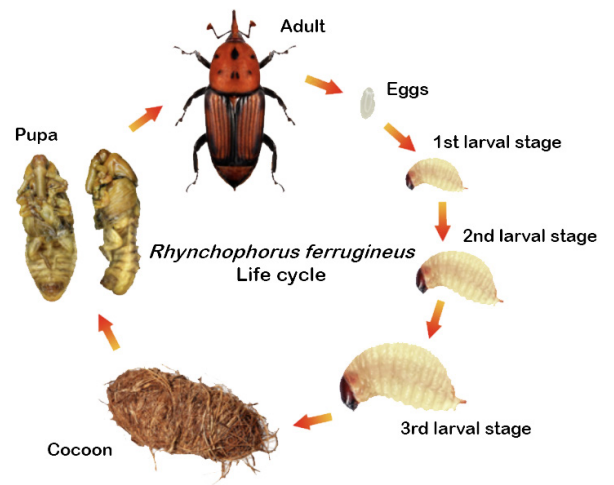


1. Description and biology

Adults have an oval body, 2 to 5 cm long. They have a beak-like extension on the head (rostrum), where characteristic reddish ferruginous, club-shaped antennae are located. The prothorax has conspicuous black spots of variable size and shape. The elytra are black and striped. Males have short mushroom-shaped cuts on the distal part of the rostrum and dorsally, which distinguish them from females, which lack them.



2. Species affected

Its main hosts are the coconut palm (*Cocos nucifera* L.) and the oil palm (*Elaeis guineensis* Jacq.), among other large palms. In Spain, *R. ferrugineus* has been observed on the Canary Island palm (*Phoenix canariensis* H. Wildpret) and its hybrids, and less frequently on the date palm (*Phoenix dactylifera* L.). The complete list can be consulted at <https://gd.eppo.int/taxon/RHYCFE/hosts>.

3. Direct damage to the palm tree



4. Control Measure

4.1 Cultural control

- Reduce planting density. We recommend planting frames of 8x8 m.
- Use drip irrigation systems to reduce excess moisture in the plantation.
- Use sanitised planting material.
- Pruning and conditioning the palm tree in winter, when weevil activity is low, thus reducing the attraction of gravid females.
- In young date palms (less than 15-20 years old), prune leaves and shoots regularly and then apply a preventive insecticide treatment to prevent gravid females from being attracted by the volatiles released by the plant tissue.
- Correct management of palm residues affected by *R. ferrugineus* by shredding, burying or incineration of plant material.

4.2 Biological control

Natural enemies of *R. ferrugineus* do not control the pest effectively. Entomopathogenic fungi, especially *Beauveria bassiana*, are the main control agents. Treatments can be applied by spraying at the base of the leaves or using attracting and infecting devices. Entomopathogenic nematodes of the genus *Steinernema* (Rhabditida: Steinernematidae) are effective in controlling larvae, pupae and adults of *R. ferrugineus*. They can be used preventively or curatively.

4.3 Biotechnological control

Trapping system

- For mass trapping:** Place traps within a radius of 1000 m from the source of infection. The recommended trap density is: 1 trap every 50 m in the case of palm tree alignments, 1 trap per roundabout with palm trees, 1 trap every 2500 m² in parks and orchards (at least 1 trap per plot). Mass trapping will take place mainly from spring to autumn. If after 12 months no palm weevil has been captured, the device could be converted into a monitoring device.
- For monitoring:** Place a monitoring trap in areas where it is suspected that weevils may have arrived. Trap density should be 1 trap every 3 ha. Monitoring traps should be maintained throughout the year. As in the case of mass trapping, the palm trees in the vicinity of the traps should be protected with preventive insecticide treatments.

Characteristics of the traps

There are several models and colours of traps currently available, all of which are valid for the implementation of a trapping net.

The trap should contain: aggregation pheromone (ferrugineol, 4-methyl-5-nonanol, 3- 7mg/day), plant material (sugar cane, apple, palm pieces, dates, etc.), components present in the volatile profile of the host (ethyl acetate esters, ethyl propionate or ethanol mixtures) and water to maintain humidity and retain captured weevils.

The traps should preferably be placed in the shade and never at the foot of a palm tree, but rather halfway between the chosen trap location and neighbouring palm trees. They should be buried in the ground just below the level of the openings, in the case of bucket traps, and in the ground without burying them in the case of cone traps.

They must be inspected regularly (at least every 15 days) to remove and record the number of weevils caught, to check that they are correctly positioned and to replenish the water level.

4.4 Chemical control

The following active substances are currently authorised for treatments against *R. ferrugineus* on palms:

Trade name	Formulated	Method of application
(Headline)	Formulated	Aerial spraying and endotherapy
Revive II® (Syngenta España)	Benzoato de emamectina 9,5% [AL] P/V	Endotherapy
Kaiso Sorbic® (Nufarm España)	Lambda Cihalotrin 5% [ES] P/P	Aerial spraying
Sivanto Prime® (Bayer)	Flupiradifurona 20% [SL] P/V	Endotherapy



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