

## **Study on the effect of *Ferula pseudalliacea* (Family: Apiacea) extract on *Varroa destructor* (Acari: Varroidae) infestation in honeybee (Hymenoptera: Apidae, *Apis mellifera*)**

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### **Abstract**

*Varroa destructor* (Acarina: Varroidae) is one of the most important pests of the honeybee, *Apis mellifera* (Hymenoptera: Apidae) throughout the world which is an economically important infestation of honeybee in Iran. The present study carried out to assess the effect of *Ferula pseudalliacea* (Apiaceae) extraction on the examined mites. The plant collected from the mountainous regions of Marivan suburb, Kurdistan Province, Iran and extracted by using Rotary evaporator. In an infested apiary, three infested hives (3 mites/ 20 honeybees) selected as treatment and control groups to determine the effect of *F. pseudalliacea* extraction (1.44mg/ml) on *V. destructor*. The dead mites removed from the litter of hives of all groups and counted at different times. There was a significant association between the effects of *F. pseudalliacea* extraction ( $34.40 \pm 9.652$ ) and number of *V. destructor* mites in control group ( $3.6 \pm 1.342$ ). During the study, the highest effect of *F. pseudalliacea* extraction and Apistan on the number of *V. destructor* mortality was in 36(30.72%) and 24(39.91%) hours, respectively. There was a significant association between *F. pseudalliacea* extraction and Apistan groups. From the results of this study, it indicated that *F. pseudalliacea* extraction might play an important role in *V. destructor* infestation in honeybees.

**Key words:** Plant extract, *Ferula pseudalliacea*, *Varroa destructor*, Honey bee

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