

# Case study: Reduction of antibiotic use in a Dutch finishing farm after implementation of oral ileitis vaccination



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## INTRODUCTION

In the Netherlands antibiotic use in human health care and in the food producing animals is a concern for the Dutch society and the Dutch government. The use of antibiotics is controlled by law and the consequence is a strict monitoring in the diagnostics of diseases including laboratory tests to confirm disease and treatments<sup>2</sup>. The message of the Dutch government is simple: use less antibiotics in animals. In this survey we demonstrate how in a finishing farm the implementation of oral vaccination against ileitis reduced antibiotic use.

## MATERIALS AND METHODS

A finishing farm, 1600 places, high standards of biosecurity, had a history of acute mortality in pigs close to slaughter, diagnosed as Porcine Hemorrhagic Enteritis (PHE). The piglets were supplied by two piglet producers: unit A 20% of the piglets and unit B 80% of the piglets. All piglets were PCV2 vaccinated (Ingelvac CircoFLEX<sup>®</sup>); unit A at 3 weeks of age, unit B at 10 weeks of age (immediately after arrival at the finishing farm).

The production results (feed conversion ratio and average daily gain) were at least equal to comparable finishing units without clinical ileitis. When mortality caused by PHE first started, antibiotics (tylosine) were used. This was with good effect; mortality dropped. The continuous use of antibiotics resulted in a high DDD (Defined Daily Dosage)<sup>1</sup>, well above the described goals used in the Netherlands<sup>3</sup>. In October 2013 oral ileitis vaccination (Enterisol Ileitis<sup>®</sup>) at one week after arrival was implemented to prevent the impact of mortality caused by PHE and to reduce antibiotics necessary to control the disease.

## RESULTS

The average production results in the year before vaccination compared to the results in 18 months of vaccinated pigs showed no big changes in Average Daily Gain, in Feeding Conversion Rate and in Mortality. At the same time the use of tylosine, antibiotic of choice to control ileitis, decreased from 30.3 kg per year to an average of 14.0 kg per year. After implementation of vaccination less compartments had to be treated with tylosine, which helped to the reduction of antibiotic use.

**Table 1: Results per year; Average Daily Gain (ADG), Feeding Conversion rate (FCR), Mortality (%) and tylosine use (KG)**

Year	ADG (gr / day)	FCR (kg / kg)	Mortality (%)	Tylosine active matter (KG)
2013	892	2.54	1.8%	30.3
2014	903	2.49	1.8%	12.2
2015 (Jan – Jun)	890	2.49	2.0%	7.9

## DISCUSSION

This survey shows a farm suffering from mortality caused by PHE. The use of antibiotics at this farm was, according to Dutch standards, too high. The effect of the antibiotics was sufficient, but offered no sustainable solution. Starting oral ileitis vaccination resulted in 46% reduction on average on the use of tylosine (kg active matter). The mortality didn't change significantly. The achieved results have to be addressed to be a team effort: farmer, feed adviser and veterinarians each had an important role.

Our conclusion is that oral ileitis vaccination can be a helpful tool in reducing the use of antibiotics and is therefore a support in sustainable pig production.

## REFERENCES

1. Geijlswijk et al. (2009) Tijdschrift voor Diergeneeskunde:134 (nr. 2), 69 – 73
2. Regeling Diergeneesmiddelen (2015) <http://wetten.overheid.nl>
3. SDa (2015) <http://www.autoriteitdiergeneesmiddelen.nl/nl/benchmarken/dierhouder>



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