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Performance of conventional health pigs vaccinated with Ingelvac MycoFLEX® or Suvaxyn® RespiFend

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Introduction and Objectives

This paper describes the results of a field evaluation of a novel M hyo bacterin, Ingelvac MycoFLEX® (Boehringer Ingelheim Vetmedica, Inc., St. Joseph, MO), and another commercially available vaccine in a conventional production system positive for PRRSv, *Salmonella typhimurium, Lawsonia intracellularis* and SIV.

Materials and Methods

A commercial production system was selected that utilized wean to finish production and vaccination against M hyo at approximately three and five weeks of age. A total of 1254 pigs were weaned into the barn over a 10 day period to fill 46 of 48 pens. Two pens remained open for use as cull pens. All pigs within a given pen received the same treatment, with the exception of two non-vaccinated sentinel pigs per pen which were used for lung lesion and serologic evaluations. Vaccinated pigs (1158) received either Suvaxyn® RespiFend (two doses at three and five weeks of age) or Ingelvac MycoFLEX® (one dose at five weeks of age). Pigs were observed for any local or systemic side effects following injection, which had previously been commonly reported by the production system following vaccination with RespiFend. Non-vaccinated sentinel pigs (92) were tagged with a purple tag, while vaccinated pigs were tagged with either a red tag (2 pigs per pen for serologic evaluations) or yellow tag. All pigs had a unique tag number regardless of tag color. All pigs were weighed off test over two days. A subset of each group of pigs was selected for slaughter check. Pigs were randomly selected during off test weighing and lung lesions were scored blindly by a veterinarian (73 non-vaccinated sentinels, 85 RespiFend and 92 MycoFLEX pigs, respectively). Average daily gain was the performance parameter of interest in this evaluation and was analyzed using one-way ANCOVA having treatment and sex as main effects and day 0 weight as a covariate. Individual pig was the experimental unit. Starting weight was evaluated using one way ANOVA. LS means are reported.

Results

No difference in average daily weight gain (ADG) was detected between the vaccinated groups. Both groups of vaccinated pigs had significantly reduced average lung lesion scores (ALLS) as compared to non-vaccinated pigs ($p \leq 0.05$, Table 1).

Twenty-seven percent of pens suffered adverse systemic side effects following injection with RespiFend. Affected pigs exhibited seizures, salivation, and lethargy. One pig died. No pigs exhibited any type of adverse reaction following Ingelvac MycoFLEX® vaccination. The day following vaccination, more MycoFLEX® pigs were observed at feeders than RespiFend pigs (2.4 vs. 1.6 pigs/pen, respectively).

Table 1. Summary Data (LS means)

	Non-vaccinated sentinels*	Ingelvac MycoFLEX®	Suvaxyn® Respifend
Total Weight Gain, lbs	NA*	218.08[a]	216.90[a]
ADG, lbs	NA*	1.46	1.46
ALLS, %	23.3 [a]	5.3 [b]	8.6 [b]

a,b: $p<0.05$. ADG=average daily gain. ALLS=average lung lesion score (% of lung with lesions). *Non-vaccinated sentinels used only for lung lesion & serologic evaluations.

Conclusions

Both vaccinated groups had similar average daily gains and end weights. Ingelvac MycoFLEX® pigs exhibited fewer local and systemic side effects than pigs vaccinated with RespiFend®. This provides an interesting contrast between the oldest, traditional two dose M hyo vaccine, and a new, non-reactive single dose vaccine. Excellent efficacy is obtainable with a safe, non-reactive, single dose vaccine.