

Assessment of the efficacy of SUISENG® under field conditions on a Korean farm

Jae-Woo Lim, Yoon-Kyung Kim, Kyeong-Dae Min, Jeong-Hee Han

College of Veterinary Medicine and Institute of Veterinary Science, Kangwon National University,
Chuncheon-Si, Kangwon-Do, 200-180, South Korea
Lim7031@gmail.com

INTRODUCTION

In recent years, *Escherichia coli* (*E. coli*) and *Clostridium perfringens* type C (CpC) associated diarrhea in preweaners has caused massive economic losses to the swine industry worldwide. In order to prevent economic losses from *E.coli* and CpC, many swine producers use an inactivated vaccine.

Commonly, diarrhea caused by these pathogens is prevented by the vaccination of sows which are then booster vaccinated twice before farrowing. The aim of this study was to assess the serological efficacy of SUISENG® (Hipra, Spain) on a commercial farm located in Korea.

MATERIALS AND METHODS

A The study was carried out on a farm in Korea with 300 sows with 15% diarrhea and around 10% mortality during lactation. The experimental groups consisted of 6 vaccinated sows and 4 control sows (30 piglets in the vaccinated group and 20 piglets in the control group). Sera from sows vaccinated with SUISENG® and with a placebo, and from their preweaners were used in this work. Testing was carried out using in-house ELISA supplied by Hipra.

The Mann-Whitney test and t-test ($p<0.05$) (SPSS statistics 20, IBM Corp., USA) were used for statistical significance.

RESULTS

The means of ELISA antibody titers against each antigen (IRPC) are shown in Tables 1 and 2. The tables show a clear distinction between the vaccinated group and the control group. Sows and their piglets in the vaccinated groups had higher antibody titers against all fimbrial antigens and toxins.

Statistical differences were observed between the vaccinated and control groups.

Table 1. SOWS. Antibody titers against all fimbrial antigens and toxins in sows (mean IRPC) in each group

	2nd shot		Farrowing	
Antigen	SUISENG®	control	SUISENG®	control
F4ab	50.6	39.0	51.8	29.7
F4ac	63.4	41.5	72.3	29.9
F5	26.5	47.6	62.2	19.9
F6	30.2	10.4	60.3	13.5
LT	24.0	11.1	16.6	3.8
CpC	69.9	47.6	50.5	22.9

Table 2. PIGLETS. Antibody titers against all fimbrial antigens and toxins in preweaners (mean IRPC) in each group

	2-3 days		1 week	
Antigen	SUISENG®	control	SUISENG®	control
F4ab	54.4	41.6	58.5	32.8
F4ac	85.7	42.0	48.4	41.1
F5	32.2	36.4	43.2	13.4
F6	64.3	29.2	48.4	18.1
LT	33.3	17.8	20.8	7.8
CpC	74.2	50.8	60.6	21.1

DISCUSSION

There was statistical significance in the F4ac and F5 antibody titers of farrowing sows. There was also a significant difference in antibody titers against CpC, F4ab, F5, F6 and LT of 1 week-old-piglets. The results clearly demonstrate that SUISENG® induces the production of specific antibodies to the LT toxin and fimbrial antigens of *E. coli* and toxoid of CpC.

REFERENCES

[1] Fairbrother J. et al, 2005, Animal Health Research Reviews 6(1); 17-39

[2] Springer S. et al, 1999, FEMS Immunology and Medical Microbiology 24; 333-336

[3] Dean-Nystrom E. et al, 2002, American Society for Microbiology Vol.70, No.5; 2414-2418



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