



Dubas Bug

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2. Biological Control:

Using predators and parasites that exist in nature, especially green lacewings (*Chrysopa pallens*), which exist in nature is recommended. These natural enemies may be protected and maintained by choosing the safest pesticides and spraying pests in recommended concentrations.

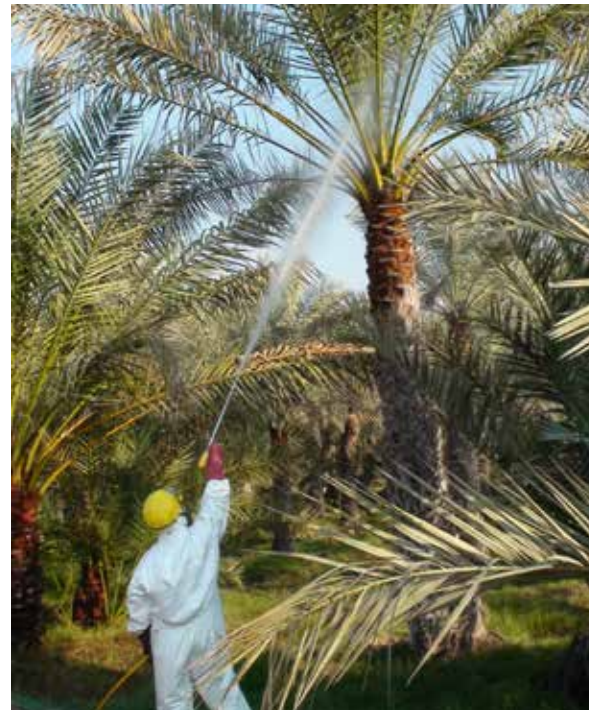
3. Chemical Control:

The efficiency of chemical control process depends on the following points:

- Noting the hatching time and nymphs emergence. The spraying should start in 1-4 weeks after the hatching.
- Determining the severity of the infection and directing the control focus towards the vegetative parts, which the adult bugs spread on; and
- The control process should be comprehensive and include all the farms in each area to reduce the chances of reinfection.

The following conditions should be met when conducting the control process:

1. Using highly efficient sprayers;
2. Using protective clothes during the control process;
3. Weather conditions should be appropriate for spraying;
4. Safe disposal of empty pesticides containers by collecting and delivering them to competent authorities.



Dear farmer,

Contact an agricultural expert as soon as possible to help you learn the appropriate control methods, materials, and techniques, to make sure you get the desired results.

Date Palm trees are a national treasure, let's maintain them



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Dubas Bug

Introduction:

Dubas Bug (*Ommatissus lybicus*) is one of the major, widespread pests that infect date palm trees in the United Arab Emirates.



Adult Bug

Life Cycle:

Dubas bug has two generations each year; spring generation and summer generation. However, the time of the bug's emergence through the two generations may vary from one country to the other. The life cycle of the bug consists of three stages; the egg, which is elongated, oval, white, and transparent. Its initial length is 0.7 mm.

The nymph is sedentary, especially while sucking the sap from vegetative and fruiting parts of the palm tree. It also prefers shaded parts of the palm trees and keeps away from the hard or dusty parts. Nymphs of dubas bug pass through five nymphal instars to reach adult stage.

Females deposit eggs in holes they excavate in the fronds (midrib of the fronds), while making part of the egg showing outside the plant's tissue.

The life cycle of an adult bug is 72 to 82 days, during which the female deposits an average of 143 eggs. The spring generation emerges in March and April, while the autumn generation emerges in October and November. High humidity and intensive farming are among the most important factors of the spread of the pest and the increasing severity of infection.

Economic Importance and Damage:

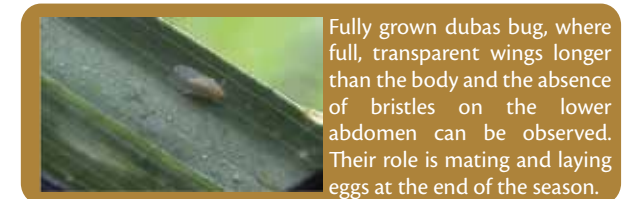
Adults and five nymphal instars of this pest cause damage to palm trees by sucking the sap. They produce honey dew which covers the leaves, piles dust, and supports sooty mold that grows on the leaves, fronds, and fruits. This reduces the photosynthesis, and transpiration activities, eventually leading to tree feebleness and production deterioration. The tight distance between plants in locations near the beach and using irrigation tunnels help spreading the pest.

Symptoms of Infestation:

- The presence of shiny honey dew on the leaves, fronds, and fruits, which piles dust and supports sooty mold, and nymph exuviae are indications of infection. Honey dew has been also monitored on the ground in cases of severe infection.
- In cases of intercropping, piles of honey dew and sooty mold could be observed on leaves of the plants.
- In late stages of infection, the fronds were completely black because of the sooty mold, a characteristic of the dubas infection.

Protection and Control Methods:

The integrated management system to control the Dubas Bug (*Ommatissus lybicus*) includes various means, the most important of which are:



Fully grown dubas bug, where full, transparent wings longer than the body and the absence of bristles on the lower abdomen can be observed. Their role is mating and laying eggs at the end of the season.



Nymphs with bristles on the lower abdomen & protrusions on both sides of the abdomen.



Nymphs and nymph exuviae on the surface of a frond and the symptoms of drought are beginning to show.



Nymphs and adult dubas bugs on the surface of a frond covered with sooty mold.

1. Agricultural Control:

The following procedures are recommended to reduce the chances of infection and limit the spread:

- Keeping a space of 8X8 m between each two trees.
- Regular application of agricultural control measures such as pruning, cleaning, and disposal of fiber and drop-off fruits.
- Carrying out irrigation and fertilization in suitable amounts and times and avoiding excessive irrigation or fertilization.
- Removing the saplings away from the main tree when it is old and big enough for cultivation.