EPPO data collection and early warning

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EFSA/EPPO Workshop on data collection and information sharing in plant health (Parma, IT, 2014-04-01/03)

EPPO's missions

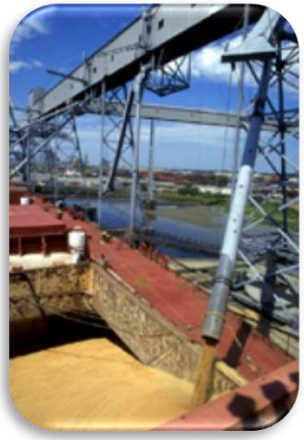
Prevent entry and spread of harmful organisms
(crops, forests, natural environments)

- Recommendations on pests which should be regulated as quarantine pests (EPPO A1 and A2 Lists)
- Prepare standards (e.g. phytosanitary measures, diagnostic protocols)

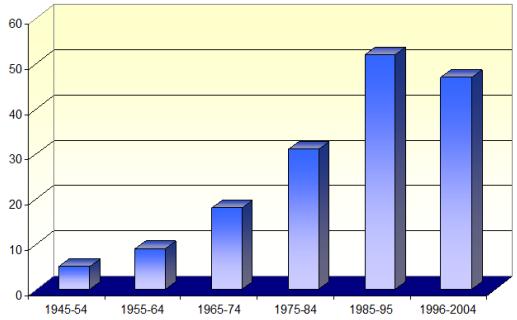
Provide information to EPPO members on pests

- Regulated pests
- Pests which may present a risk to the EPPO region

Intensification and diversification of commercial exchanges of plants and plant products



More accidental introductions of pests



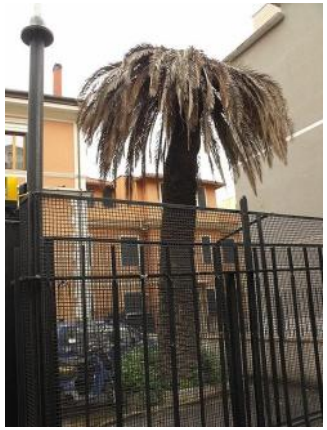
Economic impacts of introductions

UNITED KINGDOM: *Phytophthora ramorum* and *P. kernoviae*

Research and development + containment and eradication =

5 800 000 euros per year

Williams *et al*. (2010) The economic cost of invasive non-native species on Great Britain. CABI Wallingford, UK, 197 pp.

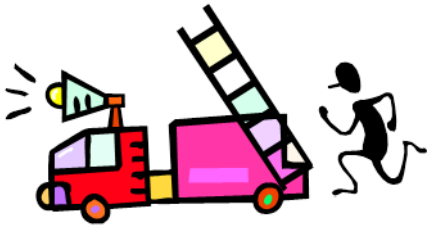


SPAIN: *Rhynchophorus ferrugineus*

Estimated costs of official control from 2002 to 2009:

45 500 000 euros

NPPO of Spain - International Conference 'Red palm weevil control strategy for Europe' (Valencia, 2010-05-05/06)



Why early warning is needed?

NPPOs need to define their strategies in advance, or as soon as possible to:

- Initiate PRA activities
- Draft contingency plans
- Elaborate surveillance programmes, diagnostic tools
- Implement eradication/containment programmes
- Implement prohibitions/restrictions on plant movements
- Prepare information/communication material for stakeholders …

Early warning: what is the trigger?

- New introductions of pests
- Expansion of geographical distribution (EPPO region and elsewhere)
- New host plants
- New vectors
- Increase of damage
- Progress in taxonomy…

Something new or unusual …

Early warning is part of the EPPO strategy

- Manage an early warning system (Alert List) and maintain a baseline (database)
- Evaluate the risks presented by potentially invasive pests (PRA)
- Make recommendations on pests which should be regulated in Europe (standards)

How data is collected?

Bibliographic search

- Peer-reviewed international journals
- CAB Plant Protection Database
- National journals

  e.g. Entomologia Croatica, Gesunde Pflanzen, Növényvédelem, Ochrona Roslin, Phytoma, Phytoma-España.
- Conference proceedings
- Books

Over 100 publications reviewed!

‘Traditional' data collection

Low tech, hard work !

Internet data collection

- Mailing lists: NAPPO Alert List, ProMED, PestLens…
- Online databases (often pest specific)
- Google (key words)

Official pest reports

Data provided by NPPOs (outbreaks)

- PM 1/5 *Format for pest reports* to harmonize data collection
- Directly to EPPO (or via IPPC website)

Notifications on non-compliance of imported consignments (via Europhyt or directly from NPPOs for non-EU)

EPPO network

- Experts from Panels
  - Panels specialized on pests (diagnostics)
  - Panels dedicated to forestry, potato
- Network of scientists

Reliability of information – ISPM no. 8

Table. Guidance for Evaluating the Reliability of a Pest Record (Sources listed from most reliable to least reliable).

1. Collectors / Identifiers	2. Technical identification	3. Location and date	4. Recording / Publication
a. Taxonomic specialist	a. Discriminating biochemical or molecular diagnosis (if available)	a. Delimiting or detection surveys	a. NPPO record/RPPO publication (where refereed)
b. Professional specialist, diagnostician	b. Specimen or culture maintained in official collection, taxonomic description by specialist	b. Other field or production surveys	b. Scientific or technical journal refereed
c. Scientist	c. Specimen in general collection	c. Casual or incidental field observation, possibly with no defined location/date	c. Official historical record
d. Technician	d. Description and photo	d. Observation with/in products or by-products; interception	d. Scientific or technical journal non-refereed
e. Expert amateur	e. Visual description only	e. Precise location and date not known	e. Specialist amateur publication
f. Non-specialist	f. Method of identification not known		f. Unpublished scientific or technical document
g. Collector/identifier not known			g. Non-technical publication; periodical/newspaper
			h. Personal communication; unpublished

Early warning

EPPO Alert List

EPPO Alert List

- Initiated in 1999
- Provides early warning
- Suggests possible candidates for Pest Risk Analysis

- Freely available on the EPPO website: **www.eppo.org/QUARANTINE/Alert_List/alert_list.htm**

EPPO Alert List

The Alert List is constantly updated by the EPPO Secretariat

Each pest is reviewed critically every year by EPPO experts:

- possible candidates for Pest Risk Analysis are selected
- when alert has been given and if no further action is recommended, pests are deleted after 3 years on the list

Early warning: the EPPO Alert List

It provides information on:

- distribution,
- host plants,
- biology,
- damage,
- transmission,
- pathway,
- possible risks

European and Mediterranean Plant Protection Organization
Organisation Européenne et Méditerranéenne pour la Protection des Plantes

Aromia bungii (Coleoptera: Cerambycidae)

Redneck longhorned beetle

Why: In 2011, the presence of *Aromia bungii* was recorded for the first time in one location in Germany. In 2012, its presence was also reported from Campania, Italy. In both countries, eradication measures have been taken. Because *A. bungii* is a fruit tree pest originating from Asia which was previously not known to occur in the EPPO region, the NPPO of Germany and the EPPO Panel on Phytosanitary Measures suggested its addition to the EPPO Alert List.

Where: *A. bungii* is thought to originate from the temperate regions of China.
EPPO region: Germany (few specimens observed in 2011 in a private garden in Bayern, under eradication), Italy (Campania region in 2012: in urban areas between Napoli and Pozzuoli; Lombardia region in 2013: in Sedriano; under eradication). In 2008, an interception of *A. bungii* had been reported by the United Kingdom. Three beetles were discovered among wooden pallets in a warehouse in Bristol but the insect did not establish (no further specimens or signs of presence were found).
Asia: China (present throughout China but more prevalent in the central and northern provinces), Japan (found in 2013 in Aichi prefecture), Korea (Republic of), Korea (Peoples' Democratic Republic of), Mongolia, Taiwan, Vietnam. Details on its distribution in Asia are generally lacking, therefore this distribution is only preliminary.
North America: Absent, intercepted only. In July 2008, *A. bungii* was intercepted in a manufacturing plant, importing products from China and Taiwan, located at the port of Seattle (Washington state, US) in July 2008.

Aromia bungii
Courtesy: Raffaele Griffo (IT)
View more pictures >

Same information appears in the EPPO Reporting Service

2012/090 First report of *Aromia bungii* in Germany: addition to the EPPO Alert List

The NPPO of Germany recently informed the EPPO Secretariat of the first record of *Aromia bungii* (Coleoptera: Cerambycidae) on its territory. In July 2011, a single male specimen of *A. bungii* was found on an old damson plum tree (*Prunus domestica* subsp. *insititia*) in a private garden near Kolbermoor in the south of Bayern. Exit holes were observed on this plum tree and the garden owners also mentioned that they had observed two other specimens (*A. bungii* adults are large black cerambycids with a distinctively red pronotum). Considering that the life cycle of *A. bungii* may take 2 to 3 years, it was estimated that *A. bungii* was introduced into this garden in 2008 or 2009. This finding was made by scientists unrelated to the NPPO and was not brought immediately to the attention of the German NPPO. Therefore, the identity of the pest could only be confirmed officially in April 2012. The origin of this infestation is currently unknown but tracing-back studies are on-going. Quarantine measures have been imposed on the infested site and an intensive survey is being carried out. Official eradication measures are envisaged.
The pest status of *Aromia bungii* in Germany is officially declared as: **Transient, only at one location, under eradication.**

Aromia bungii (Coleoptera: Cerambycidae) - Redneck longhorned beetle

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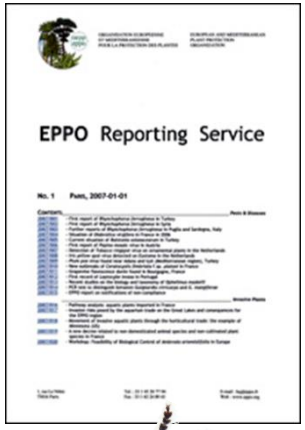
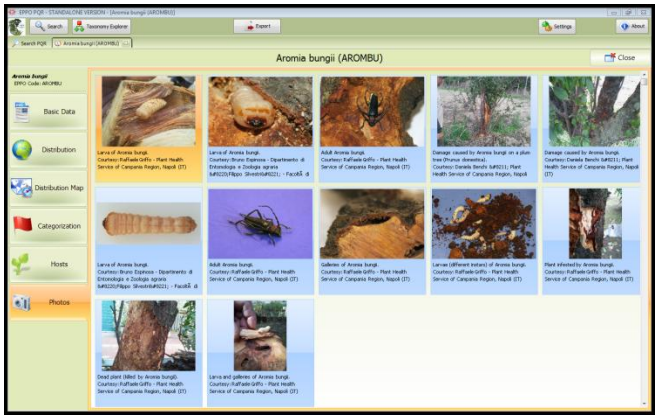
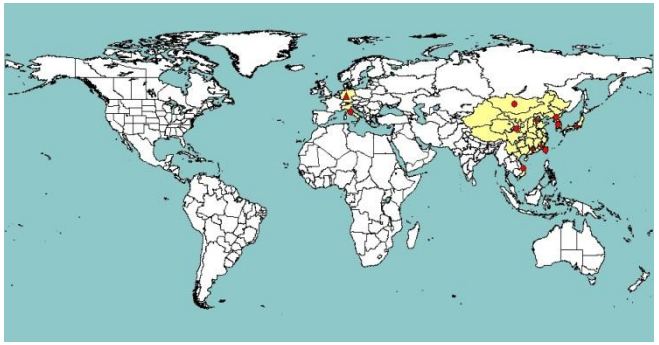
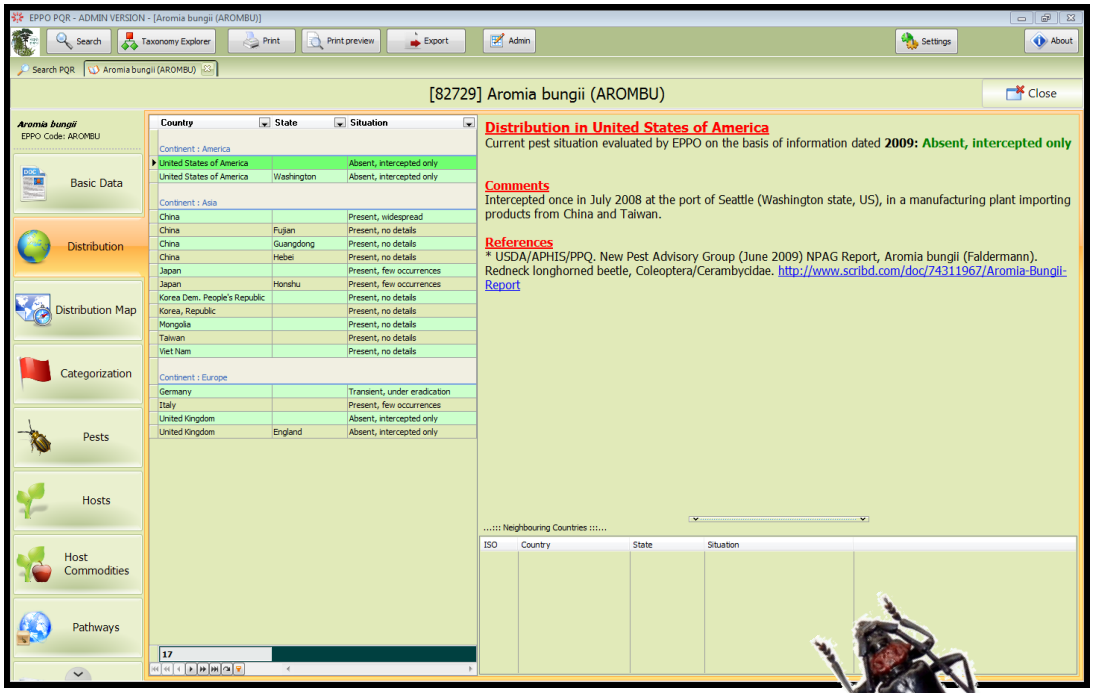


Information is also stored in PQR

EPPO data base on quarantine pests







Free downloads from the EPPO website:
www.eppo.int/DATABASES/pqr/pqr.htm

EPPO Alert List: current contents

Insects and nematodes		
Agrilus auroguttatus	*Ophiomyia kwansonis*	*Hederodera zeae*
Aproceros leucopoda	*Polygraphus proximus*	*Meloidogyne ethiopica*
Aromia bungii	*Strauzia longipennis*	*Punctodera chalcoensis*
Chrysophtharta bimaculata	*Thaumastocoris peregrinus*	
Myiopardalis pardalina	*Xylosandrus crassiusculus*	
Neoleucinodes elegantalis		

Neoeucinodes elegantalis

Meloidogyne ethiopica

Agrilus auroguttatus

Xylosandrus crassiusculus

EPPO Alert List: current contents

Fungi	Bacteria	Viruses
Chalara fraxinea *Diplocarpon mali* *Geosmithia morbida* and its insect vector *(Pityophthorus juglandis)* *Heterobasidion irregulare*	*Acidovorax citrulli* *Maize redness* (Stolbur phytoplasma) *Pseudomonas syringae* pv. *aesculi* *Syndrome des basses richesses*	*Hosta virus X* *Tomato apical stunt pospiviroid*

Diplocarpon mali

Geosmithia morbida

Hosta virus X

Maize redness

Acidovorax citrulli

Pseudomonas syringae* pv. *aesculi

Other ways to convey pest alerts

Special alert on the EPPO website: particular case of *Xylella fastidiosa* (an already regulated pest)

European and Mediterranean Plant Protection Organization
Organisation Européenne et Méditerranéenne pour la Protection des Plantes

First report of *Xylella fastidiosa* in the EPPO region

- Special Alert -

Why: In mid-October 2013, the NPPO of Italy informed the EPPO Secretariat of the first detection of *Xylella fastidiosa* (bacterium included on the EPPO A1 List since 1981) on its territory. In Southern Italy (near Lecce, Salento peninsula, Puglia region), quick decline symptoms were observed on olive trees (*Olea europea*). Investigations showed that symptomatic olive trees were generally affected by a complex of pests: *X. fastidiosa*, several fungal species belonging to the genus *Phaeoacremonium* and *Phaemoniella*, and *Zeuzera pyrina* (leopard moth). In Italy the disease has been called 'complesso del disseccamento rapido dell'olivo'. Although an unconfirmed record of *X. fastidiosa* in Kosovo was published in 1996, the presence of this bacterium had never previously been confirmed in Europe. A task force is being created in Italy to stop the spread of this new olive disease. As *X. fastidiosa* represents a very serious threat for the EPPO region, the EPPO Secretariat intends to provide on this page a brief description of the pathogen, as well as an easy access to specific EPPO data and other useful resources.

Symptoms of quick decline (complesso del disseccamento rapido dell'olivo) observed in Puglia on olive trees.

Share pest alerts on social networks

Production of E-magazines

Scoop.it is a free website which generates e-magazines (web pages).
For the EPPO Secretariat, the aim is to:

- Collect instant information from the web on various subjects
- Create a small community (follow some other topics and attract followers)
- Share information with other social networks: twitter and facebook

Pest Alerts: http://www.scoop.it/t/pest-alerts
Pests on videos: http://www.scoop.it/t/pests-on-videos
Pest Risk Analysis: http://www.scoop.it/t/pest-risk-analysis
Diagnostic activities for plant pests: http://www.scoop.it/t/diagnostic-for-pests
Invasive Alien Plants: http://www.scoop.it/t/invasive-alien-plants
Communication and citizen sciences on pests and invasive alien species: http://www.scoop.it/t/communication-and-citizen-sciences-on-pests-and-invasive-alien-species

Pest Alerts

Sharing information on new plant pests

Curated by Anne-Sophie Roy

Biology

Scooped by Anne-Sophie Roy

European and Mediterranean Plant Protection Organization (EPPO)

From www.eppo.int - July 4, 2012 2:05 PM

'Pest Alerts' is maintained by the Secretariat of the European and Mediterranean Plant Protection Organization (EPPO) and its aim is to share information collected on the Internet on new plant pests.

EPPO is an intergovernmental organization created in 1951 which currently has 50 member countries. EPPO is responsible for harmonization and cooperation among the National Plant Protection Organizations (official authorities) of its member countries. EPPO helps its members in their efforts to protect plant health in agriculture, forestry and the uncultivated environment (standard-setting activities and exchange of information).

On its official website, EPPO also provides:
- the EPPO Alert List (early warning on emerging pests which could present a risk for the Euro-Mediterranean region):
www.eppo.int/QUARANTINE/Alert_List/alert_list.htm
- a free database (PQR) on the host plants and geographical distribution of regulated pests:
www.eppo.int/DATABASES/pqr/pqr.htm
- the EPPO Reporting Service (a free monthly newsletter on pests and diseases):
www.eppo.int/PUBLICATIONS/reporting/reporting_service.htm

Visit the official EPPO website: www.eppo.int

Reactions (2) 0

Scooped by Anne-Sophie Roy

Asian Longhorned Beetle found in Mississauga, Ontario (Canada)

From onnurserycrops.wordpress.com - March 6, 11:11 AM

" It didn't take Ontarians long to get used to being in an ALHB-free zone but unfortunately the Asian Long Horned Beetle (Anoplophora glabripennis) has been detected in the GTA again, this ..."

Scooped by Anne-Sophie Roy

Discovery in France of the New Guinea flatworm

From www.eurekalert.org - March 6, 3:20 PM

" One of the consequences of globalization and increased worldwide freight trade is the introduction of invasive alien species. In the list of the 100 worst invasive alien species in the world, there is only one terrestrial flatworm: Platydemus manokwari, also called the New Guinea flatworm. This species has now been found in Caen, France -- the first discovery of the species in Europe. Given the threat, authorities should consider eradication and control of this flatworm."

Anne-Sophie Roy's insight:
The New Guinea flatworm, Platydemus manokwari, has recently been detected in France. It was discovered in the greenhouse of a botanical garden in Caen. This is the first time that this species is reported in Europe. P. manokwari feeds on land snails and has shown an invasive behaviour in the Pacific region. This exotic flatworm might threatened European species of snails.

Scooped by Anne-Sophie Roy

Thousand cankers disease detected in Italy: addition of Geosmithia morbida and Pityophthorus juglandis to the EPPO Alert List

From www.eppo.int - February 13, 9:51 AM

Anne-Sophie Roy's insight:
Thousand cankers disease has recently been detected in Italy on black walnut trees (Juglans nigra). As this disease is causing severe damage in the USA, both the fungus


Thank you for your attention