

Local activities of Palm Protect partners

August 2012:

Dr V. Soroker (ARO) ran a workshop on red palm weevil problems and challenges to gardeners and extension workers in Tel Aviv, Israel.

December 2012:

Dr F. Karamaouna gave an update on Palm Protect to a working visit of the BIO CIRCLE to the Benaki Phytopathological Institute (BPI), Athens, Greece.

January 2013:

Dr V. Soroker gave an update on red palm weevil problems and research progress at the annual date growers meeting in Israel. Llorenç Baronat and Lluís Olibet (EV) participated in training on the control of Red Palm Weevil using trunk injection and sanitation in Galicia, Spain.

February 2013:

Llorenç Baronat and Roger Busquets (EV) participated in a meeting in Terrassa, Spain entitled "Using Endoterapia to control different pests", focused on palm trees to prevent and control red palm weevil.

March 2013:

Dr D. Rochat (INRA) gave instruction on red palm weevil biology and semiochemical trapping in the city of Hyères-les-Palmiers to French Agricultural Ministry personnel who implement quarantine regulations.

May 2013:

Dr D. Rochat (INRA) delivered a lecture entitled 'New pests, new challenges: red palm weevil and palm borer moth' at the French Academy of Agriculture. Dr F. Karamaouna (BPI) participated in a workshop on the control of palm tree insect pests for the Municipality of Maroussi, Athens, Greece.

June 2013:

Dr V. Soroker (ARO) attended a meeting on the use of neonicotinoids in agriculture: neonicotinoids implementation against red palm weevil.

Dr E. Quesada ran a workshop for the Plataforma Ciudadana por los Parques, los Jardines y el Paisaje de Sevilla at the Universidad de Cordoba, where he discussed the Palm Protect project and demonstrated his research on the red palm weevil. This was reported at <http://jardinesdelaoliva.wordpress.com>.

July 2013:

Dr F. Karamaouna (BPI) participated in a workshop on quarantine pests, other diseases and insect pests at the Technological Institute of Crete, School of Agriculture, Heraklion, Crete.

Publications

Vacas S, Primo J & Navarro-Llopis V. 2013. Advances in the use of trapping systems for *Rhynchophorus ferrugineus*: traps and attractants. *Journal of Economic Entomology*. In press.

Demblio et al. 2013. Review of control methods against the palm borers *Rhynchophorus ferrugineus* (Olivier) (Coleoptera: Curculionidae) and *Paysandisia archon* (Burmeister) (Lepidoptera: Castniidae). Open access via the Palm Protect website

Giblin-Davis, R.M., J.R. Faleiro, J.A. Jacas, J.E. Peña, & P.S.P.V. Vidyasagar 2013. Biology and management of the red palm weevil, *Rhynchophorus ferrugineus*. In: *Potential Invasive Pests of Agricultural Crops* pp.1-34. J. E. Peña (ed.) CABI Invasives Series, CABI, Wallingford, UK (ISBN 978-1-8459-3829-1).



Strategies for the eradication and containment of the invasive pests *Rhynchophorus ferrugineus* and *Paysandisia archon*



Project Number: FP7-KBBE-2011-5289566

Welcome to the first Palm Protect newsletter

Issue 1

Palm protect is a three-year project set to provide solutions for the control of the red palm weevil and the palm borer. Led by the UK Food and Environment Research Agency (Fera) it involves thirteen partners from eight countries (www.palmprotect.eu).

IN THIS ISSUE

Palm Protect meetings and workshops

Partners attend Red Palm Weevil Symposium in Knoxville, USA and Palm Pest Conference in Nice, France

Web-site launched by INRA

Local activities of Palm Protect partners

Project progress - Identification of weevil attractants

Progress made with Dogs for detection of red palm weevil

Entomopathogenic fungi

Improved delivery devices

Local activities of Palm Protect partners

Recent publications

Palm Protect meetings and workshops

Since the initiation of the project, two project meetings of Palm Protect have been held at the Agricultural Research Organisation (ARO) in Tel Aviv, Israel and at the Centre of Agricultural Research for Development (CIRAD) in Montpellier, France. Open stakeholder meetings were held at the same venues.

Israel

Palm Protect partners spent one and a half days discussing scientific progress on the biology, detection and monitoring, control and economic evaluation of the two pests. A day's field excursion to the Sea of Galilee and Amnon village was also undertaken to observe Red Palm Weevil damage in ornamental palms and a demonstration of remedial action against this pest.

We also visited a date palm orchard at Almagor to observe trapping of weevils *in situ* and the Eden experimental station, where trapping equipment and the acoustic detection of red palm weevil larvae were demonstrated. The day ended with a visit to the Spring Valley Regional Council for a presentation on the date palm industry and how they are dealing with the problem of the red palm weevil. This was followed by a tour of the date palm plantation.

An open half-day workshop for local stakeholders was held at the Volcani Centre where an overview of the project aims, objectives, roles of partners and progress was given. A display of the location aware system for the detection of red palm weevil damage was provided by the Benaki Phytopathological Institute (BPI Greece) and pesticide application techniques by Endoterapia Vegetal (EV Spain) and the Plant Protection and Inspection Service (Israel). Posters on the red palm weevil were also displayed.



Demonstration of infected palm



Treating infected palm



Group photograph in Tel Aviv

Sponsorship for the Israel meeting was provided by:



LCL Lidor Chemicals Ltd.
לידור כימיקלים בע"מ

Palm Protect meetings and workshops (continued)

France

A similar format was used for the third project meeting at CIRAD in Montpellier, including one and a half days of scientific discussion between project partners and a half-day open workshop for local stakeholders where the project was introduced and discussed. The workshop also included displays of products and techniques to control palm pests and concluded with an open questions session to a panel of Palm Protect work package leaders. Lunch and cocktails for all delegates were served in the grounds of CIRAD Lavalette.



A day's field trip consisted of a visit to CIRAD/CSIRO Baillarguet where a tour and presentation of research activities was undertaken, followed by a visit to the palm area of Béziers. Here we were given a talk and tour of the palms and a demonstration of treatment of palms by Palme-Doc.



Sponsorship for the France was provided by:



Conferences attended by partners

Palm Weevil Symposium held in Knoxville USA, 13th November 2012
Red Palm Weevil, *Rhynchophorus ferrugineus*. What's Next?

Dr. Victoria Soroker, ARO, Israel presented a paper on the Challenges in the control of the red palm weevil in agricultural and horticultural areas.

Palm Protect project represented at the Palm Pest Mediterranean Conference held in Nice France, 16th-18th January 2013

Invited speakers: Dr. Didier Rochat (INRA), Dr. Victoria Soroker (ARO), Dr. Josep Jacas (Universitat Jaume I, UJI), Dr. Oscar Demblio (UJI), Dr. Stefano Collazza (Universita degli Studi di Palermo, UNIPA), Dr. Costas Pontikakos (BPI), all presented work related to Palm Protect.

Dr. Didier Rochat also presented a poster and a corresponding manuscript that are published in the conference proceedings: Palm Protect, a European applied research action devoted to palm borer pests. Both are available via the palm protect website.

Web-site launched by INRA

INRA have posted a website to inform the public about palm pests, regulations related to palm pests, and the Palm Protect. See <http://www.inra.fr/Grand-public/Sante-des-plantés/Tous-les-dossiers/Palmiers-en-danger>

Update on progress

Identification of attractants to improve red palm weevil management

Palm kairomones have been shown to synergise the attractiveness of pheromones and work is underway to isolate and identify the chemicals involved (Universidad Politécnica de Valencia, UPV). This will improve pheromone traps and provide tools for push-pull strategies for red palm weevil detection and control.



Detection using dogs

Excellent progress has been made on the use of dogs to detect red palm weevil in palms in quarantine. At the recent Palm Protect meeting in Montpellier, Dr Pompeo Suma from the University of Catania presented data and a video of his dogs in training (available via the Palm Protect website).

Entomopathogenic fungi in the control red palm control

The Universidad de Cordoba have identified two active secondary metabolites from an entomopathogenic fungi with insecticidal activity as candidate molecules for novel pesticides. Attract and infect devices are being developed in collaboration with the UJI and the UPV. They have also identified 18 different pathogenic strains of fungi from around the Mediterranean basin, that have been supplied by other Palm Protect partners, with potential as biological control agents. In collaboration with the UJI, field trials are ongoing.

Natural epizootic of *Beauveria bassiana* in RPW population (Israel)



2 isolates of *Beauveria* were isolated: one from cocoons and one from adult weevils

Improved injection devices

Endoterapia Vegetal have been developing their trunk injection devices to improve delivery of insecticide within the palm through better formulations and to eliminate damage to palm tissues. They have developed a new prototype and formulaion specifically for palm trees.



Consortium partners

