

Abstract

The poultry red mite (*Dermanyssus gallinae*) (Acari: Mesostigmata) is a hematophagous ectoparasite of poultry, cage birds, mammals and humans. Infection of poultry by poultry red mites (PRM) induce the decrease of egg production, weight gain and fitness. The massive infestation of the PRM can cause the death of the bird. The PRM is danger for human due to his ability of transport bacteria and virus of one host to the other. This review summarize the association of putative pathogenic and symbiotic bacteria with the PRM. There are studies, when PRM is considered as a vector of pathogenic bacteria. The transmission of *Salmonella* spp. has been observed frequently using PCR and/or cultivation. *Listeria monocytogenes* has been associated with the PRM only in one study, in which is not clear if the PRM really transport this bacteria or they just appear in the same time and the same place. The transport of *Erysipelothrix rhusiopathiae* was in one work approved, but the demonstration of transport wasn't successful in other experiment. The role of the PRM in transport *Bartonella quintana* (causative agent of trench fever) is also not clear. The PRM and *B. quintana* appeared in the same time in the bird nest near the attic and there were attacked a family with high socioeconomic status by trench fever. However is the PRM consider to be a vector of many pathogenic bacteria, only the *Salmonella* spp. is clearly approved to be transmit. The other bacteria are present in the PRM rather randomly or they just occur in the same time at the same place. Symbiotic bacteria associated with the PRM include reproductive parasites *Wolbachia* and *Cardinium*. The symbiotic bacteria can affect the population of the PRM. Nevertheless the role of these bacteria hasn't been studied.

Key words

Dermanyssus gallinae, zoonoses, vector, *Salmonella* spp., *Cardinium*, *Wolbachia*