Effect of ileitis vaccination on growth performance and economics in a breeding farm

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Introduction

Farm health status is crucial in a breeding farm for optimal performance. Ileitis is a widely spread disease present in most of the farms. A live oral ileitis vaccine in now available. The objective of this study was to evaluate in a breeding farm the effect of the ileitis vaccination on performance and economics.

Materials and Methods

This study was performed in a breeding farm located at the North-eastern part of Catalonia. The production system was a high health status farrow-to-finish farm of 300 sows. Nucleus animals were Large White and Landrace. The farm was free of Aujeszky, PRRS, *Actinobacillus pleuropneumoniae* and swine dysentery. However sub-clinical ileitis (*Lawsonia intracellularis*) was present in the farm confirmed by fattening ELISA seroprofile. A total of 12 fattening batches were evaluated. There were 1,278 animals (6 batches) and 1,630 pigs (6 batches) in the Control and Vaccine groups, respectively. Ileitis vaccine (Enterisol® Ileitis) was applied by trough at 8 weeks of age. All animals were kept under similar production conditions. The monitored parameters for each batch were average daily weight gain (ADWG), feed conversion rate (FCR) and mortality rate. Parameters were evaluated using standard statistical process control (SPC) methods performed by Statistica version 7.1. An evaluation was performed to analyze the economic impact of vaccination. Data was previously adjusted according to SIP database (Spanish 200,000 sows database)

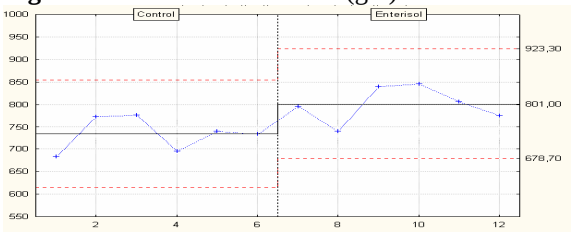
Results

In the Vaccine group overall growth performance was improved (Table 1). Vaccinated pigs grew 67 g/d faster (+9.1%) than Control pigs (Figure 1). As a consequence vaccinated pigs spent as an average of 7 days less in the growing facilities.

Table 1. Average growth performance

	Control	Vaccine	Difference
ADWG (g/d)	734	801	+67
FCR (kg/kg)	2.921	2.632	-0.289
Mortality (%)	4.56	2.98	-1.58
Fattening days	103	96	-7

Figure 1. SPC chart of ADWG (g/d)



In vaccinated pigs FCR was reduced by 9.8% (Figure 2). Finally vaccinated pigs reduced 34.6% mortality (Figure 3).

Figure 2. SPC chart of FCR (kg/kg)

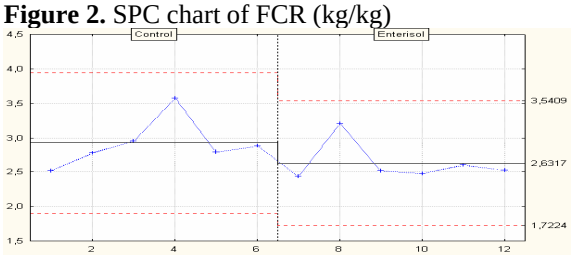
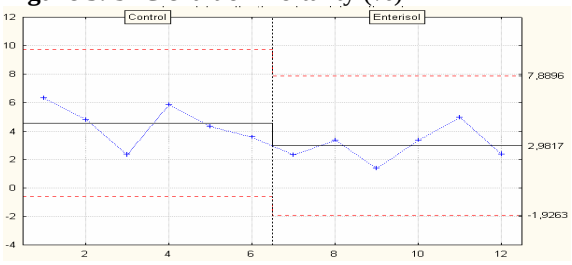


Figure 3. SPC chart of Mortality (%)



The economic evaluation showed that vaccinated pigs produced an additional gross margin of 7.09 €/pig (Table 2). 63% of the gross margin was a consequence of the reduction of the feeding cost. Vaccine produced a return of investment > 5:1.

Table 2. Economic evaluation

	Control	Vaccine	Diff.
Production cost (€/pig)	102.59	96.46	-6.13
Carcass value (€/carcass)	102.75	103.71	+0.96
Gross Margin (€/pig)	0.16	7.26	+7.09

Discussion

The ileitis vaccine impact on the farm was very satisfactory. Outstanding improvement in all monitored growth parameters was observed. Vaccination produced a substantial FCR reduction which has been previously reported in other farm studies (1). As a breeding farm the economic return of vaccination was even higher than the value produced by the economic study, due to the high value of the animals produced. In conclusion: ileitis vaccination is a profitable tool in the control of *Lawsonia intracellularis* in this breeding farm.

References

1. Behrens, G. *et al*. (2007). A. Leman Conf. , 34