

TITLE

LACK OF DOCUMENTATION IN NATURAL MATING SYSTEMS CAN BE THE CAUSE OF THE OCCURRENCE OF THROMBOCYTOPENIC PURPURA

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CONTENT

Background

Thrombocytopenic purpura is a rare disease in piglets caused by maternally derived antibodies that destroy their thrombocytes, which leads to severe bleedings in the affected animals.

Material & Methods

An organic breeding farm with 80 sows and three boars produced piglets by natural mating. In the last year, three litters with severe bleeding amongst several piglets were recognized. Four affected piglets (one weak and three dead piglets) were submitted for further examination to the swine clinic and pathology, respectively. Blood and/or tissue samples from the affected piglets, the sow and all three boars on the farm were collected. Laboratory analyses were performed and all animals were genotyped. Testing for kinship was performed through identity by descent computation and calculation of Mendelian errors with plink software.

Results

A haematocrit of 0.16 L/L, a thrombocytopenia and an increased prothrombin time were detected. The necropsy of all four piglets revealed multifocal and acute bleeding in the skin over the whole body and on inner organs, as well as activated bone marrow. Epidemic diseases such as Classical Swine Fever and Porcine Reproductive and Respiratory Syndrome were ruled out by serology. Based on the case history and the results of the investigation a thrombocytopenic purpura was diagnosed. One boar was identified as the father of all affected litter.

Discussion & Conclusion

Repeated pairings of the same boar with the same sow are of high likelihood in natural mating system. This leads to an increased risk of thrombocytopenic purpura in piglets compared to farms using artificial insemination with various boars. To reduce the incidence of thrombocytopenic purpura at herd level, an implementation of breeding documentation is necessary to avoid the repeated matings. In addition, it is necessary to replace one boar every year to renew the blood line thereby avoiding repeated breeding.