

**IMPROVED METHOD TO OBTAIN VIRULENT CULTURE OF  
*Hirsutella thompsonii* FISHER USING COCONUT MITE, *Aceria  
guerreronis* KIFER AND CASSAVA MITE, *Tetranychus cinnabarinus*  
BOISDUAL.**

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The pathogenic fungi *Hirsutella thompsonii* has been successfully used to reduce the coconut pest *Aceria guerreronis*. Repeated sub culturing of *H. thompsonii* fungus in artificial media reduces its virulence. To regain virulence it has to go through a host organism. This work presents a successful and a convenient method to obtain a culture of *H. thompsonii* from the hosts, coconut mite, *Aceria guerreronis* and cassava red spider mite *Tetranychus cinnabarinus* by infecting and isolating the fungus. Death rate and rates of infection and the isolation of the fungus are considered in developing the method. *A. guerreronis* was infected by allowing walking on 1 week old fungus mycelium in a culture medium (walk method), placing on an arena smeared with a spore suspension and swimming in a spore suspension of  $2 \times 10^5$  conidia / ml. Dead mites were collected on glass slides and incubated. Two groups of dead mites were surface sterilized with 1% and 0.1% sodium hypochlorite to prevent contaminations while one group kept without sterilizing. Mites with infection of *H. thompsonii* were cultured on Sabouraud Dextrose Agar. Cassava red spider mite was inoculated with *H. thompsonii* and sterilized in the same manner as described for *A. guerreronis*. Coconut mites were successfully inoculated by walk method with 100% mortality and all dead mites were infected with *H. thompsonii*. Out of infected mites 13%, 17% and 42% of mites which were sterilized with 0.1% and 1% sodium hypochlorite and not sterilized gave rise to pure cultures of *H. thompsonii* respectively. Cassava mites were 100% dead by the inoculation. All dead *T. cinnabarinus* were infected by *H. thompsonii* and 50%, 33% and 33% of none sterilized, mites sterilized with 0.1% and 1% sodium hypochlorite yielded pure culture of *H. thompsonii* respectively. Walk method without surface sterilization of *A. guerreronis* or *T. cinnabarinus* could be successfully used to obtain a virulent culture of *H. thompsonii*.

**Key words:** *Aceria guerreronis*, *Hirsutella thompsonii*, Isolation method, *Tetranychus cinnabarinus*, Virulence