P.212

Successful control of Porcine High Fever Disease in a Chinese 1200 sow farm: a case report

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Introduction

Porcine High Fever Disease(PHFD), the primary pathogen of which is highly virulent porcine reproductive and respiratory syndrome virus (HP PRRSV), causes huge economic losses because of high morbidity and mortality in all infected Chinese pig farms(1). An outbreak of HP PRRS in a 1200 sow pig farm started in April of 2008 in Guangdong province, and it was controlled by Ingelvac® PRRS MLV mass vaccination one month later.

Materials and methods

This pig farm was built in 1990,, with two units of 600 sows each, continuous flow management. Two-hundred newly purchased gilts were introduced into the breeding herd without acclimation in Jan.2007. PHFD broke out with evident clinical signs from Apr. 20th, whereby all animals seemed to be affected with following clinical signs: Anorexia, lethargy, dyspnea, hyperthermia and discolouration of the skin. On April 25th, abortion, preterm birth and stillbirth started. Until Apr. 30th, 80 sows aborted and 120 sows were culled.

On 26th, 40 blood samples and 5 tissue samples from the abortion embryo and stillbirth were sent to Guangdong swine disease diagnosis center for antibody and antigen test.

On May 1, all no-sign breeders, healthy suckling piglets were vaccinated with Ingelvac® PRRS MLV. Then breeders were given second shot 4 weeks later. Replacement gilts were vaccinated twice at a 4 -week interval before mating. Piglets were given one shot at 2 weeks of age. Antibiotics were administered in water or feed against bacterial infection at same time.

Results

Table 1. *Lab diagnosis results before Ingelvac PRRS MLV vaccination*

PRRS Antibody Test		HP PRRSv PCR test	
samples	positive	samples	positive
40	20	5	5

On May 10, sows started returning to normal appetite. Abortion reduced to 20 litters and no death was observed following start of vaccination. All pigs recovered in July. Reproductive performance of all sows in each quarter was getting better and better after vaccination, and even better than that before PHFD outbreak.

Table 2. *Average reproductive performance each quarter in 2008*

	Jan-Mar	Apr-Jun/Apr	Jul-Sept	Oct-Dec
Farrowing (%)	81	70/14	83	85
Abortion (%)	4	21/72	3	3
Pigs born alive/litter	9.2	7/4.5	9.6	9.5
Stillbirth (%)	8.8	20/35	6.7	5.8
suckling interval (%)	93	85/70	93	94
Nursery survival (%)	95	88/65	93	96
sows culled	93	214/150	94	90
sows died	8	20/18	0	0

*PHFD broke out on Apr.20. Ingelvac® PRRS MLV intervention started from May 1.

Discussion

Analyzing the data recorded in 2008, we found that Ingelvac® PRRS MLV improved the reproductive performance by two times of vaccination in 4 weeks. One shot of Ingelvac® PRRS MLV to piglets obviously reduced the mortality and morbidity in nursery. Ingelvac® PRRS MLV provided cross-protection against HP PRRS in the farm. In conclusion, Ingelvac® PRRS MLV is a useful tool to control and prevent PHFD.

References

1. Zhou YJ, Hao XF, et.al, Highly virulent porcine reproductive and respiratory syndrome virus emerged in China. Transbound Emerg Dis. 2008 May;55(3-4):152-64.