

Pighealth BYTES

Number: 172

Vaccinology VIII

Your own reference source on pig health



Intracare

Novus

Nuproxa

R2 Agro

The value of diagnostics

Diagnostics for many of us is a black box. The big difference between the vaccines, even for the same agent, and the large range of diagnostics tests, even for the same agent, make a sound use of these tools difficult. What the swine industry is lacking is a kind of standard. The poultry industry has developed a benchmark scenario making it much easier to do a correct analysis of the combinations of vaccine and diagnostic tests. Was this easy to achieve? No, of course not. The number of variables is enormous and for every combination of vaccine and test, an interpretation guide and baseline values has to be made.

In poultry the number of vaccinations in a short period of time by far exceeds the situation in the swine industry. The influence of maternally derived antibodies in poultry is the same issue as it is in swine, making the vaccination programme a real puzzle. The only difference between the situation in poultry versus pigs is the in-ovo vaccination option that poultry has. But, for the rest, there is no reason why the pork world should not walk the same line as poultry to overcome the issues in the vaccine – diagnostic test relation.

It is important because 'gut feeling' is not enough anymore in current pork production. We need to have confirmation that we are doing the right thing. We need information that reveals to us things that we do not see or did not notice, or were simply unaware of. Making mistakes is a human activity, trying to avoid making mistakes is also a human activity. That diagnostics are not used to broaden our information is simply because the information coming from the diagnostic tests is underestimated in the pork production world. Reaching the stage poultry has will still take some time but there is no reason why we should not make simple, but important, steps.

The easiest way to get acquainted with the information coming from a diagnostic investigation is sampling the pigs just before they go for slaughter. Check these samples for known pathogens, irrespective of whether they are known to be present on the farm where the animals were raised. When the test results are ready, consult with your veterinarian and, together, do an interpretation of these results. When antibodies are detected against certain pathogens it confirms the presence of these pathogens or is a sign of vaccination.

The titers can be low, medium-high or high. High always indicates a field infection, medium-high is often from an early infection, and low can still be from vaccination (when performed). When no antibodies against a certain pathogen are found, it can still mean that the infection was very early and the antibodies have already disappeared. For all pathogens where antibodies are found, the coefficient of variation (CoV) can be calculated. When the CoV is high, this always requires further investigation.

A simple example, a simple investigation, already revealing a lot of information. The value of diagnostics: a world that needs to be expanded in pork production.