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Introduction

A century ago the bacterium *Bordetella bronchiseptica* was first associated with respiratory disease in dogs. Since then it has been associated with respiratory disease in other animals. Some 70 years ago *B. bronchiseptica* was associated with pneumonia in pigs and 60 years ago it was being considered as a cause of atrophic rhinitis.

Distribution

B. bronchiseptica is widely distributed around the world and has many roles in porcine respiratory diseases including a leading role in non-progressive atrophic rhinitis, bronchopneumonia and porcine respiratory disease complex (PRDC). The presence of this bacterium also enhances colonisation of respiratory organs by *Pasteurella multocida* and secondary bacteria.

The causal agent

B. bronchiseptica is the only significant *Bordetella* species in pigs. There is no serological method available for differentiating *B. bronchiseptica* strains.

Epidemiology

B. bronchiseptica is widely distributed among pigs and its transmission is typically by the aerosol route. The success of this increases the closer the pigs are to each other and if the aerosol is generated by coughing or sneezing. Pigs of any age are susceptible to infection and many litters are colonised by this bacterium while still with the sow.

B. bronchiseptica persists for months, possibly indefinitely, so the introduction of carrier animals into the herd is a known way of bringing infection on to the farm, for example, via breeding stock. If the herd is immunologically negative *B. bronchiseptica* will spread rapidly following its introduction.

Maternal immunity from infected or vaccinated sows protects piglets against lesions of rhinitis and pneumonia. It will not protect against infection and this can assist the carrier state.

B. bronchiseptica can be isolated from other animals on a pig farm, such as rodents, birds, opossums or raccoons, and these could be sources of infection for your pigs. Insects have also been implicated as a means of introducing *B. bronchiseptica* to the farm, as has the role of contaminated fomites.

B. bronchiseptica can remain viable in soil for 45 days and several weeks in standing water (outdoor pigs!).

Back issues of Pighealth BYTES are available to download from our [website](http://www.positiveaction.co.uk).

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