

**Ecology, Behavioral and Control of Red wasp *Vespa orientalis* L.
(Hymenoptera: Vespidae) and it's effect in honey Bee hives in Basrah
province**

**By
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Abstract

A study was conducted for members of the Oriental wasp. *Vespa orientalis* in five regions of the province of Basra through the annual presence in 2016 and 2017 and studied some behavioral and environmental aspects and methods of control.

The results showed that the highest rate of presence of workers was in October and amounted to 32.62 workers / trap/ ten-days and the lowest presence in April and amounted to 0.69 workers / trap/ ten-days and did not record any presence in February and March, while the highest rate in the region of Kordlan 38.19 workers / trap/ ten-days The lowest in the Jikur region is 15.49 workers / trap/ ten-days .

Also observed that the peak of male activity in November, it was 14.57 male / trap/ ten-days and the lowest in December was 8.35 male / trap/ ten-days and in January it reached 0.93 male / trap ten-days . There was no indication of it presence in the rest of the months and the highest rate of males in the region of Kordlan was 13.05 male / trap/ ten-days and the lowest 9.33 male / trap/ ten-days in the Jikur region.

As for queens it appeared in November and disappeared in winter months and come back appeared in spring which its peak during the month of May it reached 7.62 queen / trap/ten-days while The lowest in March was 0.55 queen / trap/ten-days, and was not recorded in the rest of the months, It was also found that

the highest rate in the region of Kordlan 6.53 queen / trap/ten-days and the lowest in the region of Jikur 3.71 queen / trap/ten-days .

It was noted by studying the specifications of the colony of the Oriental wasp that it builds the colony in the cavities of the soil and abandoned places, especially clay buildings. When measuring the rate of the number of six eyes In the constituent disks of the colony they were in the workers and

male and the Queen 12.92, 9.35 and 7.30 square inches respectively. The ratio of eye diameter was 8.45, 9.74 and 10.95 mm, respectively. The depth of the eye was 21.87 69. 22 and 23.67 mm, respectively. When comparing the effect of the presence of Oriental wasps on the honey bee colonies in the region of Kordlan and another region where no trace has been recorded is the Juba area ,The highest mean density was 5.65 frames / range, with a rate of 6115.56 workers / cultivars in the region of Kordlan and the lowest

2.27 frames / range of 245.04 workers / cultivars in the Juba area, in the closed and open brood area, sealed and unbroken honey, 226.5, 79.1, 106.2, 67.6 and 2 respectively. In Al-Juba area, it was 725.2, 624.1, 290.9, 410.8 and 217.1, respectively.

In the case of a behavioral study, an increase in the activity of the Oriental wasp of the baits was observed. The taste of sheep lung and calf meet was superior to the rest of the grafts at 35.74 / h. It also showed the superiority of the taste of protein paste, which amounted to a rate of 17.33 workers / trap when compared to honey and sugar solution. The queen of Oriental wasp preferred the taste of sheep's lung was 4.82 queen / hour.

The Oriental wasps attracted to yellow and blue colours were 35.66 and 35.57 hours respectively. Following the activity of the Oriental wasp operators, the maximum activity during the day was between 9 am and 10 am and between 3 pm

and 4 pm.

For the use of catch traps and chemical control, four types of traps were tested for hunting the Oriental wasps. The highest rate in the domestic trap was 35 x 30 x 30 cm 3, which reached 15.41 worker / trap and 5.16 queens / traps. The amount of bait had an effect on attracting workers With the highest rate of 10.50 / trap for the amount of taste 150 g, and the high trap from the ground a large impact, which reached a high rate of 12.08 worker / trap for a rise of 0.5 m, while the direction of traps for the decomposition was the highest rate in the north amounting to 9.85, and for the survival of members of the webs caught in the trap A significant impact in the process.

attracting free individuals as high as, The average duration is 30 workers / trap every 3 days.

In the test of the attraction of the Oriental wasp workers in the field to the poisonous baits, the best attraction was Vectothor with an average of 8.71 / trap and the lowest was the Kickphos pesticide with a rate of 2.58 / Trap.