RES-004

SEVERE CONGENITAL TREMOR PROBLEMS DUE TO INFECTION WITH ATYPICAL PORCINE PESTIVIRUS (APPV)

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Congenital tremor (CT) in pigs is a well-known disease problem. Affected animals suffer from insufficient colostrum and milk intake, resulting in mortality, insufficient growth and/or higher antibiotic use. The condition may have different aetiologies, including viral infections. The present study reports a case of CT in Germany caused by a novel virus namely atypical porcine pestivirus (APPV).

The case occurred in a closed production system, comprising of two sow farms located 1.5 km away (site A 210 sows; site B 180 sows), and nursery and fattening units on site C. The first litter with trembling piglets occurred on site A in December '16. From July to September '17, the number of affected litters increased significantly. Fourteen blood samples of sows with affected and non-affected litters were taken and analysed for presence of mycotoxins (ELISA), antibodies against Leptospira (microagglutination test), PRRS virus (RT-PCR) and PCV2 (RT-PCR). Two affected piglets were euthanized and sent to the laboratory for analysis of APPV (PCR, histopathology).

From December '16 to September '17, 7% of all the litters were affected (79% of them between July and September) and pre-weaning mortality was 63% (167/263 piglets) and 16% (511/3149 piglets) in affected and non-affected litters, respectively. Severity of trembling improved with age, but some piglets continued to show trembling after weaning. Mean parity of sows with and without affected litters was 2.47 and 5, respectively. The blood samples of all sows were positive for T2 Toxin (8.26µg/l) and DON+3-Acetyl-DON (111.29µg/l). Blood samples were negative for antibodies against Leptospira, PRRS virus and PCV2. APPV was detected in brain tissue and multiple vacuolization was visible in the white substance of the brain.

Detection of APPV together with the histopathological lesions confirmed the diagnosis. Further research is ongoing to investigate the source of APPV infection and/or factors predisposing to clinical disease.