Effect of ileitis oral vaccination against *Lawsonia intracellularis* on antibiotic use reduction and performance improvement in a Spanish company

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INTRODUCTION

Lawsonia intracellularis (L.i.) is the causative agent of porcine proliferative enteropathy (PPE). PPE is a relevant economic enteric disease that causes diarrhea and reduces weight gain in growing pigs[1]. The subclinical form produces as well a negative impact on performance and farm economics. L.i. is endemic in most of the Spanish farms[2]. The aim of this study was to evaluate the efficacy of Enterisol® Ileitis (Boehringer Ingelheim Vetmedica GmbH) in a Spanish commercial company.

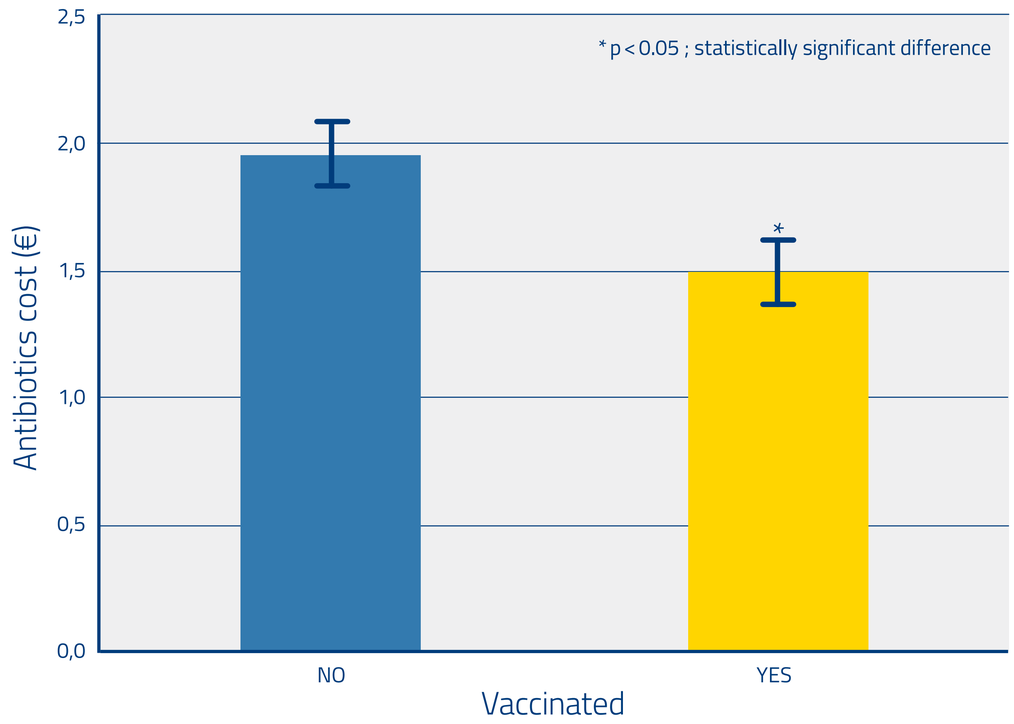
MATERIALS AND METHODS

This study was conducted in a 1,200 sows farrow to finish farm located in the eastern region of Spain. Pigs at fattening were suffering subclinical ileitis and L.i. infection was confirmed by ELISA (IgG). A total of 12,120 fattening pigs were included in the study (6611 non-vaccinated and 5509 vaccinated with the oral nonvirulent live vaccine Enterisol® Ileitis (Boehringer Ingelheim Vetmedica GmbH). Thus, 10 weekly batches were vaccinated and 12 alternates batches were kept unvaccinated in order to minimize the seasonal impact on results. The piglets were orally vaccinated via drinking water at weaning in the nursery unit using Thiosulfate Blue (Boehringer Ingelheim Vetmedica GmbH) as stabilizer. All the animals were raised under similar conditions. The parameters recorded were: average daily gain (ADG, kg/d), feed conversion rate (FCR), FCR corrected (FCRc.), mortality rate (%) and antibiotics costs (€). Data has been analysed using ANOVA with SPSS v.15.0 (SPSS Inc., Chicago, IL, USA) software.

RESULTS AND DISCUSSION

The results are summarized in Table 1. Due to differences on initial and final weight, corrected FCRc. (18 – 100) was used.

Figure 1: Statistic graph showing the impact of the vaccination on antibiotics use reduction.



The reduction on antibiotic use in vaccinated group represents 23,6% compared to those animals that were not vaccinated.

The average mortality was 7,5 % lower in vaccinated group (4,57 % vs 4,94 %). In addition corrected FCRc was 57 g less and ADG was 10 g / day better also in vaccinated group. Statistical differences could have been obtained in these performance data with a higher sample size (n).

CONCLUSION

In this field experience, it was demonstrated that antibiotic use was significantly reduced by the vaccination with Enterisol Ileitis®. This fact means that the immunization improved pig´s health. Then growing parameters and mortality were numerically better too.

Table 1: Efficacy of Enterisol Ileitis® at fattening.

	No vaccine (n = 12)	vaccine (n = 10)	Difference	p value
ANIMALS	6611	5509		
ADG (kg / d)	0.654 ± 0.003	0.664 ± 0.007	+0,010	P = 0.188
FCR	2.537 ± 0.016	2.495 ± 0.025	-0,042	P = 0.167
FCRc.	2.639 ± 0.018	2.582 ± 0.029	-0,057	P = 0.105
ANTIBIOTICS (€)	1.95 ± 0.13a	1.49 ± 0.12b	-0,46	P = 0.018
MORTALITY (%)	4.94 ± 0.58	4.57 ± 0.35	-0,37	P = 0.605

REFERENCES

1. McOrist et al. (2006). Dis. Of Swine 9th ed. P 727 – 737.
2. Salleras et al. (2006). Proc. 19th IPVS. P 174.