

# Environmental aspects of Zoonotic Diseases

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When asked to review this book I immediately answered in the affirmative. Without having seen the book previously I was excited about the title of the book and the potential knowledge for so many diseases in relation to the environment. I took the book to my desk and started reading the introduction and to my surprise and pleasure I learnt that the book was written by two Israeli authors from Haifa, in the North of Israel.

In the preface to this book the authors immediately recognize the importance of the correlation between human diseases and livestock density and the latter's contribution to both water and environmental pollution. In this regard they quote a study by Kabore *et al.* in which the potential association between zoonotic gastroenteritis in children and livestock density was evaluated and found to be positively correlated.

The book is divided into five chapters. At first the book introduces the subject by dealing with separate sub-sections on human populations and socio-economic distribution, climate, water and wastewater, global animal trade and environmental pollution. Each of these subsections discusses briefly the significance of its effect on the influence on the prevalence of diseases, with examples provided.

The section relating to "Global animal trade" is of particular interest to the veterinary profession and stresses the need for strict control of the movement of animals from one country to another in particular in regard to wildlife and illegal trading in these animals. Pet movements can also be an important issue related to zoonoses such as in the case of leishmaniasis outbreaks in dogs in the USA as a result of military personnel and their pets returning home from the Mediterranean area. Other examples are also presented.

The second chapter deals with bacterial zoonotic disease with each subsection studying a specific zoonotic disease. In the same fashion the third, fourth and fifth chapters deal with viral zoonoses, parasitic zoonoses and fungal zoonoses, respectively.

A variety of bacterial infections are discussed including anthrax, brucellosis, campylobacteriosis, leptospirosis, pasteurellosis, mycobacterial infections, plague, rickettsiosis, salmonellosis, tularemia, vibriosis and others. The effects of environmental factors such as soil, rain, drought and wind on the spread and outbreaks of anthrax is well illustrated. The section on Bartonellosis and the reference to pets is interesting and relevant to veterinarians in small animal practice. The authors emphasize the influence of the environment as an important factor in the spread of bartonellosis in man and animals especially in geographical areas with a high precipitation and close to the coast.

The chapter on Listeriosis gives examples of how the environment may play a role in the enhancement of the growth of the bacteria. While recognizing that the major source of contamination by listeriosis is water resources, the authors quote studies showing that soil treated with fertilizers and herbicides have been shown to support and encourage the growth of *Listeria monocytogenes*.

The section on viral infections covers a wide variety of pathogens including the Bunyaviridae, Reoviruses, Arenavirus, Orthomyxoviruses and also prions. Each section has a description of the disease followed by the effect of the environment on its transmission and spread.

The concept to "environment" as covered in this book includes facets such as human socio-economic distribution, climate, geographic variability, water and wastewater, global animal trade and environmental pollution. This book is recommended to anyone interested in zoonotic diseases and the effect of the environment on their development and spread.

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### Book review by:

Dr. Trevor Waner,

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