

ALTERNATIVE VACCINATION SCHEMES AGAINST *MYCOPLASMA HYOPNEUMONIAE* IN PIGS REARED FOR ITALIAN D.O.P. HAM PRODUCTION

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Introduction

Vaccination against *Mycoplasma hyopneumoniae* (*Mh*) is performed worldwide to decrease infection and lung lesions caused by *Mh*.

It has been clearly demonstrated that vaccination against *Mh* is effective in improving average daily gain (ADG) and feed conversion ratio (FCR) (1). Vaccination schemes in Italy are not different from other countries, even though pigs are slaughtered at a higher weight (160-180 kg) and, therefore, enzootic pneumonia can occur later in pig life cycle.

The aim of this study was to evaluate the efficacy of two "delayed" *Mh*-vaccination schemes compared to traditional ones in Italian heavy pigs.

Materials and Methods

A finishing farm producing 25.000 heavy pigs a year for Parma and San Daniele ham was used in this study.

A group of 704 pigs from the same breeding farm were introduced at the age of about 100 days of age (T100). All pigs had previously received one injection of a commercial *Mh* one-shot vaccine at 21 days of life in the breeding farm. They remained separated from other pigs and followed all-in, all-out management. Pigs were fed a liquid diet and received antiparasitic and antibiotic treatment following the prophylactic schemes of the farm.

Experimental design: Control pigs (C) were not vaccinated whereas late pigs (L) and very late pigs (VL) were vaccinated with HYORESP[®] (2ml I.M) following the scheme reported in Table 1.

Table 1

C		L		VL	
Nr.	Vacc. day	Nr.	Vacc. day	Nr.	Vacc. day
238	-	123	T100	123	T145

Nr.: number of pigs; Vacc. day: day of vaccination

The following data were recorded: nr. of dead and culled pigs; duration of the finishing period; weight at arrival, at the end of the growing and the finishing period; ADG; FCR; FE (feed efficiency); D-C (dead and culled pigs); lung lesion scores at slaughterhouse according to Madec *et al.*, 1982 (2).

A statistical analysis was performed on lung lesion scores by Kruskal-Wallis test.

Results

Zoo-economic data are reported in Tables 2, 3, and 4.

Table 2

CONTROL		T100	T147	T284	
Nr.pigs		238	236	230	
Average weight		41.26	67.83	163.03	
ADG		-	542.24	684.89	
FCR	4,01*	FE (%)	24,93	D-C	8

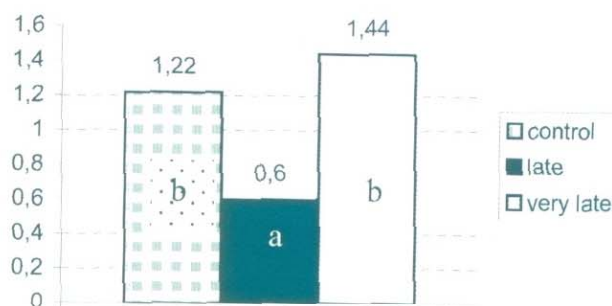
Table 3

LATE		T100	T147	T284	
Nr. of pigs		123	123	121	
Average weight		43.00	68.61	168.51	
ADG		-	522.65	718.7	
FCR	3,97*	FE (%)	25,18	D-C	2

Table 4

VERY LATE		T100	T147	T284	
Nr. of pigs		123	121	120	
Average weight		42.35	69.00	163.62	
ADG		-	543.87	680.71	
FCR	4,10*	FE (%)	24,39	D-C	3

*Estimated feed consumption of dead pigs was also included



Different letters between the same groups: $p < 0,01$

Figure 1: Lung lesion scores

Discussion

Results showed that, while control group and very late vaccinated group had similar performances, the late vaccination scheme against *Mh* was effective in improving all pig performances tested and was also effective in decreasing lung lesion scores in pigs.

References

- Jensen, C. S. *et al.* (2002). *Prev. Vet. Med.* 54: 265-278
- Madec F. *et al.* (1982) 14th Journées de la Recherche Porcine en France, Paris, France, 405-412

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