

Assessing the sow herd porcine Circo Virus-2 (PCV2) stability utilizing placental umbilical cord serum (PUCS) samples pre and post mass vaccination with 1ml Ingelvac CircoFLEX



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INTRODUCTION

PCV2 vaccination in wean age pigs is necessary to protect pigs effectively in downstream production.² Analysing the prevalence of PCV2 vertical transmission from dams to their offspring and implementing subsequent sow vaccination may allow us to further improve the health of the entire herd.³ PUCS sampling has shown to be a convenient method to detect vertical transmission of PCV2, and is recommended over colostrum sampling in a herd of unknown PCV2 status.² Furthermore, vaccination of sows with Ingelvac CircoFLEX has shown to reduce vertical transmission and to improve the reproductive performance of the sow herd.¹

The objectives of this study were to determine whether biannual mass vaccination of sows with Ingelvac CircoFLEX could be used to reduce vertical transmission of PCV2 from the sows to the offspring. The vertical transmission of PCV2 was measured using PUCS diagnostic samples.

MATERIALS AND METHODS

The investigation was conducted on a 2.000 sow unit in South Africa, positive for M.hyo and negative for PRRS. Piglets were routinely vaccinated with 1 ml Ingelvac CircoFLEX at 18 days of age. Gilts were vaccinated with 1 ml Ingelvac CircoFLEX at weaning and again in the gilt development unit (GDU). Sow vaccination for PCV2 was not routinely practiced.

Biannual mass vaccination of the sow herd was implemented in December 2016 and June 2017. PUCS samples were obtained pre and post vaccination by milking the serum from at least three umbilical cords of one placenta into a serum tube and analysing this by PCR for PCV2. A PUCS prevalence of 20% or greater was considered to coincide with the detection of instability.

RESULTS

Prior to the implementation of sow mass vaccination for PCV2, the prevalence of PCV2 PUCS positive samples was 80%. (see table 1) Following the implementation of biannual sow vaccination with Ingelvac CircoFLEX, the prevalence of PCV2 PUCS positive samples was reduced to 0%.

Table 1. Prevalence of PCV2 positive PUCS samples

	Total number of PUCS samples tested	Number of PCV2 positive PUCS tests	Prevalence (%)
Nov-16	5	4	80 %
Mar-17	11	0	0 %
May-17	30	20	67 %
Oct-17	27	0	0 %

DISCUSSION AND CONCLUSION

The PUCS diagnostic tool was considered useful in determining the sow herd stability status to PCV2. Prior to the implementation of the first mass vaccination in December 2016, the prevalence of PUCS positive samples was greater than 20%. This coincided with the detection of PCV2 instability in the sow herd and vertical transmission to the piglets. The prevalence was still greater than 20% following the first mass vaccination, thus a second mass vaccination of the sow herd was performed six months later.

Following biannual mass vaccination, the prevalence of PUCS positive samples was reduced to 0%, correlating to the achievement of stability to PCV2 and consequent reduction of vertical transmission of PCV2 from the sows to their offspring.

Biannual mass vaccination of the sow herd with Ingelvac CircoFLEX is a useful tool to reduce vertical transmission of PCV2 from the sows to the offspring. Sow vaccination should be considered on farms where vertical transmission of PCV2 has been diagnosed. The vaccination of piglets around weaning must continue, but implementing dam vaccination in addition to the piglet vaccination can assist to reduce vertical transmission of PCV2 to the piglets.²

REFERENCES

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