**SYMPTOMS AND DAMAGES**

The most common symptom reflecting an insect attack in a palm tree is the withering of the leaves in the centre of the crown, which can dry up and droop to the ground.

When the attacks on the palm tree are very severe, the crown dries up, causing its death. The affected leaves fall off easily when removing them from the palm tree. At the base of the palm trees, larval galleries and very often the pupal cocoons can be seen.

When opening the crown of a palm tree in a state of advanced infestation, many larvae of different sizes can be found in a mass of fermenting tissue that gives off a peculiar unpleasant smell. The affected palm trees die in the short term when the meristem or plant heart is completely destroyed and its interior is in decomposition.

The females lay their eggs in holes that they have perforated with their rostrum (or snout) inside the wounds, which have been caused during the harvest, pruning and leaf stripping.

The Rhynchophorus ferrugineus larva feeds on the living tissues of the palm tree.

The infested palm trees by red palm weevils are outbreaks of infestation for other palm trees.

**FLIGHT PERIOD OF THE RED PALM WEEVIL**

Average of *Rhynchophorus ferrugineus* adults captured per month in 2,876 traps, which were placed throughout Valencia and Alicante between 2005 and 2008, in accordance with the results of López-Calatayud (2008).

**BIOCONTROL**
**DETECTION AND MONITORING**

1 to 3 RHYNCHONEX® traps per hectare (at least 1 trap per plot) should be placed, preferably by burying them in the ground. If the trap cannot be buried or placed in a natural environment, it is recommended to use the CROSSTRAP® MINI.

The traps should be placed 50 to 100 metres from each other and throughout the year, especially in spring, summer and autumn. This is because the activity of the pest increases with temperature. The placement of a greater number of traps per surface area significantly reduces new infestations.

**EXHAUSTIVE MONITORING**

For exhaustive monitoring, the amount of traps per surface area should be increased depending on location and homogeneity of the plots: approximately 1 RHYNCHONEX® or CROSSTRAP® MINI trap every 50 metres. This means a density of 4 to 6 RHYNCHONEX® or CROSSTRAP® MINI traps per hectare.

When using traps with pheromones and kairomones, the males and females of *Rhynchophorus ferrugineus* are captured, especially 2/3 of females and 1/3 of males. The traps capture both males and females to reduce mating.

The females that have been captured tend to be already pregnant. Therefore, capturing these females is very effective because the egg laying is reduced on palm trees. Each insect captured in a trap means one less insect on the palm tree.

**NECESSARY MATERIAL**

**RHYNCHONEX® 7.5 Red TRAPS**

The RHYNCHONEX® 7.5 Red trap is a wet trap that is used, together with pheromones and kairomones, for the detection and monitoring of the red date palm weevil: *Rhynchophorus ferrugineus*.

It consists of three easily adjustable parts, a base, a lid and a special hanger for the RHYNCHONEX® ATTRACTANTS KIT diffuser.

The frusto conical shape of the base of the trap is red and has 4 perpendicular holes with measurements of 3 x 7 cm, so the insects can enter in easily. The lid is also red and has 2 entrance holes with 3 x 7 cm measurements.

The RHYNCHONEX® traps should be filled with water up to 2/3 of their volume and placed half-buried up to the entrance holes, and preferably in the shade.

When using the RHYNCHONEX® wet traps, the red date palm weevil dies by drowning in the water.

**CROSSTRAP® MINI TRAPS**

For trapping in forests or if it is not possible to bury the RHYNCHONEX® traps, it is recommended to use the CROSSTRAP® MINI WITH DRY COLLECTION CUP trap.

The CROSSTRAP® MINI WITH DRY COLLECTION CUP is a suspended trap that captures insects in flight and is very effective from spring to autumn. The design and the slippery product of the trap prevent the captured insects from escaping.

The trap does not require any type of liquid or and does not need a food attractant. The captured insects die inside the collection cup from dehydration, which makes handling it easier. The trap can be hung from natural or artificial supports, but always far enough from the palm trees.

**RHYNCHONEX® ATTRACTANTS KIT**

The RHYNCHONEX® ATTRACTANTS KIT consists of a blister pack with a RHYNCHONEX® PHEROMONE 90 DAYS diffuser and a RHYNCHONEX® KAIROMONE 90 DAYS diffuser for *Rhynchophorus ferrugineus*, that lasts for 90 days in field conditions. It includes an identifying label to place on the traps with the date of placement and replacement of the kit. It is sold in boxes of 6 units.

**RHYNCHONEX® KAIROMONE 90 DAYS**

*Rhynchophorus ferrugineus* kairomone diffuser made of ethyl acetate. It lasts for 90 days in field conditions.

Scientific research has shown that the synergistic action of the pheromone and the kairomone acting together significantly increases the number of captured insects from 2.5 to 5.

**RHYNCHONEX® PHEROMONE 90 DAYS**

*Rhynchophorus ferrugineus* pheromone diffuser with a mixture of 4-methyl-5-nonal and 4-methyl-5-nonanone. It lasts for 90 days in field conditions.

**FOOD ATTRACTANT**

The combination of food and pheromones increases the effectiveness of the RHYNCHONEX® SYSTEM: dates, sugar cane, apples and bananas are foods that can be added to the RHYNCHONEX® traps.