

The Encroachment of Rubber Plantation and the Risk of the Spread Out of Rice Bug in
Phatthalung Province, Southern Thailand

Anisara Pensuk Tibkaew¹, Tharnsawat Pimsen², Romanee Thongdara³

¹Department of Plant Science, Faculty of Technology and Community Development, Thaksin University, Thailand, anisara.pensuk@gmail.com

²Master Student, Sustainable of Agricultural Resources Management Program, Faculty of Technology and Community Development, Thaksin University, Thailand, tharnsawatpimsen@gmail.com

³Department of Civil and Environmental Engineering, Faculty of Engineering, Mahidol University, Puttamonthon, NakornPathom, Thailand
romanee_t@yahoo.com

Abstract: This research was studied in the relationship of factors affecting the spread out of the rice bug by developing the mathematic equation in order to estimate the rice bug spread risk. The household and field survey showed that the weed on rubber plantation is one of the important factors as the bug use for their habitat. Therefore, the distance from rubber plantation plays an important role on the severity of the spread out and the outbreak of the rice bug. The mathematic equation expresses the relationship between the distance from rubber plantation and the number of the rice big found from the study was: $y = -0.3678x + 94.419$ (y = number of the rice bug and x = distance from rubber plantation). After applying the equation to the study area we can obtain the risk of rice bug spread out map of two important rice growing district of Phatthalung province. About 64.7% of total rice area of Paphayom district has been forecasted according to the equation as the moderately risk of the spread out of the rice bug (20-60 bugs/sqm), whereas more than half of the total rice growing area of Khuankanun district was forecasted as light and very light severity.

Keyword: Phatthalung Province, rice bug, rubber plantation, outbreak of the rice bug