

Watchara Tongsooknong 2011: Insecticidal Efficacy and Action of Turmeric (*Curcuma longa* Linn.) Extract on Larva of Common Cutworm (*Spodoptera litura* Fabricius). Master of Science (Entomology), Major Field: Entomology, Department of Entomology. Thesis Advisor: Associate Professor Siripan Tantakom, Dr.Agr. 86 pages.

Efficacy of the extract substances from Turmeric by three extracting methods; alcohol extraction, water extraction and steam distillation extraction, were tested on 2-3 instar common cutworm larvae for insecticidal effect, fumigant effect, repellent effect and growth inhibition. Insecticidal efficiencies were tested by topical application method and leaf dipping method. In the topical application method, the Turmeric crude extract with alcohol, water and steam distillation showed high insecticidal efficiency and their LC_{50} at 24 hour were 13.70, 13.47 and 1.14 percents (v/v), respectively. In the leaf dipping method, the Turmeric crude extract with alcohol, water and steam distillation also showed high insecticidal efficiency and their LC_{50} at 24 hour were 55.29, 65.82 and 4.04 percents (v/v), respectively. In the repellent test, Turmeric crude extract with alcohol, water and steam distillation had high repellency efficiency by which their repellency percentage at 5 hour were 40.00, 31.11 and 70.00, respectively. The Turmeric crude extracts by all three methods had low fumigant efficiency and low growth inhibition efficiency on the common cutworm.

Student's signature

Thesis Advisor's signature