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NANTHIYA PHOSAWAT: EFFICIENCY OF TEA SEED CAKE (*Camellia sinensis*) AND DERRIS ROOTS (*Derris elliptica*) EXTRACTS FOR CONTROLLING OF GOLDEN APPLE SNAIL (*Pomacea canaliculata*). THESIS ADVISORS: PRAPEUT KERDSUEB, M.Sc. (TECHNOLOGY OF ENVIRONMENTAL MANAGEMENT), GRITSANARUCK THEERARAJ, M.Sc. (TECHNOLOGY OF ENVIRONMENTAL MANAGEMENT), PIYAKARN TEARTISUP, M.Sc. (TECHNOLOGY OF ENVIRONMENTAL MANAGEMENT). 97 p. ISBN 974-664-354-1.

Extracts of tea seed cake and Derris roots were tested on golden apple snail with 3 sizes of 0.5-2.0, 2.1-3.5 and 3.6-5.0 cm. and also tested against their eggs. Study for acute toxicity and degradation rate in experimental scale of the extracts were observed by tilapia with the average length of 3.0-4.0 cm.. The extracts were prepared in distilled water at 12 hours maceration.

The observed mortality data of these tests were analyzed for median lethal concentration (LC₅₀) in 96 hours at 95% confidence limit. The LC₅₀ of tea seed cake extract in 96 hours reach the values 21.49, 42.10 and 48.79 mg/l for 3 size of Golden apple snail, respectively. The LC₅₀ of Derris roots extract in 96 hours value were 25.20, 45.26 and 77.00 g/l for size 3 of golden apple snail, respectively. The hatching of eggs showed that there was no effect with the extracts in all concentration. Acute toxicity of the extracts killed all tilapia in 1 hour. Mortality rate of tilapia was reduced to 1.67% and 8.33% after tea seed cake and Derris roots extracts were degraded at 21 and 28 days, respectively.

Based on the overall results, the tea seed cake and Derris roots extracts were effective in controlling golden apple snail but had no effect on the hatching of their eggs. The extracts' efficiency varied in reverse with snail size. A low concentration of the extracts contained a high toxicity when used immediately after extraction. Application of tea seed cake and Derris roots extracts to control golden apple snail should be allowed to degrade at least 21 and 28 days, respectively, so the residue will not be harmful to aquatic animals.