

### Abstract

The objective of this research was to develop a prototype of striped flea beetle attractant (*Phyllotreta striolata*). It is another method to reduce the use of agricultural chemicals in highland areas. From the research Allyl isothiocyanate (AITC) and mustard essential oil 3, 6 and 12 drops and 5:1 drops of mustard essential oil mixed with synthetic AITC to attract beetles. It was found that 3 drops of mustard essential oil at 28 days gave the best attraction activity, i.e. 499.75 of striped flea beetle. In addition, 3 drops of Butylated Hydroxytoluene (BHT) in 0.1% concentration with 3 drops of mustard seed oil (0.06 g per 1 trap) with paraffin gel dispenser in the Cross traps was the optimum conditions. It attracted striped flea beetles in field with difference statistically significant ( $P < 0.05$ ) with two traps: house trap and cup traps. They were 866.50, 194.50 and 40.25 respectively, representing 78.68, 17.66 and 3.65% of the striped flea beetle attracted at 28 days. Then, a trapping distance at 3 meters at 28 days could attracted 263.38 insects. Using 7 traps in 30 square meter costs 176.47 baht, which is a reasonable saving cost, safe to use and can reduce the use of chemicals. The product which was kept in light brown glass vial at 4 ° C for 3 months was still effective. Therefore, the application of the mustard essential oil : BHT : liquid paraffin : limonene : vegetable oil and paraffin gel. The optimum ratio was 0.06 : 0.0025 : 0.02 : 0.02 : 0.02 : 0.02 g per trap. The trapping distance of 3 meters apply for 28 days with a minimum shelf-life of 3 months at 4 ° C. Can reduce the use of chemicals in crop cultivation. It is safe for agriculturist and consumers.