

The use of Porcilis PRRS vaccination to help control escalating post weaning mortality

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Summary

Post weaning mortality in the progeny of a 1000 sow herd reached 16%; breeding herd conception rate also recorded a marked decline. A herd inspection, review of management procedures, and blood sampling of the breeding and growing herd was instigated, together with post mortem evaluation. A herd breakdown to PRRS was diagnosed via serology and clinical inspection, and PMWS confirmed. A vaccination and medication regime was implemented which resulted in a rapid and dramatic reduction in mortality and improved growing herd pig health.

Herd details

The herd comprises 1000 sows, of which 80 are GP's producing gilt replacements, and 920 first cross commercial sows. Dry sows are housed indoors, farrowing and lactating sows are outdoors. All sows are served with A.I., returns caught by chaser boars. Sows P.D.'d at 24 days and 7 weeks. The rearing herd is situated approximately 1 mile from the sow herd. All progeny from 7-45kg are housed in weekly weaning groups in straw yards and are wet fed; approximately 50% of these pigs are finished at 105kg in fully slatted, wet fed ARM sheds, the remaining pigs sold as stores.

Health status

The herd has been PMWS/PDNS positive since June 2001, cases being particularly evident between 9-12 weeks of age. The herd is also positive to *Mycoplasma hyopneumoniae* (vaccinated) and *strep.suis* type 2. Following PMWS breakdown, significant problems were encountered with *Salmonella typhimurium*. The herd was initially believed to be free from PRRS, but subsequent serology indicated that breakdown may have occurred in the breeding herd in May 2002.

Herd inspection and planned action

A telephone conversation with the farmer client in September 2002 revealed that breeding herd performance was declining in respect of conception rate and total litter size at birth. Also concern was expressed in respect of diarrhoea in young growing pigs and an increased incidence of 'PMWS-type' pigs.

A herd inspection followed; no major management faults could be identified to account for the declining prolificacy; 'problem' sows were blood sampled.

Pigs from the rearing herd were also blood sampled, with 10 pigs representing each of 3 age groups; pigs with diarrhoea were also submitted to the VLA for post-mortem examination.

Figure 1

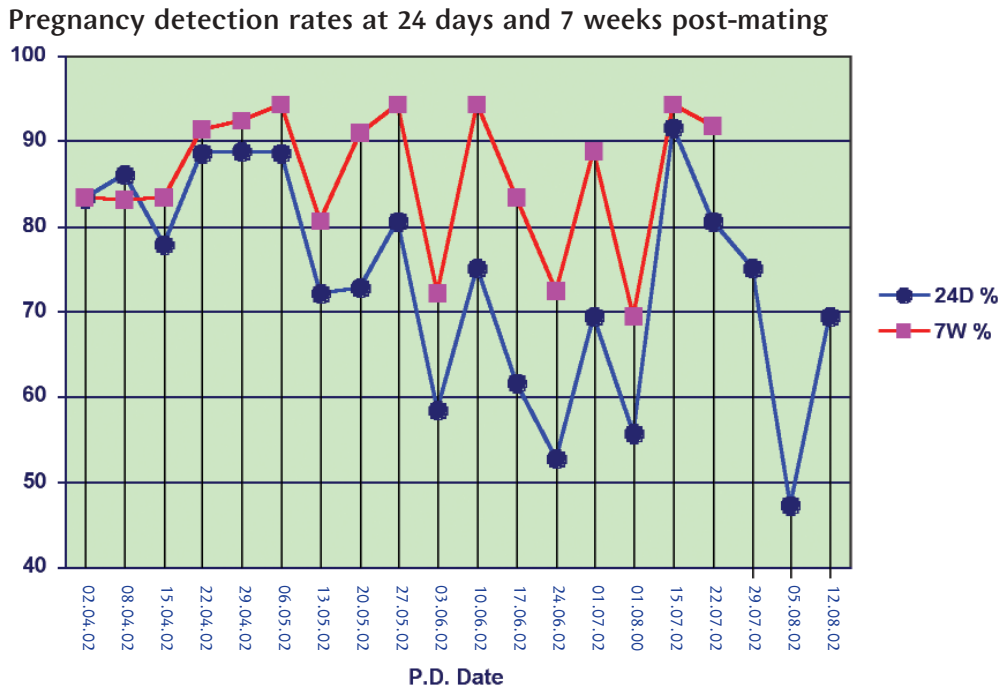


Figure 1 shows the progressive decline in conception rate prior to the visit.

Results of blood sample tests and post mortem examination

Although the sow herd was believed to be PRRS negative, 10 /14 sow blood samples were PRRS positive, and had high titres. No evidence could be found to indicate the presence of Swine Influenza. Although titres to Leptospirosis were low at 1/50, a high proportion (10/14) of the samples were positive for Leptospirosis. In view of PRRS serology, the Leptospirosis results were discounted.

The growing pig serology results are shown in table 1.

Table 1 PRRS serology in growing pigs

Age of pig (weeks)	PRRS status	
	Pigs positive	Pigs negative
6	0	10
11	2	8
20	8	2

Pigs at 9 weeks of age looked unwell, had increased respiratory distress associated with coughing, were listless and had an increased incidence of diahorrea.

The VLA report confirmed PMWS and also *Salmonella typhimurium* 104.

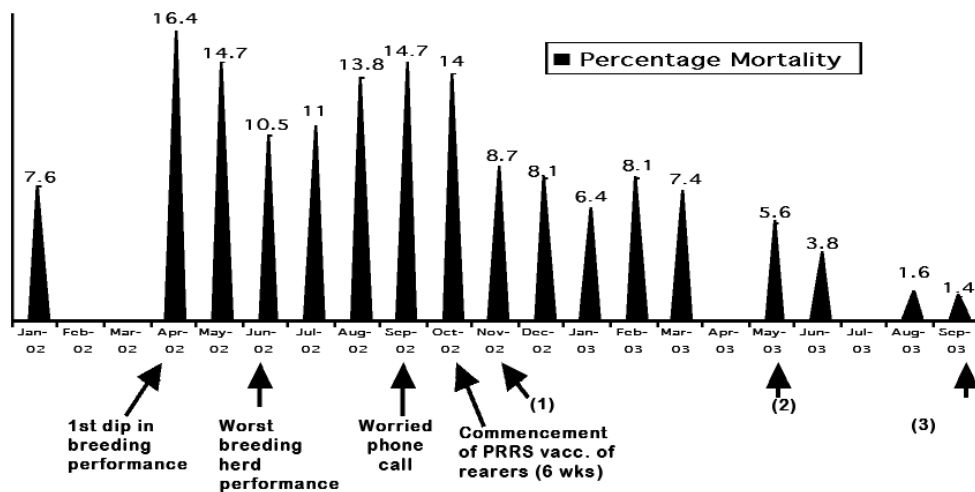
Action Plan

The following procedures were implemented:-

- i The breeding herd was vaccinated en masse, twice with a dead PRRS vaccine (Inglevac PRRS KV).
- ii Growing pigs were vaccinated between weaning and 6 weeks of age, and thereafter at weaning with the live vaccine Porcilis PRRS.
- iii Apramycin was incorporated in the feed to control Salmonellosis.

PMWS management procedures were reviewed and improved.

Figure 2 Decline in mortality rate in relation to time and actions



A herd inspection in November 2002 (1 in figure 2) showed that mortality had started to decline, pigs looked healthier, were more active and uniform in appearance, and the client was happier.

In May 2003 (2) pigs were blood sampled in the finishing stages at 16 weeks of age. These pigs had been deliberately not vaccinated with Porcilis PRRS vaccine when weaned 12 weeks earlier. PRRS titres for these pigs were very low and only 2/10 pigs were PRRS positive, indicating that PRRS virus circulation within the herd had been greatly reduced.

September 2003 (3) the client reported that the condition and performance of pigs in the rearing herd had never been better.

Conclusions

- i As is usually the case, no single factor was responsible for changes in performance.
- ii A herd PRRS breakdown exacerbated PMWS problems and thus the increased incidence of Salmonellosis.
- iii Implementation of vaccination of rearing herd pigs with Porcilis PRRS had a rapid and dramatic impact in terms of reducing mortality rates.
- iv Ongoing PRRS vaccination has stabilised PRRS activity within the rearing herd and contributed to improving the level of mortality.
- v Is there now potential to cease vaccination?