

PMWS and PCV2

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Introduction

Postweaning Multisystemic wasting syndrome (PMWS)

- affects pigs of 6-16 weeks.
- associated with high levels of morbidity and mortality (30 and 70%)
- characterised by wasting, pallor and occasional jaundice

PCV2

- currently thought to be causally associated with PMWS
- present in both PMWS positive and healthy herds
- experimental inoculation of pigs with pure PCV2 does not produce full clinical PMWS

Methods

Cross sectional study of 116 UK breeding farms

- 85 with PMWS
- 19 without PMWS
- 10 recovered
- Farms were self diagnosed with a high correlation between farmer and vet opinion

Blood samples from

- 10x: 8 week pigs, 14 week pigs
- 5x: Gilts, 1st, 2nd, 3rd, 4th and 5th+ parity sows
- Blood samples were tested for PRRS, PPV and PCV2 antibodies

Euthanased pigs

- up to 3 sick pigs
- 1 aged matched healthy pigs
- Selected by the farmer and field technicians. Lymph nodes were extracted at PME and tested for PCV2 antigen

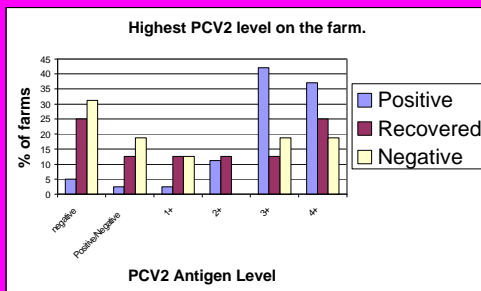
Results

PCV2 antigen levels

The PCV2 antigen levels on positive farms tend to be higher than on negative and recovered farms (figure 1) with most positive farms having PCV2 antigen levels over 3+.

The antigen levels are similar in negative and recovered farms.

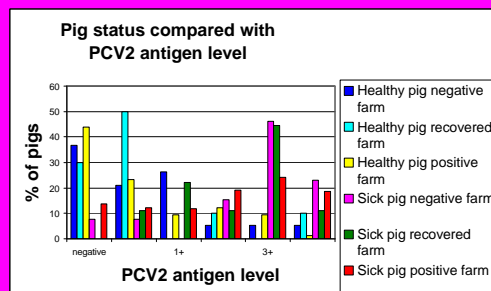
Figure 1



This difference is also seen at a pig level. However about 25% of sick pigs from positive farms have a negative or

positive/negative titre to PCV2 (Figure 2)

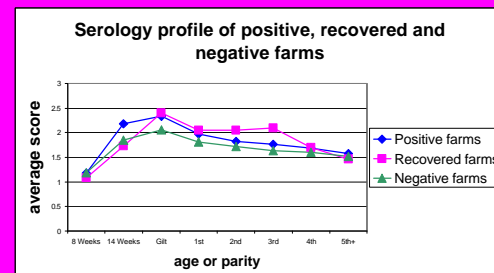
Figure 2



PCV2 antibody levels

Seroconversion to PCV2 occurs between 8 and 14 weeks. (figure 3) and antibody levels decrease with parity. There is a slightly different pattern in recovered farms where the antibody levels stay the same until the third parity where they decrease

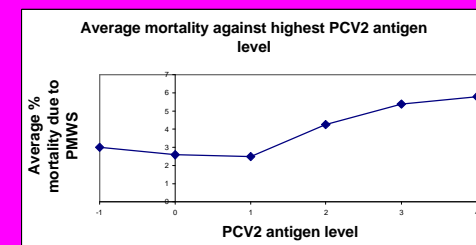
Figure 3



PCV2 antibody and mortality

Farms which have higher PCV2 antigen levels tend to have a higher current mortality due to PMWS (figure 4)

Figure 4



Conclusions

- PCV2 antigen levels tend to be higher on PMWS positive farms
- PCV2 antibody levels are not significantly different between positive, negative and recovered farms

- Sick pigs from PMWS farms can still have low levels of PCV2 antigen
- High levels of PCV2 antigen are related to higher levels of mortality due to PMWS

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