PCV2 vaccination – sows, piglets or both?

When vaccinating against PCV2 (porcine circovirus type 2), should we be vaccinating sows, piglets or both? A recent study by Fraile and others (2012) from the CReSA group in Barcelona have come up with some interesting answers.

There was a lot of acrimonious debate when the first PCV2 vaccines came out, concerning whether sow vaccination or piglet vaccination was better. Each had their own advocates and in the presence of such a soul-destroying disease, both for the pigs and the producers, anything that helped was gratefully received. Piglet vaccine rapidly dominated the market and continues to be commonly carried out as a matter of routine in affected herds.

A trial was carried out (Fraile et al, 2012) in a herd, which was described as subclinically affected with PCV2 infection and also had a background PRRS infection. Previously, they were not using any PCV2 vaccination in the sows. Two groups of sows were either vaccinated prior to mating (SV) or not vaccinated (SNV). Piglets from these two groups (476 in total) were also either vaccinated (PV) or non-vaccinated (PNV) at 4 weeks of age and their weight recorded throughout the study until 25 weeks of age. The PCV2 viral status in serum was also monitored in a sub-population of 75 pigs from each of the 4 groups.

The comparative weight gain expressed as a percentage with the unvaccinated SNV-PNV piglets acting as negative controls (100%) are highlighted in Figure 1.

There were some variations in growth between the groups during the trial period but there was a remarkably stronger growth in the two piglet-vaccinated groups, during the main PCV2 viraemic phase (see Figure 2) between weeks 12-25 and especially between weeks 16-21.

The sow only vaccine (SV-PNV) appeared to delay the viraemia a little by 16 weeks but not at 21 weeks. The piglet vaccinated groups controlled the viraemia particularly well and there was no statistical difference between the two (SNV-PV and SV-PV), although

they were both statistically better than the sow vaccinated (SV-PNV) and sow unvaccinated groups (SNV-PNV).
Overall, in growth terms the SV-PV group performed best with 4.1kgs of extra liveweight/pig, which was statistically better than the other treatment groups. Colleagues in the UK have also been advocating vaccinating gilts, prior to service, to give them a protective boost during pregnancy from PCV2 infections, which can have some damaging effects on reproductive performance.

I think this work goes a long way to explain some of the controversy surrounding sow and piglet vaccination but possibly confirms that the combination of the two might even improve protection of both mother and offspring from this damaging virus.

by David Burch May 22, 2013

Pig Progress