BBD-OP-06

PASSIVE SURVEILLANCE OF *LEPTOSPIRA* INFECTION IN SWINE IN GERMANY

K. Strutzberg-Minder 1, A. Tschentscher 1, M. Beyerbach 2, M. Homuth 1, L. Kreienbrock 2.

1 IVD Innovative Veterinary Diagnostics (IVD GmbH), Seelze, Germany; 2 Institute for Biometry, Epidemiology and Information Processing, University of Veterinary Medicine Hannover, Foundation, Hannover, Germany.

Introduction

Leptospirosis is presumed to be the most widespread zoonosis worldwide; it is a cause of reproductive loss in swine breeding herds and has been reported in swine from all parts of the world. Unfortunately, current data about the prevalence of leptospiral infection in swine are rare.

Material & Methods

Laboratory data were analysed from diagnostic examinations carried out on samples taken from swine all over Germany between January 2011 and September 2016. A total of 29829 swine sera were tested by microscopic agglutination test (MAT) for antibodies against strains of eleven Leptospira serovars.

Results

Overall, 20.2 % (6025) of the total sample collection tested positive for leptospiral infection. Seropositivity ranged between 16.3 % (964) in 2011 and 30.9 % (941) in 2016 (January to September only). The most frequently detected serovar was Bratislava, which was found in 11.6 % (3448) of all samples, followed by the serovars Australis in 7.3 % (2185), Icterohaemorrhagiae in 4.0 % (1191), Copenhageni in 4.0 % (1182), Autumnalis in 3.7 % (1054), Canicola in 2.0 % (585), and Pomona in 1.2 % (368). Modelling shows that both the year and the reason for testing at the laboratory had statistically strong effects on the test results; however, no interactions were determined between those factors. The results support the suggestion that the seropositivities found may be considered to indicate the state of leptospiral infections in the German swine population.

Discussion & Conclusion

Although data from passive surveillance are prone to selection bias, stratified analysis by initial

reason for examination and analyses by model approaches may correct for biases. A prevalence of about 20 % for a leptospiral infection is most probable for sows with reproductive problems in Germany, with an increasing trend.