

EFFECT OF INGELVAC CIRCOFLEX® ON THE MORTALITY RATE OF A HIGH HEALTH STATUS PIG HERDS IN MALAYSIA

KAM K.Y.¹, YONG C.K.¹, AND GUO Y.H.¹

¹ Boehringer Ingelheim (Malaysia) Sdn Bhd.

ABSTRACT. PCV-2 associated disease and related losses occur commonly in high health status herds. With the advent of PCV-2 vaccines, these losses can be successfully reduced. In this study, there was a significant reduction (48%) in the mortality rate of the vaccinated pigs when compared to the non-vaccinated pigs. Vaccination was conducted at day 21. In the vaccinated group, mortality was reduced from 5.25 % to 2.73%. This data indicates that the implementation of a PCV2 vaccination program can reduce the mortality rate of high health status pigs in Malaysia.

Keywords: PCV-2, pigs, Ingelvac CircoFLEX®, high health status herd, mortality rate.

INTRODUCTION

Porcine Circovirus Diseases (PCVD) or Porcine Circovirus Associated Diseases (PCVAD) are terms referring to several disease entities, where Porcine Circovirus type 2 (PCV2) plays a significant role. Postweaning Multisystemic Wasting Syndrome (PMWS) is the most important PCVD. (Baekbo, Kristensen and Larsen, 2011). This syndrome generally occurs in

5-12 week old pigs and clinically affected pigs present progressive weight loss, tachypnea, dyspnea and jaundice. PCV2 also implicated in other syndromes such as Porcine Dermatitis and Nephropathy Syndrome (PDNS). (Jasbir, Nisha and Choo, 2007). Post weaning mortality is one of the most significant losses in PMWS affected herds, but reduction in growth and poor feed utilisation as well as increased consumption of antibiotics add to the cost of the diseases. (Baekbo, Kristensen and Larsen, 2011). Porcine Circo Virus Type-2 (PCV-2) associated disease and related losses commonly occur in high health status herds (Imre., Tamas., Zoltan and Mark, 2010) With the advent of PCV-2 vaccines, these losses can be successfully reduced (Imrel *et al.*, 2012). The objective of this study was to determine the efficacy of Ingelvac CircoFLEX® in reducing the mortality rate of a high health status pig herds in Malaysia.

MATERIALS AND METHODS

The study was conducted in a pig farm located in a high density pig rearing region of southern region of Peninsular Malaysia. The farm was located at a single site with

a farrow-to-finish operation and had about 500 sows. The farm had a International Standard Operation (ISO) certificate for their farming production and management. The farm produce around 1000 porkers per month to the market. For the past 2 years, the farm pigs had shown symptoms of lethargy, wasting, abdominal breathing and pale skin 3 weeks after weaning. The presence of PCV2 was confirmed by positive PCR tests on tissues samples. In mid August 2010, the farm started to use Ingelvac CircoFLEX® on its piglets at day 21 of age. Vaccination was conducted as per manufacturer’s instructions. The mortality rate at the weaning, growing and finishing stages were recorded from January 2010

until September 2011. Mortality rates from January 2010 until August 2010 was compared with September 2010 until September 2011. The difference in total mortality rate was statistically evaluated using Statistical Process Control (SPC) and Chi–square test (significance level $p=0.05$).

RESULTS

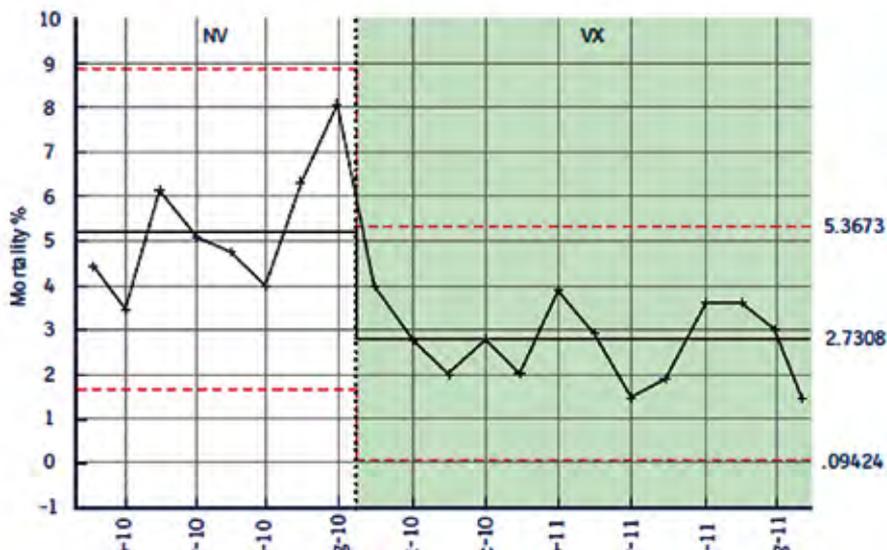
There was a significant reduction (48%) in the mortality rate of vaccinated pigs when compared to the previous time period (Table 1). The mortality in the vaccinated pigs were reduced from 5.25 % to 2.73% when compared with the non vaccinated pigs.

Table 1: Monthly mean (Mean ± SD) wean-to-finish mortality rates of pigs before and after vaccination with Ingelvac CircoFLEX®.

Group	Mortality rate (%)
No vaccination (Jan 2010 – Aug 2010)	5.25 ± 0.52 *
Ingelvac CircoFLEX® (Sept 2010 – Sept 2011)	2.73 ± 0.25 *

*Statistically significant between the groups ($p<0.05$)

Figure 1. Comparison of mortality rates before and after vaccination at day 21 with Ingelvac CircoFLEX®.



DISCUSSION

To obtain and continue achieving the ISO standard on farm production and management, the farm has to have good biosecurity and also farm management. From disease point of view, the farm doesn't apply *mycoplasma* and *Haemophilus parasuis* vaccination on pigs to control the respiratory problems but using antibiotics to prevent mycoplasma problem in farm. Although the farm had mild incidence of other diseases, including *Haemophilus parasuis*, *mycoplasmosis* and edema disease, mortality was reduced significantly. Vaccinating pigs against PCV2 significantly reduced the mortality rate of pigs in the farm (Figure 1). From

the results of this study, using Ingelvac CircoFLEX® may significantly reduce the mortality rate of PCV2 infected pigs in Malaysia.

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