



New threats or old threats in new surroundings: how can EPPPO help its members?

Petter F, Roy AS, Zlof V

European and Mediterranean Plant Protection Organization

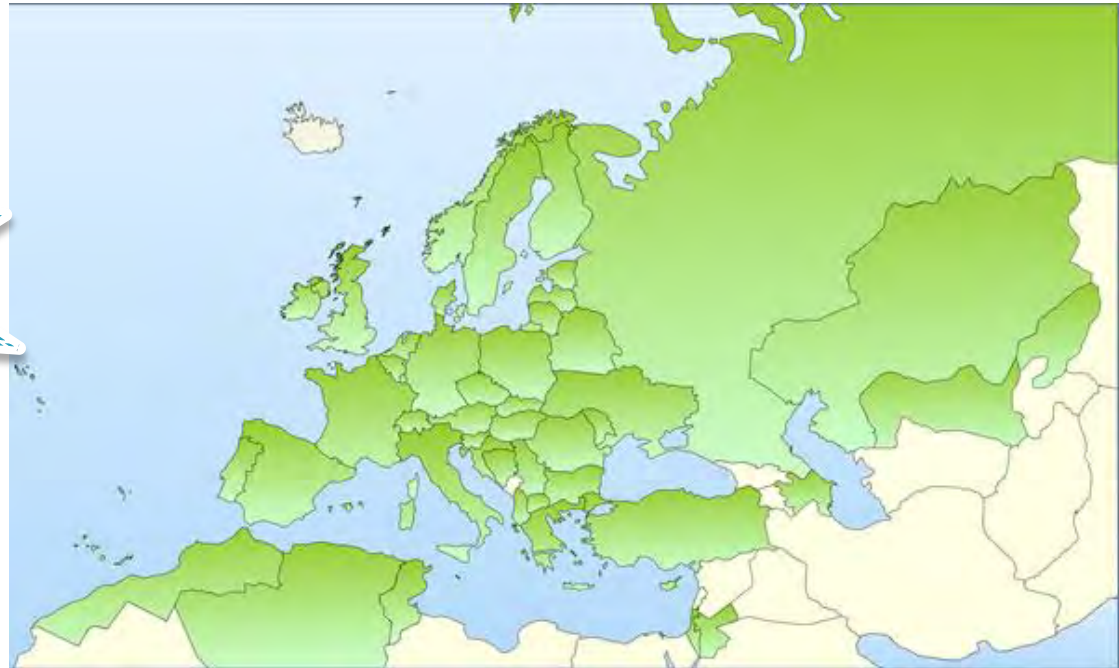




European and Mediterranean Plant Protection Organization

- **Creation 1951 by 15 countries**
- **International cooperation in plant protection (plant quarantine and plant protection products)**

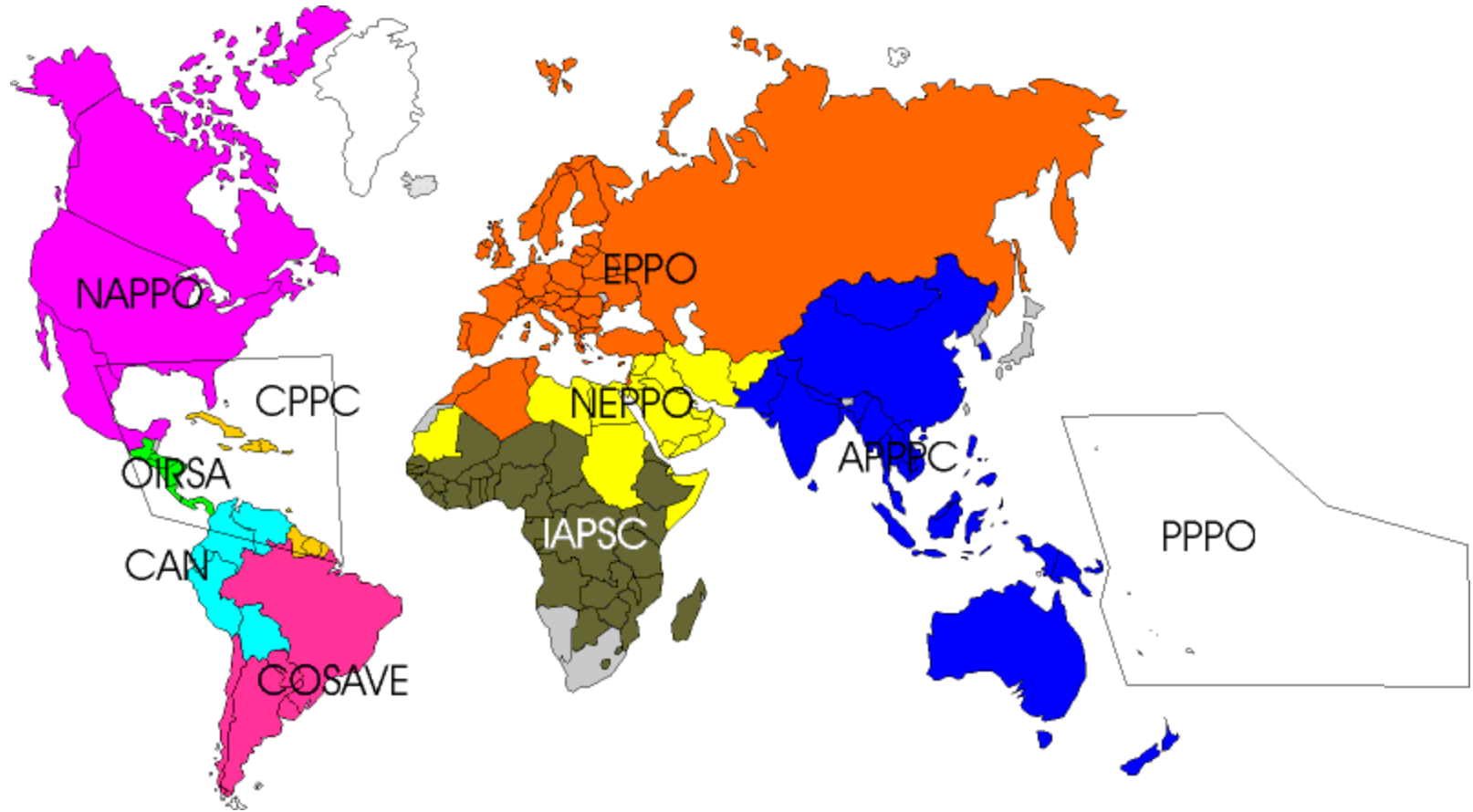
**In 2012
50 member
countries**



One of the Regional Plant Protection Organizations under IPPC



International Plant Protection Convention
Protecting the world's plant resources from pests

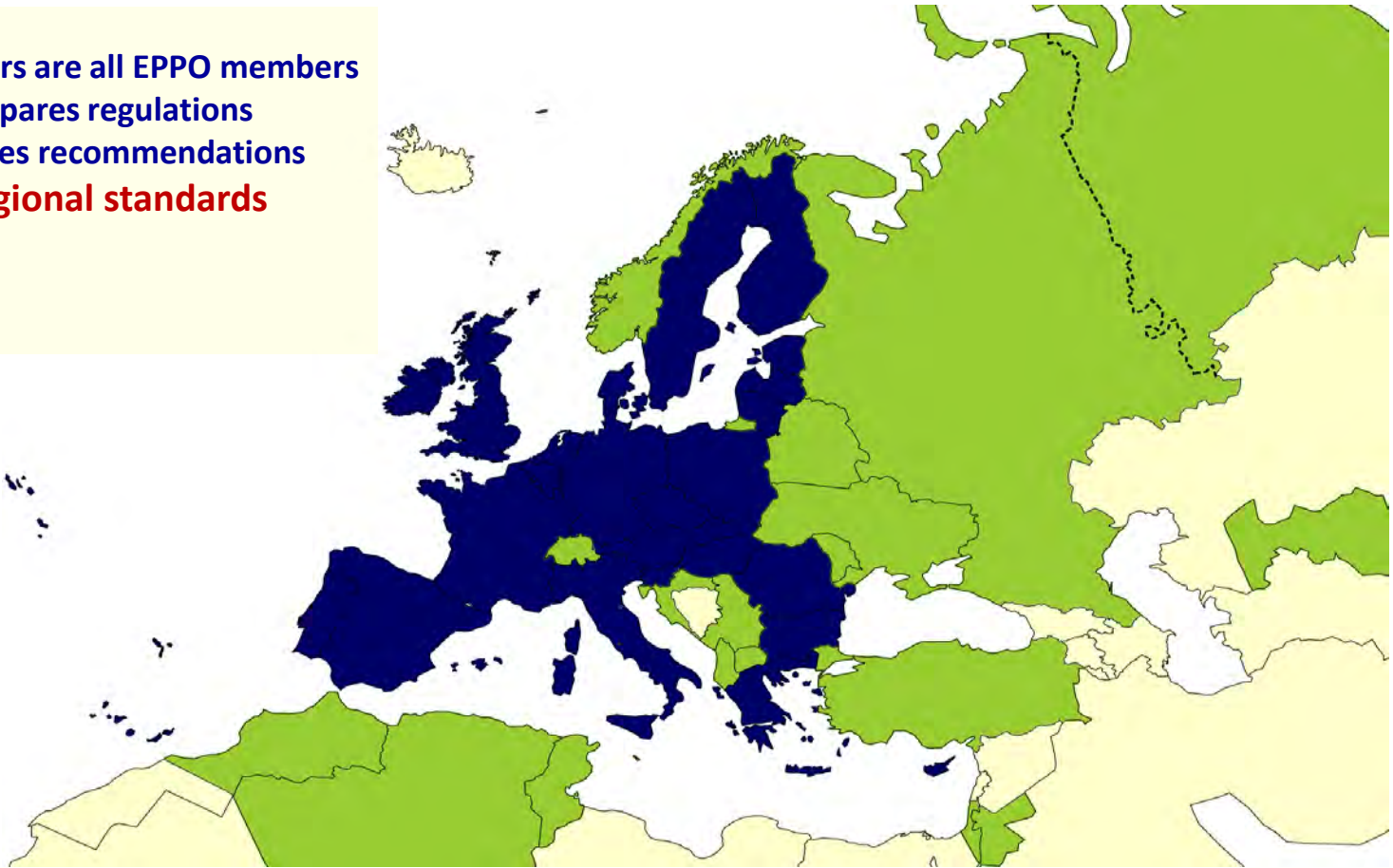




EPPO and the European Union



27 EU members are all EPPO members
EU prepares regulations
EPPO makes recommendations
e.g. regional standards

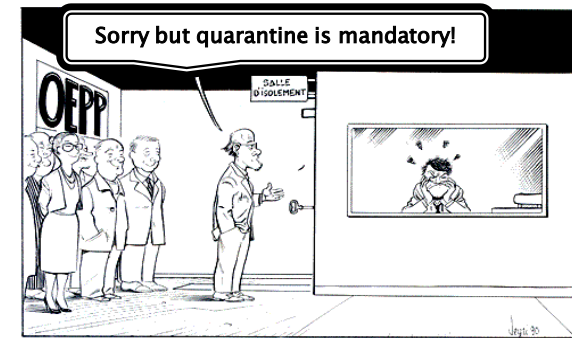




EPPO: two main areas of activities

▶ Plant quarantine

- Prevent entry or spread of dangerous pests (plant quarantine)



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▶ Plant protection products

- Promotion of the use of modern, safe and effective pest control methods.



In the last decades the environment in which EPPO works has changed in both areas





Current context in plant quarantine: Emergences

Intensification and diversification of commercial exchanges of plants and plant products



accidental introductions of pests into new regions
(including spread of vectors)



Modifications in the environment
(cultural practice, climatic change)



Symptoms of Pepino mosaic virus on cherry tomatoes.
Courtesy: Dr Andrea Minuto (IT)

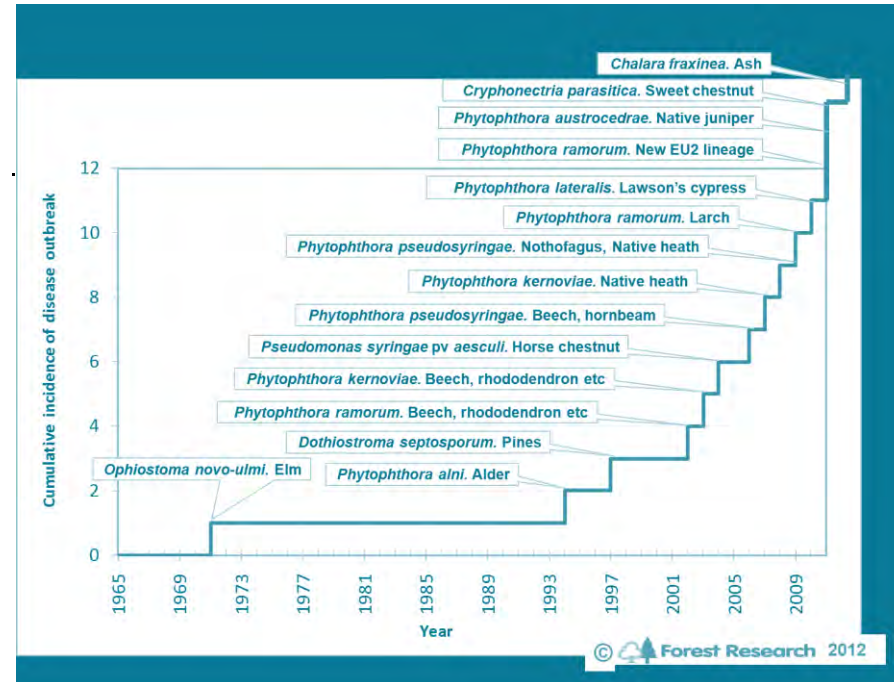


Phytophthora lateralis
FERA, York (GB)



Fusarium oxysporum f.sp. *lactucae*
Servizio Fitosanitario
Regione Emilia-Romagna (IT)

New tree/natural environment tree outbreaks 1970/2012 (Brasier, 2012)



Candidatus Liberibacter solanacearum



Chalara fraxinea



Cylindrocladium buxicola



Fusarium foetens



EPPO activities to help NPPOs to prevent entry and spread of pests

(crops, forests, natural environments)

- Identification of potential risks:
 - Early warning systems to identify emerging risks and maintenance of a database
 - Retrospective study on risks presented by imports of plant for planting
- Evaluation of potential risks: Pest Risk Analysis
- Recommendations for regulation (EPPO A1 and A2 Lists)
- Preparation of standards (e.g. official control standards, diagnostic protocols, inspection procedures....)

Provide information to EPPO members



Identification of potential risks



Early warning: the EPPO Alert List

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

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

EPPO Alert List
(last updated in 2010-03)

The purpose of the Alert List is to draw the attention of EPPO member countries to certain pests possibly presenting a risk to them and achieve early warning. Pests are marked with an asterisk* in the Table below when PRAs are planned or under development within EPPO. The entry date corresponds to the date when the pest was added to the Alert List.

Read a short [introduction on the purpose and maintenance of the EPPO Alert List](#).

Pest Names	Main host plants or habitats	PRA	Entry date
Insects and mites			
<i>Agrilus anxius</i> (Coleoptera: Buprestidae) *	Betula	*	2010-02
<i>Bactrocera invadens</i> (Diptera: Tephritidae)	Wide range of fruit crops (e.g. Citrus, Lycopersicon, Mangifera, Psidium)	*	2005-06
<i>Diaphania perspectalis</i> (Lepidoptera: Pyralidae)	Buxus	*	2007-11
<i>Diocalandra frumentif</i> (Coleoptera: Curculionidae)	Palmae	*	2003-05
<i>Drosophila suzukii</i> (Diptera: Drosophilidae)	Polyphagous (fruit crops)	*	2010-01

- ▶ Critically reviewed every year (when alert has been given and no further action taken, pests are deleted after 3 years on the list)
- ▶ Freely available on the EPPO website: www.eppo.org



EPPO Alert List



www.eppo.org

It provides information on:

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

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Pseudomonas syringae pv. *actinidiae*

Bacterial canker of kiwifruit

Why: Bacterial canker of kiwifruit caused by *Pseudomonas syringae* pv. *actinidiae* was first described in Japan in the 1980s causing damage in *Actinidia* orchards. The disease was then observed in Korea where it also caused economic losses. In the EPPO region, the disease was first noticed in Northern Italy in 1992 where it remained sporadic and with a low incidence during 15 years. But in 2007/2008 economic losses started to be observed particularly in the Lazio region and the possible spread of the disease to other kiwifruit producing regions in Italy began to raise concerns. Because *P. syringae* pv. *actinidiae* is currently emerging in the Mediterranean region, the EPPO Secretariat decided to add it to the EPPO Alert List.



All pictures were kindly provided by the Plant Protection Service of Emilia-Romagna (IT)
>> [View more pictures](#) >>

Where: Although *P. syringae* pv. *actinidiae* was originally described in Japan, its area of origin has not been ascertained. For example, comparison studies between Korean and Japanese strains showed that they have different phylogenetic origins.

EPPO region: Italy (Emilia-Romagna, Lazio, Veneto).

Asia: China (Anhui), Japan (Hokkaido (on *Actinidia arguta*), Honshu, Kyushu, Shikoku), Korea Republic.

Data is lacking on the situation of *P. syringae* pv. *actinidiae* in China (where *Actinidia* species originate from); only a small number of records were reported from the province of Anhui. In the literature, several papers mention the presence of *P. syringae* pv. *actinidiae* in Iran, but the original publication only refers to *P. syringae* pv. *syringae*.



EPPO study on the risks presented by imports of plants for planting

- ▶ Analysis of past experiences with new trade (new origins, new commodities) of plants for planting and their associated risks

Conclusions of the study

- Most EPPO countries operate under an “open” phytosanitary system, (a commodity that is not specifically prohibited can be imported).
- Under an open” system it is not possible to identify and address all potential pest risks.

Furthermore

- ▶ Ensuring adequate inspection and proper application of regulations, and taking action in case of non-compliance is very demanding for the importing countries.

There is evidence that the open system is contributing to the introduction of new pests into the EPPO region



EPPO study on the risks presented by imports of plants for planting: follow up actions

- ▶ Context: some EPPO member countries have initiated a re-evaluation of their plant health systems.
- ▶ EPPO is developing a **screening process** intended to be used in a context of a 'reverse strategy'

This document is currently under country consultation

- ▶ **Main concepts:**
 - an authorization would need to be given before a commodity of plants for planting could be imported.
 - the proposed screening process should allow a preliminary pragmatic and rapid identification of those that may pose the highest risks.



Evaluation of potential risks



Performing Pest risk analysis: EPPO Expert Working Groups for PRA

5 groups performed per year on 5 pests

Objectives:

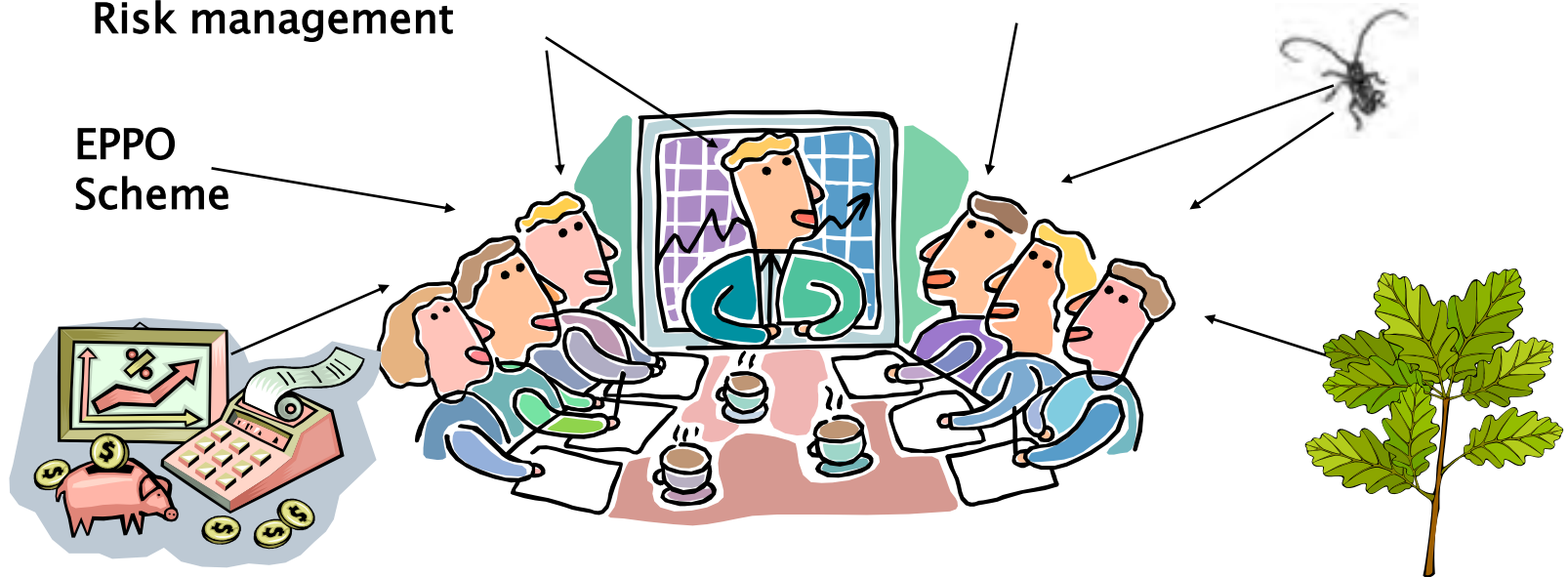
- Perform risk assessment
- Identify the endangered area
- Identify risk management options

Core members +
ad-hoc members

GIS and modelling
softwares (e.g. CLIMEX)

Risk management

EPPO
Scheme



Recommendations for regulation



Preparation of Standards



Identification of pests

- ▶ Diagnostic protocols on regulated pests (and confusion with look alike)
- ▶ New techniques incorporated as well as quality assurance and accreditation principles
- ▶ Need for expertise and Phytosanitary research , Maintenance of reference collections
- ▶ The consequences of continuing evolution in diagnostic techniques and taxonomy on phytosanitary regulations should be considered further.





Other activities and future activities

- Preparation of standards (e.g. official control standards, inspection procedures....)

Possible future EPPO activities



- ▶ More pathway/commodity analysis???



Plant Protection Products activities



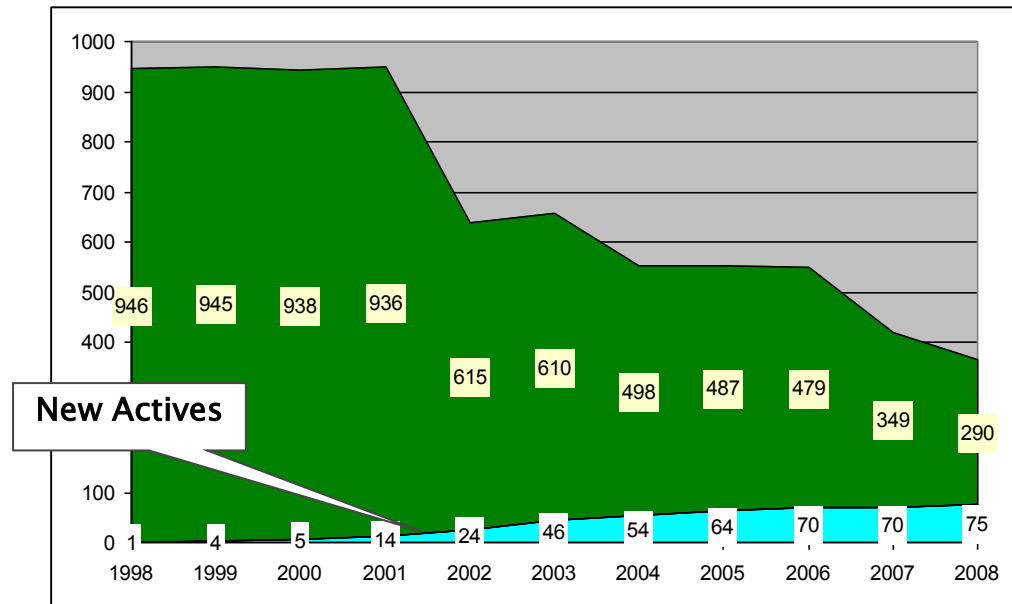
Plant Protection Products: the current context

Sustainable pesticide regulation

EU re-registration

Number of
registered active
substances
(between 1998 and 2008)

→ European Portfolio
Reduced by 62 %



Year of Annex I inclusion or non-inclusion

Increasingly difficult to control specific pests in a satisfactory way

One of EPPO's main priorities is to develop principles of good plant protection practice in the EPPO region



EPPO activities to ensure that principles of good plant protection practice are followed

- ▶ Development of Standards
 - efficacy evaluation more than 280 Standards
 - environmental risk assessment
 - good plant protection practices...

EPPO database on efficacy evaluation standards: <http://pp1.eppo.int/>

- ▶ Organization of conferences and workshops on themes related to plant protection

“current hot topics” include comparative assessment, zonal recognition, minor uses, resistance, ...





PP1/271 Guidance on comparative assessment

Application for a
PPP use



Comparison to other available control methods:
Non-chemical methods:
– Biological control
– Cultural control methods
Presently available chemical methods



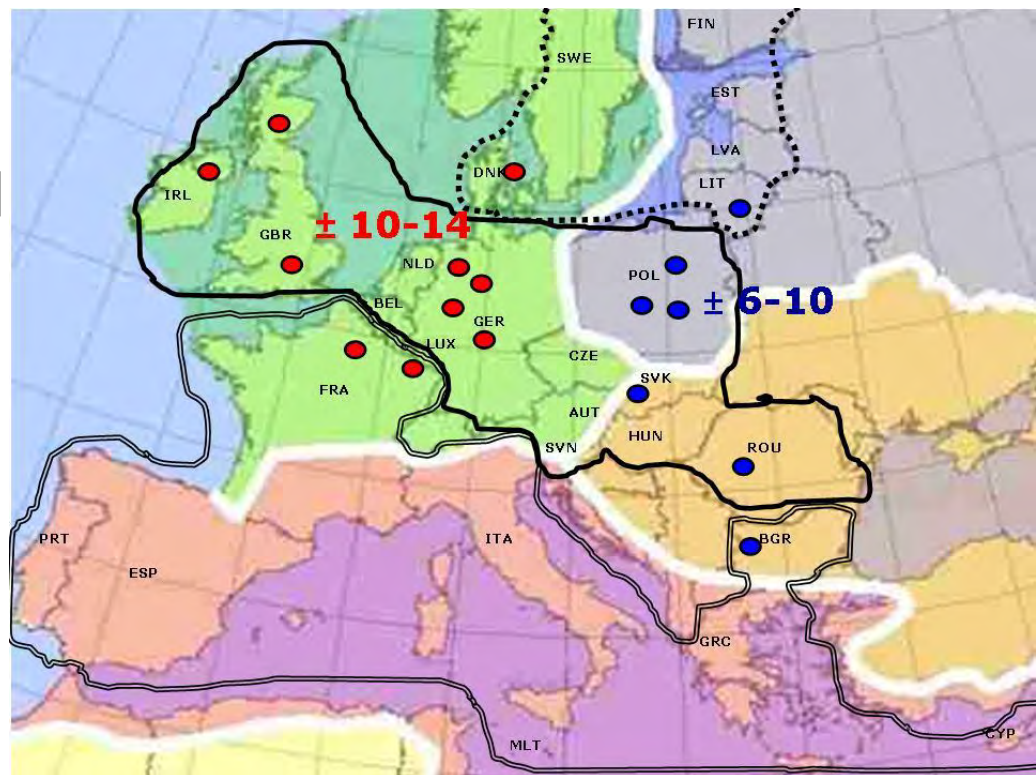
Regulatory decision

- ▶ PPP uses are compared to other products and management possibilities to test whether there is a true need for an authorization;
- ▶ Ensures that the approved control methods/systems are effective and sustainable;

PP1/278(1) Principles of zonal data production and evaluation: streamlining the registration process

- ▶ A new conceptual approach to PPP authorization
- ▶ Divides Europe into 3 Zones: North, Central and South
- ▶ PPP registrations are sought per zone (rather than per country)
- ▶ Harmonized guidance on how to organize a set of representative crop trials across a large geographical area.

Representation of EPPO climatic zones (in colour: EPPO Standard PP1/241, Guidance on comparable climates) superimposed with the three European zones (EC Regulation 1107/2009).



Specific examples under development will be added to a dedicated EPPO webpage



Minor uses



- ▶ Crop production varies from country to country.
- ▶ Some crop are of low economic importance at national level (minor crop),
- ▶ Some pest of limited importance on a major crop (minor pest).

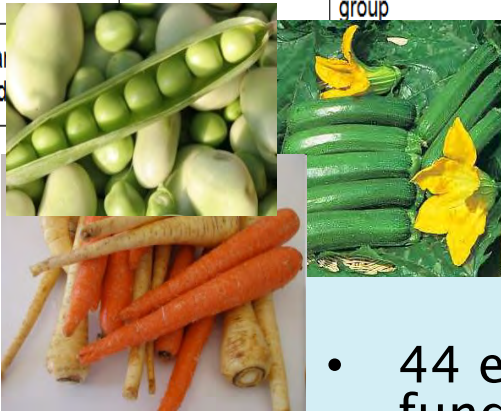
- ▶ It is not commercially viable for companies to assimilate the expensive data packages to support these registrations



What can be done?????



Progress with efficacy data extrapolation

2 Disease group name	3 Indicator crops	4 Extrapolation to other crops	5 Data from these crops can support the indicator crops (reduced data or no data *)	6 Extrapolation to other crops (reduced data or no data *)
Root rot	melon CUMME	All crops within the group	tomato LYPES, potato SOLTU	
Fusarium wilt	melon CUMME	All crops within the group	tomato LYPES	
Fusarium and			tomato LYPES, asparagus	Sweet basil
			tomato LYPES, potato SOLTU	chrysanthemum

2007 approval of EPPO Standard PP 1/257 Efficacy and crop safety extrapolations for minor uses

- Guidance on identifying solutions to crop protection problems and
- Reduction of efficacy data requirements

- 44 extrapolation tables on a range of crop groups for fungicides, insecticides and herbicides

<http://www.eppo.int/PPPRODUCTS/extrapolation/tables.htm>

EPPO is actively involved in international minor use activities (OECD, EU, FAO)



PP1/213 Resistance risk analysis

- ▶ Increasingly important part of the registration process
- ▶ Represents one of the general principles of IPM and CA
- ▶ Objective is to determine whether the proposed use pattern is acceptable
- ▶ Workshops are organized





Future activities related to IPM

- ▶ Work to support the regulatory process development of standards:
 - Principles of efficacy evaluation for pheromone based plant protection products
 - Guidance for assessing the impact of plant protection products on beneficial organisms in efficacy trials.

- ▶ IPM pilot project to update one of the existing GPP Standards (PP2)
 - Objective
Establish the feasibility of undertaking a revision of the standards in the series PP2.



In a changing environment, EPPPO's mission and strategy is adjusted regularly in order to better serve the needs of the regulatory bodies both in the area of plant quarantine and plant protection products.

Thank you for your attention!