

MOLLUSCICIDES POTENTIAL OF *Acacia mungium* (Willd.)
AND *Gliricidia sepium* (Jacq.) AGAINST
Pomacea canaliculata (Lamarck)

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ABSTRACT

MOLLUSCICIDES POTENTIAL OF *Acacia mangium* (Willd.) and *Gliricidia sepium* (Jacq.) AGAINST *Pomacea canaliculata* (Lamarck)

Golden Apple Snails or scientifically known as *Pomacea canaliculata* (Lamarck) is still one of the major problems faced by paddy farmers. Both conventional chemical molluscicides and bio-molluscicides have been used to control the population of this pest. However, the current bio-molluscicides are costly and not suitable for mass production. In this study, two species of fast growing plants that are commonly can be found in Malaysia were tested for their potential molluscicidal activity against *Pomacea canaliculata* (Lamarck). It was found that both selected plants are showing a positive molluscicidal activity against this pest. Additionally, this study found that there was no significant difference in the 24 hours mortality recorded of *Pomacea canaliculata* (Lamarck) between the current practical bio-molluscicide that is *Furcraea selloa* var. *marginata* (Trel.) and *Acacia mangium* (Willd.). Study also had identified the LD50 of each plant at 24g for *Furcraea selloa* var. *marginata* (Trel.), 25g for *Acacia mangium* (Willd.) and 30g for *Gliricidia sepium* (Jacq.). More research and development should be done to highlight the potential of *Acacia mangium* (Willd.) as bio-molluscicide.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Rice is the main carbohydrate source among Asians. In Malaysia, paddy field area increased from 655,000ha in 1985 to 677,884ha in 2010, (Department of Agriculture, 2011; Mahmud, 2001). However, the government is still importing foreign rice especially from Thailand to cover up the demands. In Sabah, there are few areas where the cultivation of paddy is being done commercially. However, Sabah still imports some 70 percent of its rice requirements, which estimated about 220,000 tonnes a year costing more than RM1 billion (Borneo Post, 2012).

One of the major problems faced by the farmers in paddy cultivation is pests (Thiengo *et al.*, 2003). This non-stop problem will reduce the rice production if it is not under control. In this pest control strategy, farmers nowadays turn to use bio pesticides rather than the common chemical pesticides. This is because bio pesticides are non-toxic to human compared with the conventional pesticides (Chandler *et al.*, 2011; Stephen *et al.*, 2010). In this study, two potential plant species extract will