

Field experiences with PCV2

unstable sow herds and downstream pig flows

Which are the most likely contributing causes for failure of PCV2 vaccines?

Sow herd instability can be a critical underlying factor that needs to be addressed in order to gain control of PCV2 in the downstream pigs.

Rule-outs for failure of PCV2 vaccines include:

01 Poor vaccination protocol compliance.

02 Off-label use.

03 Immunosuppressive diseases such as PRRS at the time of vaccination

04 Infection with PCV2 prior to vaccination.

05 Maternal antibody interference.

Linked with sow herd PCV2 status

Assessing sow herd PCV2 status has become a routine component of PCV2 vaccine efficacy complaint investigations.

Factors contributing to PCV2 instability in sow herds

The focus for understanding sow herd instability is on the sow.



Viremic and shedding gilts upon introduction into the sow herd.



Emergence of PCV2d?

- Immunity in the sows does not completely prevent PCV2d infection.
- Increased pathogenicity of PCV2d compared to previous genotypes (PCV2a and PCV2b).

How to investigate cases of suspected sow herd instability?

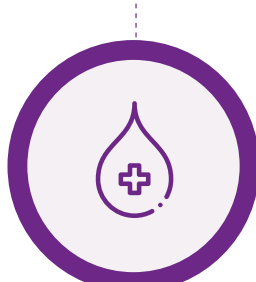
Blood sampling of young pigs is not very sensitive, as the lack of viremia does not mean pigs are not infected

Assess vertical transmission of PCV2:



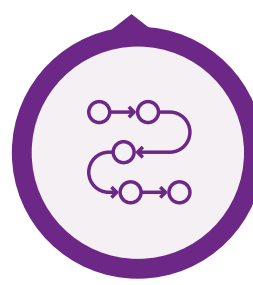
Placental umbilical cord serum (PUCS)

Colostrum



Pre-suckle pig blood

Processing fluids



Fetal tissues

Assess **Maternally-Derived Antibodies (MDA)** levels by Indirect Immunofluorescence Assay (IFA)

Intervention strategies in cases of suspected sow herd instability

01

Stabilization of the sow herd by mass vaccination.

02

Monitoring of gilts for PCV2 viremia and vaccine program implementation.

03

Monitor MDA levels in piglets by IFA for several months post sow herd vaccination.

04

If needed, move PCV2 vaccination protocol in piglets to later time points to avoid interference with MDA

Once the sow herd has stabilized...

Follow up vaccinations:

Booster previously vaccinated gilts at selection.

Booster sows at each parity or on a calendar basis.

Continual monitoring for PCV2 infection:

Viremia in replacement gilts

Colostrum/ PUCS in sows

Keypoints

01

Although **vaccination of pigs is highly successful**, there are situations where vaccination protocols need to be revisited due to sow herd instability.

02

PUCS and colostrum can be easily utilized to **determine PCV2 stability** at sow herd level.

03

Infected gilts contribute to an **increased vertical transmission** of PCV2.

04

PCV2d may be more **readily found in sows and newborn piglets** from unstable herds.

05

A **mass vaccination protocol** in sows may reduce prevalence and viral load of PCV2 in piglets.

