سیویلیکا - ناشر تخصصی مقالات کنفرانس ها و ژورنال ها
گواهی ثبت مقاله در سیویلیکا
CIVILICA.com

عنوان مقاله:

Insecticidal activities of some essential oils against larval ectoparasitoid, Habrobracon hebetor (Hymenoptera: (Braconidae

محل انتشار:

Journal of Crop Protection, دوره 7, شماره 2 (سال: 1397)

تعداد صفحات اصل مقاله: 9

نویسندگان:

Jabraeil Razmjou - *Department of Plant Protection, Faculty of Agriculture and Natural Resources, University of .Mohaghegh Ardabili, Ardabil, Iran*

Vahid Mahdavi - *Department of Plant Protection, Faculty of Agriculture and Natural Resources, University of .Mohaghegh Ardabili, Ardabil, Iran*

Hooshang Rafiee-Dastjerdi - *Department of Plant Protection, Faculty of Agriculture and Natural Resources, University .of Mohaghegh Ardabili, Ardabil, Iran*

Arash Farhoomand - *Department of Plant Protection, Faculty of Agriculture and Natural Resources, University of .Mohaghegh Ardabili, Ardabil, Iran*

Samira Molapour - *Department of Plant Protection, Faculty of Agriculture and Natural Resources, University of .Mohaghegh Ardabili, Ardabil, Iran*

خلاصه مقاله:

Habrobracon hebetor Say is an idiobiont and gregarious larval ectoparasitoid of many moths. In this study, lethal and sublethal effects of Eucalyptus camaldulensis, Carum carvi and Heracleum persicum essential oils on the demographic parameters of H. hebetor were assessed at ۲۶ ± ۲ °C, ۶۰ ± ۵% RH, and a photoperiod of ۱۶:۸ (L: D) h. Essential oils were obtained from these plants by hydro-distillation method using a Clevenger apparatus. The chemical constituents of essential oils were detected by Gas Chromatography-Mass spectrometry (GC-MS). ۲۵۰ml Glass vials were used for the fumigant toxicity experiments. In order to assess the sublethal effects, adult wasps were exposed to an LC۲۵ of each essential oil and then the demographic parameters of live parasitoid wasps were studied. Fumigant toxicity with adults indicated that the lethal concentration (LC۵۰) values of the above essential oils against H. hebetor females were ۱.۱۱۶, ۰.۳۴ and ۳.۴۱۶µl/l air, respectively. Chemical analysis by GC-MS displayed o-Cymene (۱۵.۱۱%), Carvone (۵۵.۸%) and Hexyl butyrate (۴۱.۷۸%) were main constituents of the essential oils of E. camaldulensis, C. carvi and H. persicum, respectively. The results showed that the intrinsic rate of increase (r), finite rate of increase (λ), net reproductive rate (R۰) and gross reproductive rate (GRR) were significantly affected by the essential oils. The highest and the lowest r values were ۰.۲۲۶ and ۰.۱۳۰ day-۱ in control and C. carvi-treated insects, respectively. According to these results, essential oils have suitable potential for the integrated management of stored product .pests

کلمات کلیدی:

Essential oils, fumigant toxicity, GC-MS, parasitoid wasp, اسانس های گیاهی, سمیت

تدخینی, GC-MS, زنبور پارازیتوئید

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1811425