Two commercial one-shot Mhyo vaccine show comparable production results in a large Dutch fattening farm

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DE VARKENS PRAKTIJK
Een stap vooruit

Introduction

In the Netherlands fattening farms generally operate as continuous flow systems, having the pigs managed all in – all out per room. Respiratory disease is common in these systems[1] and *Mycoplasma hyopneumoniae (Mhyo)* vaccination is used in more than 50% of the Dutch piglets[2]. Despite of what the official registrations of the various products state, sometimes the efficacy of different competitive products is argued by farmers. The objective of this field study was to evaluate two commercial mycoplasma vaccines on a Dutch fattening farm on production parameters under field circumstances.

Materials and Methods

The 7000 head farm consisted of 3 different closed barns with automatic ventilation. At slaughterhouse check an unexpected high percentage of lung lesions were recorded, with minimal corresponding clinical signs at the farm. Laboratory results confirmed Mhyo-infection, which was preceded by infections with App, Influenza and PRRSV. During the study every week on average 350 piglets arrived with a weight variation of 19.5 to 23.5 kg on average per batch. All piglets came from the same sow herd and were PCV2 vaccinated (CircoFLEX®) at 3 weeks of age. Every week a batch was housed in 2 or 3 different rooms and vaccinated within 3 days after arrival with either MycoFLEX® or Stellamune One®, alternating the brand of vaccine per batch. In total 3 batches were vaccinated MycoFLEX® and 3 batches were vaccinated Stellamune One®. During the study 5 bloodsamples per room were collected within 4 weeks before slaughter to monitor the Mhyo infection by serology (Herdcheck Mycoplasma hyopneumoniae ELISA,IDEXX Laboratories, Westbrook, Maine). The primarily production parameters for evaluation were the Average Daily Gain (ADG) and mortality, secondary parameter was lung lesion score at slaughter.
Lung lesions were registered at the slaughterhouse by dedicated slaughterhouse staff, reported as the total percentage of registered lungs with any kind of pneumonic lesions.

Results

Mhyo infection during the study was confirmed by serology performed in all batches.
See table 1 for the production parameters of the two groups.

Table 1: production parameters of the pigs in fattening unit for 2 mycoplasma vaccines.

	MycoFLEX	Stellamune One
no of pigs	976	1088
% boars	53	57
ADG (gr/day)	805	794
mortality %	3,6	3,3
% lungs with lesions	61	56

Discussion and Conclusion

As shown in table 1 the production parameters of both groups were comparable.
The percentage of boars per group has to be comparable, for boars generally have better performance results[3] which could influence the study results.
When lung lesions at the slaughterhouse are scored one has to realize that the lesions can be the result of anything that has happened in the pig's life. The percentage of lung lesions is in general not only influenced by Mhyo-infections, but also by other infections such as PRRSV and PCV2[4,5], SIV[6] and by non-infectious causes[7]. This has to be taken in consideration when using lung lesions as a parameter for evaluation.
The low number of batches in this field study did not allow statistical evaluation.
The results suggest that the efficacy of both vaccines is comparable.
The used vaccines have different registrations regarding the administration of the vaccine concerning age, mixability and safety. With comparable technical performance these characteristics are of importance for the pig farmer in the choice of a Mhyo vaccine.

References

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