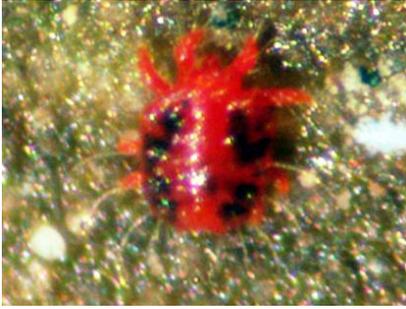


THE RED PALM MITE IN JAMAICA



Red Palm Mite females are red, typically with dark patches on the body, and about 0.32 mm long.

The Red Palm Mite (*Raoiella indica* Herst) was first identified in Jamaica in April 2007. Previous to its arrival in the Americas, the Red Palm Mite (RPM) had established its might and destructive nature in India, Philippines, Mauritius, Reunion, Malaysia, Israel and Egypt. Though diminutive insects of under 0.32 mm (0.01 in.) in length, the RPM has been causing massive damage to the coconut industry in Jamaica. As plant feeders, RPM mainly affect the leaves of their hosts, rendering them a brownish colour and eventually causing the fall of leaves from the trees. Known hosts of RPM include: coconut and areca palms, bananas and plantains, ornamental palms (such as hurricane/princess and Christmas), and ornamental plants (such as heliconia, bird of paradise, and red torch ginger).



The yellow-brown discoloration of the leaves is a consequence of RPM feedings.

Containment of the infestation is crucial, not only because they damage the leaves, but for the impact the mites may have on the fruits when or if the leaves disappear. Furthermore, the United States of America has already placed a ban on the importation of palm handicrafts to its shore, highlighting the economic importance of controlling the spread of the RPM.

Management Initiatives

1. Research

The Research and Development Division in the Ministry of Agriculture initially sought to identify the best treatment options available. Additional focus was given to the impact of RPM on the major hosts (coconut, banana, handicrafts, nursery, heliconia), and what aspects of the palm industries were of major concern. Researchers also noted how well RPM procreated on the different hosts.

2. Spraying of Pesticides

From efficacy trials it was noted that five reduced-risk pesticides could be used in the containment of the pest. These include **abamectin**, **soybean oil**, **sulphur**, **insecticidal soap** and **spiromesifen**, and the conventional insecticide **diafenthiuron**.

3. Introduction of Natural Enemies



Natural enemies of RPM are predatory mites and the ladybird beetle.

Males and females are sexually mature when they emerge leading to RPM's high reproduction rate. Two predator species, a predatory mite and a ladybird beetle, were found associated with the reduction of the RPM population throughout its stages of growth.

5. Public Awareness

The Plant Health Coordination Committee used various media to expose the public to the invasion of the pest. Major stakeholders, such as coconut farmers, were visited and trained on how to identify the pest and the treatment options available to them.

Are we winning the battle?

Containment of the Red Palm Mite is meeting some level of success. However, the public awareness campaign will be extended to increase the effectiveness of the management programme.

Environmental friendly treatments have been applied to the problem, such as the introduction of natural enemies. Plans are in progress to rear these locally to minimize dependence on imports. The Bodles Research Centre is continuing research on the rearing of RPM predators in buckets, which would make it easy for farmers to manage the pest infestation themselves in their groves.

How do you prevent the spread of PHMB?



Constantly inspect both the green and yellowish-brown leaves of your plants to ascertain if RPM is there. The presence of red substance on your hand is an indication that RPM is in the field.

Never remove plants suspect of infestation from your garden to another location. Cut the infested leaves and burn, or place in an air-tight plastic bag in bright sunlight for at least one day. You need to protect your farm as well as those of others, to avoid re-entry on your premises.

If you suspect that Red Palm Mite (RPM) is on your premises, please contact the:

Research and Development Division
Bodles Agricultural Research Station
Old Harbour
983-2281
983-2267
bodlesresearch@moa.gov.jm

Rural Agricultural Development Authority (RADA)
Hope Gardens (6)

977-1158
977-1161
(or the nearest RADA office to you)