Abstract

The objective of this research is to study and select chemicals which will be used as pheromone to attract striped flea beetle (*Phyllotreta striolata*) in highland agriculture. Plants, plants extract and synthetic chemicals (i.e. mustard essential oil extracted from mustard seed, chinese cabbage, cabbage, aqueous extract of mustard cake, mustard fixed-oil and synthetic AITC) were studied in laboratory. It was found that, striped flea beetle was attracted differently, with statistical significant, under various kind of attractants. At 48 hours, mustard essential oil attracted 25.12% while allyl isothiocyanate (AITC), aqueous extract of mustard cake, mustard fixed-oil, chinese cabbage and cabbage attracted striped flea beetle at 14.75, 10.38, 8.62, 7.50 and 5.00%, respectively. Chemical analysis of mustard essential oil found AITC in 96.25%. This AITC might be the reason behind attractant activity. Ratio study of mustard essential oil: AITC was performed in order to find the appropriate amount of each substance. The ratio of mustard essential oil: AITC were 0:6, 1:5, 2:4, 3:3, 4:2, 5:1 and 6:0. Each trap contains 6 drops of mixture. The best results was the ratio 5:1. At this conditions, 49% of striped flea beetle was attracted.