VACCINATION WITH ENTERISOL® ILEITIS IN 23 FRENCH PIG FARMS IMPROVES TECHNICAL PARAMETERS WHILE REDUCING THE TOTAL AMOUNT OF ANTIBIOTICS USED

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Introduction

During the last 5 years, PCV2 vaccination has allowed French pig farms to decrease their overall veterinary expenses, while improving their technical and economical performance (Lewandowski et al, ESPHM, 2012) (1) ; however, in many farms, despite this PCV2 vaccination, some antibiotics are still used to control *Lawsonia intracellularis* infection; vets from Selas de la Hunaudaye decided to implement Enterisol® Ileitis vaccination targetting 23 of this type of farms, in order to reduce antibiotic use, having in mind the topical principle: "prevention is better than cure".

Materials and Methods

From October 2010 till June 2013, we collected technical and economical data in 23 pig farms where PCV2 was already under control (including 19 farrow to finish farms, 3 wean to finish farms, and 1 finishing farm) ; in total, we obtained data on more than 141000 pigs (76122 non vaccinated pigs vs 65762 vaccinated pigs); we compared technical and economical parameters before and after vaccination (BV vs AV) with Enterisol® Ileitis (statistic analysis using ANCOVA, 2 factors: farm and vaccination). Table 1 gives the global description of farms included in this study, and their mode of vaccination. Indeed, in France, we vaccinate with Enterisol® Ileits mainly by proportioner at the end of flatdeck, but also by trough at the beginning of fattening unit.

Table 1: Description of farms included in this study and mode of vaccination with Enterisol® Ileitis

Number of farms included in this study	23
Average number of sows/farm	193
Number of vaccinated pigs with Enterisol® Ileitis	65762
PCV2 Vaccination rate	87%
Number of farrow to finish farms	19
Number of wean to finish farms	3
Number of finishing farms	1
Number of multiplier farms	7
Enterisol® Ileitis vaccination by proportioner	65%
Enterisol® Ileitis vaccination by trough in the finishing unit (vaccination in water, not in liquid feed)	35%

Results

Table 2 gives both economical (Antibiotic ATB costs) and technical parameters (Average Daily Gain ADG, Food Conversion Rate FCR and mortality rate) before and after implementation of ileitis oral vaccination in 23 French pig farms.

Table 2: Technical and economical parameters before and after vaccination with Enterisol® Ileitis in 23 farms

Criteria	Before Enterisol ®Ileitis	After Enterisol ®Ileitis	Δ	Statistics P value
ADG 8-115 (g/day)	688	700	+ 12	<0,01
Mortality rate (%)	5,0	4,7	- 0.3	0,43
Technical FCR (kg)	2,60	2,54	- 0.06	<0,01
ATB in feed (€/pig)	0,67	0,32	- 0.35	0,02
ATB oral route (€/pig)	0,49	0,25	- 0.24	0,02
ATB injection route (€/pig)	0,55	0,59	+ 0.04	0,50
Total ATB (€/pig)	1,71	1,15	- 0.56	<0,01

Discussion and conclusion

Results demonstrate that Enterisol® Ileitis is a very effective alternative to antibiotics in farms infected by *Lawsonia intracellularis*. Indeed, we obtained a 32 % reduction in antibiotic costs (BV: 1.71 vs AV: 1.15 €/pig, $p<0.01$), only due to reduction in quantities of antibiotics used, the price of antibiotics remaining the same between the 2 periods; at the same time, the ADG 8-115(BV: 688 g/day vs AV: 700 g/day, $p<0.01$) and FCR 8-115 (BV: 2.60 vs AV: 2.54, $p<0.01$) were improved, leading to a total gain per pig due to the vaccination of 2.90 €.

This field study shows that ileitis vaccination can allow farms to improve their technical performance while taking into account the necessity to decrease antibiotic use in the field, in full consideration of both animal and human health.

References

(1) Lewandowski E., Jagu R., Adam M., 2012. Proceedings of 4th ESPHM, Bruges, Belgium. P108, p144.