

## **BBD-PP-21**

### **TITLE**

VACCINATION AGAINST MYCOPLASMA HYOSYNOVIAE REDUCED CASES OF ARTHRITIS IN GILTS

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### **CONTENT**

#### Background and Objectives:

*Mycoplasma* (*M.*) *hyosynoviae* is ubiquitous in the pig production worldwide and can cause arthritis in growing-finishing pigs and particularly in gilts after introduction to a new farm or during early stages of pregnancy.

Whether clinical arthritis occur is depending on differences in genetics, body conditions, management practices, differences in virulence and environment. Predisposing factors are osteochondrosis and injuries. Once clinical signs are present it will lead to reduced animal welfare, increased antimicrobial usage and treatment costs and decreased performance. Since no commercial vaccine is available autogenous vaccines are more and more used to prevent disease.

#### Material & Methods:

In a German farrow-to-finish farm with a high number of *Mycoplasma*-associated arthritis *M. hyosynoviae* was isolated from the tarsal joint of a developing gilt at 3 months of age. The pig was showing acute lameness prior necropsy. With the isolated strain an autogenous vaccine based on an oil-in-water emulsion was produced.

Replacement gilts were vaccinated twice with a 2 ml dose at 12 and 15 weeks of age. With 160 days gilts were placed in a separate stable within the breeding unit. After 6-7 weeks the exclusion rate due to lameness were recorded. This was carry out on non-vaccinated and vaccinated groups per quarter from 2016 to mid-2018. In total, more than 5000 gilts were evaluated.

#### Results:

Without antimicrobial treatment and without vaccination 2.2% of gilts were culled because of arthritis. In the vaccinated groups the culling rate decreased significantly on average to 1.4% ( $p=0.038$ ). Especially in the first two quarter of 2018 only 0.76% of gilts were excluded due to lameness.

#### Discussion & Conclusion:

Vaccination against *M. hyosynoviae* with an autogenous vaccine was shown to be an effective tool in preventing *Mycoplasma*-associated arthritis. Reduced cases of lameness resulted in a decreased antibiotic use and improved gilt selection.