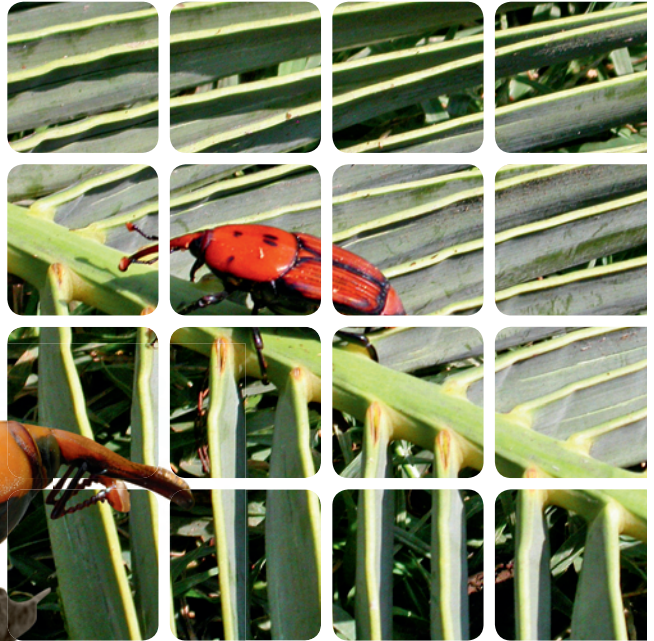




The insect killing our palm trees

EU efforts to stop the Red Palm Weevil



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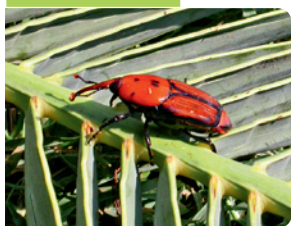
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1 INTRODUCTION

The Red Palm Weevil (RPW) is a harmful insect that is not native to Europe and can attack a wide range of palm trees, such as date palms, coconut and areca palms and many other palm species. The insect entered the European Union through imports of palm plants. The insect has been found in all Mediterranean Member States, causing concerns about the future of their palms.

2 IDENTITY

Scientific name: *Rhynchophorus ferrugineus* (Olivier).

Common names: asiatic palm weevil; palm weevil; red palm weevil; red strip weevil; coconut weevil; picudo rojo de las palmeras (Spanish); charancon asiatique du palmier (French); indomalaiischer palmen-russler (German)

Taxonomic position: *Insecta: Coleoptera: Curculionidae*

3 HOST

Rhynchophorus ferrugineus (Olivier) is a pest of palms (*Arecaceae*). It is believed that the insect does not threaten plants with a stem diameter smaller than five centimetres at their base. The main palm species in the Mediterranean area are *Phoenix dactylifera* and *Phoenix canariensis*. *Phoenix canariensis* is widely used as an ornamental plant and *Phoenix dactylifera* is extensively cultivated for its sweet fruit – the dates.

Rhynchophorus ferrugineus (Olivier) is also being recorded on:

Areca catechu, *Arecastrum romanzoffianum*, *Arenga pinnata*, *Borassus flabellifer*, *Brahea armata*, *Butia capitata*, *Calamus merillii*, *Caryota maxima*, *Caryota cumingii*, *Chamaerops humilis*, *Cocos nucifera*, *Corypha gebanga*, *Corypha elata*, *Elaeis guineensis*, *Howea forsteriana*, *Jubea chilensis*, *Livistona australis*, *Livistona decipiens*, *Metroxylon sagu*, *Oreodoxa regia*, *Phoenix canariensis*, *Phoenix dactylifera*, *Phoenix theophrasti*, *Phoenix sylvestris*, *Sabal umbraculifera*, *Trachycarpus fortunei* and *Washingtonia* spp.

IMPORTANCE

The palms are trees of high environmental, landscape, economic and cultural importance in the Mediterranean countries of the EU. Palms are present in cities and private gardens and the public is very concerned about their preservation. Also, there are some world heritage palm groves such as, for example, in Crete (Greece) or in Elche (Spain).





5 BIOLOGY

The RPW is about 3 cm long. It has a reddish brown colour and has a characteristically long-curved rostrum. Its larvae can excavate holes up to more than one metre long in the trunk of palm trees, thereby weakening and eventually killing the host plant. It is possible for one palm tree to simultaneously host hundreds of insects at various stages of development. They feed off it until the tree's total destruction at which point the adults move to another host plant.

Its biological characteristics are one of the main reasons why the RPW has become one of the most important pests of palm trees in the world:

- The RPW is a strong flyer. Uninterrupted dispersal distances of more than 1km have been recorded and marked beetles were found five days after release up to 7km away from the place where they were released.
- The larvae develop within the tree trunk, destroy its vascular system and cause the collapse and death of the tree. At the early stages of infestation symptoms are hardly visible. At the later stage of infestations, when the symptoms become visible, adult beetles have often already left the tree.
- Females lay about 300 eggs. The RPW normally has three generations per year. Eggs, larvae, pupae and adult insects can be found at the same time on the same tree.
- About four months after egg laying the new generation of adult beetles emerges.

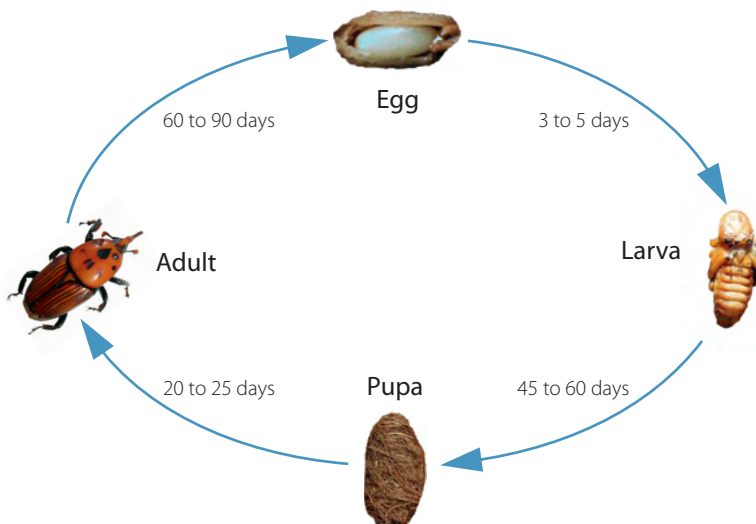
6 DAMAGE AND SYMPTOMS

The damage is caused by the larvae, which make tunnels and large cavities. The larvae can be found anywhere within the palm. They feed on the growing tissue in the crown of palms, often destroying the apical growth area and causing the eventual death of the palm.

It is very difficult to detect *Rhynchophorus ferrugineus* (Olivier) during the early stages of infestation. Generally, it is detected only after the palm has been badly damaged. Careful observation may reveal the following signs, which are indicative of the presence of the pest: holes in the crown or trunk from which chewed-up fibres are ejected (this may be accompanied by the oozing of brown viscous liquid); a crunching noise produced by feeding grubs can be heard when the ear is placed on the trunk of the palm; withered bud/crown.

Symptoms that may be visible at the early stages of infestation include the destruction of new vegetation and the bending of old leaves, which gives the tree an umbrella-like appearance.

BIOLOGICAL CYCLE (Cycle duration: 3 to 4 months)



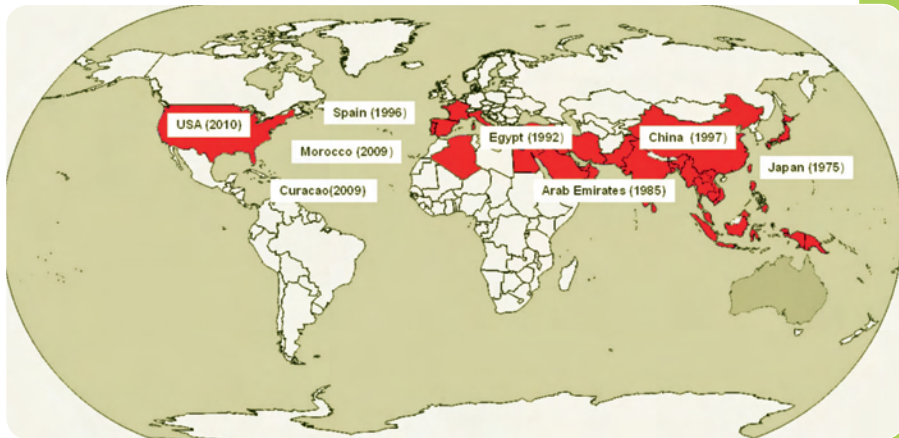


7 DETECTION

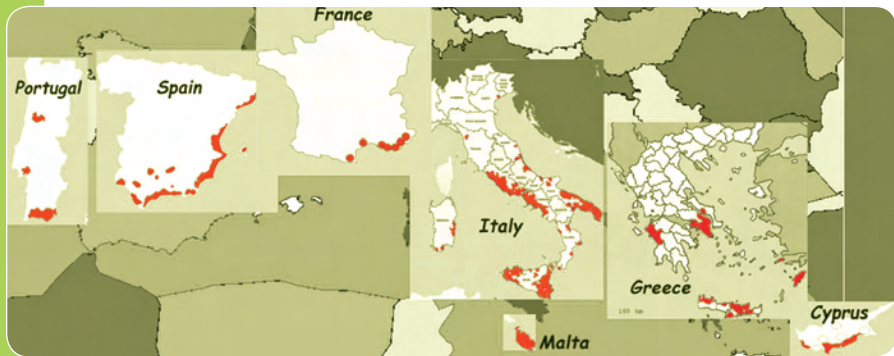
The first record of appearance of the weevil in Europe dates back to 1996 in Spain. Only in the middle of the first decade of 2000 did the major impact of the pest in the Southern European countries become clear. EU legislation was put in place in 2007. Since then, the official plant protection organizations in all relevant Member States are conducting detailed annual survey programmes in their territory.

8 GEOGRAPHICAL DISTRIBUTION

The Red Palm Weevil is native to southern Asia and the Melanesia region. Since the 1980s it has rapidly expanded its geographical distribution and has so far been found in at least 45 countries. It reached Saudi Arabia and the United Arab Emirates in about 1985, spreading through the Middle East. It was found in Egypt, Israel, Jordan and the territories controlled by the Palestinian Authority. It is considered a pest of global significance.



It was accidentally introduced into the territory of the European Union. Spain reported its presence in 1996 and this was followed by reports from Italy in 2004, Greece in 2005, Cyprus and France in 2006, Malta and Portugal in 2007, and Slovenia in 2009. Currently it is present in all Mediterranean Member States and Portugal.



PRESENCE OF RED PALM WEEVIL IN THE EUROPEAN UNION (SITUATION 2010)

Situation in Cyprus

The first finding of the *Rhynchophorus ferrugineus* (Olivier) in Cyprus was in 2006. Since then, the organism has spread, infesting a large area in the south and west coast and showing outbreaks in several locations inland. The number of outbreaks is increasing slightly (2007: 47 outbreaks, 2008: 100 outbreaks, 2009: 83 outbreaks, 2010: 111 outbreaks).



Situation in Greece

The first sighting was in 2005. In 2007, 36 outbreaks were notified and, in 2008, 241 outbreaks in three prefectures (incomplete survey). In 2009, the organism was present in 11 prefectures including, for the first time, Crete. The pest has progressed in 2010, as it has been found in 15 prefectures.



Situation in France

The first sighting was in 2006. Nowadays the organism is present in Corsica (2006), Provence Alpes-Côte d'Azur (2006) and Languedoc Rousillon (2007). Since 2007 the pest has spread significantly in Provence, while in Languedoc the situation has remained steady. A slow increase has been observed in Corsica, with a new infected department in 2010.



Situation in Italy

The first outbreak was reported in 2004. In 2010, the number of regions affected by the insect had increased from five in 2007 to 13 out of a total of 20 regions. The size of the infested area is very significant, in certain regions such as Puglia, Campania, Sicilia and Lazio.





Situation in Malta

The first finding took place in 2007. There were 11 outbreaks in 2007, rising to 131 in 2008. However, in 2009 this number had fallen to 28, and the island of Gozo is considered free of this organism.



Situation in Portugal

The first finding was reported in 2007. Today *Rhynchophorus ferrugineus* (Olivier) is present in five regions on Portugal's mainland and in the island of Madeira. Algarve is regarded as the most contaminated region. Since 2007, the pest has been spreading, with more regions and municipalities affected.



Situation in Slovenia

The first findings of *Rhynchophorus ferrugineus* (Olivier) were reported in 2009. In Piran, the organism was found in a private garden where one *Phoenix dactylifera* and five *Phoenix canariensis*, originating in Italy, were infested. Also in Koper, one *Phoenix canariensis* had been infested. There was no recurrence of the RPW in 2010.



Situation in Spain

The first outbreak was in 1996 in Granada in the region of Andalusia. Before 2003, the outbreaks were solely in the territory of Andalusia. Since 2004, the organism has spread mainly to Spain's Mediterranean region and its islands.

10

POLICY ASPECTS IN THE EU

Emergency measures

The main legislative framework of the plant health regime in the EU is Council Directive 2000/29/EC of 8 May 2000 on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community.

According to this Directive, where a Member State considers that there is a danger of introduction into or spread within its territory of a harmful organism not regulated in the Directive, it may temporarily take any additional measures necessary to protect itself from that danger.

Rhynchophorus ferrugineus (Olivier) is not covered by the basic Directive. However, a report of a pest-risk assessment demonstrated that this specific organism causes severe tree damage, including significant mortality on particular plant species belonging to the *Palmae* family and is restricted to plant sizes with a diameter of the stem at the base of over 5cm (susceptible plants). When the rapid spread was noted, the Commission – in consultation with Member States – adopted emergency measures in May 2007, under Decision 2007/365/EC to control the entry and spread of the insect.

Missions carried out by the Commission in Member States, and information collected by a group of experts from the Commission and all Member States affected by the Red Palm Weevil, showed that the results of the application of this decision were not fully satisfactory as regards the measures to be taken in cases where *Rhynchophorus ferrugineus* (Olivier) was detected. All the available information was presented at the international conference on *Rhynchophorus ferrugineus* (Olivier) which was held in Spain in 2010. Taking this information into account, the Commission amended Decision 2007/365/EC in 2010.

The revised Decision provides for stricter measures to combat the Red Palm Weevil.

The emergency measures include:

1. Categorisation of the Red Palm Weevil: *Rhynchophorus ferrugineus* (Olivier)
2. Listing of susceptible hosts: 23 species and one genus of palms
3. Specific requirements for the imports into the EU
4. Specific requirements for the internal movements within the EU
5. Surveys to check for the presence or continued absence of red palm weevil
6. Demarcation of areas in the Community where red palm weevil is present



1. Categorisation of the Red Palm Weevil:

Rhynchophorus ferrugineus (Olivier).

2. Listing of the most susceptible hosts:

Susceptible plants refers to plants, other than fruit and seeds, having a diameter of the stem at the base of over 5 cm of *Areca catechu*, *Arecas-trum romanzoffianum*, *Arenga pinnata*, *Borassus flabellifer*, *Brahea armata*, *Butia capitata*, *Calamus merillii*, *Caryota maxima*, *Caryota cumingii*, *Chamaerops humilis*, *Cocos nucifera*, *Corypha gebanga*, *Corypha elata*, *Elaeis guineensis*, *Howea forsteriana*, *Jubea chilensis*, *Livistona australis*, *Livistona decipiens*, *Metroxylon sagu*, *Oreodoxa regia*, *Phoenix canariensis*, *Phoenix dactylifera*, *Phoenix theophrasti*, *Phoenix sylvestris*, *Sabal umbra-culifera*, *Trachycarpus fortunei* and *Washingtonia* spp.





3. Specific requirements for imports into the EU

Susceptible plants originating in third countries shall be accompanied by a phytosanitary certificate, which states under the heading 'Additional declaration' that the susceptible plants:

- (a) have been growing throughout their life in a country free of Red Palm Weevil; or
- (b) have been growing throughout their life in a pest-free area; or
- (c) have, during a period of at least one year prior to export, been growing in a place of production:
 - (i) which is registered and supervised by the national plant protection organisation in the country of origin, and





- (ii) where the plants were placed in a site with complete physical protection against the introduction of the specified organism or an application of appropriate preventive treatments takes place, and
- (iii) where, during official inspections carried out at least every three months and immediately prior to export, no signs of the specified organism have been observed.

4. Specific requirements for the internal movements within the EU

Susceptible plants, either originating in the Community or imported into the Community, may be moved within the Community only if they are accompanied by a plant passport and have been growing:

- (a) throughout their life in a Member State or third country free of Red Palm Weevil; or
- (b) throughout their life in a place of production in a pest-free area; or
- (c) in a nursery in a Member State during a period of two years prior to the movement, during which:
 - (i) the susceptible plants were placed in a site with complete physical protection against the introduction of the specified organism or an application of appropriate preventive treatments takes place, and



- (ii) no signs of the specified organism have been observed in official inspections carried out at least every three months;
- or
- (d) if imported, have been growing since their introduction into the Community in a place of production in a Member State during a period of at least one year prior to the movement during which:
 - (i) the susceptible plants were placed in a site with complete physical protection against the introduction of the specified organism, and
 - (ii) no signs of the specified organism have been observed in official inspections carried out at least every three months.

5. Surveys to check for the presence or continued absence of the Red Palm Weevil

Member States are required to conduct official annual surveys in order to check the presence or absence of Red Palm Weevil. The results of those surveys, together with the list of demarcated areas, shall be notified to the Commission and to the other Member States by 28 February of each year. In Member States in which the specified organism is present, that notification shall be accompanied by an up-to-date version of the action plans and an up-to-date list of the demarcated areas including updated information on their description and location (including maps).

Member States shall, in any event within five days and in writing, notify the Commission and the other Member States of the actual appearance of the specified organism in an area within their territory where its presence was previously unknown.

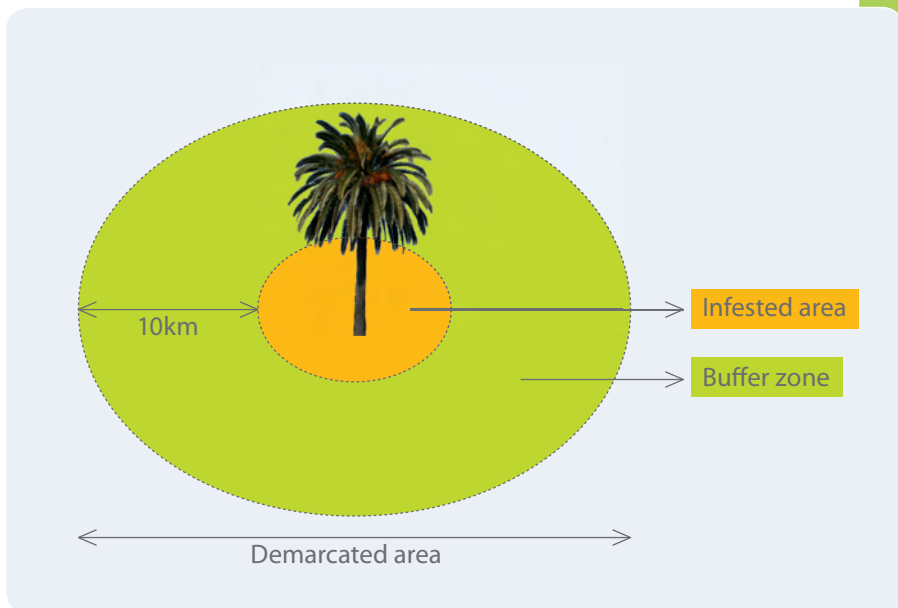
If, based on the annual surveys, the specified organism is not detected in a demarcated area for a period of three years, it may be concluded that the organism has been eradicated in that area.

6. Demarcation of areas and action plan in areas where *Rhynchophorus ferrugineus* (Olivier) is present

When the presence of *Rhynchophorus ferrugineus* (Olivier) is confirmed in an area, Member States shall define demarcated areas and implement an action plan in these areas. Affected Member States shall notify these plans to the Commission and the other Member States within one month. This notification shall include a description of that demarcated area, a map and the action plan itself.

The demarcated areas shall consist of the following parts:

- (i) an infested zone where the presence of the specified organism has been confirmed and which includes all susceptible plants showing symptoms
- (ii) a buffer zone with a boundary at least 10km beyond the boundary of the infested zone



The exact delimitation of the zones shall be based on sound scientific principles, the biology of the specified organism, the level of infestation, the period of the year and the particular distribution of susceptible plants in the Member State concerned.

The action plan in question shall contain a detailed description of the official measures in order to eradicate the organism. It shall also include a time period for the implementation of each of those measures.

The official measures to be taken in the demarcated areas and included in the action plan shall contain:

(a) appropriate measures aimed at eradicating the specified organism, including:

(i) destruction or, where appropriate, complete mechanical sanitation of the infested susceptible plants





- (ii) measures to prevent any spread of the specified organism during the destruction or sanitation actions by applying chemical treatments in the immediate vicinity
 - (iii) appropriate treatment of infested susceptible plants
 - (iv) where appropriate, mass pheromone trapping in infested areas
 - (v) where appropriate, replacement of susceptible plants by non-susceptible plants
 - (vi) any other measure, which may contribute to the eradication of the specified organism
- (b) measures on intensive monitoring for the presence of the organism by appropriate inspections and methods, including pheromone trapping at least in infested areas



(c) where necessary, specific measures to address any particularity or complication that could reasonably be expected to prevent, hinder or delay its implementation. These complications could relate to the accessibility and adequate eradication of all susceptible plants, infested or suspected of infestation, irrespective of their location, to issues of public or private ownership or to the person or entity responsible for them.

The action plan shall address the official measures mentioned and set out the reasons for the measures chosen, describing the situation, the scientific data and the criteria on the basis of which the measures were selected.

In the demarcated areas where results over at least three years show that the eradication of the specified organism within one additional year is impossible, the action plan shall first focus on containing and suppressing the organism in the infested zone, keeping eradication as the longer-term objective.





The action plan should be implemented by technically qualified and duly authorised public servants and/or qualified agents or operators or, at least, under direct supervision of the responsible official bodies.

It should not be necessary to define a demarcated area in cases where the insect was previously not known to occur and where:

- (a) only plants belonging to one consignment of susceptible plants were identified as infested in an area with a radius of 10 km around those infested plants
- (b) that consignment was introduced into the area concerned less than five months previously and it had already been infested before introduction

(c) taking into account sound scientific principles, the biology of the specified organism, the level of infestation, the period of the year and the particular distribution of susceptible plants in the Member State concerned, no risk of spreading of the specified organism has occurred since the introduction of the infested consignment in the area.

In such cases, Member States shall draw up an action plan, but may decide not to define a demarcated area and to limit the official measures to the destruction of the infested material, carrying out an intensified survey programme in an area of at least 10km around the infestation and the tracing of related plant material.

11 THE UNION'S FINANCIAL ASSISTANCE

Solidarity provisions

In cases of the introduction or spread within the Community of *Rhynchophorus ferrugineus*, Member States may receive from the Community a financial contribution for "plant health control" to cover expenditure relating directly to the necessary measures, which have been taken or are planned for the purpose of combating the organism in order to eradicate, or if that is not possible, contain it.

Assistance for research

It is very important to foster and coordinate research and development of programmes focused on the early detection and on the control and eradication of the pest.

In this context, a specific research project for the early detection, biology and control techniques for Red Palm Weevil is being cofinanced by the European Commission. The project will provide critical information to the European authorities and the Member States for improving and effectively implementing strategies for eradication and control of Red Palm Weevil.

12 RECOMMENDATIONS

An early detection of infested palms is essential in order to control and eradicate the RPW. Visual symptoms may help in detecting the infestation. At the early stages of infestation, the destruction of the new vegetation and the bending of old leaves gives the tree an umbrella-like appearance. Additionally, careful observation may reveal the following signs, which are indicative of the presence of pest: holes in the crown or trunk from which chewed-up fibres are ejected (this may be accompanied by the oozing of brown viscous liquid); a crunching noise produced by feeding grubs can be heard when the ear is placed on the trunk of the palm; withered bud/crown.

As soon as you see the insect or any of the symptoms described above, please contact the national (or regional) plant protection organisation in your country.



On line information about the European Union in 23 languages is available at:
<http://europa.eu>

Further information on Plant Health is available at:
http://ec.europa.eu/food/plant/organisms/index_en.htm

and on Red Palm Weevil at:
http://ec.europa.eu/food/plant/organisms/emergency/index_en.htm

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European Commission

The insect killing our palm trees
EU efforts to stop the Red Palm Weevil

The insect killing our palm trees

EU efforts to stop the Red Palm Weevil



In the European Union, palm trees are ornamental plants with high environmental, economic and cultural value, mainly in the Mediterranean countries. Red Palm Weevil is a harmful insect that is native to eastern Asia. It first arrived in the EU in Spain in 1996 through imported palm trees. Over the years it spread to all the Mediterranean EU Member States and to Portugal. The EU aims to prevent the insect's further spread, or where still feasible to eradicate it.

