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Use of Enterisol® Ileitis in suckling pigs
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Introduction and Objectives

Enterisol® Ileitis (Boehringer Ingelheim Vetmedica Inc., St Joseph, MO) is a modified live *Lawsonia intracellularis* vaccine available for administration to healthy pigs 3 weeks of age and older by oral drench or via the drinking water. Ideally, vaccines are administered when the proportion of animals with residual maternal immunity approaches 0% and the proportion of animals already naturally infected is still near 0%. Maternal immunity to *L. intracellularis* (positive serologic test results) has been observed in pigs up to at least 5 weeks of age (unpublished data). It is not known if suckling piglets can be actively immunized in the presence of maternal immunity. Kroll, et al, have shown that recently weaned pigs can be actively immunized in the presence of maternally derived serum antibodies.¹ However, it has not been determined if this immunity persists as long as it does in pigs vaccinated in the absence of maternal immunity. This study was conducted to evaluate the effectiveness of Enterisol Ileitis when given to suckling pig less than 10 days of age.

Materials and Methods

An 850-sow farrow to finish multi-site system began using Enterisol Ileitis in the fall of 2002. The pigs are weaned at 17-21 days of age. Initially frozen form (FF) vaccine was administered via the drinking water to weaned pigs 9-10 weeks of age. In May of 2004 it was decided to try changing the timing of vaccination to 1 week of age due to early infection with *Lawsonia* and the reluctance of the system managers to remove continuous feed grade antibiotic medication in early to mid-nursery rations. The need for continuous feed antibiotic medication in the nursery precluded implementation of the antibiotic-free period required for vaccination with Enterisol Ileitis. Piglets were then given a full dose of non-frozen (NF) Enterisol Ileitis at processing at 7 days of age. No other vaccinations or antibiotics were routinely administered prior to weaning. Performance data of groups of pigs marketed prior to the change in vaccination process were

compared to groups marketed after change of the vaccination process was implemented:

Period 1: 5/20/03 – 11/28/2003, Enterisol Ileitis Frozen Form was administered at approximately 60 days of age (approximately 45 lbs body weight) via drinking water. Fourteen groups comprising approximately 9,800 pigs were weaned and vaccinated during this period.

Period 2: 5/7/04 – 12/10/2005, Enterisol Ileitis Non-frozen Form was administered to suckling pigs approximately 7 days of age via oral drench. Sixteen groups comprising approximately 11,200 pigs were weaned and vaccinated during this period.

Results and Discussion

No significant differences were found in ADG, FE, or mortality between the periods using different vaccination processes (Table 1).

Table 1. Wean to finish performance of pigs vaccinated with Enterisol Ileitis FF post-weaning via the drinking water (Period 1) versus pigs vaccinated with Enterisol Ileitis NF pre-weaning via oral drench (Period 2).

	ADG P = 0.21	FE P = 0.33	Mortality P = 0.21
Period 1	1.46 lbs	2.77	4.64 %
Period 2	1.48 lbs	2.81	4.07%

These data suggest that similar overall productivity was achieved with both vaccination processes. If vaccination of suckling pigs is confirmed to be effective in controlled studies, it could resolve several management challenges facing some farms that need to vaccinate very young pigs. These include achieving vaccination sufficiently ahead of early post-weaning infection with *L. intracellularis*, and other post-weaning pig health status constraints which sometimes prohibit removal of antibiotic feed medication.

References

1. J Kroll et al. Proc IPVS 2004:255.