

Abstract

Acythopeus curvirostris (Coleoptera: Curculionidae) is one of the most important vine crop pests, including melon, watermelon, cucumber and also colocynth. The main damage is in the larval stage. There are larvae in the fruit and destroy the interior of the fruit completely, so they are out of reach of farmers and cannot be controlled directly. Given the low impact of pesticides and their environmental effect, using behavioral characteristics to attract to the symptoms of chemical and Aromatic materials of host plant (kairomones), is one of the practical ways to control the pest, by knowing host preference being able to achieve on-farm pest control. In this study, the attraction rate of adult male and female (Virgin) to some plants from Cucurbitaceae (melon, watermelon, cucumber, and colocynth) and also to the opposite sex in a completely randomized design was studied and statistically analyzed. The lethal effects of methanol and hexane extracts of *Acroptilon repense* (Asteraceae) was also evaluated in different concentrations. The results of a behavioral response analyzed by Excel software, showed that the male insects attract male and female ($p = 0.02$), while any attraction effect in females insects on male and female was not observed ($p = 0.07$) that could be the reason for the existence of cumulative pheromones in male insects. The results showed that melon and watermelon were attractive to males, compare between host plants ($p=0.01$, $p= 0.02$). Results of lethal effects analyzed with software spss 16 showed that hexane extract of *Acroptilon repense* had lethal effects on male ($Lc50 = 122$ mg / insect) and female ($Lc50 = 940$ mg / insect) insects of *Acythopeus curvirostris*, while the extract methanol showed no lethal effects.

Keyword: Melon weevil, Russian knapweed, Host plant, Olfactometer, Sex pheromone, Attractant



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**Attraction behavioral response of the
Acythopeus curvirostris towards host
plants and lethal effect of *Acroptilon
repense* extract on adult**

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