

Vector-Borne Diseases: Impact of Climate Change on Vectors and Rodent Reservoirs
Berlin, 27 & 28 September 2007

Tick ecology and climate: Mechanisms regulating the distribution and life cycle of *I. ricinus*

Jean-Luc Perret, Novartis AG / University Neuchatel, Switzerland

Abstract

The population dynamics of the tick *Ixodes ricinus* is complex and difficult to measure. Key factors affecting the population dynamics of this tick are: 1) its huge reproduction potential, 2) its development and moulting speed, 3) its host-finding behavior, 4) host species relative and absolute densities as well as their behaviour, 5) predator species relative and absolute densities as well as their behaviour and 6) tick pathogens.

In this talk I will present experimental as well as field results regarding factors 1) to 3) and demonstrate how the climate is influencing these factors. Finally given this knowledge we will have a retrospective look on a long term record of *I. ricinus* questing densities collected in Switzerland.

