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Effect of Tilmovet® 250 mg/ml Oral Solution on piglet lung diseases in Denmark

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Introduction

In Denmark, the incidence of porcine lung pathologies in farrowing and weaning pigs is greatest in wintertime. Depending on health status and applied vaccination programs (sows and piglets), concerned farms mostly adhere to preventive measures and treatments to contain the symptoms brought on by lung pathologies. On average, vaccinations need 6-8 weeks after the first symptoms, to have a positive effect. The objective of this trial was to evaluate whether a treatment with Tilmovet® 250 mg/ml Oral Solution is an efficient prevention method, in addition to the classic McRebel method used to prevent infections causing respiratory diseases spreading in farrowing rooms.

Materials and Methods

In two Danish SPF farms (each 1,200 sows), serologically PRRS free, the open gilts were vaccinated twice (2 ml) with PorcilisPcV® before mating and the sows were vaccinated 3 weeks before farrowing. In addition, all animals received a multiple influenza A vaccination. Both farms ran strict all-in/all-out systems in the farrowing rooms. In Farm A & B, piglets received an oral iron supplement (Hyofer H2O®, day 1-16) followed by a 10-14 day pre-weaning antibiotic treatment: tiamulin as Denagard® (1 ml/15 kg, daily), doxycycline as Doxylin Vet® (500 mg/g with 1 g/40 kg, daily) and tilmicosin as Tilmovet® 250 mg/ml oral solution (1 ml/12.5 kg, daily). In Farm A, as opposed to Farm B, the antibiotic treatment was repeated the first 10 days post-weaning. Different combinations were used (Table 1). Unthriftiness & mortality in both farms were recorded, as were serology, PCR values and bacteriology. Dead piglets were sent in for section and histological research.

Results

The treatment of Farm A underlines the importance of pre-weaning antibiotic treatment with the right antibiotic. Farm B the advantage of dosing in water than injection. Pre-weaning treatment reduced mortality rates by nearly 40% and had a considerably lower number of wasting piglets and runts. Also, in terms of mortality rates and number of unthrifty pigs, on a relative scale, Tilmicosin was found to score best (# 100) in comparison to tiamulin (# 1) and doxycycline (# 45). Secondary effects of tilmicosin (e.g. feed intake, milk yield) that have been documented earlier[1], were also noticed by the farmers.

Table 1: Farm A, 2009/10, Results

Weaning wk	Treatment in		Death /euthanized, two weeks post-weaning
	Farrowing room	Weaning room	
4	TMV	TMV	0
5	TMV	TMV	0
6	DOX	DOX	6
7	DOX	TMV	6
8	TMV	TMV	0
9	TMV	TMV	2
10	TMV	TMV	4
11	TMV	TMV	4
12	DEN	DEN	7
13	DEN	DEN	12
14	DEN	TMV	14
15	TMV	TMV	2
16	TMV	TMV	2

TMV= Tilmovet®, DEN= Denagard®, DOX=Doxylin®

Table 2: Farm B, 2010/11, Results

	Injection period	Water medication
	July – Dec. '10	Jan. – March '11
Live born / litter	15.4	15.5
Still born / litter	1.9	1.9
% mortality before weaning	16.2	10.4
Calculated weaned pigs/sow/yr	29.3	32.0
G/day from weaning to 30 kg	493	460

Post-mortem research showed negative sera against PRRS, Ap2/Ap6, *M. Hyopneumoniae* and *B. bronchiseptica* and were positive against *P. multocida* and Porcine Cytomegalovirus (PCMV). PCMV was diagnosed based on the pathognomonic lesions of Inclusion Body Rhinitis (IBR) and verified in Farm A by PCR. Farm B showed IBR through histology. Moreover, atrophic rhinitis was not found. This was examined to rule it out as major differential diagnose pathology.

Discussion

In both farms, using this treatment technique, a clear clinical effect in reduction of the respiratory distress and sneezing caused by PCMV was noticed after a 4 to 5 days treatment with Tilmovet®. This tilmicosin based formulation outperformed the other molecules used in this trial set-up, by presenting considerably lower mortality rates.

References

1. Froejk, G.F. (2006), Elimination of clinical symptoms, improvement in performance and reduction of serological titers in a conventional herd with PRDC by moving pigs offsite and treatment with tilmicosin, IPVS 2006, Vol. 2, p. 312.