

The European and Mediterranean Plant Protection Organisation

EPPO's past and future role in Regional Standards for biological control

Event: IBMA Conference, Basel

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with help from scientific officers:

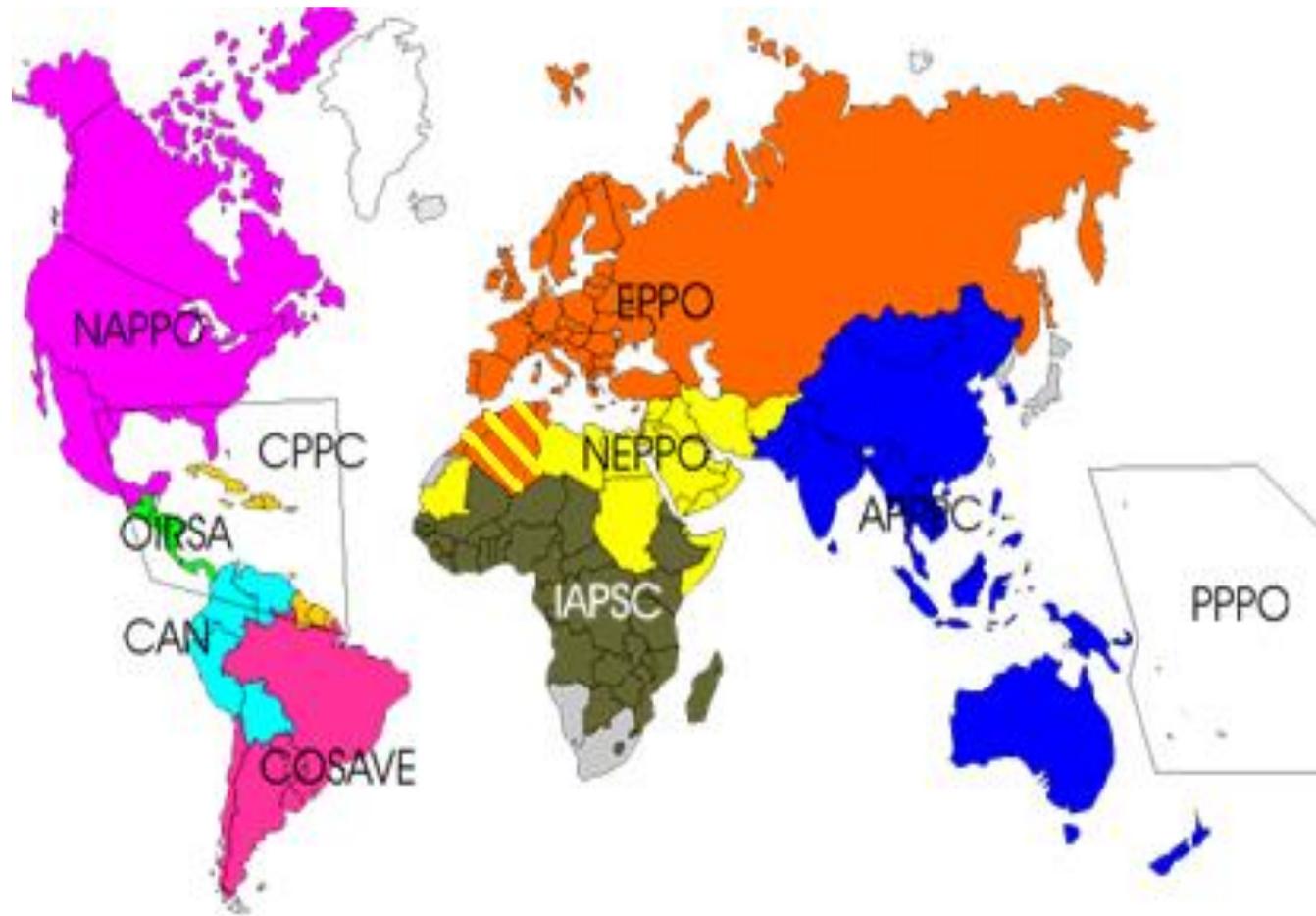
Vlasta Zlof (Plant Protection Products)

Andrei Orlinski (Biocontrol Agents and Forestry)

<http://www.eppo.int/>

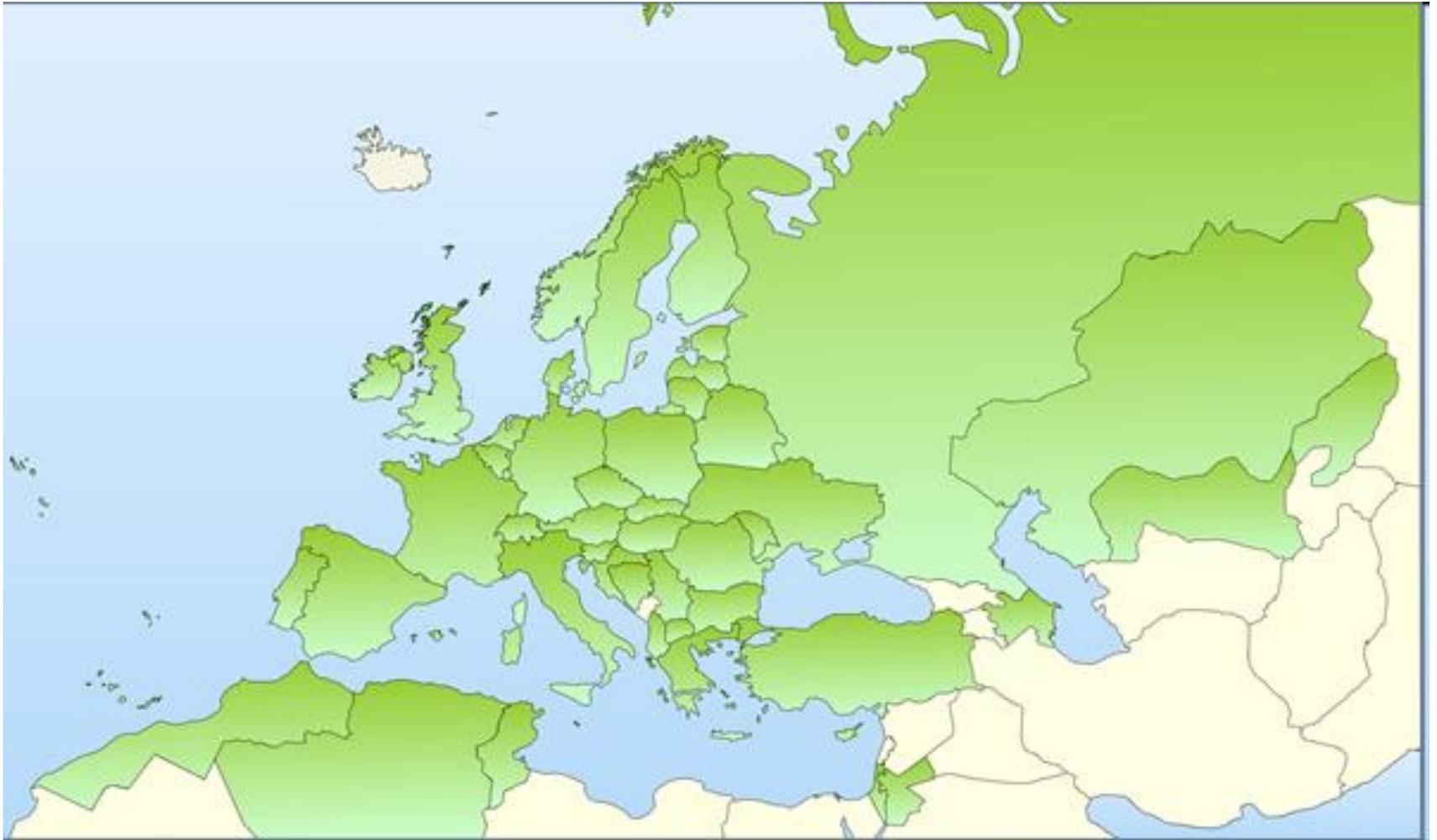


A Regional Plant Protection Organisation recognised by FAO under the International Plant Protection Convention (IPPC)



1951 EPPPO Convention – 15 countries

Now 50 member countries



Aims (Convention Article 1)

- a. to support the Member Governments in their aim of assuring plant health, while preserving human and animal health and the environment
- b. to pursue and develop, by cooperation between the Member Governments, the protection of plants and plant products against pests and the prevention of their international spread and especially their introduction into endangered areas
- c. to develop internationally harmonized phytosanitary and other official plant protection measures and, as appropriate, to elaborate standards to that effect
- d. to present the collective views of the Member Governments, as appropriate, to FAO, WTO, other regional plant protection organizations and any other bodies with related responsibilities.

Remit

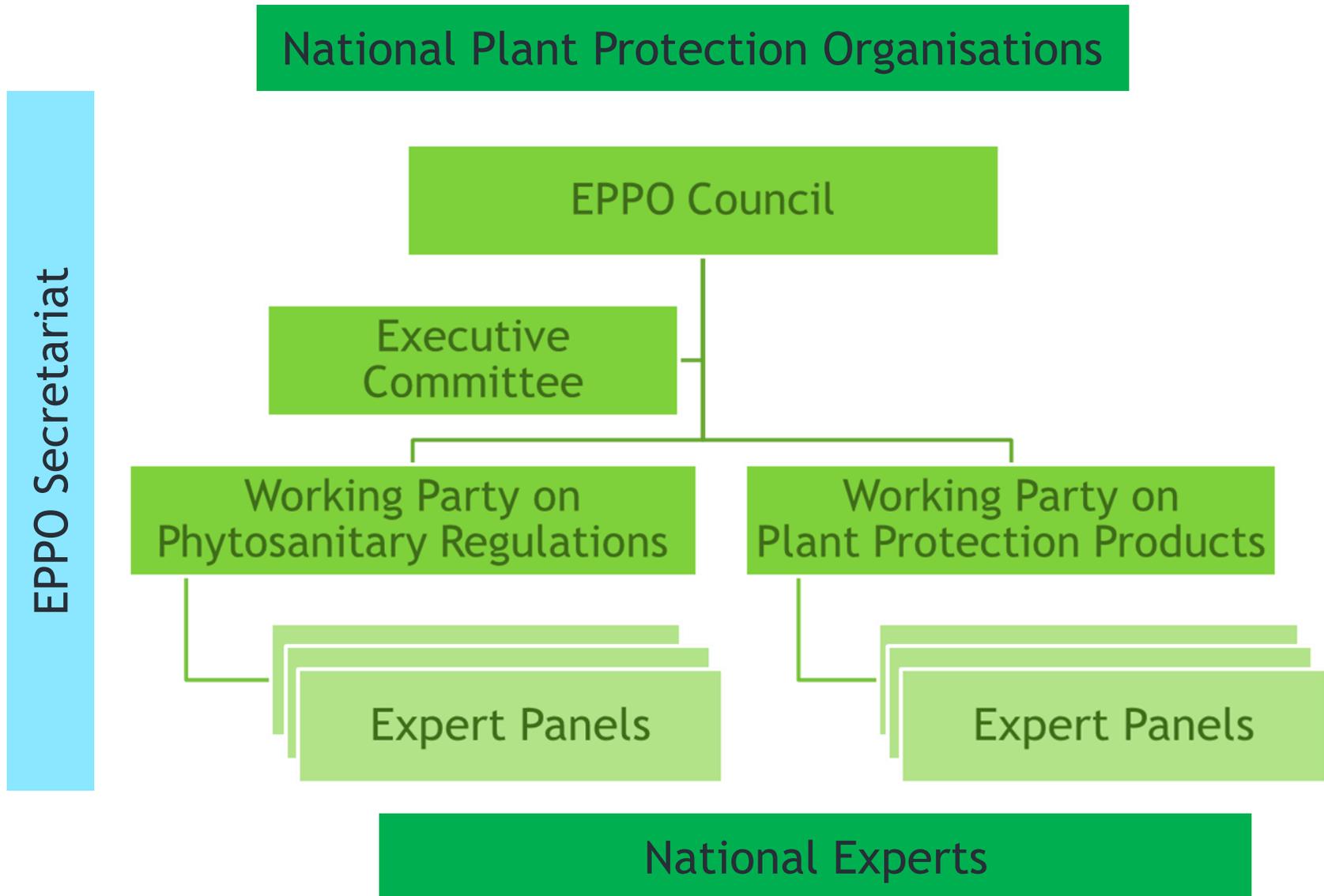
- Plant quarantine
- Plant certification schemes
- Efficacy of plant protection products
- Invasive alien plants
- Biological control agents

by:

- Development of technical standards
- Sharing intelligence and expertise through networks



Organisation



Working Parties

- Representatives of all member countries
- Oversee work of panels
- Approve draft Standards for submission to Council
- Each meets once a year in a member country
- WP on Plant Protection Products - 2014 Hungary
- WP on Phytosanitary Regulations - 2014 Moldova



Expert Panels

- Nominated by member countries
- Appointed by Executive Committee
- Serve as experts, not representatives
- Costs paid by member countries
- Responsible for developing standards
- Frequency varies between panels from 4 -24 months



Phyosanitary Regulations Panels

- IPPC Affairs
- Risks and Measures
- Inspection Procedures
- Diagnostics
 - Entomology
 - Nematodes
 - Bacteria
 - Fungi
 - Virology
 - Quality Assurance
- Forestry
- Potatoes
- Invasive Alien Plants
- Biocontrol Agents

Plant Protection Products Panels

- General Standards on Efficacy Evaluation
- Herbicides and Plant Growth Regulators
- Insecticides and Fungicides
- Resistance
- Harmonisation of Data Requirements
- Extrapolation tables for minor uses

Secretariat

- **Martin Ward** Director General
- **Françoise Petter** Assistant Director
- **Vlasta Zlof** Scientific Officer (Plant Protection)
- **Andrei Orlinski** Scientific Officer (Forestry and Biocontrol)
- **Anne-Sophie Roy** Information Officer
- **Muriel Suffert** Scientific Officer (Potatoes and PRA)
- **Sarah Brunel** Scientific Officer (Invasive Alien Plants)
- **Valerio Lucchesi** Scientific Officer (Plant Protection)
- **Damien Griessinger** Information Technology Officer
- **Madeleine McMullen** Managing Editor
- **Eliane Madène** Administrator
- **Marie-Christine Ozanon** Secretary
- **Jocelyne Cesari** Secretary
- **Jean Perchet** 3 year secondment from French Government



Some current activities ...



Plant Protection Products

- Harmonisation of data packages for efficacy to enable mutual recognition of approvals between countries
- Facilitation of EU zonal authorisation
- Work to ensure continued availability for “minor uses”
- EPPO database on Standards for the efficacy evaluation of PPPs (series PP1) <http://pp1.eppo.int/>



EPPO Codes

- Codes for over 30,000 pests and 30,000 host plants
- Taxonomic structure
- 120,000 common names in > 20 languages
- Used (and originally developed) by pesticide industry
- Key to EPPO, EU, IPPC and national databases
- Now free to users



Kingdom	Animalia	1ANIMK
└ Phylum	Arthropoda	1ARTHP
└ Subphylum	Hexapoda	1HEXAQ
└ Class	Insecta	1INSEC
└ Order	Hemiptera	1HEMIO
└ Suborder	Sternorrhyncha	1STERR
└ Family	Aleyrodidae	1ALEYF
└ Genus	Bemisia	1BEMIG
└ Species	Bemisia tabaci	BEMITA

Diagnostics

- Providing guidance for laboratories preparing accreditation
- Including molecular methods in diagnostic protocols
- Linking EPPO with global work on diagnostic standards
- Database of diagnostic experts in the EPPO region



Horizon Scanning and Risk Assessment

- Reporting Service - monthly news of pests on the move
- Alert List of pests not yet regulated
- Rapid risk assessment and prioritisation tools
- Risk assessments on pathways
 - Plants for planting (contributing to EU regime review)
 - Tomato fruit
 - Wood chips and wood waste (major issue of definitions!)



EPPO Reporting Service: example of a first record

EPPO Reporting Service – Pests & Diseases

2010/200 First record of *Anoplophora glabripennis* in the Netherlands

The NPPO of the Netherlands recently informed the EPPO Secretariat of the first record of *Anoplophora glabripennis* (Coleoptera: Cerambycidae - EPPO A1 List) on its territory. On 2010-11-16, the identity of the pest was confirmed on the basis of analysis of wing covers and DNA analysis of larval remains which had been found in 1 tree in a lane of *Acer pseudoplatanus* in the municipality of Almere. In total 16 exit holes and 3 larvae were detected in one tree. Observations indicated that some exit holes had been formed recently, whereas others were estimated to be at least three years old. The exact age of exit holes is still to be determined. Signs of the presence of *A. glabripennis* have also been detected on 6 adjacent trees in a lane of *A. pseudoplatanus* trees. These trees are located in an industrial area of Almere and were planted approximately ten years ago. In this area there are no tree nurseries and only a limited number of public or private gardens, but a nature conservation area is situated within the surveillance area of 1 kilometre radius around the infested site. It is considered that the most likely source of the outbreak is wood packaging material from Asia because there are several companies importing goods from Asia in the vicinity. Investigations are being carried out to identify the possible source of this infestation. The following phytosanitary measures aiming at a prompt eradication of *A. glabripennis* are being taken and include the following:

- 1) Destruction of all symptomatic trees, as well as all deciduous trees and shrubs (with a diameter of 2.5 cm or more) located within a range of 100 m from the infested trees. Each individual plant will be dissected and analysed by the national reference laboratory for any signs of the pest. It is envisaged to finalize tree destruction by January 2011.
- 2) Restrictions on the movement of host plant material (with a diameter of more than 2.5 cm) within a range of 500 m around the infested trees. This material should be officially reported and destroyed according to official procedures.
- 3) Specific surveillance (also involving specialized tree climbers) will be carried out on an annual basis within a radius of 1 000 m around the affected trees for at least the next four years.

The pest status of *Anoplophora glabripennis* in the Netherlands is officially declared as: **Transient - Isolated outbreak, actionable, under eradication.**



nieuwe Voedsel en Waren Autoriteit
Ministerie van Economische Zaken,
Landbouw en Innovatie



Source: NPPO of the Netherlands (2010-11).

Additional key words: new record

Computer codes: ANOLGL, NL

Information Services

- EPPO Bulletin
- New “EPPO Global Database” combining:
 - Data sheets
 - Risk assessments
 - Maps
 - Pictures
 - Standards



A screenshot of the EPPO Global Database interface. The top navigation bar includes 'EPPO Global Database (beta)', a search bar, and user options like 'What is Global Database?', 'Help', and 'Login'. The main content area is for 'Acidovorax citrulli' (PSDMAC). It features a grid of images showing the bacterium on plant leaves and a close-up of a leaf with a lesion. The interface is divided into several sections: 'Basic Information' (listing EPO Code, Preferred name, and Authors), 'Taxonomy' (showing classification from Kingdom to Species), 'Other scientific names' (listing synonyms and their authors), and 'Common names' (currently showing 'no data'). A world map at the bottom right indicates the distribution of the species. The footer contains contact information for EPPO and copyright details.

**Acidovorax citrulli** (PSDMAC)

Overview

Distribution

Distribution map

Hosts

Pathways Hosts

Categorization

Reporting

Photos

Documents



Symptoms of *Acidovorax citrulli* on melon leaves.
Courtesy: Dr Andrea Minuto, Centro di Saggio, CERSAA, Albenga (IT)

[see all photos](#)**Basic information**

EPPO Code: PSDMAC

Preferred name: *Acidovorax citrulli*

Author(s): (Schaad et al.) Schaad, Postnikova, Sechler, Clafin, Vidaver, Jones, Agarkova, Ignatov, Dickstein & Ramundo

Taxonomy

- | Bacteria (1BACTK)
- | --- Proteobacteria (1PROBP)
- | ----- Betaproteobacteria (1BETBC)
- | ----- Burkholderiales (1BURKO)
- | ----- Comamonadaceae (1COMAF)
- | ----- Acidovorax (1ACVRG)
- | ----- *Acidovorax citrulli* (PSDMAC)

Other scientific names

Name	Author(s)
<i>Acidovorax avenae</i> subsp. <i>citrulli</i>	(Schaad, Sowell, Goth, Colwell & Webb) Willems, Goor, Thielemans, Gillis, Kersters & De Ley
<i>Pseudomonas avenae</i> subsp. <i>citrulli</i>	(Schaad, Sowell, Goth, Colwell & Webb) Hu, Young & Triggs.

Common names

no data

EPPO Global Database (beta) What is Global Database? Help Login

Search... GO

Acidovorax citrulli (PSDMAC)

Overview Distribution **Distribution map** Hosts Pathways Hosts Categorization Reporting Photos Documents

Distribution map for *Acidovorax citrulli* [View as png/svg](#)

Contingency Planning

- Standard on “Generic Elements for Contingency Plans”
- EPPO Inspectors Workshop - Kew, November 2014
- Encourage learning from others’ experience
- Potential database of eradication expertise?



EPPO and Biological Control Agents ...



History

- 1996 EPPO/CABI Workshop on Safety and Efficacy of Biological Control in Europe, Streatley-on-Thames
- 1999 - Standard PM 6/1 on first import of exotic BCAs for research under contained conditions
- 2000 - Standard PM 6/2 on import and release of exotic BCAs
- 2001 - Standard PM 6/3: List of BCAs widely used in the EPPO region



Recommendations from Streatley 1996

- The introduction of BCAs into Europe is necessary for research purposes, for classical control programmes and for commercial purposes. In considering the value and risks of establishing exotic BCAs in Europe, an eco-regional approach should be taken.
- ... practices for the import of macrobiological agents at present vary greatly between European countries. These practices should be harmonized, with appropriate conditions recommended for different purposes.
- The workshop suggested that an EPPO Panel should establish, and promote the adoption of harmonized recommendations on good practice for the import of macrobiological agents.

Joint EPPPO / IOBC Panel on BCAs

- 1997 EPPPO Panel created to develop standards
- 2002 completed its work and stopped
- 2008 joint meeting with IOBC to review the lists
- Has since met annually, most recently last week
 - Experts from regulatory authorities in 19 countries
 - Experts from IOBC
 - Experts from IBMA



EPPO Standards for BCAs

- “The EPPO Standards seek to make the administrative framework for the introduction and use of BCAs as light as practically possible, in order to sustain a general policy of promotion of biological control ...”
- “The national authority may advise whether the import is useful (a real potential benefit to the community is to be expected) and can be made safely”



EPPO Standard PM 6/1

- Guidelines for the first import of exotic biological control agents for research under contained conditions
- Importing research organisation provides dossier with
 - Purpose
 - Description of containment facilities
 - Identification of organism
 - Details of import and origin
 - Host range, previous use and impacts
 - Conclusion on risks for agricultural and natural systems
- National Authority responds with guidance

EPPO Standard PM 6/2

- Guidelines for import and release of BCAs
 - for classical control (establishment intended)
 - for augmentative control
- Dossier as for PM 6/1 (if not previously supplied)
- National authority considers:
 - need for Pest Risk Assessment
 - possible impacts on environment e.g. non-target invertebrates
- National Authority may issue a licence for release
- Licence may specify
 - Supervision of release
 - Evaluation and monitoring
 - Reporting of any problems encountered

EPPO Standard PM 6/3

- Lists of indigenous, introduced and established BCAs recognised by the Panel to have been widely used in several EPPO countries (5 years in 5 countries)
- “Other EPPO countries may therefore presume with some confidence that in the absence of any reported negative effects on non-target organisms, these BCAs can be imported and used safely”
- Not necessary to follow PM 6/1 and 6/2 in each country
- Annually updated lists of
 - Commercially used BCAs
 - Classical BCAs
 - BCAs formerly listed but since removed

Semiochemicals

- EPPO Standard PP1/264 *Mating disruption pheromones*
- First approved in 2008, published in EPPO Bulletin 38, No.3 (Dec.2008); currently under revision
- Describes the general principles of trials design for the efficacy evaluation of mating disruption techniques based on sexual pheromones
- It is written to give advice on potential problems and what should be considered when conducting trials
- Requirements for efficacy data should be flexible and adapted to the special properties of semiochemicals

Microbials

- EPPO Standard PP 1/276 *Principles of efficacy evaluation for microbial plant protection products*
- As a minimum there should always be a statistically significant improvement ... of an appropriate measure of either pest control or crop yield...
- ... evaluations should concentrate on ensuring that users can be provided with accurate information on the likely performance of the product and advice on how best to use it so that it will perform as effectively and consistently as possible

Future strategy

- New EPPO Strategy for 2015-2020 just agreed
- Plant Protection Products - focus on efficacy?
- Biological Control Agents - focus on safety?
- Further work to be done over the next two years to clarify EPPO's role in relation to Biological Control Agents and Integrated Pest Management



Questions

- What do industries want EPPO to do on BCAs?
- What do regulators want EPPO to do on BCAs?
- What do stakeholders want EPPO to do on BCAs?
- Does EPPO have the resources to do what is requested?





Thank you!

