

# **Performance benefits resulting from vaccination with Ingelvac CircoFLEX<sup>®</sup> and/or Ingelvac<sup>®</sup> PRRS MLV**

K. Bretey, J. Husa, E. Diaz, R. Philips, R. Edler  
Boehringer Ingelheim Vetmedica Inc, St Joseph, MO

## **Introduction**

PCVAD (Porcine Circovirus Associated Disease) and PRRS (Porcine Reproductive and Respiratory Syndrome) are both commonly involved in respiratory disease in growing pigs.<sup>1</sup> Both laboratory and large-scale field experiments have resulted in published information on the benefits of using modified live PRRS vaccine to control respiratory disease in growing pigs when exposed to heterologous PRRSv challenge.<sup>2-5</sup> Published information also demonstrates the efficacy of Ingelvac CircoFLEX<sup>®</sup> in controlling respiratory disease in pigs challenged by PCVAD.<sup>6</sup> However, there is little information published on the benefits of using vaccine for PRRSv and PCV2 concurrently to control respiratory disease.<sup>7</sup> It is common to have both pathogens present in the growing pig phase of production. This study compares the concurrent use of Ingelvac<sup>®</sup> PRRS MLV and Ingelvac CircoFLEX<sup>®</sup> to each vaccine used alone and to non-vaccinated controls. This study also demonstrates the safety of these vaccines through the nursery phase when used at 3 weeks of age.

## **Materials and Methods**

The experimental unit in this field trial was the farrowing group. Each group contained approximately 1,100 pigs. Approximately 27,500 pigs were included in the study. The pigs were randomly allocated into 4 treatment groups: 1) Ingelvac<sup>®</sup> PRRS MLV, 2) Ingelvac CircoFLEX<sup>®</sup>, 3) Ingelvac CircoFLEX<sup>®</sup> concurrent with Ingelvac<sup>®</sup> PRRS MLV (separate syringes and injection sites) and 4) a non-vaccinated control group. All injections were given IM at approximately 21 days of age. Pigs were weaned weekly into a nursery room. Nursery room and subsequent finisher room treatment group integrity was maintained by all in/all out flow. Diagnostic testing was done for the presence of PRRSv and PCV2. ANOVA assessment of productivity parameters were used for

statistical evaluation of the data with Tukey HSD used to discern pairwise differences using JMP v8.0.

## Results and discussion

Exposure to PCV2 was detected in early finishing and to PRRSv in late nursery/early finishing consistent with clinical observations of respiratory disease in the finishing phase. No differences were observed among groups at the end of the nursery period (Table 1). In the finishing phase, pigs previously vaccinated with both Ingelvac CircoFLEX<sup>®</sup> and Ingelvac<sup>®</sup> PRRS MLV had a significant reduction in combined cull and mortality rates, significantly increased % pigs marketed, and numerically improved ADG compared to non-vaccinated control pigs (Table 2).

There were no negative effects on nursery performance following vaccination with Ingelvac CircoFLEX<sup>®</sup>, Ingelvac<sup>®</sup> PRRS MLV, or both. Pigs exposed to both PCV2 and PRRSv benefited from concurrent vaccination with both Ingelvac<sup>®</sup> PRRS MLV and Ingelvac CircoFLEX<sup>®</sup> compared to non-vaccinated controls.

**Table 1.** Nursery performance.

Response variable	Non-vaccinated Control	PRRS MLV	CircoFLEX	CircoFLEX + PRRS MLV
Number of groups	4	7	7	7
Average daily gain, lbs	0.98	0.97	0.95	0.98
Feed conversion	1.58	1.59	1.63	1.49
Mortality, %	0.95	1.20	1.02	0.88

**Table 2.** Finisher performance.

Response variable	Non-vaccinated Control	PRRS MLV	CircoFLEX	CircoFLEX + PRRS MLV
Number of groups	4	7	7	7
Average daily gain, lbs	1.75	1.77	1.78	1.85
Feed conversion	3.01	2.91	2.98	2.96
Culls + Mortality, %	16.23 <sup>a</sup>	13.41 <sup>ab</sup>	8.68 <sup>ab</sup>	6.01 <sup>b</sup>
Percent pigs marketed	82.45 <sup>a</sup>	85.37 <sup>a</sup>	89.06 <sup>ab</sup>	92.60 <sup>b</sup>

<sup>ab</sup> Means within a row without common superscripts differ significantly (Tukey HSD,  $P \leq 0.05$ ).

## References

1. Opriessnig T. *Proc ESW Intl Conf Animal Circovirus Assoc Dis*, Sept 2005.
2. Opriessnig T. et al. *J Swine Health Prod*, 2005 ;13(5)246-253. :
3. Philips Reid, et al. *Proc Int Pig Vet Soc*, 2006(1):242.
4. Roof, M. *Proc Lemman Swine Conf* 2008:30-40.
5. Jordan, D. et al. *Proc Lemman Swine Conf Suppl* 2009, in press.
6. Cline, G. et al. *Vet Rec*, 2008(163)737-740.
7. Jones R., et al. *Proc Lemman Swine Conf Suppl* 2007:14.