

Efficacy of vaccination with Stellamune® One administered simultaneously with ECOPORC SHIGA under field conditions



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Introduction

The majority of vaccinations for piglets are performed during the suckling period due to an early onset of most infections and the duration for establishment of sufficient immunity. Since enzootic pneumonia is spread worldwide, 80% of piglets are vaccinated against *Mycoplasma hyopneumoniae* (*M.hyo*). Commercially available vaccines are designed to be administered at 3rd day of life and according to individual infection dynamics on farm level,

early vaccination can be useful, not only against *M.hyo* but also against Oedema Disease.

The aim of this study was to examine the efficacy after one shot vaccination against *Mycoplasma hyopneumoniae* (Stellamune® One) by simultaneous administration of a vaccine against Oedema Disease (ECOPORC SHIGA) in the first week of life under field conditions.

Materials and Methods

The study was performed in 3 consecutive farrowing batches in a commercial 180 sow farrow-to-finish farm in the southern part of Germany from December 2013 until August 2014 with a known history of EP but unsuspecting regarding Oedema Disease. The piglets were individually eartagged and randomly assigned to *M.hyo* vaccination groups VG1 and VG2 receiving vaccines based on vaccination schedule in the first week of life (4th – 7th day of life): VG1 (n = 135) Stellamune® One, i.m.; VG2 (n = 135)

ECOPORC SHIGA and Stellamune® One, i.m. and one control group (CG). The efficacy of the vaccination was determined by comparing performance parameters such as bodyweight at the end of finishing period as well as average daily weight gain (ADWG) between day 64 and the end of finishing (day 168). The percentage of physically retarded animals was furthermore evaluated and lung lesions were scored at slaughter.

Results

Bodyweights at the end of the finishing period did not differ significantly between VG1 (86.80 kg) and VG2 (86.35 kg) but weights of CG (84.15 kg) were numerically lower without differing significantly from VG2. The ADWG for the pigs belonging to VG1 and VG2 was 766.0 g and 762.7 g respectively and 730.0 g for the pigs from the control group.

Pigs of VG1 achieved significantly higher rates of ADWG than CG ($p < 0.025$). In VG1, 4.6% and in VG2, 5.4% of pigs were physically retarded in contrast to CG with 10.7% ($p > 0.025$). Lung scores of VG1 and VG2 was 5.7 and 6.8, respectively and 7.7 for the pigs of CG ($p > 0.025$).

Conclusion

The data of present study showed that the concurrent vaccination with ECOPORC SHIGA and Stellamune® One leads to similar results concerning ADWG, bodyweight and percentage of physically retarded animals compared to a

single vaccination with Stellamune® One. The lung lesion score of pigs vaccinated simultaneously (VG2) exceeded that of VG1 but was lower than that of the control group, not vaccinated against *M.hyo*.