BACTERIAL DISEASES

BBD-036

EFFICACY OF HYOGEN® IN COMPARISON TO OTHER ONE SHOT *MYCOPLASMA HYOPNEUMONIAE* VACCINES UNDER FIELD CONDITIONS

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Introduction

Vaccination against *Mycoplasma hyopneumoniae* (Mh) is a common tool used for the prevention and control of Enzootic pneumonia (EP). Evaluation of lungs at the slaughterhouse is a common method to assess the efficacy of vaccination. The aim of this study was to compare the efficacy of Hyogen® with other four one-shot Mh vaccines.

Material and methods

Between October 2016 and November 2017 a total of 548 batches within 81.507 lungs from different farms located in Spain were scored at the slaughterhouse for Enzootic pneumonia (EP)-like lesions using Ceva Lung Program (CLP) scoring methodology described previously. Prevalence and extensions of dorsocaudal pleurisy (*Actinobacillus pleuropneumoniae*-like lesions) were also recorded.

For each batch the indicators of EP-like lesions and APPI index were calculated, using CLP app.

Results

Lungs from unvaccinated pigs showed statistically more lung lesions than lungs from vaccinated pigs. The % of affected lung with EP-like lesions was 59,04% vs 43,48% ($p<0,001$), percent of affected surface out of all lungs was 5,11% vs 2,98% ($p<0,001$), and APPI index 0,33 vs 0,37 ($p<0,001$) in non-vaccinated vs vaccinated batches respectively.

Lungs from farms vaccinated with Hyogen® showed statistically lower percentage of affected lungs with EP-like lesions than the rest of vaccines, 37,96% vs 52,92% ($p<0,001$), and less percentage of affected surface out of all lungs 2,08% vs 4,53% than in the other groups ($p<0,001$). The APPI index was also statistically different 0,32 in Hyogen® group vs 0,35 in the rest ($p<0,05$).

Discussion & Conclusions

Vaccination of piglets against *Mh* reduced the prevalence and severity of EP-like lesions. Lungs from farms vaccinated with Hyogen® showed less EP-like lesions, pleurisy and APPI index than lungs from farms vaccinated with any other vaccine or no vaccinated farms. This result also indicates that efficient control of *Mh* infections can help to control the problems with *Actinobacillus pleuropneumoniae*.