in Salmonella shedding. Identification of bacterial or archael population that are linked with the excretion could help to better understand this phenomenon and lead to the development of new methods of control.

Conclusion

In the conditions of this study we confirmed that the sows can be an important reservoir of Salmonella. These sows were shedding a major strain at the beginning of the gestation phase and the shedding was reduced in the late gestation. Some variations in the types of strains that were excreted were also observed. We are currently evaluating the impact of the microbiota on this variation.

Acknowledgment:

This work was supported by the Natural Sciences and Engineering Research Council of Canada (NSERC), financial partners in the industrial Research Chair in Meat Safety and the bourse de la Cité de la biotechnologie agroalimentaire, vétérinaire et agroenvironnementale. The authors would also like to thank F. Ménard Inc. for their collaboration and their participation.

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The Animal and Plant Health Agency (APHA) Farmfile database allows incidents of pig disease diagnosed in the network of APHA laboratories across England and Wales to be collated and analysed. Between 2005 and 2014, there were 884 disease incidents in pigs involving salmonellosis with the annual diagnostic range ranging from 7.2 to 14.6% of submissions tested. Nearly half of the diagnoses were made in submissions of pigs for post-mortem examination, the remainder were from submissions of samples. Seventy percent of the diagnoses involved Salmonella Typhimurium which was the main serotype diagnosed each year. However, since 2010, the numbers of incidents due to monophasic Salmonella variants 4,12:i:- and 4,5,12:i:- recorded in the database have increased each year, and in the first quarter of 2015, were responsible for the same number of disease incidents as S. Typhimurium for the first time, reflecting the increasing prevalence of these variants in the pig population. Significantly, 53 different non-Salmonella diagnoses were made in salmonellosis incidents between 2005 and 2014, with 60% of salmonellosis incidents from post-mortem examinations being diagnosed with at least one other disease. Most other diagnoses group into enteric, systemic or respiratory syndromes and indicate that salmonellosis in post-weaned pigs is frequently part of more complex disease. The most prevalent concurrent viral diseases were due to porcine circovirus2, porcine reproductive and respiratory syndrome virus and swine influenza virus. The most prevalent concurrent bacterial diseases were due to Pasteurella multocida, Streptococcus suis, Haemophilus parasuis and Escherichia coli (mainly causing enteric colibacillosis). These disease combinations, clinical signs and other epidemiological features of salmonellosis incidents will be described and exemplify the importance of comprehensive diagnostic investigations of disease outbreaks to assist identification of factors which may influence the occurrence of disease due to Salmonella infection in pigs. Case descriptions will illustrate potential scenarios predisposing to salmonellosis.

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