2nd case report: Reproductive performance improvement after PCV2 sow vaccination in Spain

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INTRODUCTION

Porcine circovirus type 2 (PCV2) is a globally prevalent virus that can provoke in growing pigs several diseases aka PCV2-associated disease (PCVAD).

PCV2 can also be associated with reproductive disease (PCV-RD) and cause infertility and increased rates of mummified, macerated, stillborn and weak-born piglets[1,2,3].

A previous study carried out in Spain found that only in one out of 293 reproductive failure cases PCV2 DNA was detected[4].

The aim of this study is to inform about the positive impact of PCV2 sow vaccination on several reproductive parameters in a Spanish sow herd.

MATERIALS AND METHODS

The farm of the present case report is a one-site, 2600-head sow farm located in Aragon (Spain). The farm was positive for PRRS (stable throughout the period of study), Mycoplasma and PCV2. The herd was vaccinating against PRRSv, every 3 months, and PPV post farrowing. Since 2015 the abortion rate has been above (3,3 %) and reproductive performance below the target.

Blood and vaginal swab sampels were tested negative for PRRS, *Leptospira*, *Clamydia* and *E.rhusiopathiae* yielding but *Streptococcus spp* and *Treuperella pyogenes* were detected in vaginal swabs. Thus whole herd antibiotic treatment was applied without significant performance improvement.

Regarding PCV2, both vaginal swabs (2 pools out of 3) as well as blood from sows that aborted were PCR positive. According to that, sows were mass vaccinated twice with 1 ml of Ingelvac CircoFLEX® (Boehringer Ingelheim, Spain, SA) in December 2016 and January 2017, and subsequently mass revaccinated every 4 months.

Several reproductive parameters were analyzed by ANOVA or non-parametric tests with Minitab.17.1.0 software (2013 Minitab Inc.).

RESULTS

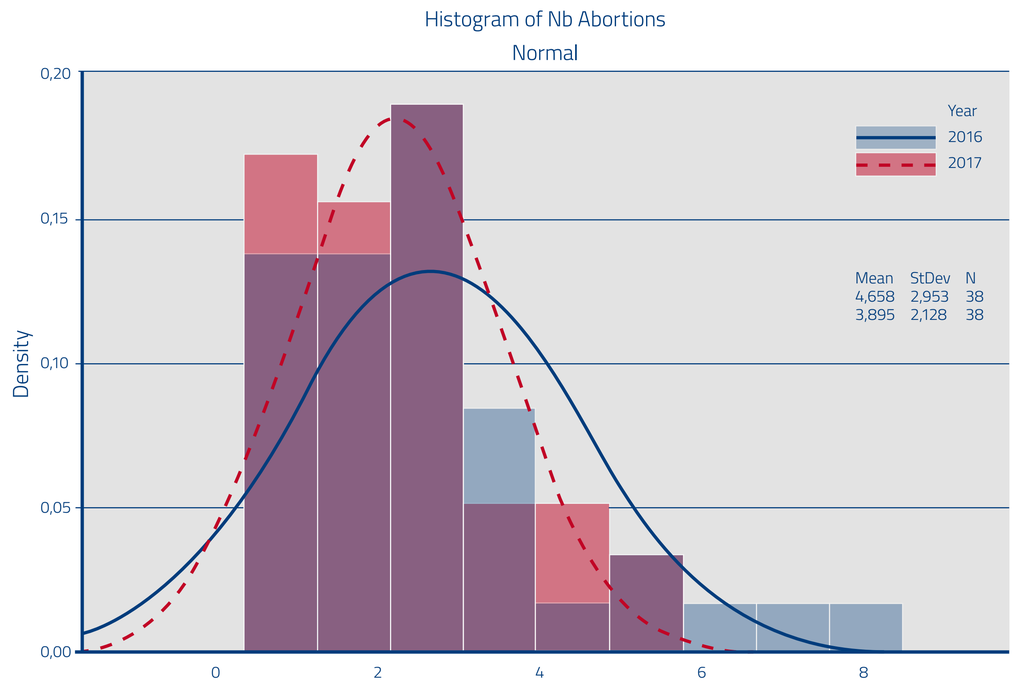
A summary of the comparative reproductive performance of the first 38 weeks of 2016 and 2017 is depicted in table 1.

Figure 1 shows the annual distribution of weekly abortions that were numerically reduced after vaccination.

Table 1. Interannual comparison of weekly reproductive records (n = 38 weeks/year).

Reproductive Index	2016 (x ± sd)	2017 (x ± sd)	P-value
Born Alive	12.4 ± 0.5	13.3 ± 0.5	<0.001
Stillbirths	1.07 ± 0.2	1.14 ± 0.3	0.08
% Fert 40	87.3 ± 3.9	90.6 ± 4.3	<0.001
Weaning fecundation interval	11.8 ± 2.6	10.2 ± 2.1	0.003
% Litter Scatter	10.2 ± 4.0	7.4 ± 3.3	0.01

Figure 1. Histogram of the distribution of the weekly number of abortions.



CONCLUSIONS

This is the second case study from Spain showing a significant benefit of PCV2 sow vaccination on reproductive performance. Taken together the two studies highlight that PCV-RD should be taken into account in case a sow herd does not meet the expected performance.

REFERENCES

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