaccination. Included farms were positive for the PRRSV2 strain by RT-PCR and by real-time RT-qPCR assay. The piglets were randomly distributed into two groups and vaccinated at 2 weeks of age: group 1 (n=800) was vaccinated intradermally (0.2 ml) with UNISTRAIN® PRRS and group 2 (n=800) was vaccinated intramuscularly (2 ml) with a commercial PRRSV2 MLV vaccine (vaccine A). Safety evaluation consisted in daily monitoring of systemic and local reactions (pyrexia, skin redness and abscesses, clinical respiratory signs, depression and inappetence) for both groups until 3 weeks post vaccination (Fig 1). Productive parameters monitored were: average daily weight gain in the lactation period per litter (ADLWG) and in the fattening period (ADFWG), cumulative mortality rate (until slaughter age), fattening mortality rate (from 10-weeks of age to slaughter age) and feed conversion rate (FCR), (IBM SPSS statistics 22).

## RESULTS

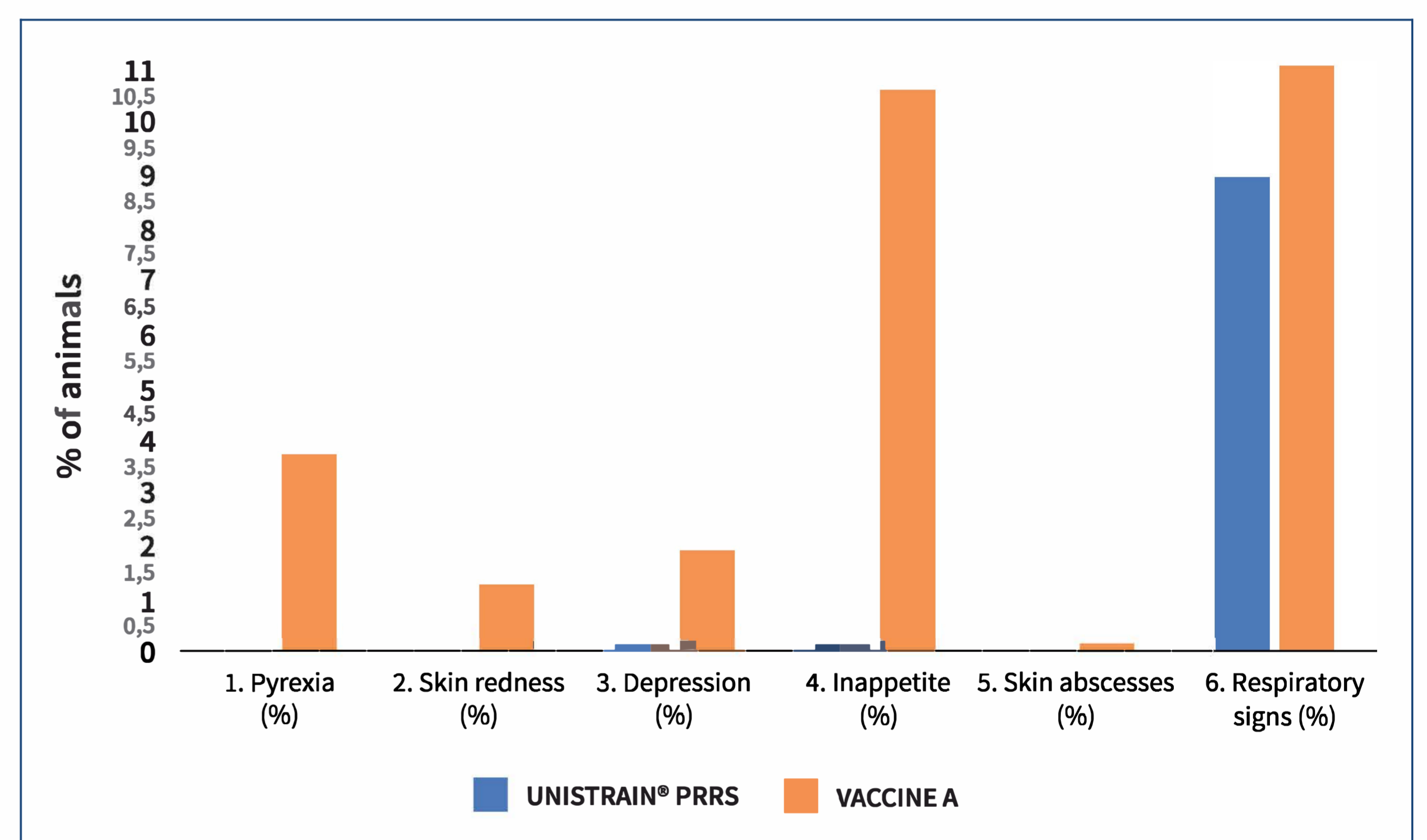
Almost no systemic or local reactions were observed in the UNISTRAIN® PRRS group whilst piglets from group 2 showed inappetence (10.6%) and pyrexia (3.75%). All productive performance parameters showed significant differences between groups (Table 1).

## CONCLUSIONS

In the same production system under PRRSV2 field infection, UNISTRAIN® PRRS (EU strain) showed a significant improvement in productivity, reducing mortality and increasing ADWG. In this case, UNISTRAIN® PRRS was effective against PRRSV2 virus infection compared with the unsuccessful outcome achieved with the previous PRRSV2 vaccine.

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**Figure 1.** Percentage of animals positive for systemic and/or local reactions in both groups.

**Table 1.** Productive parameters over a 6-month period after vaccination (mean ± SD)

Productive parameter	UNISTRAIN®PRRS	Vaccine A
ADLWG (kg)	2.5 ± 17.8 <sup>a</sup>	2.1 ± 39.9 <sup>b</sup>
ADFWG (kg)	0.7 ± 12.9 <sup>a</sup>	0.6 ± 15.4 <sup>b</sup>
Cumulative mortality rate (%)	10.6 ± 1.7 <sup>a</sup>	19.5 ± 3.3 <sup>b</sup>
Fattening mortality rate (%)	1.6 ± 0.7 <sup>a</sup>	3.9 ± 1.1 <sup>b</sup>
FCR	2.4 ± 5.6 <sup>a</sup>	2.6 ± 51.1 <sup>b</sup>

Note: \*Different letters (a, b) within the same row represent significant differences (p>0.05)

## REFERENCES

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