

EMERGENCY VACCINATION PROTOCOL WITH UNISTRAIN® PRRS AFTER AN OUTBREAK OF PORCINE REPRODUCTIVE AND RESPIRATORY SYNDROME ON A NEGATIVE SWINE FARM IN SOUTH KOREA

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INTRODUCTION

Porcine reproductive and respiratory syndrome virus (PRRSv) is one of the diseases which causes the greatest economic losses to the swine industry. When PRRSv enters a negative farm cause a serious outbreak : increase of abortions over a period of months, weakborn piglets, an increase in pre-weaning mortality, etc. are often seen. Under these circumstances, minimisation of the impact of the disease is a primary objective. This can be achieved by emergency vaccination of sows with PRRS MLV vaccines. Vaccination with MLV vaccines has been reported to achieve farm stabilisation more quickly than other methods (1). This is a case report of a clinical outbreak on a negative farm in Korea.

MATERIALS AND METHODS

A 450-sow breeding centre that was previously PRRS- negative was infected and this was confirmed by the laboratory by regular serum profile monitoring to detect PRRS antibodies (ELISA) and PRRSv (RT-PCR). As a measure to reduce the impact of the PRRSv outbreak, the farm decided to carry out emergency vaccination with UNISTRAIN® PRRS (0.2 ml), applied intradermally, using a Hipradermic® needle-free device. Mass vaccination of the sows was performed once per month, starting just after PRRSv confirmation and for 4 months after the outbreak. Herd closure, infected nursery depopulation and an exhaustive monitoring programme were other measures that were taken. The monitoring programme consisted of a serum profile for antibody detection (ELISA) once a month and oral fluid collection for PRRSv detection (RT-PCR) after the 4th vaccination in sows, suckling piglets, weaned piglets and fattening pigs (Figure 1). Moreover, all the housing materials were dismantled, cleaned and disinfected (Figure 2). High internal and external biosecurity measures were implemented. Feeding immune boosters (PMCplus®) after the 4th vaccination and antibiotic treatments (tylvalosin, bacitracin) were used to minimise co-infections. Sentinel pigs that were PRRSv ELISA and PCR-negative were introduced into the nursery units 7 months after the PRRSv outbreak and they were sampled by ELISA and PCR 3 weeks after entering the nurseries.

RESULTS

The ELISA and PCR results from the time of the outbreak onwards are shown in Table 1. All animal categories were positive for ELISA and PCR until 2 months after the outbreak. 7 months after the outbreak, the farm started to become stable with PCR-negative results in the sow herd and negative ELISA and PCR results in the suckling piglets. 3 weeks after entering the nurseries, sentinel pigs were also negative for ELISA and PCR.

	PRRS Outbreak		2 months after outbreak*		7 months after outbreak**	
	Ag	Ag	Ag	Ag	Ag	Ag
Sow	+ PRRSv1	+	+ PRRSv1	+	-	+
Suckling piglets	+ PRRSv1	+	+ PRRSv1	+	-	-
Weaning piglets	+ PRRSv1	+	x	x	-	-
Growing pigs	+ PRRSv1	+	x	x	x	x

Table 1. ELISA and RT-PCR results for the detection of PRRSv antibodies (Ab) and PRRSv antigen (Ag).

*Start of nursery depopulation, ** Introduction of sentinel pigs. Results in yellow boxes correspond to sentinel pig sampling 3 weeks after they entered the nurseries. + (positive), - (negative), x (no pig population exists).

CONCLUSIONS

Amongst other measures, emergency vaccination with UNISTRAIN® PRRS on a previously negative farm helped to reduce the disease impact and to stabilise the farm after the PRRSv outbreak.

REFERENCES

1. Linhares et al., 2014. Preventive veterinary medicine. 116. 10.1016/j.prevetmed.2014.05.01