

Behaviour in weaned piglets following vaccination with different PCV2 vaccines

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Adapted from the animal observation section of the 2003 Swine Welfare Assurance Program (SWAP), willingness to approach observations have been used to evaluate pig behaviour after vaccination.

The objective of this study was to compare the willingness to approach behaviour in pigs following vaccination with two different PCV2 piglet vaccines that are commercially available in Japan.

Materials and methods

A 450 sow PRRS positive farm with a past history of PMWS located in Ibaraki, Japan, was selected for the study. A total of 871 weaned piglets aged 3-4 weeks were included for observation. At weaning pigs were allocated to pens of approximately 20 pigs each.

After an average acclimatisation time of one week, half of the pens (22) received 1ml of Ingelvac CircoFLEX (group A), while the other half received 2ml of Porcilis PCV (group B).

Pigs that have had a bad experience in the past, or are not feeling well, may often be reluctant to approach a person in the pen.



| | Group A | Group B |
|--|---------------------------------|--------------------------------|
| No. of pens observed | 22 | 22 |
| No. of pigs observed | 423 | 448 |
| Baseline pre-vaccination behaviour (% WTA) | 69% (293/423)* | 66% (297/448)* |
| Six hour post-vaccination behaviour (% WTA) | 57% (242/423)* | 18% (81/448)* |
| Six hour post-vaccination behaviour compared to baseline | 83% ^A (242/293)** | 27% ^B (81/297)** |

^{A, B}: p<0.0001 *Number of approaching pigs/number of pigs observed
**Number of approaching pigs/number of pigs that approached at baseline

Table 1. Willingness to approach before and after PCV2 vaccination.

Vaccines were administered according to the manufacturer's instructions. There was no difference in average weight, age or sex between vaccine groups.

An adaptation of the animal observation section of the 2003 SWAP was utilised to evaluate willingness to approach behaviour (WTA) of piglets pre- and post vaccination.

After entering the pen, sitting down and waiting a 15 second period, the blinded observer counted all pigs that approached and/or were in eye contact to him.

These counted pigs divided by the total number of pigs in the pen resulted in the % willingness to approach (% WTA).

The initial observation (base line)

was conducted at 4pm on the day prior to vaccination. On the following day, vaccination of pigs was completed by 10am, and WTA observations were conducted six hours (4pm) post vaccination.

The change in post vaccination % WTA was compared to the baseline for each vaccine group and between groups.

The % WTA compared to baseline between groups was analysed by the Pearson Chi-square test. Results were considered significant when P values were equal to or less than 0.05.

The results are summarised in Table 1.

Six hours post vaccination, there was a statistically significant differ-

ence (p<0.0001) in the % WTA compared to baseline between groups (83% and 27% for groups A and B, respectively).

Conclusion

Using the willingness to approach model, it was previously shown that Ingelvac CircoFLEX was not different to saline, for which reason a control group was not included in the study protocol.

In this study pigs from group A showed more willingness to approach six hours post vaccination, compared to those of group B, indicating that depending on the type of PCV2 piglet vaccine used, differences can occur in the behaviour of piglets at six hours after vaccination.

Willingness to approach observations utilise the natural behaviour of pigs by assessing their level of interest to a person in the pen, thus providing a certain indication as to the well being of those pigs.

Based on the results of this study, willingness to approach observations may provide a useful tool in order to objectively assess the potential welfare impacts of different vaccines on pigs.

References are available from the authors on request

Although they may be fearful at the beginning, pigs will quickly overcome that fear and start to approach a person in the pen.

