

Watcharin Srimongkolchai 2010: Effect of *Lantana camara* Crude Extract to Control *Spodoptera litura*, *Polyphagotarsonemus latus* and *Tetranychus urticae*. Master of Science (Economic Botany), Major Field: Economic Botany, Division of Science. Thesis Advisor: Miss Thitiya Pung, Ph.D. 111 pages.

Lantana camara leaves and flowers were extracted by soxhlet apparatus for 8 hours with hexane, dichloromethane and methanol. Each crude extract of flowers was tested for the topical toxicity by applying these extracts on the third thorax of *Spodoptera litura* (second instar). The result showed that the 10% (w/v) dichloromethane crude extract was the most effective, which caused *Spodoptera litura* die for 56% in 7 days, followed by hexane extract for 34%, which higher than control (2%) ($p < 0.05$). For oral toxicity, *Lantana camara* flowers extract from dichloromethane 10% w/v caused *Spodoptera litura* die 16% higher than that of control; however, it was not significantly difference. For residual toxicity and repellent effect on *Tetranychus urticae*, results from no choice bioassay showed that both dichloromethane and hexane extracts (1% w/v) of *Lantana camara* flowers repelled *Tetranychus urticae* out of the leaf discs at 66.04% and 60.83%, respectively. However, the mortality rate of *T. urticae* in treatments did not significantly differ from control. The dichloromethane and hexane extracts of *Lantana camara* flowers were tested in three different concentrations to calculate the median effective concentration (EC_{50}). The repellent effects of hexane and dichloromethane were observed with the EC_{50} of 0.756% and 0.902%, respectively. In choice test, hexane and dichloromethane crude extracts repelled *T. urticae* to the ethanol side of the leaf discs in 72 hours, which the numbers of mite on treated side were lower than their untreated side ($p < 0.05$). The crude hexane and dichloromethane extracts of leaves and flowers could also repel *P. latus* to the ethanol side of the leaf discs in 48 hours.

Student's signature

Thesis Advisor's signature