EFSA Plant Health Panel activities 2017-2020

Mike Jeger, Chair of the EFSA Plant Health Panel

efsa
European Food Safety Authority

OUTLINE

1. The Plant Health Panel at EFSA

2. Plant health Panel activities

- Supporting legislation
  - *2-step Pest Risk Assessment*
  (1)Pest categorisation
  (2) Pest Risk Assessment

  - *Quantitative pest risk assessment*

- Support to outbreaks /global threats (*Xylella*)

- Other activities

EFSA TOPICS FROM FARM TO FORK

Plant Health

Plant Protection

Genetically modified organisms

Animal feed

Animal health and welfare

Biological hazards

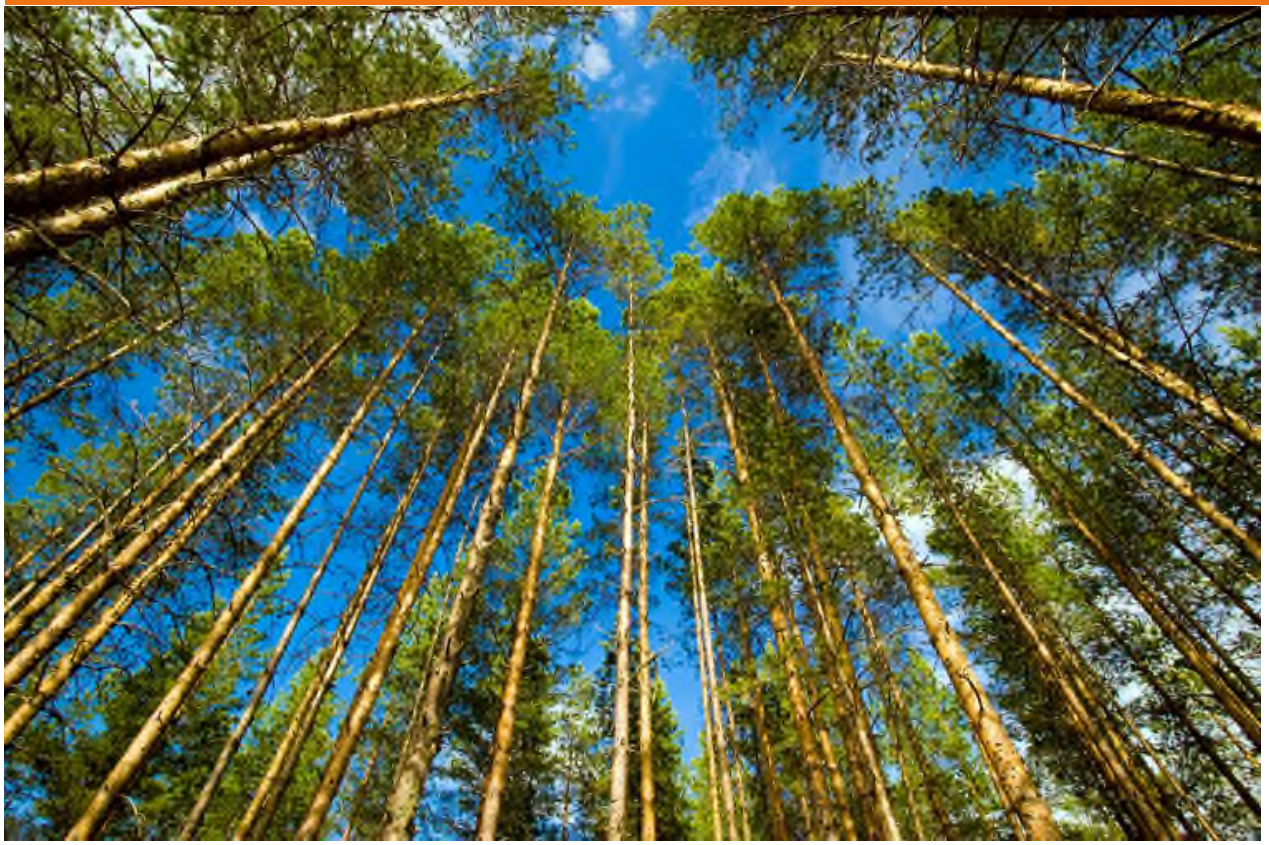
Chemical contaminants

Food additives

Food packaging

Nutrition

PLH PANEL



Objectives

- Provision of high-quality, independent and transparent **scientific advice to EU risk managers**
- Contribution to development of **science-based approach for phytosanitary pest risk assessment**

PLH Panel (4th term 2015-2018)

21 members of 10 different nationalities from academia, research and national authorities

(experts on plant pathology. bacteriology, virology, entomology, acaralogy, nematology, ecology, invasive plants, IPM, modelling, epidemiology, surveillance …)

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SUPPORTING LEGISLATION: LEGISLATIVE AND INTERNATIONAL FRAMEWORK

WTO SPS Agreement recognizes as standard setting organization for plant health the FAO's Secretariat of the **International Plant Protection Convention** https://www.ippc.int/

- **2002** Reg EC 178/2002. EFSA responsible for RA on food and feed safety, animal health and welfare, nutrition, plant protection and **plant health**
- **2006** Commission Regulation (EC) 575/2006. EFSA Scientific Panel on Plant Health established
- **2000** EU Plant Health Directive (Dir. 2000/29/EC)
- **2019** Dir. 2000/29/EC replaced by Reg. (EU) 2016/2031 **- NEW EU PLANT HEALTH LAW**

SUPPORTING LEGISLATION: RISK ASSESSSMENT FRAMEWORK

To conduct Pest Risk Assessment

Data

Methodology

STEPS

Pest Categorisation

Entry

Establishment

Spread

Impact

Evaluation of effectiveness of risk reduction options

Peer reviews

(e.g. of PRAs, EU trade partners' requests)

Scientific Opinions

Guidance documents

Scientific Opinions

SUPPORTING LEGISLATION:
2 STEP PEST RISK ASSESSMENT APPROACH

STEP 1

Pest categorisation

Opinion 1

ToR2 & Recommendation

RA scenario
- Risk Reducing Options
- Pathways

Interaction with the Risk Managers (EC/AWG/PAFF)

END

ToR 3 ?

STEP 2

Entry
Establishment
Spread

Impact
crops
environment

Risk Reducing Options
evaluation

Opinion 2

EFFICIENCY GAINS WITH 2-STEP RISK ASSESSMENT

40 Pest categorisations (2014-2015)

ONLY 20% REQUIRE CONTINUATION

8 Risk assessments

4 published in December 2016

1. *Flavescence Dorée Phytoplasma*
2. *Ditylenchus destructor*
3. *Ceratocystis platani*
4. *Cryphonectia parasitica*

4 completed by **May**/June 2017

1. ***Eotetranychus lewisi***
2. *Diaporthe vaccinii*
3. ***Radopholus simili***
4. ***Atropellis* sp.**

Pilot phase of the new Risk Assessment protocol

Next challenge: **133** pest categorisations

PEST CATEGORISATIONS 2017-2020

- EFSA was **mandated in March 2017** to deliver a **pest (hazard) categorisation** for **133** regulated **plant pests or groups** of plant pests
  - Insects & mites (60)
  - Fungi (32)
  - Bacteria (5)
  - Viruses (20)
  - Phytoplasma (2)
  - Nematodes (6)
  - Parasitic plants (1)
  - Plant Pest Groups (6)

- Work started, pest categorisation template updated, **first 4 opinions adopted in May 2017**
- 133 Pest categorisations will be delivered in three batches following legislative priorities (June 2018; end 2019; end 2020).

NEW QUANTITATIVE PEST RISK ASSESSMENT APPLIED

10 years of pest risk assessment by EFSA Plant Health Panel

Need for review of the RA methodology in Plant Health
Scientifc Committee Draft Uncertainty Guidance

Phase 1: 2015/2016
4 pilot studies
-Development and testing

4 scientific opinions published end 2016

Phase 2: 2016/2017
4 further studies
-Fine tune
-tool-kit validation

3 scientific opinions adopted May 2017

New quantitative approach for Pest Risk assessment

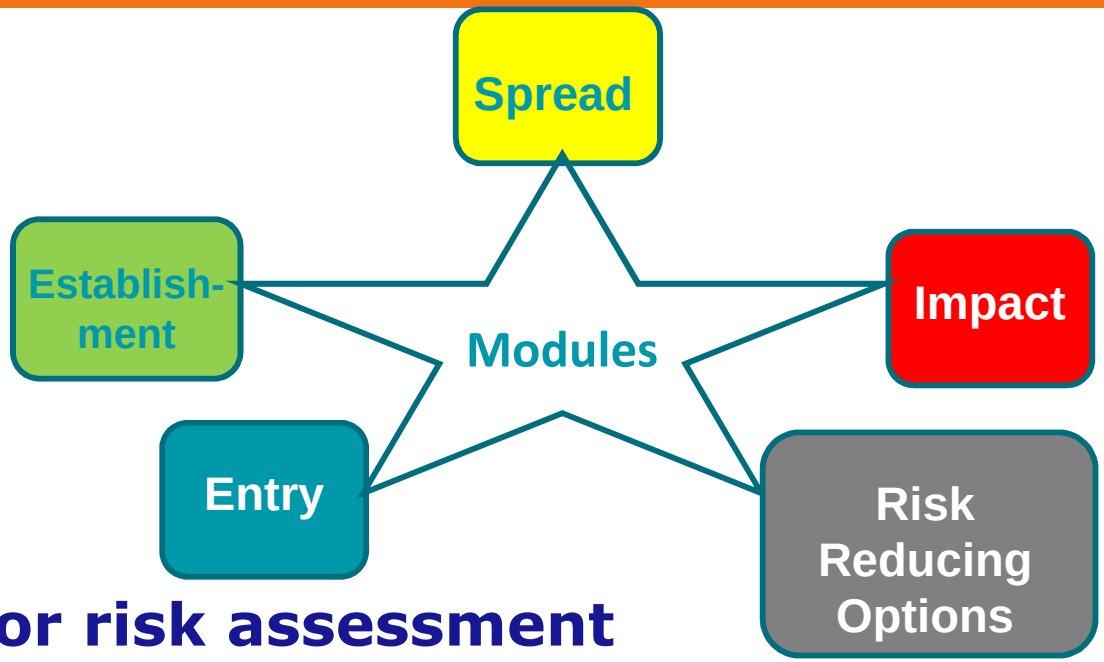
- Feedback by Panel, WGs, Commission, PAFF and Annexes WG
- Online tool available by end 2017
- Public consultation by end 2017 and Guidance adoption in 2018

A NEW METHODOLOGY FOR PRA – ADVANTAGES

- New approach fully in line with **International Standards**
- **Two steps** → better use of resources
- More **transparent**
- **Clearly defined scenarios** systematically addressed
- Risk assessment **based on real data/**uncertainty
- **More targeted documents**
- **Quantification based on measurements and estimates in the real world**: helps to assess measures
- **Uncertainties:** more specifically expressed

WHAT IS NEW AND HOW IS IT DONE?

- **Conditional assessment**: modules
- **Scenarios:** Assessors and Managers **interact** to define them



- **Transparent method for risk assessment**
- **Systematic identification/evaluation of Risk Reducing Options**
- **Integration of Risk Reducing Options and Risk Assessment**

→ **HOW MUCH AND WHERE RISK IS REDUCED**

→ **More fit for purpose approach based on 3 pillars**

PILLAR 1 – PLAN AND ADAPT THE ASSESSMENT

- **Definitions specific for the assessments to be conducted**
  - Pathways
  - Units: Pathway unit and sub-units, transfer unit, spatial unit
  - Definition relevant to the impact: production unit, SPU, Endangered area

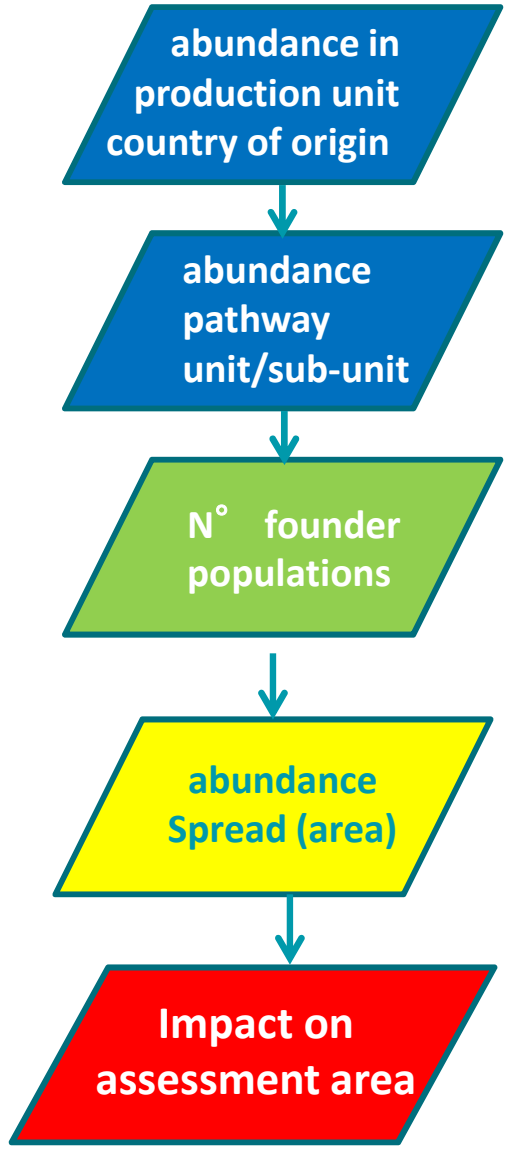
- **Scenarios for the assessments to be conducted**
  - Pathways
  - Risk Reducing Options
  - Ecological factors and conditions
  - Scales: extent and resolution

Interaction and clear ToR

PILLAR 2 - BASE THE ASSESSMENT ON ABUNDANCE

Mechanistic and population-based

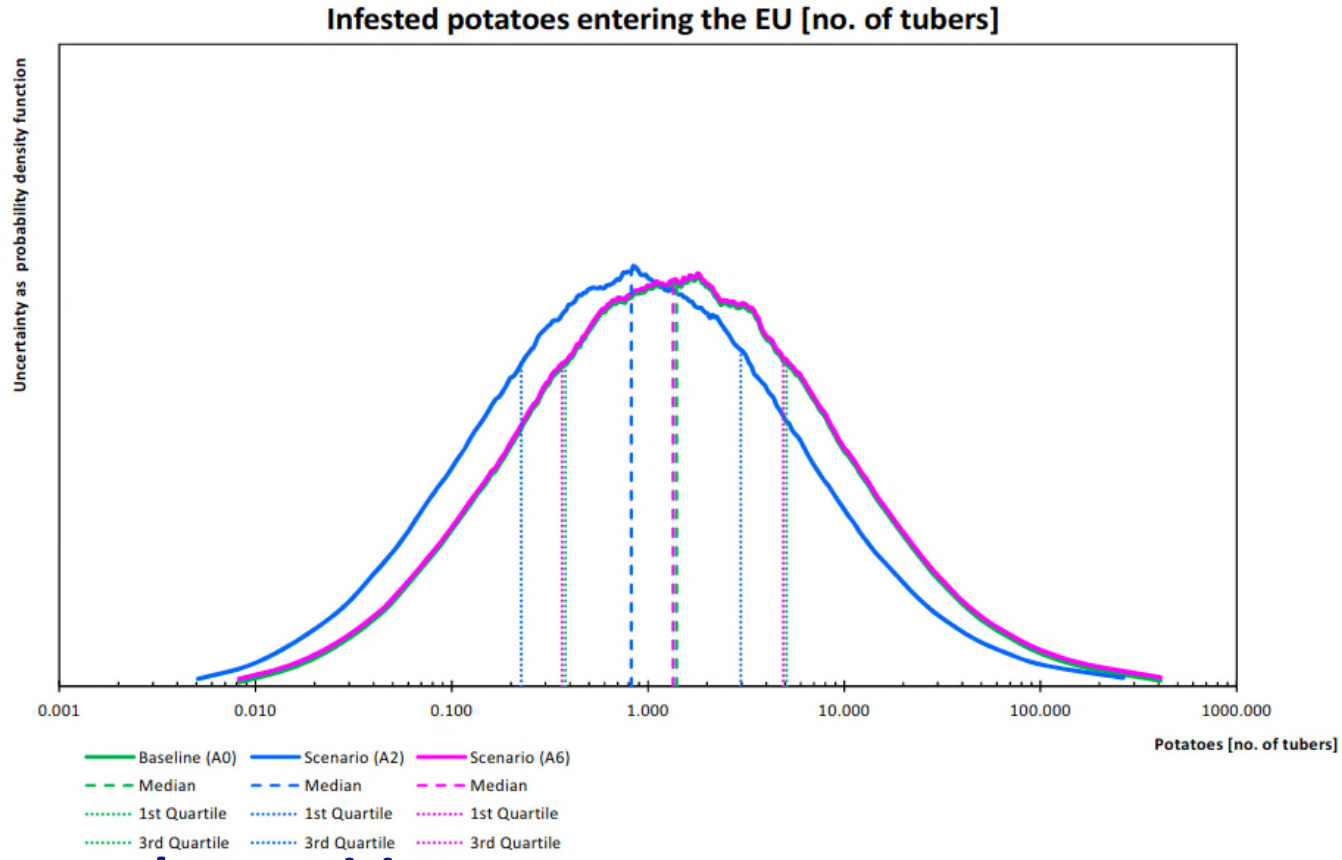
- Flow of events and processes: all steps and sub-steps are connected
- Full integration of the Risk Reducing Options in the framework
- Reasoning is based on biological relevance



PILLAR 3: GO QUANTITATIVE

- **Measurable variables**
- **Probability judgement**

→ New approach to combine knowledge and uncertainty



More consistency by **using real quantities**, e.g.:

- Number of infected potatoes entering the EU
- Number of new established pest populations
- Area of newly infected plants
- Tons of produce lost due to the pest

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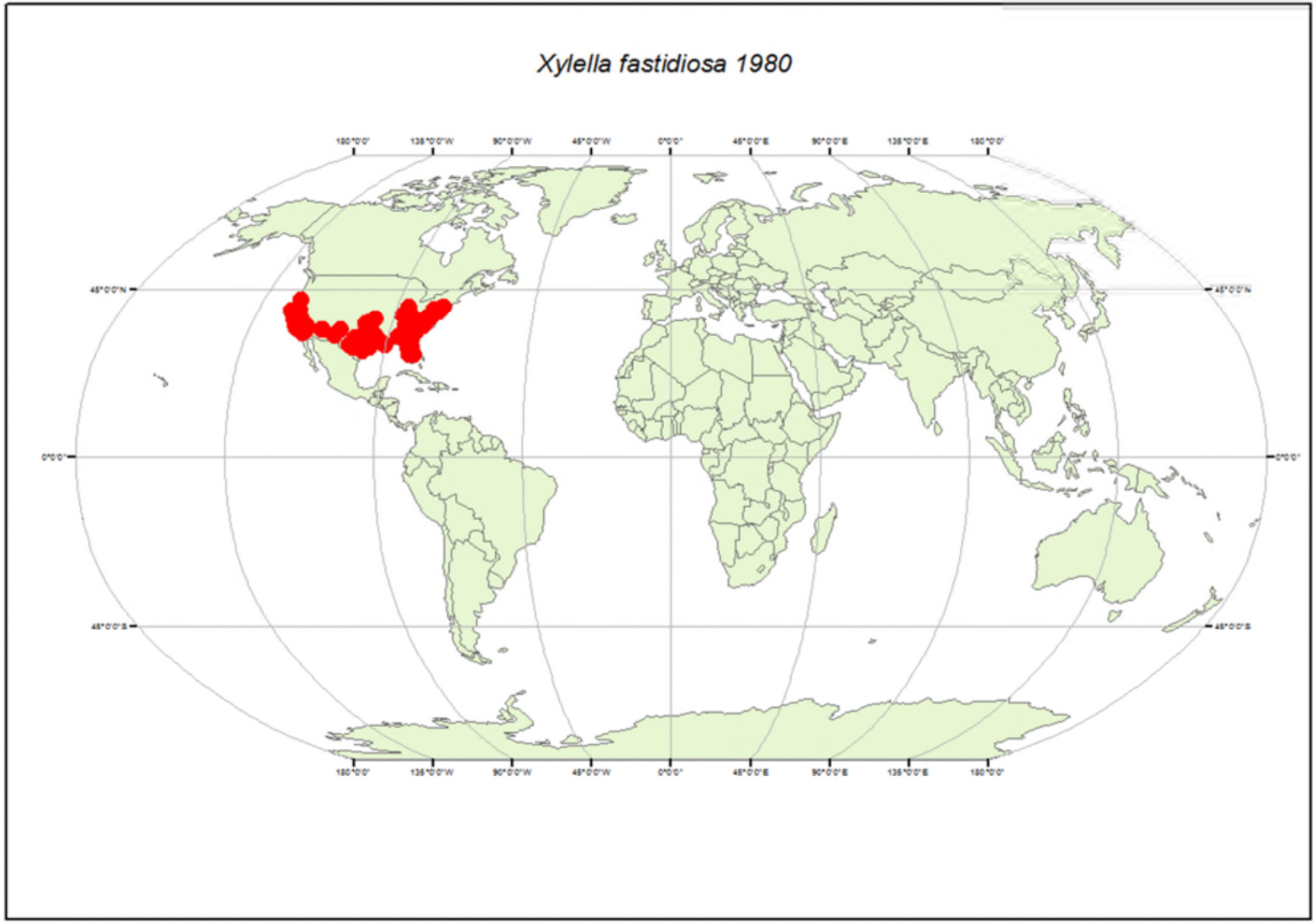
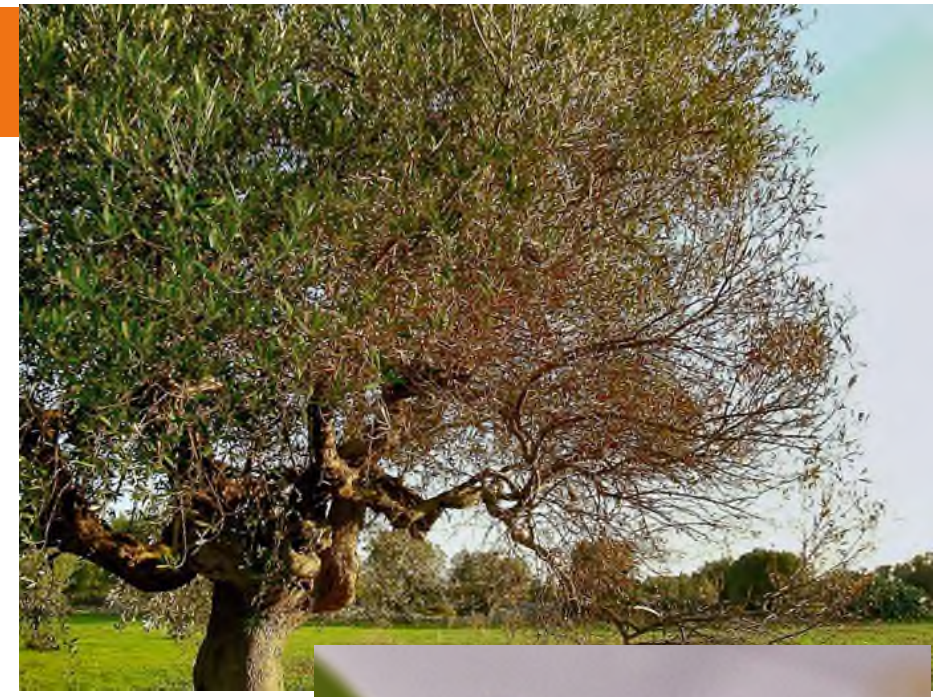
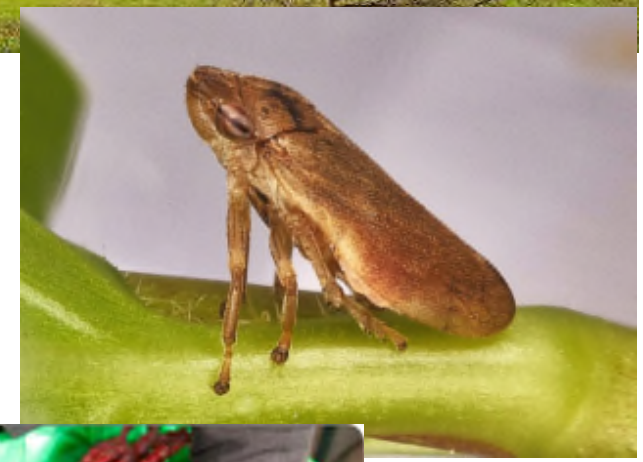
XYLELLA FASTIDIOSA: GLOBAL SPREAD FROM LITERATURE REPORTS



EFSA PLH PANEL SUPPORT TO *XYLELLA OUTBREAKS*

1. EFSA PLH Panel, 2015a. Scientific Opinion on the risks to plant health posed by *Xylella fastidiosa* in the EU territory, with the identification and evaluation of risk reduction options. EFSA Journal 2015;13(1):3989 [262pp.]
2. EFSA PLH Panel, 2015b. Hot water treatment of *Vitis* sp. for *Xylella fastidiosa*. EFSA Journal;13(9):4225 [10 pp.]
3. EFSA PLH Panel, 2015c. *Vitis* sp. response to *Xylella fastidiosa* strain CoDiRO. EFSA Journal 2015;13(11):4314 [20 pp.]
4. EFSA PLH Panel, 2016a. Scientific opinion on four statements questioning the EU control strategy against *Xylella fastidiosa*. EFSA Journal 2016;14(3):4450 [24 pp.]
5. EFSA PLH Panel, 2016b. Treatment solutions to cure *Xylella fastidiosa* diseased plants. EFSA Journal 2016;14(4):4456 [12 pp.]
6. EFSA PLH Panel (EFSA Panel on Plant Health), 2016. Statement on diversity of *Xylella fastidiosa* subsp. *pauca* in Apulia. EFSA Journal 2016;14(8):4542, 19 pp. doi:10.2903/j.efsa.2016.4542
7. EFSA Panel on Plant Health (PLH), Jeger M, et al, 2016. Statement on susceptibility of *Citrus* spp., *Quercus ilex* and *Vitis* spp. to *Xylella fastidiosa* strain CoDiRO. EFSA Journal 2016; 14(10):4601, 19 pp. doi:10.2903/j.efsa.2016.4601
8. EFSA Panel on Plant Health (PLH), Jeger M, et al, 2016. Statement on susceptibility of *Phoenix roebelenii* to *Xylella fastidiosa*. EFSA Journal2016;14(10):4600, 11 pp. doi:10.2903/j.efsa.2016.4600





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COMMODITY-BASED RISK ASSESSMENTS FOR EU

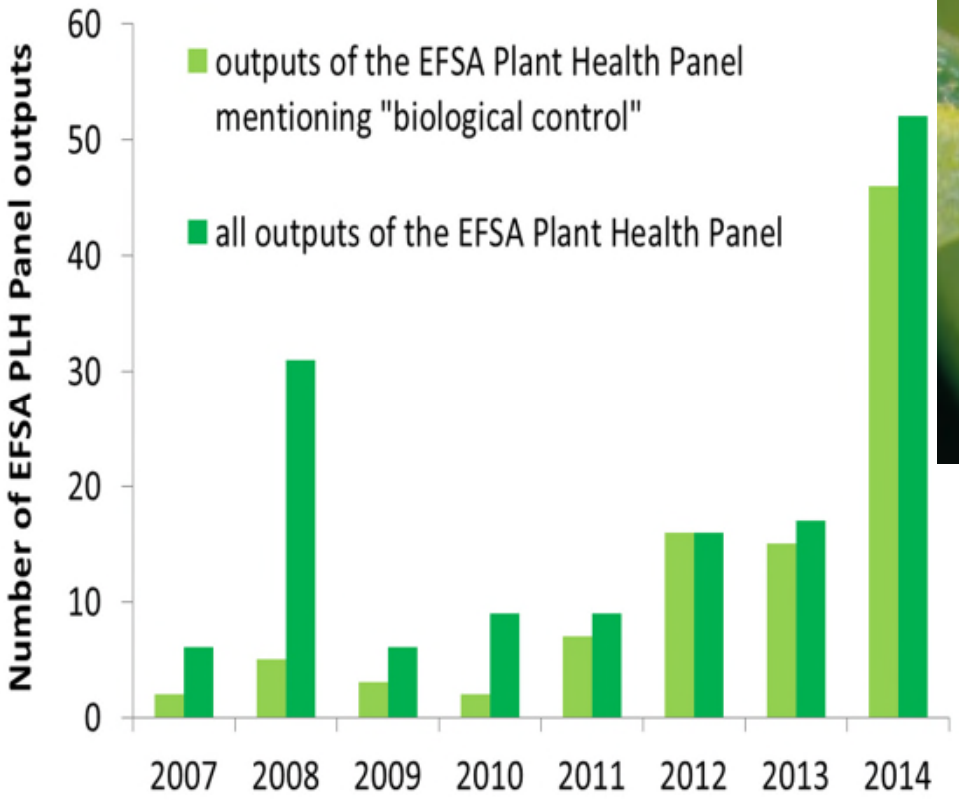
Risk of plant viruses introduction with pollen of *Prunus, Malus, Pyrus, Cydonia, Fragaria, Ribes and Rubus.*
SEPTEMBER 2013

Risk for plant health posed by import of soil and growing media (including evaluation of current EU measures)
MAY 2015

Quantitative pathway analysis models for non-food (wood, plants, seeds, cut flowers / **MAY 2015**) and food commodities (cereals, apple, plum, orange / **FEBRUARY 2016**) OUTSOURCED

POSSIBLE FUTURE WORK
Specific commodities risk assessments for the EU?

RISK ASSESSMENT FOR INVERTEBRATE BIOCONTROL AGENT



Trichilogaster acaciaelongifoliae

(photo courtesy of J.H. Hoffmann, Univ. of Cape Town)

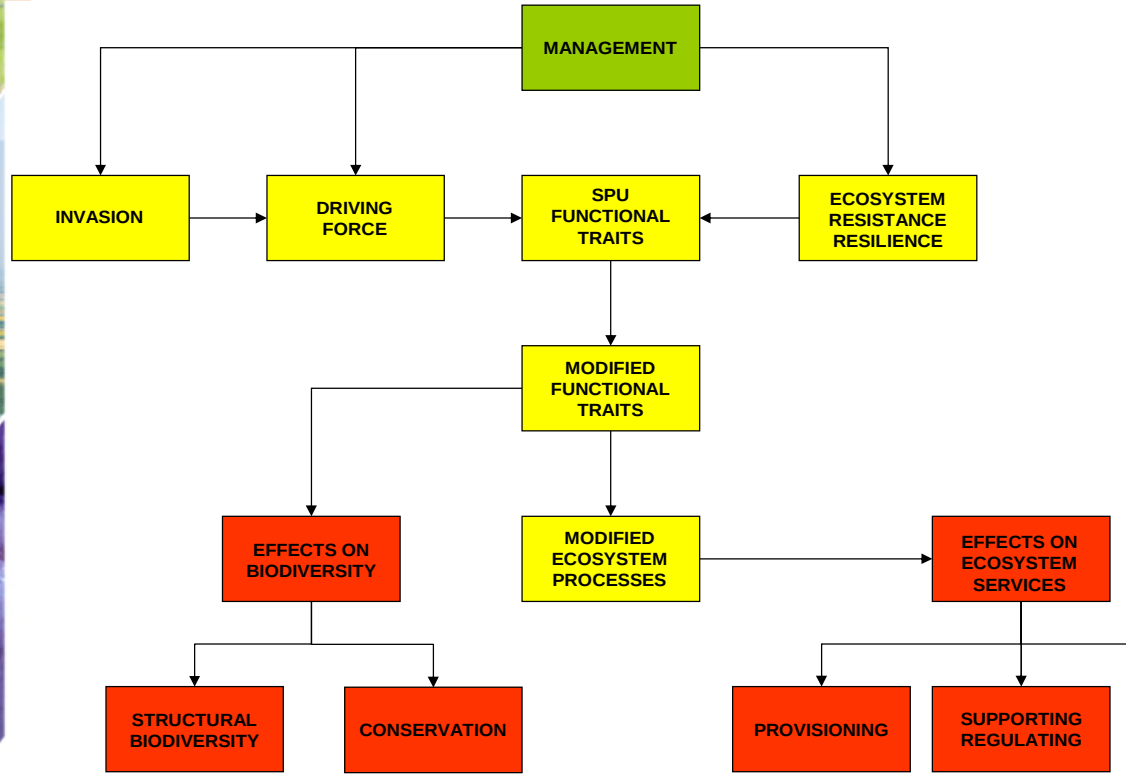
Acacia longifolia in Portugal

(photo courtesy of invasoras.uc.pt)

Statement on the assessment of the risk posed to plant health in the EU territory by the intentional release of biological control agents of invasive alien plant species

http://www.efsa.europa.eu/en/efsajournal/pub/4134

ENVIRONMENTAL RISK ASSESSMENT OF PLANT PESTS



Assessment of

- the effect on biodiversity
- the effect on ecosystem services (SPU → modified functional traits → modified ecosystem processes → change in ES provision levels)

Guidance on the environmental risk assessment of plant pests

http://www.efsa.europa.eu/it/efsajournal/pub/2460

Ongoing

- **Integration within the new Quantitative RA**
- **Alignment with other ERA**

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