

Effect of two different vaccine combinations against PCV2 and *Mycoplasma hyopneumoniae* (Mhyo) on pigs' well-being



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INTRODUCTION

Body temperature, acute phase proteins (APPs) and weight gain (ADG) are suitable indicators of inflammation and stress in pigs^{1,2}. The aim of this study was to evaluate the physiological effects of two PCV2 and Mhyo vaccines, registered in EU, by measuring these parameters.

MATERIALS AND METHODS

This side by side study was conducted in 3 farrow to finish herds following the same procedures. Farms characteristics are summarized in table 1.

Table 1: Characteristics of herds

	Herd 1	Herd 2	Herd 3
No. of sows	1200	300	200
No. of batches	20	7	4
Weaning age (days)	21	28	21
Age at vaccination (days)	28	28	35

One day before weaning, piglets were randomly allocated to 2 groups and ear tagged. At T0, piglets were weighed individually and vaccinated either with 2 ml of a freshly mixed preparation of Ingelvac CircoFLEX[®] and Ingelvac MycoFLEX[®] (Group 1) or with 2 ml of Suvaxyn[®] Circo+MH (Group 2). Vaccines were used according to their Summary of Product Characteristics. T0 was different between herds and for each of them was selected according to the usual vaccination schedule (see table 1). All piglets were individually weighed again 14 days after vaccination. Twenty piglets per treatment group were selected for the assessment of body temperature and APPs (Haptoglobin and C - reactive protein (CRP)) within the 48 hours following vaccination. The serum concentration of Haptoglobin and CRP were measured using a Pig Haptoglobin ELISA kit (Life Diagnostics HAPT-9) and a Pig C-Reactive Protein Elisa kit (Life Diagnostics CRP-9) respectively. Statistical analysis was performed by herd and also considering all herds together.

RESULTS

Six and 24h after vaccination, overall the body temperature was significantly lower in Group 1 than in Group 2 ($p < 0.001$ and $p < 0.05$ respectively). Figure 1 displays the rectal temperatures for each farm. Twenty four hours post-vaccination the concentrations of both Haptoglobin and CRP were significantly lower in Group 1 compared to Group 2 ($p < 0.001$). The results for each herd are given in Figure 2. Fourteen days after vaccination, ADG when considering all herds was significantly higher in Group 1 compared to Group 2 ($p < 0.05$). Table 2 provides the results for each included farm.

Table 2: Weight gain from day of vaccination to 14 days after vaccination

		Group 1	Group 2	Δ
Herd1	No. of pigs	211	213	
	ADG (g/day)	343,98	332,62	11,36
Herd2	No. of pigs	203	203	
	ADG (g/day)	319,00	302,23	16,77
Herd3	No. of pigs	186	187	
	ADG (g/day)	343,13	334,29	8,84

DISCUSSION AND CONCLUSION

The outcome of this study is consistent with other trials showing that vaccination with Ingelvac CircoFLEX[®] and Ingelvac MycoFLEX[®] lead to less inflammatory reactions and stress than other M. hyo and PCV2 vaccines^{3,4,5}.

Figure 1: Mean rectal temperature

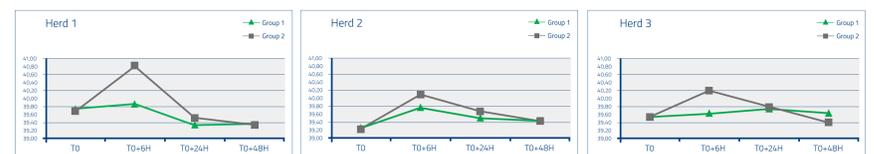
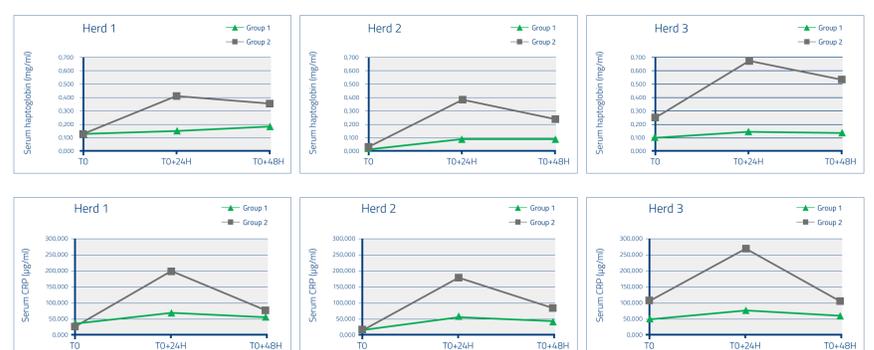


Figure 2: Mean serum concentration of APPs: Haptoglobin and CRP



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