

Effect of entomopathogenic fungi *Metarhizium anisopliae* to the cattle tick (*Boophilus microplus*)

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Abstract An experiment to study effect of entomopathogenic fungi in controlling cattle ticks (*Boophilus microplus*) is consisted of two steps. The first step, the fungal infectivity was evaluated by spraying the engorged female ticks with the five isolates of *Metarhizium anisopliae* at a concentration of 5×10^5 conidia per ml. Then, the numbers of dead ticks covering with fungal hyphae were counted and % mortality was analyzed by using Abbot's formula. The results indicates that 4 fungal isolates were capable of killing ticks, but at 100% mortality rate were *M. anisopliae* (Ma.) 6079 and 7965. Only 7527 isolate did not affect the ticks. In the next step, the most virulent was tested for its lethal effect at four different conidial concentrations; 10^{10} , 10^8 , 10^6 and 10^4 conidia per ml. Then, the median lethal concentration (LC_{50}) and median lethal time) LT_{50} (were calculated by using M stat C based on Probit analysis. The LC_{50} and LT_{50} values of *M. anisopliae* 6079 were 2.4×10^4 conidia/ml and 11.9 day, respectively. The LC_{50} and LT_{50} value of *M. anisopliae* 6171 were 5.00×10^4 conidia/ml and 6.31 day, respectively. The LC_{50} and LT_{50} value of *M. anisopliae* 7965 were 3.4×10^4 conidia/ml and 5.53 day, respectively. The LC_{50} and LT_{50} values showed that *M. anisopliae* 7965 was the most potential isolate for tick control. Moreover, this fungal strain did not infect the cattle skin and no effect to general health by blood picture examination.

Keywords : cattle, tick, *Metarhizium anisopliae*
