

Improvement of pig performance by Enterisol® Ileitis in field in Japan

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Introduction

Porcine proliferative enteropathy (PPE), caused by *Lawsonia intracellularis* (*Li*), leads acute to chronic diarrhea in growing and finishing pigs. Chronic diarrhea by *Li*, which does not causes high mortality, is economically significant in swine industry because low growth rate and reducing of FCR are occurred. Live oral vaccine is an effective control tool of this disease and has been available since 2010 in Japan.

In this study, improvement of average daily gain (ADG) and feed conversion ratio (FCR) were evaluated after using of Enterisol® Ileitis (Boehringer Ingelheim Vetmedica Japan Co., Ltd.) in a Japanese farm.

Materials and Methods

The study was carried out in a 200 sow of breeder farm. In this farm, sudden reduction of ADG and FCR occurred from Jul 2015. Diarrhea was observed in finisher and *Li* was detected from those feces by PCR¹.

To control *Li*, oral 2 ml of Enterisol® Ileitis was administrated orally at weaning since Jun 2016. Total 752 pig performance data for 19 months was analyzed. Data of pigs before vaccination (control group; n=518) and after vaccination (vaccine group; n=234) were collected from Jul 2015 to Jul 2016 and from Aug 2016 to Feb 2017, respectively.

Body weight was recorded at 77.35 and 135.45 days of age in average and ADG was calculated. FCR was estimated per month by total weight gain/total feed consumption during the above period. Average of ADG and FCR of each group was compared and statistically analyzed by Student's t-test.

Results

Improvement of ADG and FCR were observed since Oct 2016 (Fig. 1, 2). ADG during study period was 1,133 g/day and 1,142 g/day in control group and vaccine group, respectively (Table 1). FCR was statistically improved in vaccinated group (FCR=3.05) compared with control group (FCR=3.16) ($p < 0.001$).

Figure 1: Monthly average daily gain data

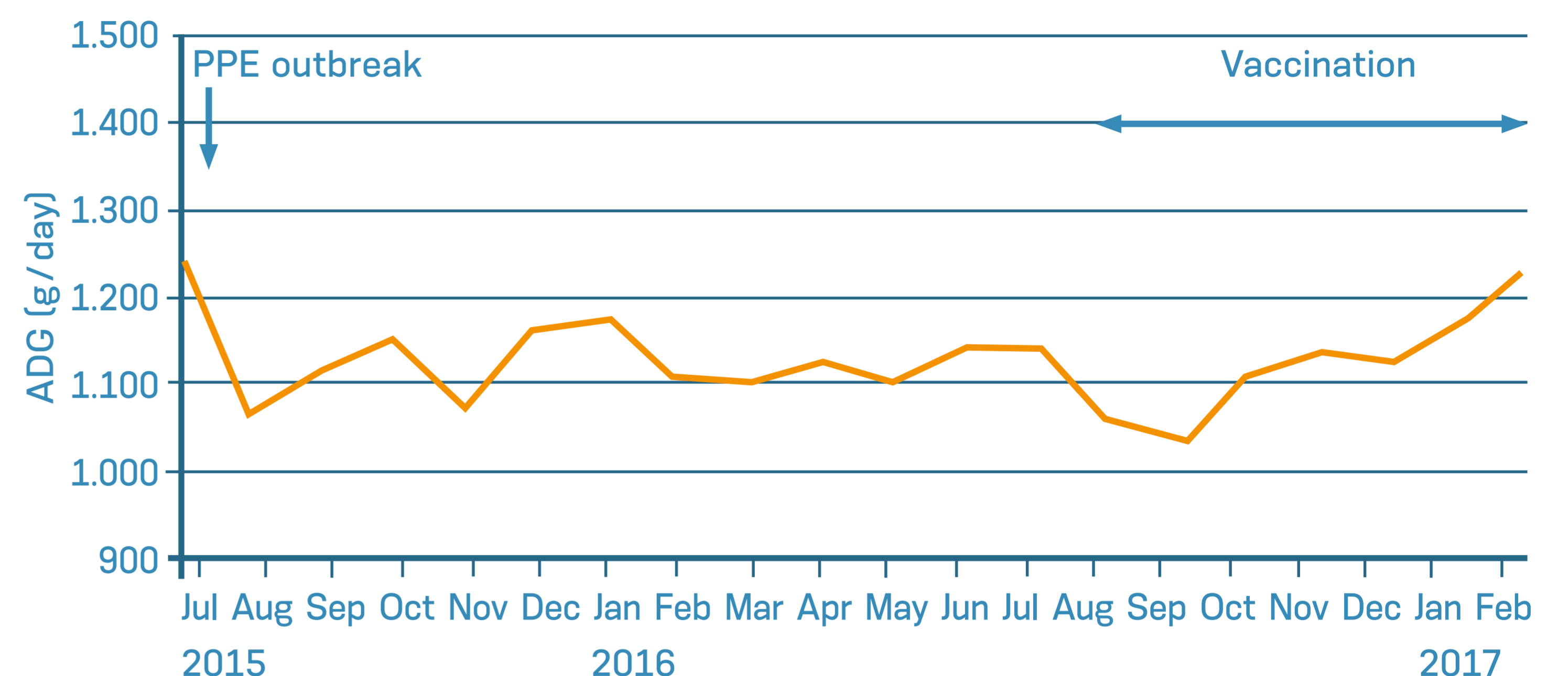


Figure 2: Monthly feed conversion ratio (FCR) data

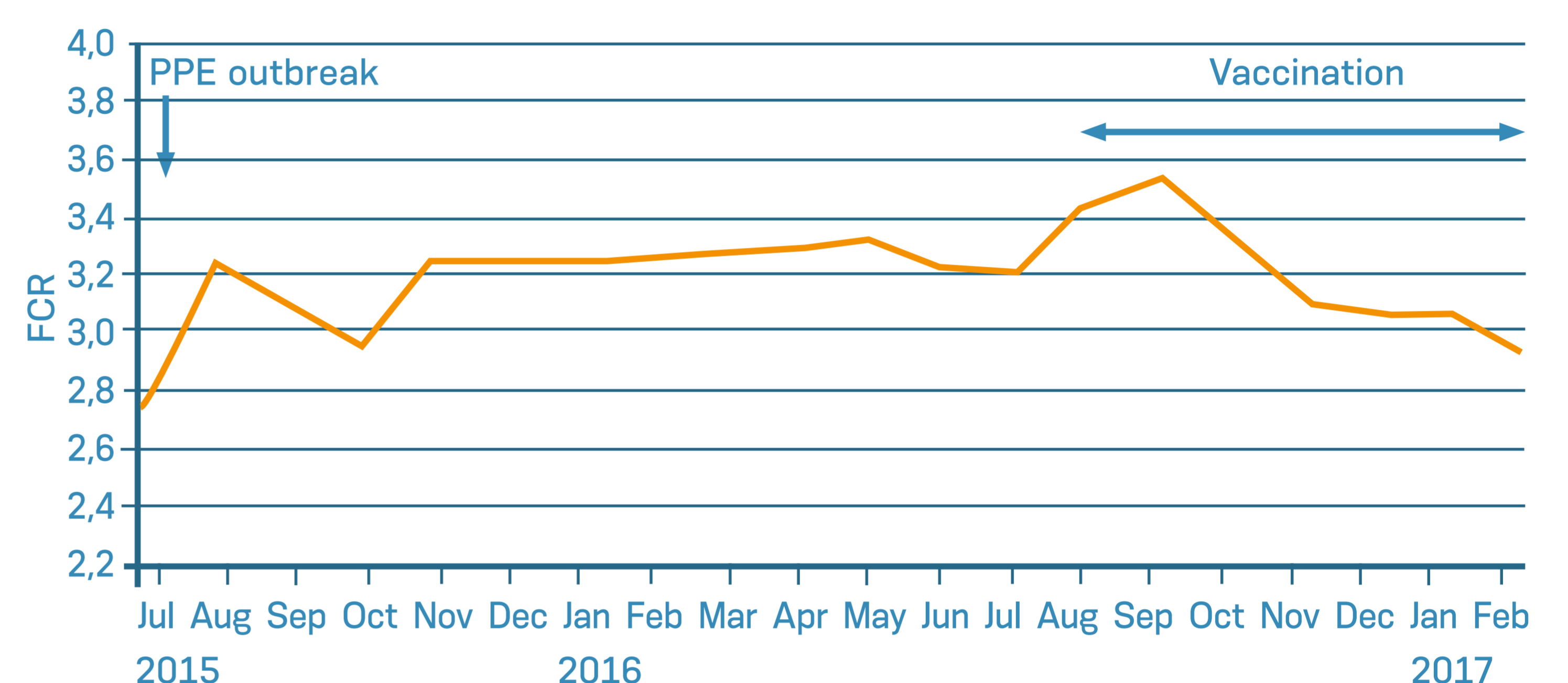


Table 1: Production parameters summary

	Control	Vaccine
ADG (g/day)	1,133	1,142
FCR	3.16 ^a	3.05 ^b

a, b: significant difference between groups ($p < 0.001$)

Discussion and Conclusion

It is shown that Enterisol® Ileitis is effective to improve performance of herd which has been threatened by *Li* in Japan. Especially, significant improvement of FCR was shown in only 7 months period after vaccination.

References

1. Jones et al. (1993) Journal of clinical microbiology pp2611 – 2615.