

Molecular Survey of *Campylobacter jejuni* in Broiler Chicken Farms in East Coast of Peninsular, Malaysia

ABSTRACT

Campylobacter spp. is responsible for food borne illness in humans while *Campylobacter jejuni* is the most common species for majority of human enteritis cases. The present study was conducted to determine the prevalence of *C. jejuni*, risk factors associated with the occurrence, identification control and preventive measure to reduce the prevalence in broiler chicken farms in Kelantan state located at east coast region of peninsula Malaysia. Eighty cloacal swab samples were collected from 4 different broiler chicken farms in district Tumpat, Machang and Bachok. The samples were processed for identification of *C. jejuni* followed by PCR to detect the presence of *C. jejuni*. Overall, 65% in total (80 samples) of cloacal swab samples showed positive reactions, where prevalence in farms A, B, C and D was 70%, 70%, 75% and 45%, respectively. Among, 2 of 5 identified risk factors through questionnaire showed significant difference which were open house system and untreated water source. Other risk factors which includes small scale, not using probiotic and poor biosecurity were not significant enough in association to occurrence of *C. jejuni*. Based on the risk factors that have been identified, control measure to reduce the occurrence was; by changing the open housing system into close housing system, using treated water source, use of probiotics, implementing strict biosecurity and good hygiene practices. In conclusion, the prevalence of *C. jejuni* in broiler chicken farms in Kelantan was high. Therefore, the farmer should always aware with this public health threat by avoiding those potential risk factors that are associated with the colonization of *Campylobacter*.