

Teerasak Saeting 2014: Management of Chili Pest at Farm and Postharvest Level.
Master of Science (Plant Protection), Major Field: Plant Protection, Department of Plant
Pathology. Thesis Advisor: Assistant Professor Chainarong Rattankreetakul, Dr.sc.agr.
105 pages.

Chili pest management with the 2 fold of neem galangal and citronella grass extracted was showed the good activity. The result revealed that plant extracted could inhibited the *Colletotrichum capsici* mycelial with poisoned food to 33.13-30.67 percent during 3 to 7 day. Plant extracted could inhibit to the anthracnose symptom development of pre and post *C. capsici* mycelium infection to chili fruit with 35.05-33.76 percent and 55.33-37.78 percent during 3 to 5 day of the test. Insecticide activity of plant extracted by direct contact to the third instar larvae and the adult fruit fly was showed with 43 percent and 83 percent respectively.

The chili pest management was done under farm practice conditions with helping of protein autolysate mixed with malathion and the petroleum oil follow the IPM scheme. The pest management activity was compared to the farmer practice with pesticides as mancozed and abamectrin. The IPM plan was expressed the healthy chili fruit about 52.74-97.00, fruit fly *Bactocera latifrons* defected fruit about 1.20-47.26 percent and the anthracnose, *Colletotrichum capsici* symptoms about 0.00-3.33 percent while in farmer practice with pesticide was founded about 18.77-38.20 percent of healthy fruit , about 52.00-78.11 percent of fruit fly defected fruit and about 0-20.27 percent of anthracnose defected fruit. The tested plant extracted shows no effect to the level of the detoxify enzymes as esterase and glutathione-s-transferase in the living adult fruit fly after the treated with plant extract compared with the healthy insect. This was indicated that no insect resistant from plant extracted application to *B. latifrons* at adult stage.

For the handling of chili fruit after harvest, the treated chili fruits were tested with the hot water and hot water with ultrasonic treatment. The hot water treatment with 46 °C for 60 minutes showed completely control to the anthracnose and fruit fly in chili with no effect to chili fruit quality.

Student's signature

Thesis Advisor's signatur