



The European and Mediterranean Plant Protection Organisation

update on EPPO activities

Event: IPPC Regional Workshop for
Eastern and Central Europe and Central Asia

Date: 2017-09-5/8

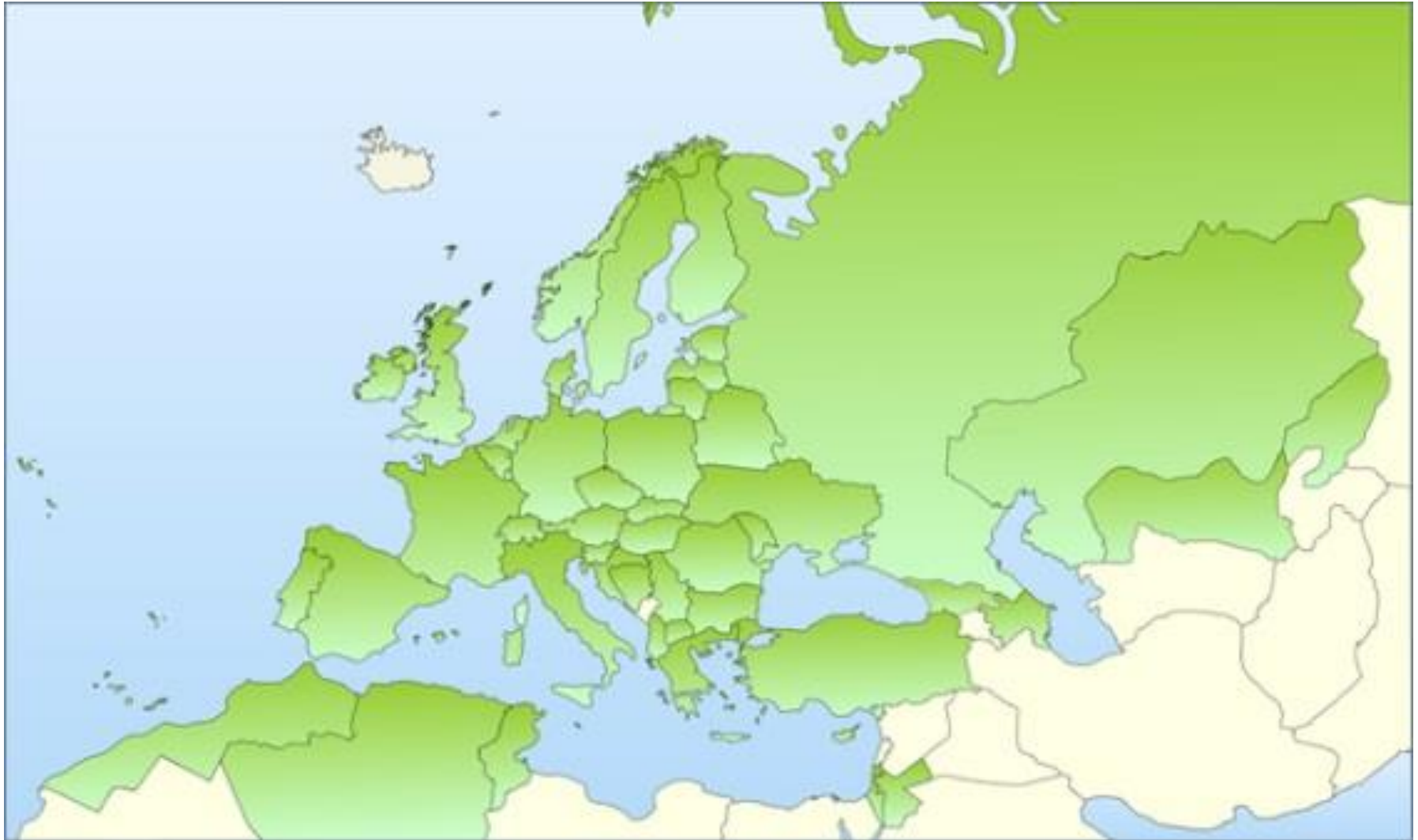
Martin Ward (Director General) - hq@eppo.int



1951 EPPPO Convention – 15 countries

Now 51 member countries

One of 9 RPPOs recognised under IPPC



Remit

- Plant quarantine
- Efficacy of plant protection products
- Invasive alien plants
- Biological control agents
- Plant certification and Regulated Non Quarantine Pests

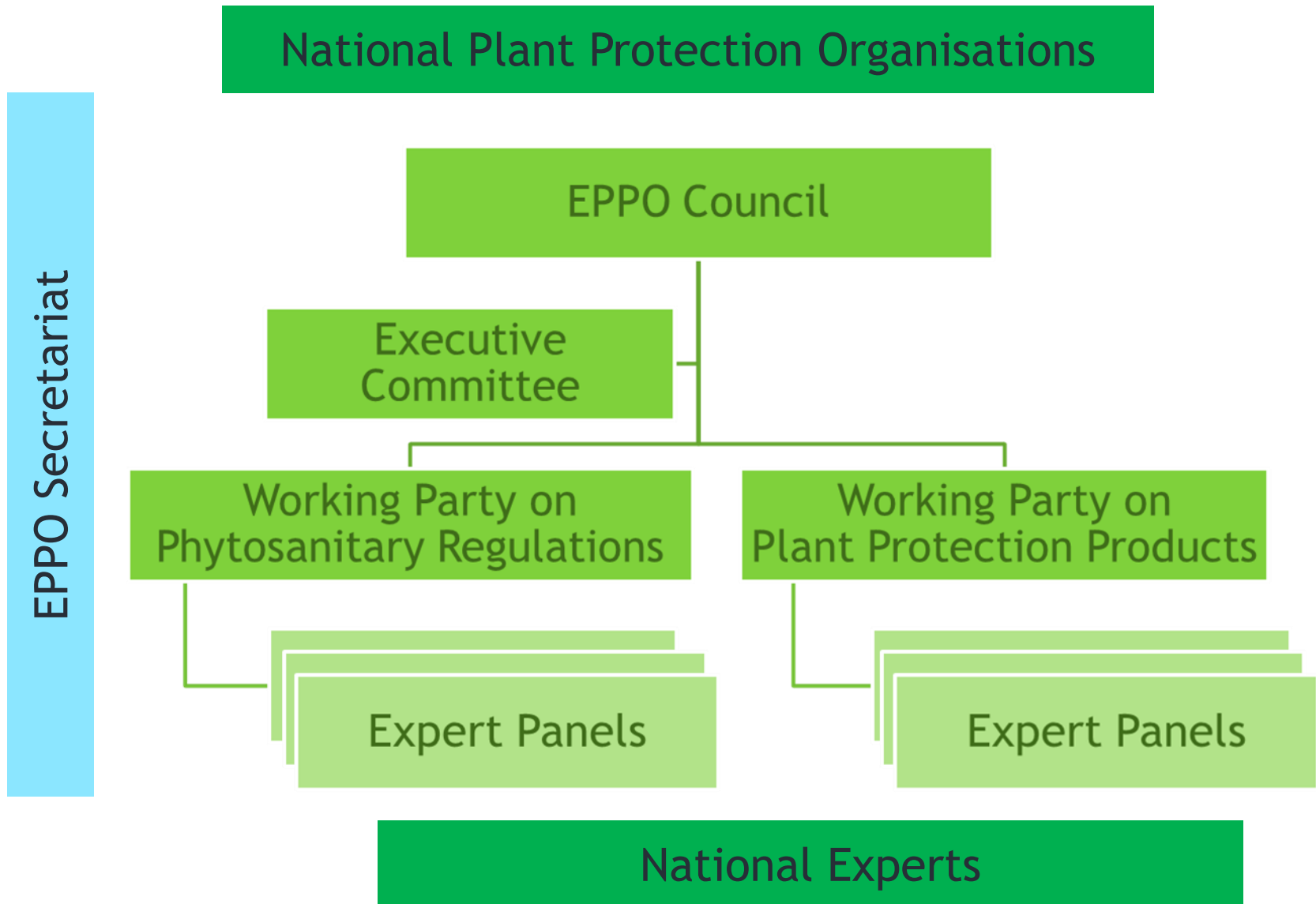
by:

- Drafting and adoption of regional technical standards
- Input to development of international standards
- Sharing information and expertise through networks

EPPO hosts Euphresco and the EU Minor Uses Co-ordination Facility which have their own funding and governance



Organisation



Active Panels

Plant Protection Products

- General Standards
- Herbicides
- Insecticides and Fungicides
- Resistance
- Harmonisation of Data Requirements

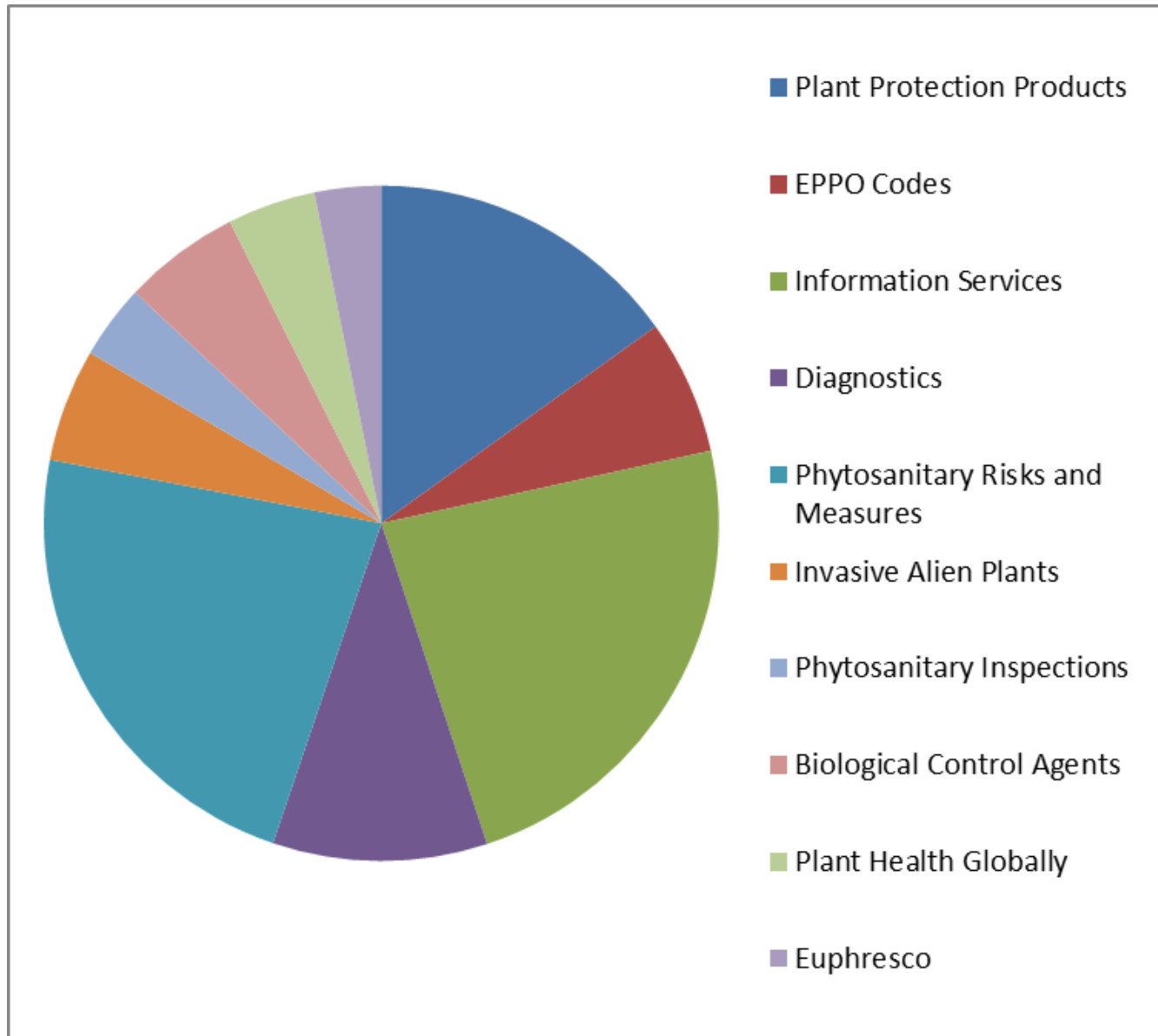
Phytosanitary Regulations

- Global Phytosanitary Affairs
- Phytosanitary Measures
- Forestry
- Potatoes
- Inspection Procedures
- Information
- Diagnostics (General) +
 - Entomology
 - Nematodes
 - Bacteria
 - Fungi
 - Virology
- Invasive Alien Plants
- Biological Control Agents

Resources, funding and work programme

- Nineteen staff (14 scientific, 5 admin/IT)
- Two thirds for core programme funded by countries
 - Annual work programme and budget agreed by Council
- One third for projects funded, at least in part, by others
 - Euphresco
 - EU Minor Uses Co-ordination Facility
 - Regulated Non-Quarantine Pests
 - Invasive Alien Plants Risks
 - Research projects (EMPHASIS, DROPSA, XFactors)

Core programme



Some developments since September 2016

- Communication kits for publicity campaigns
 - *Popillia japonica*, Huanglongbing, *Agrilus planipennis*
- Agreed methodology for assessing candidate RNQPs
- Guidelines on national reference laboratories, progress on flexible scope for accreditation and NGS
- 10 updated specific diagnostic protocols
- Questionnaire on regulation of biological control agents
- Adoption of new Standards
 - PM9 on regulatory control of *Popillia japonica*
 - PM3 on inspections for *Xylella fastidiosa*
- Preparation of new and revised Standards
 - Revision of PM9 Standard on *Bursaphelenchus xylophilus*
 - Development of PM9 Standard on agents of zebra chip disease

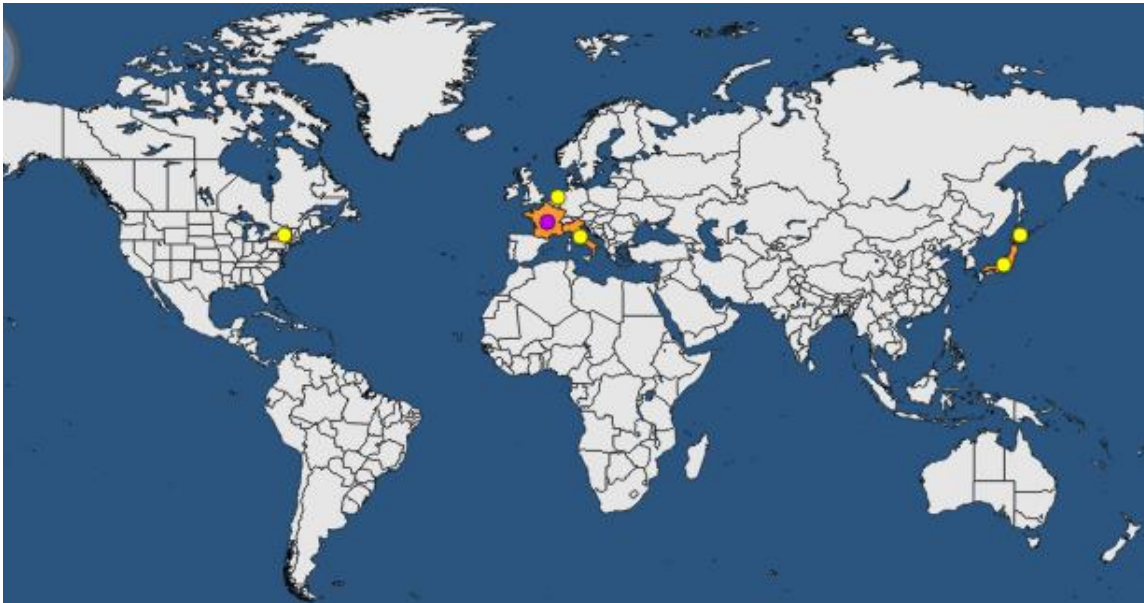
Some developments since September 2016

- 11 Plant pests recommended for regulation
 - *Meloidogyne mali*
 - *Citrus bark cracking viroid*
 - Candidatus *Phytoplasma phoenicium*
 - *Bactrocera latifrons*
 - *Ceratothripoides brunneus*
 - *Ceratothripoides claratris*
 - *Prodiplosis longifila*
 - *Thekoposora minima*
 - *Platynota stultana*
 - *Pomacea maculata*
 - *Pomacea canaliculata*
- 4 Invasive Alien Plants recommended for regulation
 - *Salvinia molesta*, *Pistia stratiotes*,
Gymnocoronis spilanthoides, *Cardiospermum grandiflorum*



Meloidogyne mali –syn. *Meloidogyne ulmi*

- apple root-knot nematode
- Main hosts : Wide range of trees and shrubs in several families (but likely to be wider than reported) and weeds
- Damage: root-galling, increased sensitivity, lower stability ► trees becoming uprooted in strong winds.

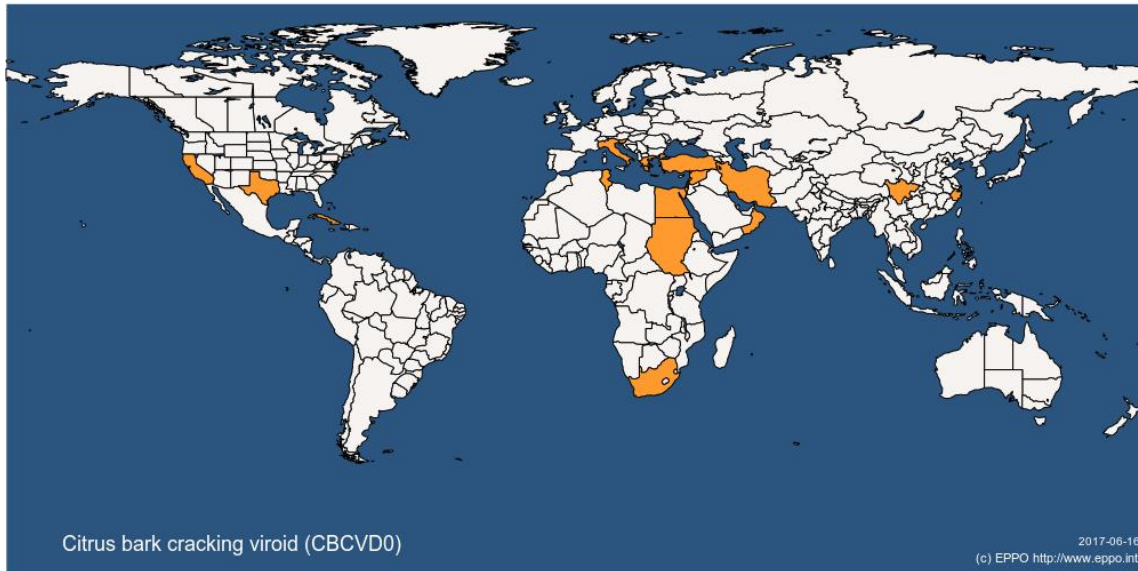


Conclusions *Meloidogyne mali*

- Endangered area: whole EPPPO region where hosts occur
- Phytosanitary risk: moderate with moderate uncertainty
- Measures to reduce probability of entry:
 - Host plants for planting with roots (including rooted cuttings; except plants in tissue culture), with or without soil or growing media: PFA, PFPP, physical isolation
- Recommendations:
 - Surveys where *Ulmus* from breeding programme
 - Surveys in nurseries on imported material
 - Increase awareness of nursery and forest/parks workers in relation to *M. mali* and other nematode-related problems

Citrus bark cracking viroid (CBCVd)

- Based on Slovenian PRA
- Minor pathogen on Citrus, causing severe disease on hop (*Humulus lupulus*)
- Main hosts :
 - Citruses (*Citrus* spp.; *Poncirus trifoliata*)
 - Hop (*Humulus lupulus*), only in Slovenia since 2014
- Damage: stunted growth, dieback



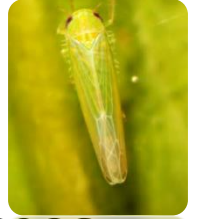
Conclusions *Citrus bark cracking viroid*

- Endangered area: hop growing areas in EPPO region
- Phytosanitary risk: moderate with low uncertainty
- Measures to reduce probability of entry:
 - Plants for planting of *Humulus lupulus* (other than seeds): PFA, PFPP, testing
 - Machinery, tools, persons: cleaning to remove plant parts, disinfection



'*Candidatus Phytoplasma phoenicium*'

- almond witches' broom
- Transmitted by grafting and insect vectors
- Vectors: leafhoppers or planthoppers *Asymmetrasca decedens* (Cicadellidae) + *Tachycixius* species + others?
- Vectors in Iran not known
- Only reported from Lebanon and Iran
- Host plants: *Prunus* species (+ weeds)



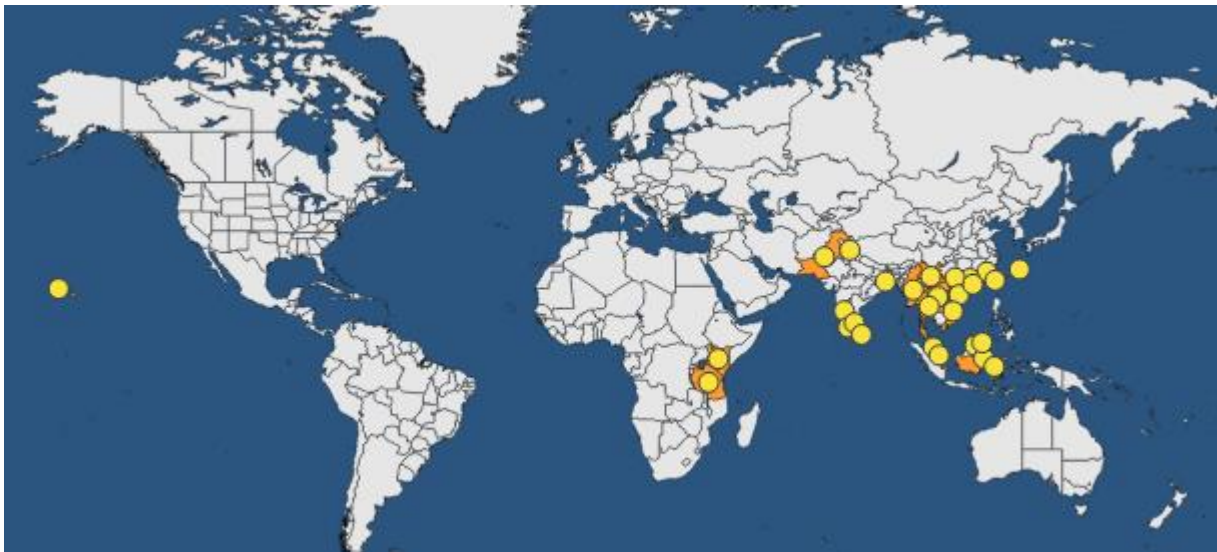
Conclusions *Phytoplasma phoenicium*

- Endangered area: where almond, peach, nectarine and apricot are cultivated and known vectors occur = Mediterranean Basin and Portugal, north to the southern part Germany and East towards the West of Russia, as well as the Near East and Central Asia
- Phytosanitary risk: High with moderate uncertainty
- Entry: plants for planting (partly regulated for EU: Iran but not Lebanon) and natural spread to neighbouring countries
- Measures to reduce probability of entry:
 - Prunus plants for planting (except seed): PFA or grown under physical isolation or tested in vitro plants



Bactrocera latifrons

- Diptera: Tephritidae (fruit fly)
- Main hosts = Solanaceae. 30 species, incl. *Solanum lycopersicum*, *Capsicum* spp. and *Solanum melongena*
- Other hosts in 11 families, incl. Cucurbitaceae
- Intercepted on fruit not known as hosts, incl. mangoes



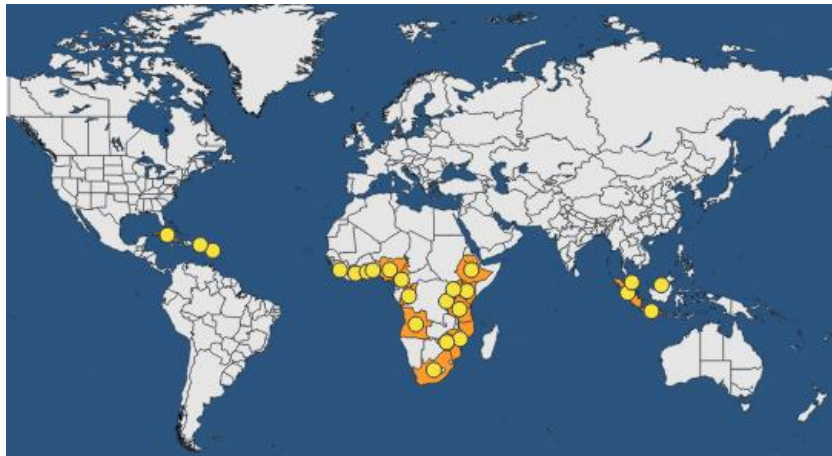
Bactrocera latifrons (female) [© USDA-ARS]

Conclusions *Bactrocera latifrons*

- Endangered area: Mediterranean Basin, Portugal and the South of the Black Sea coast
- Phytosanitary risk: moderate with moderate uncertainty
- Measures to reduce probability of entry:
 - Fruits
 - Plants for planting of cultivated hosts with fruit
 - Raising awareness for travellers and inspection of luggage

Ceratothripoides brunneus and *C. claratris*

- Thysanoptera: Thripidae
- Eggs, larvae, adults on leaves, stems and fruits
- *C. claratris* is a vector
- Main hosts = Solanaceae and Cucurbitaceae, incl. *S. lycopersicon*, *S. melongena*, *Capsicum*, *Citrullus lanatus*, *Cucumis melo*



Ceratothripoides brunneus



Ceratothripoides claratris

Conclusions *C. brunneus* and *C. claratris*

- Endangered area:
 - Outdoor: *C. brunneus*: coastal areas of the Mediterranean
 - Both species in glasshouses and other protected conditions (screenhouses/ polytunnels)
- Phytosanitary risk: moderate
Uncertainty: moderate (*C. brunneus*) / high (*C. claratris*)
- Measures to reduce probability of entry:
 - Plants for planting (except seeds and tubers) of cultivated hosts
 - Fruits
 - Cut flowers and herbs of cultivated hosts
 - Raising awareness for travellers and inspection of luggage



Prodiplosis longifila

- Diptera: Cecidomyiidae
- Adults, eggs, larvae above-ground, pupae in soil
- Different hosts at different locations
- South America: tomato in all countries + asparagus and *Capsicum annum* in Peru, or potato in Ecuador
- USA: *Gossypium*, *Citrus x latifolia*
- Confirmed hosts in 11 families

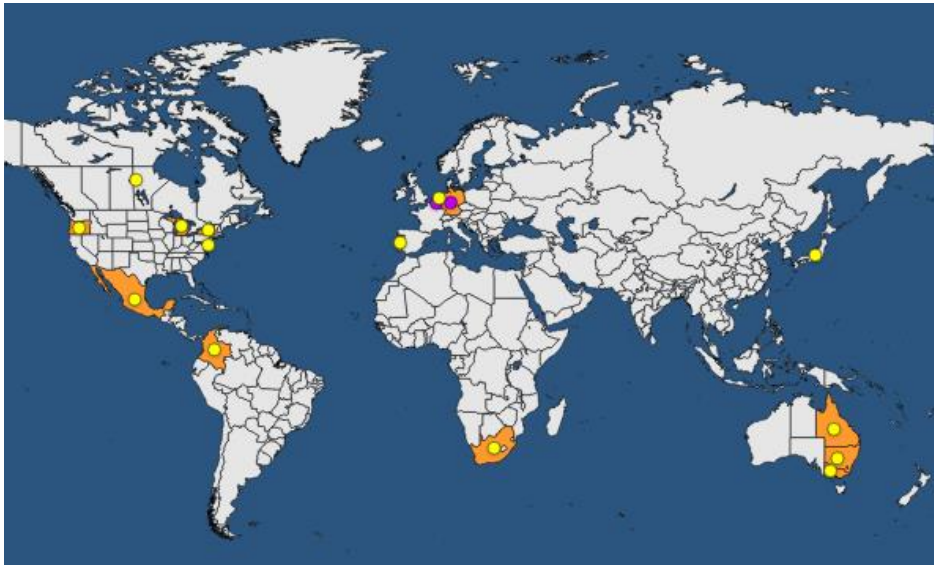


Conclusions *Prodiplosis longifila*

- Endangered area:
 - Mediterranean region, Portugal and the southern Black Sea coasts (and with a higher uncertainty the oceanic part of Western Europe), as well
 - indoors production
- Phytosanitary risk: high (uncertainty: moderate)
- Measures to reduce probability of entry:
 - Plants for planting (except seeds) of cultivated hosts
 - Fruits (e.g. tomato, Capsicum, Cucumis leki)
 - Cut plant parts (cut flowers and branches, cut herbs, leafy vegetables,) of cultivated hosts (e.g. asparagus)
 - Raising awareness for travellers and inspection of luggage

Thekopsora minima (Blueberry rust)

- Heteroecious rust (leaves of ericaceous plants / needles of *Tsuga* spp.)
- Main hosts :
 - *Vaccinium angustifolium*, *V. ashei*, *V. corymbosum*, *V. erythrocarpum*
 - Other *Ericaceae* (incl. *Rhododendron*)
 - Alternate host: *Tsuga* spp.
- Damage: defoliation, premature fruit drop



Conclusions *Thekopsora minima*

- Endangered area: where hosts are grown (outdoor and indoor), in particular evergreen *Vaccinium*. Damage higher in warm and wet conditions
- Phytosanitary risk: moderate with moderate uncertainty (very high impact if wild European *Vaccinium* susceptible)
- Measures to reduce probability of entry:
 - *Vaccinium* plants for planting (except seeds, tissue cultures, pollen): PFA, or Grown under complete physical isolation, or systems approach
 - Other host plants (*Tsuga*, other *Ericaceae*): no measure as low probability of entry (with moderate uncertainty)
 - No measures for fruit (but producers should be encouraged not to import bulk fruit to be repacked in place of production)

Platynota stultana - omnivorous leafroller

- Recommendations based on Spanish PRA
- Lepidoptera: Tortricidae
- Distribution: USA, Mexico, Spain (restricted distribution)
- Hosts: highly polyphagous. Preferred hosts: kiwifruit, bell pepper, Citrus, carnation, cotton, apple, plum, peach, pomegranate, pears, roses, blackberry, raspberry and grapevine
- Impact: high in USA and Mexico (low in Spain)
- Entry more likely with fruits in which larvae feed



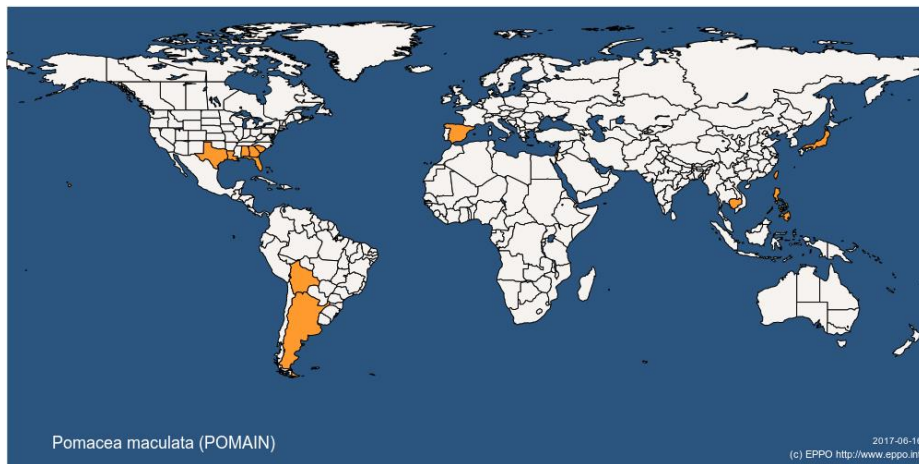
Conclusions *Platynota stultana*

- Endangered area:
 - outdoors: Southern Europe and Mediterranean Basin
 - Indoor: entire EPPO region
- Phytosanitary risk: high with medium uncertainty
- Measures to reduce probability of entry:
 - Entry from Spain is considered unlikely so measures could be less stringent (but further information to provided by Spanish NPPO)
 - Host plants for planting except seed (preferred hosts): PFA or grown under physical isolation, or dormant plants without fruit and leaves, or in vitro plants
 - Pomegranates, blackberries and raspberries, grapes and sweet peppers: PFA, or grown under physical isolation or Systems approach
 - Citrus, apples, plums, peaches, pears: without leaves and green parts
 - Cut flowers: PFA, or grown under physical isolation



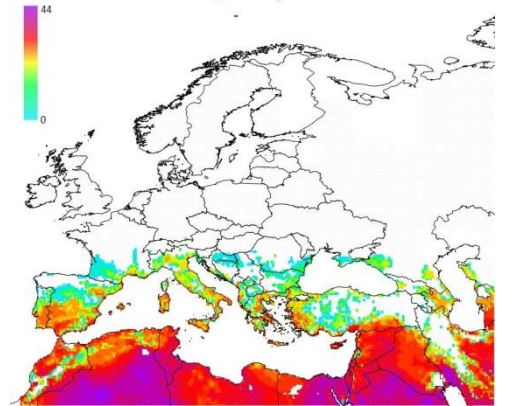
Pomacea maculata and *P. canaliculata*

- Apple snail
- Recommendations based on EFSA PRA
- Main hosts /habitats :
 - Rice (*Oryza sativa*) fields
 - Natural wetlands such as rivers, shallow lakes and ponds
- Impact on rice production, and ecosystem services in wetlands



Conclusions *apple snail*

- Endangered area: paddy rice and wetlands
- Phytosanitary risk: high with low uncertainty
- Measures to reduce probability of entry:
 - Intentional import of *Pomacea* spp.
 - ban on importation into the PRA area of the entire *Pomacea* spp.
 - ban on breeding and trade within the PRA area of *Pomacea* spp.
 - Plants for planting (excluding seeds) that can grow in water or soil that is permanently saturated with water:
 - PFA or PFPS or Physical isolation or inspection prior to export



Two activities hosted by EPPO with their own funding and governance



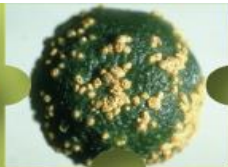
Euphresco (Plant Health Research Co-ordination)

- Started as an EU supported ERA-net in 2006
- Since 2014 a self sustaining network of partners who are funders and managers of plant health research
- Annual call for transnational research projects
- 2016 - 20 projects, total budget 2.5m€
- Projects typically small and short (relatively)
- All EPPO countries are now Euphresco members
- Additional members within EPPO region and beyond
- Fast track research commissioning (emergency response) under development



Euphresco

Network for phytosanitary research coordination and funding



EU Minor Uses Co-ordination Facility

- Started work September 2015
- Funded initially by EU, FR, DE and NL
- Uses “... in a particular Member State on plants ... which are not widely grown in that Member State, or ... to meet an exceptional plant protection need”
- Includes uses on newly arrived pests for which no approved products may be available!

