

## Prevalence of ectoparasitism on small ruminants in Kelantan, Malaysia

### ABSTRACT

Kelantan is a chiefly agrarian state with abundant small-holder ruminant farms in the East Coast economic Region of Malaysia. Ectoparasitism affects small ruminant production in Malaysia. It often causes reduction in meat quality and milk production which affect the farmers' income. To date, no report for the prevalence of ectoparasitism on small ruminant in Kelantan compared to other state in Malaysia. This study aims to determine the prevalence and associated risk factor of ruminant ectoparasitism in Kelantan. Ectoparasites were collected by manual picking and skin scrapping from 462 sheep and goats in Kelantan between April and September 2017 (during dry season). 60% of the sampled animals were infested with at least one species of the ectoparasites. In this study, lice and ticks were the most prevalent ectoparasites on small ruminant, which were 43.64% and 22.98%, respectively. The high biotic potential of lice population on host might be one of the factors they become the most prevalent species found on the animals. There was no significant relationship between ectoparasitism prevalence and species of small ruminants ( $\chi^2 = 1.12$ ,  $p = 0.293$ ). However, there was significant variations in prevalence between the regions where the animals were sampled from ( $\chi^2 = 30.25$ ,  $p = 0.002$ ) and farm management system for both species. This present study provides baseline epidemiological data on the prevalence of ectoparasitism in small ruminant. This information is useful for the formulation of prevention and control measures in order to enhance ruminant productivity in Kelantan.

**Keyword:** Ectoparasites; Goats; Lice; Prevalence; Sheep; Ticks