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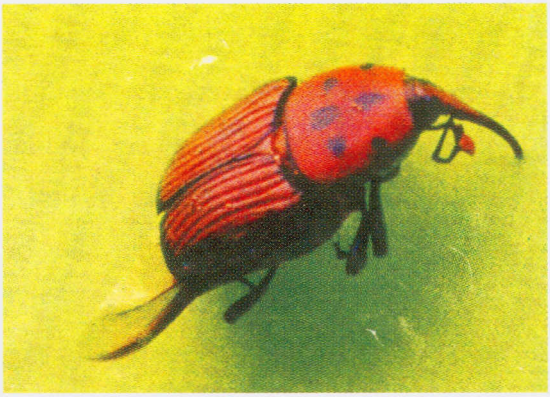
# RED PALM WEEVIL MANAGEMENT IN COCONUT



INSTITUTION VILLAGE LINKAGE PROGRAMME (NATP)

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## INTRODUCTION

The coconut palm, rightly known as *kalpavriksha* or the "tree of heaven" provides many necessities of life including food and shelter. Goa is one of the important coconut growing state in India. The total area under coconut in Goa is 24,000 ha. The average production of nuts is far less as compared to the other coconut growing states of India. One of the reasons for low yield of coconut is the incidence of the pests and disease. Out of the several pests infesting coconut, red palm weevil, *Rhynchophorus furrugineus* (Oliver) is one of the major pests infesting coconut.

## NATURE OF DAMAGE

Red palm weevil is one of the most destructive pests of coconut, oil palms and ornamental palms. The grubs cause damage inside the stem or crown by feeding on soft tissues and often cause severe damage especially when a large number of them bore into the soft growing parts. In case of severe infestation the inside portion of trunk is completely eaten and become full of rotting fibres. The hole can be seen on the stem with chewed up fibres protruding out. Many times reddish brown liquid can be seen oozing out from the hole. In case of young palms the top withers while in older palms the top portion of trunk bends and ultimately breaks at the bend.

**Red Palm Weevil damage in coconut palm**

It is rather difficult to detect the infestation of this pest in the initial stage and when noticed in advance stage, the losses caused are irreparable. The adult weevil do not cause any damage to the palms and can fly long distances in search of host trees. The weevils are attracted to the trees by the smell of the wound on the palm.

## LIFE CYCLE

The pest breeds throughout the year. The female weevil prepares a small hole with its snout in the soft tissues of the trees or in the existing wounds in the crown or trunk. A female lays about 200-500 oval whitish eggs in its life span of 3-4 months. The eggs hatch within 2-5 days and the soft whitish grubs on hatching feed on the soft tissues and tunnel into the tree trunk. The full grown larva is yellowish and measures 65 mm in length. The larval period lasts for 2 to 4 month. The full grown larva pupates inside the stem and the pupal stage lasts for about 14 days. The adult weevil is reddish-brown, cylindrical with a long curved snout. The male has tuft of hairs along the dorsal surface of the snout, whereas the female is without it.

## MANAGEMENT

a) Avoid making cuts on the coconut stem.

b) Clean crown regularly.

c) Dig and turn the soil deeply around the coconut trunk in the month of April-May.

d) Pick up grubs and kill them.

e) Heavily infested trees should be cut down and destroy along with the various stages of the pest.

f) Use of the pheromone trap can effectively bring down the population of the pest.

g) Wounds on the trees should be filled with a mixture of 10% carbaryl + sand (1:1).

h) Fill the leaf axils with 10%carbaryl + sand (1:1) as weevil stage shelters in the leaf axils.

i) Inject phosphamidon 20ml or monocrotophos 20ml in the topmost hole. The rest of the holes on the tree should be closed with cement prior to the treatment.

j) The young feeder root should be selected by digging around the tree trunk. The root is then given a slanting cut. The cut portion of the root is then immersed in the insecticidal solution kept in the polythene bags in such a way that the cut end is dipped up to the bottom of the polythene bag. The polythene bag is then tied with the help of jute string. The root absorbs the entire quantity within 4 days.

## PRECAUTIONS

a. Select young vigorously growing root only.

b. Apply insecticide after harvesting of the nuts and do not harvest nuts at least for 30 days after application.

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