

The impact of terpenoids isolated from seeds of *Peganum harmala* and leaves *Nerium oleander* plants against cotton insect *Aphis gossypii*

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Abstract : The current research Included testing the effectiveness of some plant extracts against insect cotton, So prepare extract terpenoids from Harmala seeds and leaves of Oleander plant. Where he studied the effect of the combination terpenoides extract for both plants in the mortality of the adult cotton aphid insect and proved extracts its effectiveness and in all concentrations tested after 24, 48 and 72 hours of treatment.

Introduction:

Aphis gossypii is one of the most common pests located on cotton¹, There are the insect on the surface of the paper feed on the phloem² Causing a lack of production as a result of feeding on the plant . As the aphids secrete Symposium horny causing fungal contamination of those plants as well as they cause more than 50 kinds of diseases of the plant as a result of the transfer of viruses¹. Therefore, farmers resort to the use of chemical pesticides in order to protect their products from the scourge, but the use of these pesticides frequently leads to resistant insect pesticide in addition to the pollutants caused by these pesticides to humans, animals and soil as a result of its impact on the environment³ so it was necessary to the use of roads in the resistance be less harmful to the environment and the ways to use plants in the control⁴ because they are many characteristics including the rapid decomposition and low toxicity to humans, animals and non-toxic to plants within the prescribed dose⁵. The oleander plants and harmala of the plants used in the fight against certain pests they include some secondary metabolites which are toxic substances such as volatile oils and resin materials and material harmalin (Arab Organization for Agricultural Development, 1988).⁶

Materials and methods of work

Test samples

Adults were collected aphids from the surface of cotton plants infected leaves at the end of the season from a farm in the Levantine spend diagnosed by lush diagnosis was confirmed based on the taxonomic key⁷.

Collect samples of plants

Was purchased seeds harmala from the local markets in the city of Diwaniyah, while the oleander plant leaves from one nursery in Diwaniya collected during the months (October and II), it has been washed and dried shade and then crushed mediated electric grinder and put them in plastic bags and stored until use.

Prepare Abstract

Followed the method of Harborne, 1984⁸ for the preparation of compounds extract crude terbenoides as it weighed 20 grams of leaves powder of the dry seeds of the plant harmala separately, were extraction device Alksolat b (200) ml chloroform for 24 hours and the temperature (40- 45 m) and then focused extract rotary evaporator and dried sample in the electric furnace at a temperature (40-45 m) and preserved dry the sample in a sealed glass tube in the refrigerator until use.

The impact of terbenoides isolated from the oleander plant leaves and seeds of harmala plant in the adult insect cotton.

Were taken (2) g of dry oil extracted for the two plants separately 2/g of oily extract of the seeds of harmala and (2) g of oily extract of leaves oleander plant [and melted in 4 ml of chloroform and he finished size to 100 ml of distilled water was the focus The stock (2%) for each extract and it was prepared concentrations (2.5, 5 and 7.5).

It has this method dipping Filter paper with a diameter of 8 cm with a solution of water extracts and alcohol for two plants Klaaly unit one minute for two and placed in dishes, plastic petri diameter of 9 cm punctured lids by 6 small holes for the purpose of insects ventilation and prevent leakage to the outside of the dish, the process is repeated with three replicates for each concentration with a control treatment which used distilled water instead of the extract, calculated mortality after 24, 48 hours. The correct rate of death in the transactions by⁹ to extract the ratio of death Corrected mortality in the event of death in the

Results and discussion

Table (1) the effect of the terpenoides extract isolated from harmala plant in the mortality adults aphid Cotton.

The mortilaty after		the concentration	
48 h	24h		
40.17	27.57	2.5	Terbenoids extract of <i>Rhazyastrieta</i>
47.24	32.00	5	
60.18	37.23	7.5	

*Each number in the table represents three replicates

Table (2) the effect of terpenoides extract isolated from the plant oleander in the decimation adults Aphid cotton

The mortality after		the concentration	
48h	24h	ml	
45.22	40.00	2.5	Terbenoids extract of Plant oleander
66.68	57.52	5	
79.99	72.40	7.5	

*Each number in the table represents three replicates

The results suggest the tables described above to be Extract terpenoides isolated from the seeds of Harmala plant and leaves oleander plant with an impact on adults aphid cotton has caused the loss ratio due to the turbine isolated from plant compounds are highly toxic.¹⁰ The results also showed that the oleander plant was the most influential in the loss, and the loss ratio increased with increasing concentration of extract of both plants.

In this regard pointed¹¹ that the extract Alasithona's *Otostegia persica* caused the deaths of adult's cotton *A. gossypi* increased by 89.5 and 65.5 after 72 hours of treatment at concentrations (80 and 60) mg / mL. As found¹² in his study on a group of plants that the plant extract *Ocium basicum* had the most impact on adults of cotton *A. gossypi* reaching perdition 40.67 percent after 24 hours of

treatment. Also among¹³ that extract of oleander leaves highly effective against adult worker ants, reaching 100% loss ratio when the focus 100 pp Portal said¹⁴ that the plant *Peganum harmala* highly effective against *Tribolium castaneum*. as noted¹⁵ to the effectiveness of the seeds of destruction in the harmala plant rice weevil *Sitophilus oryzae* where a plant in the proportion of the loss amounted to 16.8%. Where¹⁶ that the seeds of the plant extract *Peganum harmala* have an impact on adult worker ants *Aphaenogaster* causing the deaths by the loss amounted to 9.334%.

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