

BENEFICIAL IMPACT OF PIGLETS VACCINATION WITH UNISTRAIN® PRRS BEFORE TRANSPORT TO FATTENING FARMS WITH HIGH RISK OF PRRS VIRUS INFECTION

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INTRODUCTION

Porcine respiratory and reproductive syndrome virus (PRRSV) is an important pathogen causing huge economic impact in swine industry worldwide. Especially in the multisite system, PRRS can be a problem when fattening farms are located in high density pig producing areas with high risk of PRRSV infection¹. Through this study, the efficacy of UNISTRAIN® PRRS administered to 8 week of age piglets was evaluated in fattening farms with severe respiratory disorder caused by PRRSV.

MATERIALS AND METHODS

A 650-sow farm produced PRRS-free 30 kg piglets and transferred them to 2 fattening units that were surrounded by several swine farms. These neighbor farms were infected by type-2 PRRSV and problems of high mortality rate were observed. In this situation, piglet mortality was increased due to type 1 and 2 PRRSV infection. Accumulated mortality rate until slaughter was 18.1-24.3% and 14.4-15.3% in fattening farm A and B, respectively.

To solve this problem, a type-2 PRRS MLV (Ingelvac® PRRS) and a type-1 PRRS MLV (UNISTRAIN® PRRS, HIPRA) were evaluated by vaccinating different piglet batches at 8 weeks of age (600-750 piglet per batch). Cumulative mortality rate of each batch was recorded to evaluate the efficacy of PRRS vaccines in terms of clinical signs and productivity.

RESULTS

As a first prevention measure, type-2 PRRS MLV was used during 4 weeks, but pig mortality remained still high in farm A (13.3%, Table 1) and B (9.9%, Table 2). Moreover, field strains of type-1 PRRSV were detected in serum samples by RT-PCR.

In order to control PRRSV infection, vaccination with UNISTRAIN® PRRS was implemented. Using UNISTRAIN® PRRS, cumulative mortality was significantly reduced in farm A and B during 5 months. Especially after the 3rd batch of piglets vaccinated with UNISTRAIN® PRRS, cumulative mortality rate until slaughter age in farm A and B decreased until 2.3% and 2.1%, respectively.

Table 1. Cumulative mortality rate of each batch in farm A.

GROUP	BATCH SIZE (number of pigs)	ENTRY DATE (30 kg pigs)	CUMULATIVE MORTALITY RATE (until slaughter age)
Non-vaccinated	700	16 Jul 16	24.3%
	700	06 Aug 16	18.1%
Ingelvac® PRRS	750	13 Sep 16	13.3%
	750	25 Sep 16	8.5%
UNISTRAIN® PRRS	750	30 Oct 16	6.5%
	706	24 Nov 16	2.3%
	650	24 Dec 16	3.2%
	699	25 Jan 17	3.2%
	650	10 Feb 17	2.2%

Table 2. Cumulative mortality rate of each batch in farm B.

GROUP	BATCH SIZE (number of pigs)	ENTRY DATE (30 kg pigs)	CUMULATIVE MORTALITY RATE (until slaughter age)
Non-vaccinated	700	04 Jul 16	14.4%
	700	26 Jul 16	15.3%
Ingelvac® PRRS	750	18 Aug 16	9.9%
	750	01 Sep 16	7.6%
UNISTRAIN® PRRS	750	07 Oct 16	3.3%
	706	19 Oct 16	2.1%
	650	11 Nov 16	1.9%
	699	08 Dec 16	2.0%
	650	08 Jan 17	2.1%

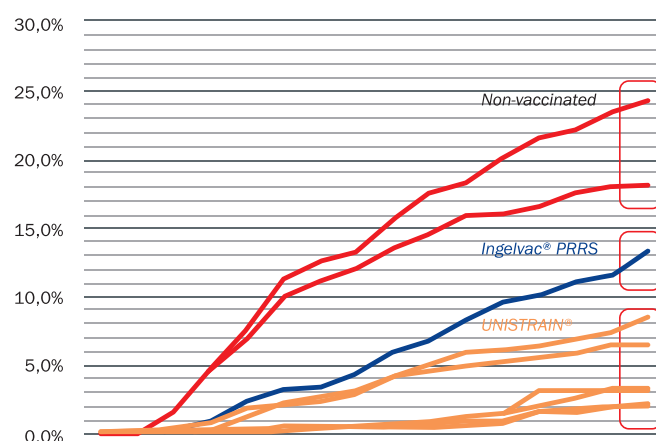


Figure 1. Cumulative mortality rate in fattening farm until slaughter age (Gray; Non-vaccinated, Blue; Ingelvac® PRRS, Orange; UNISTRAIN® PRRS).

CONCLUSION

The commercial type-2 PRRS MLV could not control the type-1 PRRSV infection. However, in the same production system, UNISTRAIN® PRRS showed significant improvement in productivity reducing significantly the mortality. In overall, piglet vaccination with UNISTRAIN® PRRS improves productivity especially in farms co-infected with type 1 and 2 PRRSV².

REFERENCES

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