In vitro viability of vaccine attenuated PRRSv (UNISTRAIN® PRRS) when mixed with an inactivated Swine Influenza vaccine (GRIPORK®)

Martínez C [1], Torrents D [1], Pedrazuela R[1] Miranda J [1], Martínez E [2] Pujol R [2]

[1] Swine Business Unit, HIPRA, Amer, Spain.

[2] Research & Development department HIPRA, Amer, Spain

carlos.martinezbenitez@hipra.com

INTRODUCTION

In Asia, nowadays, pig producers need to protect their pigs and sows against several pathogens. Many vaccination programs have to be implemented in sows during the gestating or lactating period[1]. The possibility of reducing or administering vaccines simultaneously can potentially improve either welfare status or the labour efficiency[2]. Therefore, the objective of this trial was to estimate if the attenuated PRRS vaccine (UNISTRAIN® PRRS) can keep viability when it is reconstituted with an inactivated swine influenza vaccine (GRIPORK®).

MATERIALS AND METHODS

Two 50-dose freeze dried tablet of UNISTRAIN® PRRS (strain VP-046 BIS. HIPRA) vaccine (attenuated PRRS virus) were used. One was reconstituted with GRIPORK® (HIPRA) (50-dose bottle; 100ml). The other one was reconstituted in 100ml aqueous commercial solvent (HIPRA). After 0, 1, 2, 3 and 4 hours post reconstitution at 25ºC, virus was titered measuring its cytopathic effect in CLON 8 cell line.

RESULTS

PRRS vaccine virus (UNISTRAIN® PRRS) when mixed with GRIPORK® maintained its in Vitro viability with titers values equivalent or higher than the minimum effective concentration (MEC) of the product ($10^{3.5}$-$10^{5.5}$CCID$_{50}$) until 4 hours after reconstitution. The same results were obtained when mixed with the diluent (100ml) in commercial solvent (see table 1).

Table 1. Results of titres per dose of PRRS vaccine virus.

Time after reconstitution (h)	Vaccine virus titres per dose (2ml) (CCID50/dose)	
	UNISTRAIN®PRRS +Solvent	UNISTRAIN®PRRS +GRIPORK®
T0	10^{5}	$10^{4.93}$
T1	$10^{4.75}$	$10^{4.81}$
T2	$10^{4.93}$	$10^{4.06}$
T3	$10^{5.06.}$	$10^{4.18}$
T4	$10^{4.64}$	$10^{3.93}$

DISCUSSION

These results suggest there is no interference on PRRSv viability between vaccine components when UNISTRAIN® PRRS is reconstituted with GRIPORK®.

Moreover, UNISTRAIN® PRRS can keep its MEC until 4 hours after the reconstitution at room temperature. Bear in mind that field conditions can interfere in these results. Despite of further studies *in vivo* would be required in order to assure the safety and the immunogenic response of this vaccine mixing, it could be considered a potential vaccine combination in commercial farms.

REFERENCES

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Laboratorios Hipra, S.A.
Avda. la Selva, 135
17170 Amer (Girona)
Spain

Tel (34) 972 43 06 60
Fax (34) 972 43 06 61
hipra@hipra.com
www.hipra.com