EVALUATION OF THE EFFICACY OF A VACCINE AGAINST *A. pleuropneumoniae*

Clinical outcome, mortality and pleuritis lesions at slaughterhouse

Catelli E.[1], Catella A.[1], Canelli E.[1], Luppi A.[2], Caleffi A.[3], Arioli E.[3], Borghetti P.[1], Martelli P.[1]

[1]Dept. of Veterinary Sciences, University of Parma, [2]IZSLER, Reggio Emilia, Italy; [3]Veterinary Practicioner, Mantua, Italy;

Introduction

Vaccination is one of the major tools for prevention and reduction of the economic losses due to porcine pleuropneumonia. **This study aims at assessing the efficacy of vaccination against *Actinobacillus pleuropneumoniae (A.p.)* in comparison with non-vaccinated (controls).**

Materials and Methods: 500 piglets belonging to a farrow-to-finish herd with a history of pleuropneumonia were divided in two groups: 250 vaccinated with COGLAPIX-Ceva Santè Animale and the control group injected with saline solution.

Vaccinated	Control
COGLAPIX	Saline solution

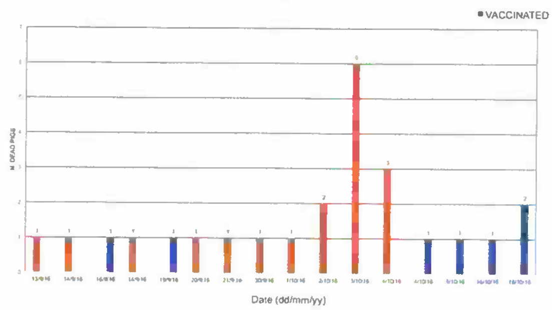
The vaccine performance was evaluated by morbidity, mortality due to A.p. infection based on microbiological findings, lung scoring at slaughterhouse and the return on investment (ROI).

Results

MORTALITY & RUNTS

Graph 1: Total mortality and runts. In red, mortality during A.p. outbreak. In vaccinated group, mortality associated with A.p. isolation was reduced by 63.1%

MORTALITY DURING A.p. OUTBREAK



Graph 2: mortality during A.p. outbreak

RETURN ON INVESTMENT= ROI

	CONTROL	VACCINATED	DIFFERENCE (V-C)
N. PIGS ENROLLED	250	250	
MORTALITY & RUNTS	30,8% =77	20% =50	-10,8%
SLAUGHTERED PIGS	173	200	+27 pigs
L.W. AT START	24,6	24,6	
L.W. AT SLAUGHTER	176	175	
BW INCREASE	151,4	150,4	-1 kg
KG PRODUCED	26.192	30.080	+3,888 kg
MARKET PRICE		1,44 €	
VALUE €	37.716,48	[illegible]	+5,598 € (a)
VACCINATION COST € (fattening period)	0,40 (ADV)	2,40	+2 € (A.p. vaccination)
TOTAL VACCINATION COSTS €	100	600	+500 € (b)
BENEFIT			5098 € (a-b) +20.39€/pig
INDIVIDUAL INJ. TREATMENT €	373,80	[illegible]	-108.15 € +0,43€/pig
BENEFIT/PIG			+20,82€ */pig

Table 1: Return of investment based on prodaction parameters.

LUNG LESIONS

	R1	R2	R3	A	L1	L2	L3	SPES
CONTROL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
VACCINATED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table 2: Lungs of vaccinated pigs shown significantly (Kruskal-Wallis chi-squared without ties = 14.709 with 1 d.f. $p = 0.0001$) less MADEC lesion at slaughterhouse. No difference for SPES score.

Discussion and conclusions

Vaccination against Pleuropneumonia reduces mortality, morbidity and related costs. The evaluation of the return on investment (ROI) is the better parameter to evaluate the performance of a treatment

Corresponding author: ELENA CATELLI
PARMA UNIVERSITY - DEPARTMENT OF VETERINARY SCIENCES, Via del Taglio 10, 43126 Parma, Italy
email ele.cat.mn@hotmail.it