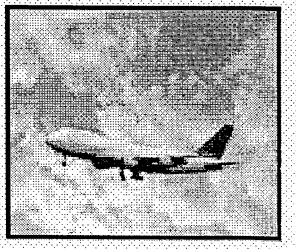
Host Plants

- Coconut
- Christmas Palm, Manila Palm
- Formosa Palm
- Macarthur Palm
- Senegal Date Palm
- Balizier
- Banana and Plantain
- Tania
- Chinese Fan Palm
- Heliconia
- Ginger
- Mexican Fan Palm
- Screwpine

How can the Red Palm Mite be spread?

- Transport of infested plants.
- Handicrafts fashioned from coconut leaves have been found to harbour live mites and viable (live) eggs.
- Strong tropical storms or hurricanes could also distribute the Red Palm Mite over a wide area .

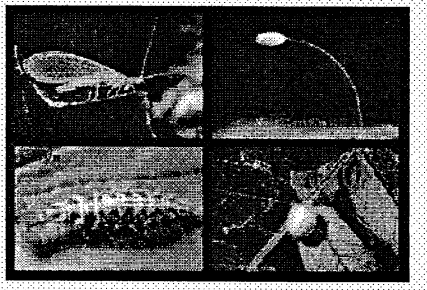


RPM Research to Date

Chemical control is considered impractical due to the large size of most palms. Some biological control agents have proven useful in the Eastern hemisphere including predatory mites, beetles, lacewings and other mite predators.

To date natural enemies of the Red Palm Mite found in Dominica are: Lacewings and two predatory mites (mites which feed off other mites). Efforts to find a suitable natural enemy for RPM are ongoing.

NATURAL ENEMIES OF THE RPM



Lacewing

A. channabasavanni

A. largoensis

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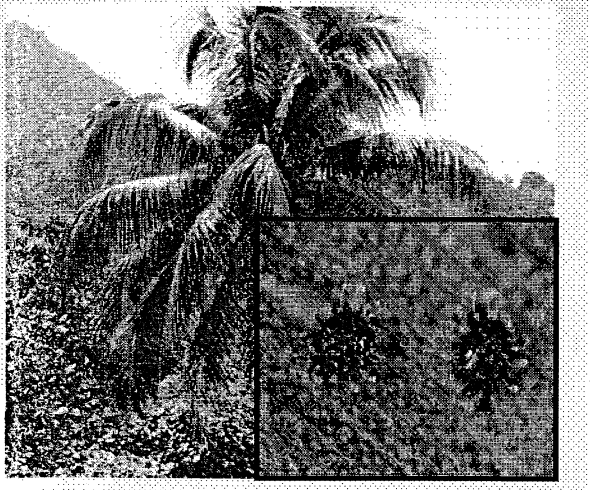
Ministry of Agriculture & Forestry

The Red Palm Mite

(*Raoiella indica hirst*)

The red palm mite, *Raoiella indica hirst*, a pest of several important ornamental and fruit-producing palm species, has invaded the Western Hemisphere and is in the process of colonizing several islands in the Caribbean.

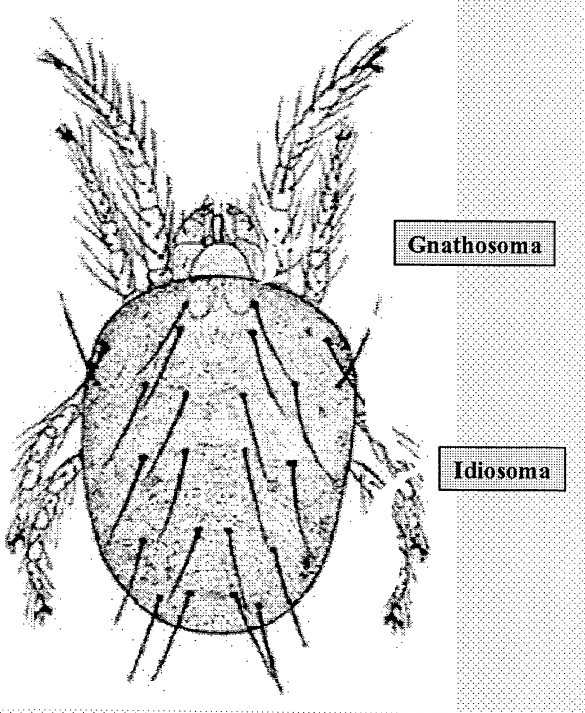


Prepared by:
Plant Protection and Quarantine Services (PPQS)

What is the Red Palm Mite (RPM)?

RPM is a new pest to Dominica and the region which feeds on the sap (liquid) of host plants causing death to the cells where they feed. Infested areas on the leaf where they feed turn yellow and then brown leading to a decrease in the plants ability to be productive. The RPM belongs to the same class as ticks (Acari: Tenuipalpidae) but are much smaller organisms. They are about the size of a dot on a page, with four (4) pairs of legs and two (2) body regions (see diagram below). The long spike-like setae all over the body serve as protection from predators.

(The Red Palm Mite **is not an insect.** An insect has a three part body (head; thorax; abdomen) and six (6) legs)



How can the Red Palm Mite be identified?

The Red Palm Mites resembles small red dots on the underside of host leaves.

Eggs are 0.12 mm long and 0.09 mm wide, smooth and can be found in groups attached to the underside of leaves.

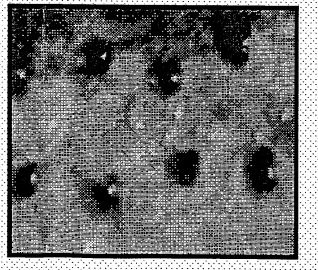
Larvae are 0.18–.020 mm in length and only have three pairs of legs

Nymphs are 0.18–0.25 mm long.

Adults are approximately 0.32 mm long. Females are larger than males with dark patches on their body. Females have a rounded abdomen, whereas the abdomen of males is triangular.

LIFE CYCLE

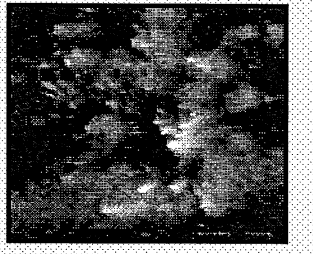
The egg stage ranges from 6 to 9 days. Development from egg to adult ranges from 23 to 28 days for females, and 20 to 22 days for males. The red palm mite lives for about 26 days.



EGGS

NYMPHS

ADULT FEMALES



ADULT MALE

What Damage does the Red Palm Mite Cause?

Heavy infestations of the mites are typically on the lower surface of the leaves and yellow speckles and blotches on the leaves are seen from the feeding damage. Yellowing of the leaves may often be severe. These mites do not produce webbing.

Palms affected by *R. indica* show scattered yellow spots on both leaflet surfaces to a strong yellowish coloration on the entire leaflet, with most of the leaflets affected located in the middle area of the leaf.

Coconut palms severely affected by the mite showed entirely yellow leaves, particularly on the lower third region of the plant. The mite is spreading to other exotic and ornamental palms.

In Dominica, where in some cases coconut is grown with bananas, the mite shifted to this new host. The lower leaves of banana and plantain turn yellow with small patchy green-yellow areas.

Coconut affected by RPM

Plantain affected by RPM