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Performance of weaned pigs vaccinated with 3FLEX™ compared to pigs vaccinated with Ingelvac® CircoFLEX-MycoFLEX™ and Ingelvac® PRRS MLV in separate injections.

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Introduction and Objectives

3FLEX is the first USDA licensed vaccine to contain, in a single injection, Porcine Reproductive & Respiratory Syndrome (PRRS) virus, Porcine Circovirus type 2 (PCV2) virus, and *Mycoplasma hyopneumoniae* (M hyo). This vaccine has been shown to be safe,¹ and effective.^{2,3} The objective of this study was to confirm equivalence for wean to finish average daily gain and compare mortality and cull rates of pigs vaccinated with either 3FLEX or Ingelvac CircoFLEX-MycoFLEX and Ingelvac PRRS MLV.

Materials and Methods

653 pigs were weaned into a commercial three-site production nursery facility from a sow site known to be positive for PCV2, M hyo and PRRSv. All pigs were individually tagged, weighed and randomly assigned to treatment. Pigs were vaccinated at approximately 3 weeks of age. Pigs in treatment group 1 were vaccinated with Ingelvac CircoFLEX-MycoFLEX and Ingelvac PRRS MLV (CF-MF + PRRS) in separate injections. Pigs in treatment group 2 were vaccinated with 3FLEX (3FLEX). All vaccinations were given per label instructions. Individual pig weights were taken at weaning (day 0), nursery exit (day 48), and prior to first marketing (day 133). Mortalities were recorded on a daily basis and culls were defined as any animal weighing less than 185 pounds on day 133. Body weight and ADG from d0-48 and 48-133 were compared using a two sample t-test. Overall performance data were analyzed using equivalency test and mortality and cull rates were analyzed using a Pearson's chi-square. A margin of 0.05 lbs d0-133 average daily gain was specified as the margin of practical equivalence.

Results

No differences were observed in the body weight of pigs or in ADG at d0-48, or d48-133. Overall ADG was practically equivalent between the

vaccine regimens using the predetermined margin of 0.05 lb/d (Table 2). No differences were detected in mortality or cull rates between the vaccine regimens (Table 3).

Table 1. The effect of vaccine on performance.

Parameter	CF-MF+PRRS	3FLEX	P-value ¹
Number of pigs	327	326	-
d0 weight, lbs.	14.85	14.94	0.7
d48 weight, lbs.	62.4	62.55	0.89
d133 weight, lbs.	234.79	232.28	0.97
d0-48 ADG, lbs.	0.99	0.99	0.96
d48-133 ADG, lbs.	2.02	1.99	0.3

¹Two sample t-test

Table 2. Practical equivalency test for overall ADG

Parameter	CF-MF+PRRS	3FLEX
d0-133 ADG, lbs.	1.65	1.63

Means are practically equivalent using a margin of 0.05 lbs.

Table 3. Mortality and culls rates

Parameter	CF-MF+PRRS	3 FLEX	P-value ¹
d0-48 Mortality (%)	5/327 (1.53)	7/326 (2.15)	0.58
d48-133 Mortality (%)	10/322 (3.11)	12/319 (3.76)	0.67
d0-133 Mortality (%)	15/327 (4.59)	19/326 (5.83)	0.49
d0-133 Culls (%)	17/311 (5.47)	18/301 (5.98)	0.86

¹Pearsons chi-square

Conclusions

In this study, overall ADG was equivalent, and no differences were detected in BW and mortality and cull rates in pigs vaccinated with 3FLEX or Ingelvac CircoFLEX-MycoFLEX and Ingelvac PRRS MLV concurrently, but had the added convenience of having PRRS, PCV2 and M hyo antigens in a single dose.

References

- ¹ Piontkowski. Leman 2010.P177
- ² Haiwick. Leman 2010. P176
- ³ Eichmeyer. Leman 2010. P175