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## Invited presentation

### The role of domestic animals and shelters in ticks and tick-borne diseases

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## Abstract

There are more than 900 globally described tick species and 32 of these have been reported from Turkey, of which are hard ticks of the family Ixodidae with an exception of Argas, Otobius and Ornithodoros species belong to the Argasidae family. Along with the vast density of the tick populations in domestic animals, there is also an intense diversity of the major species towards to the host groups. Majority of the tick species present in the country are found and fed on large animals, mainly ruminants and a few are common on pet animals, mainly dogs. Virtually majority of the ticks found on dogs are Dermacentor marginatus, Ixodes ricinus, Rhipicephalus sanguineus (brown dog ticks) and Haemaphysalis spp. with the exception of Dermacentor spp. (in which the immatures infest mainly rodents), all three stages (adult, nymph, larva) of the other common species may infest dogs. All of these tick species have multiple hosts in their life cycle and their biology depends on environmental conditions as well as host suitability. Ticks of economically important animals such as sheep and cattle has a wider variety in terms of genus and species. Boophilus (Rhipicephalus), Dermacentor, Haemaphysalis, Hyalomma and Rhipicephalus species are prevalent on farm animals in Turkey. Tick species found in poultry are in soft-ticks group and have a host/pen dependent biology. Among all these species, single, two or three host ticks are present. Related to tick borne infectious diseases, Anaplasma spp., Babesia spp., Borrelia burgdorferi sl. (Lyme), Crimean Congo Hemorrhagic fever Virus, Ehrlichia phagocytophyla (HGE), Louping ill virus, Rickettsia spp., Theileria spp., Tick Borne Encephalitis Virus have been identified from tick samples in various regions of the country. Although most concern relates to infectious agents, it should be noted that the vast majority of host seeking ticks are not infected. Other than presence of the agents in tick species, their relation with the host and vector, and natural foci of the vector and agents play a crucial role for the emergence of the tick-borne infections. Barns of domestic animals and animal shelters for pets, especially dogs, can be infested by some tick species. Acaricides may reduce the risks of infestation and impair the persistence of tick population, which is important in formation of natural foci of infections. Identification of the tick species is important for the type and timing of the acaricide applications. Regular and systematic control of the animals and housing is essential for detection of timely and actual risks for animal health and tick-borne diseases as well.

**Keywords:** tick, shelters, tick-borne diseases, domestic animals

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