



Department
for Environment
Food & Rural Affairs

The UK's response to European and International plant health matters, and coordinated initiatives on Plant Health in Europe

Nicola Spence Chief Plant Health Officer

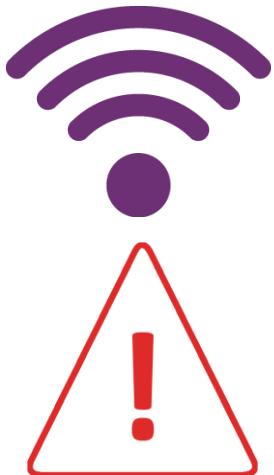
@plantchief



Defra's Strategy : Creating a great place for living 2016-2020



- A cleaner, healthier environment, benefiting people and the economy
- A world-leading food and farming industry
- A thriving rural economy, contributing to national prosperity and wellbeing
- A nation better-protected against floods, animal and plant diseases and other hazards, with strong response and recovery capabilities



Delivering the GB Plant Biosecurity Strategy

 www.gov.uk/defra

Department
for Environment
Food & Rural Affairs

Protecting Plant Health
A Plant Biosecurity Strategy for Great Britain
April 2014




Llywodraeth Cymru
Welsh Government


Forestry Commission


The Scottish
Government



The Five P's of Plant Health

Predict

- Systematic and proactive screening of new and emerging risks
- International Plant Sentinel Network of botanical gardens and arboreta

Prevent

- Targeted inspections at the border to intercept high risk trades
- Restrictions on movement and import of high risk species and products

Protect

- Aerial and ground based surveillance for high priority pests
- National control programmes for Phytophthora and Ash dieback

Prepare

- Generic and pest-specific contingency plans to strengthen our response
- World leading research and modelling to support response and recovery

Partnering

- Sharing information and responsibilities with communities and businesses
- A nationwide network of trained citizen scientists

Predict



UK Plant Health Risk Register



Department for Environment, Food & Rural Affairs

Search for a Pest or Organism

794 pests in the Risk Register

- Preferred Name
- Synonym
- Common Name
- Host

Advanced Search

Download Entire Risk Register

About

The UK Plant Health Risk Register is a major step in implementing the recommendations of the independent Task Force on Tree Health and Plant Biosecurity. It is a tool for government, industry and stakeholders to prioritise action against pests and diseases which threaten our crops, trees, gardens and countryside. The Register is publicly available.

Risk Register News

Additions to the Risk Register

31/07/2015

The following pests have been added to the Risk Register recently:...

[View More](#)

Pest Interceptions 21/07/2015

The following pests have all been recently intercepted or detected in the UK. They are considered to...

Example Searches

Show pests marked as a priority for...

Which entries are pests of *Fraxinus*?

Which entries are pests of *Solanum*?

About Plant Health

What's New

Latest Pest Risk Assessments

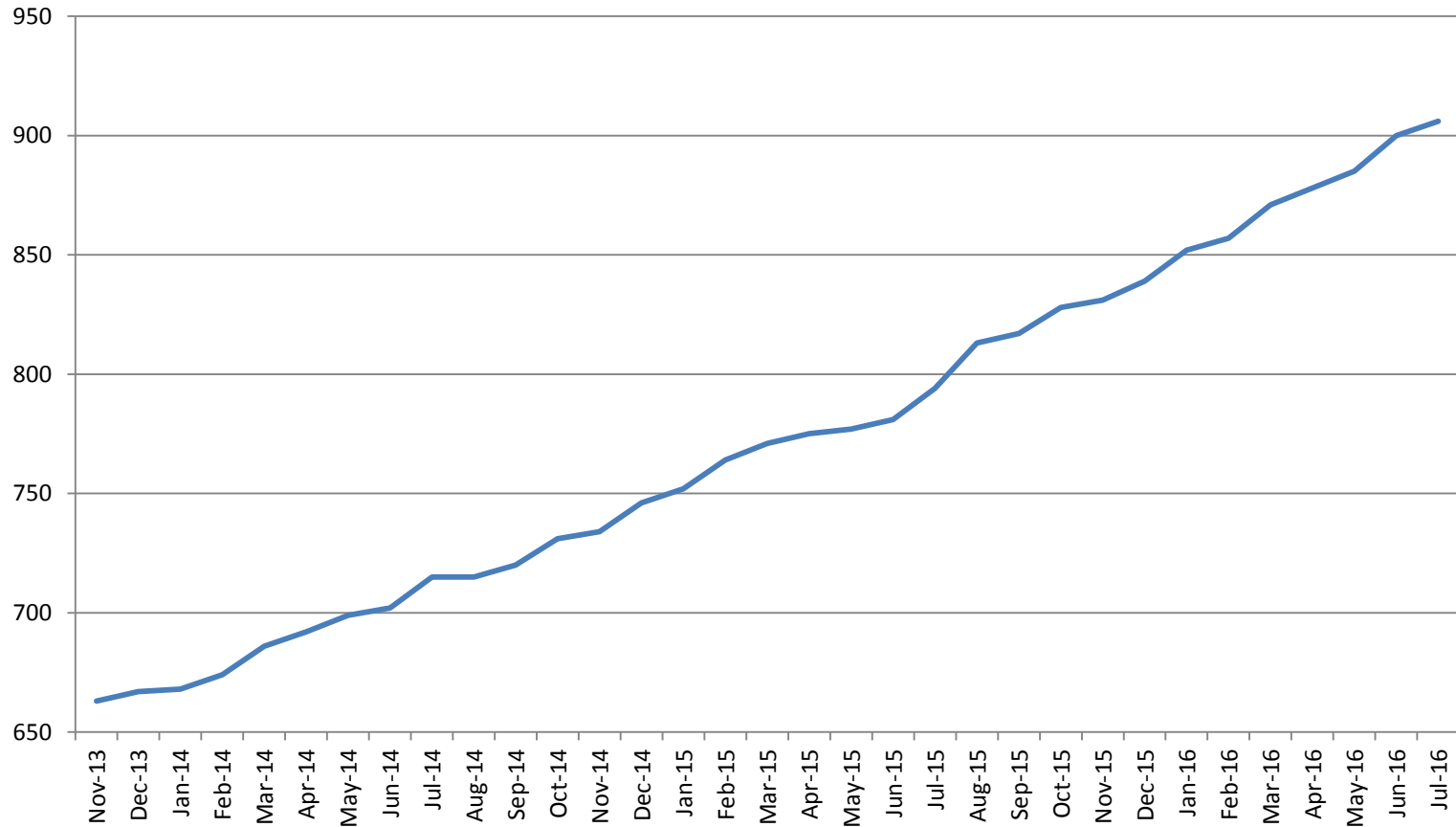
Legislation

Licensing of non-native biocontrol



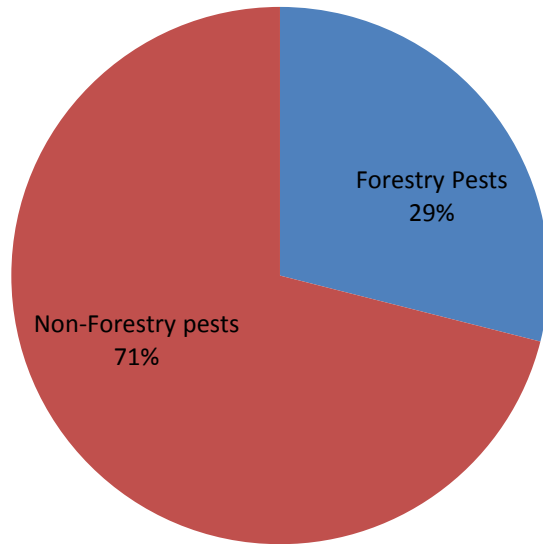
Risk register progress

Number of Pests on the Risk Register

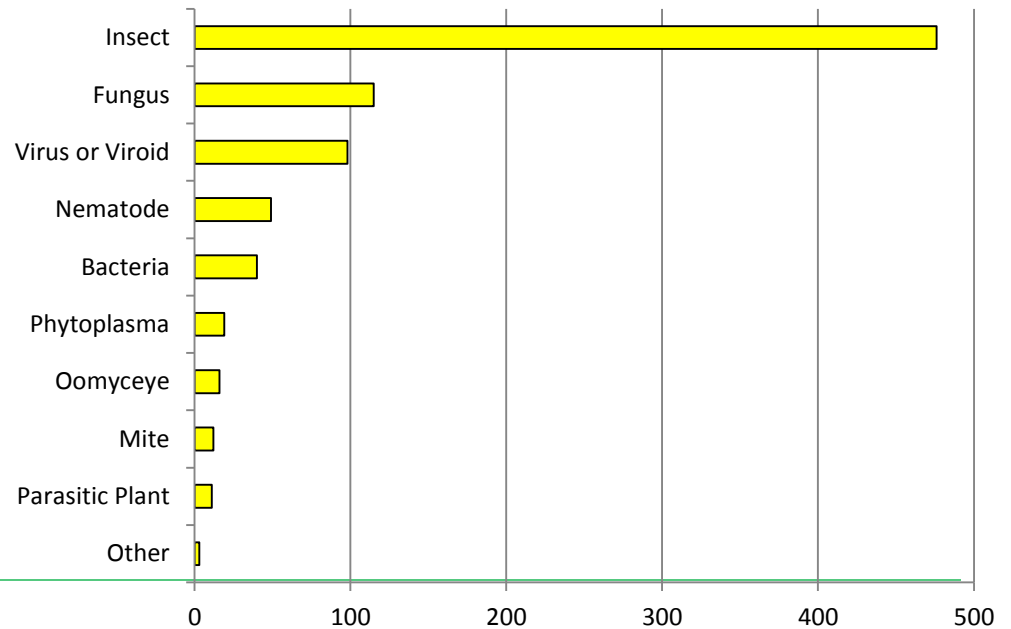


Priority pests

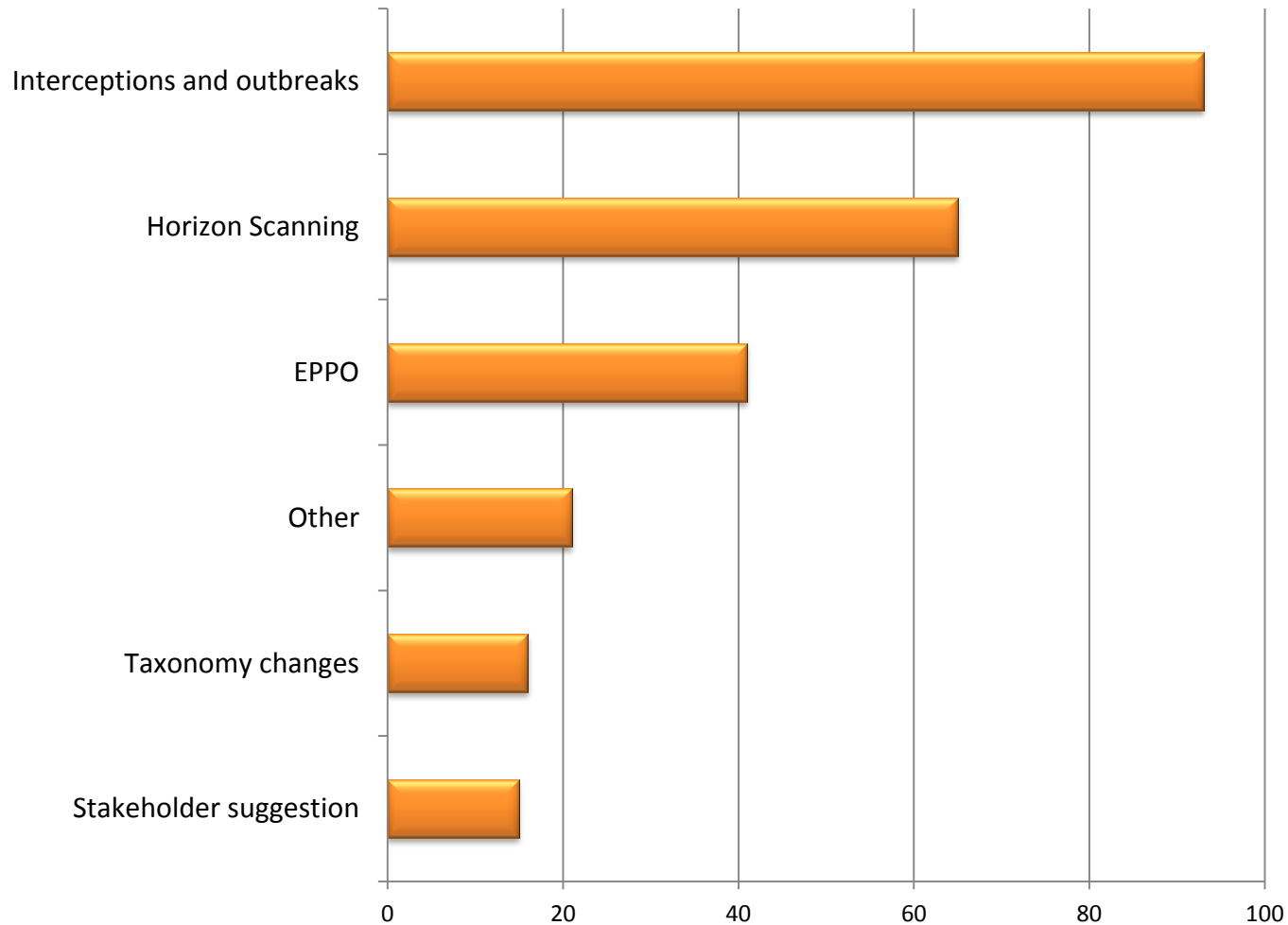
Forestry versus Non-Forestry



Risk Register by Pest Type

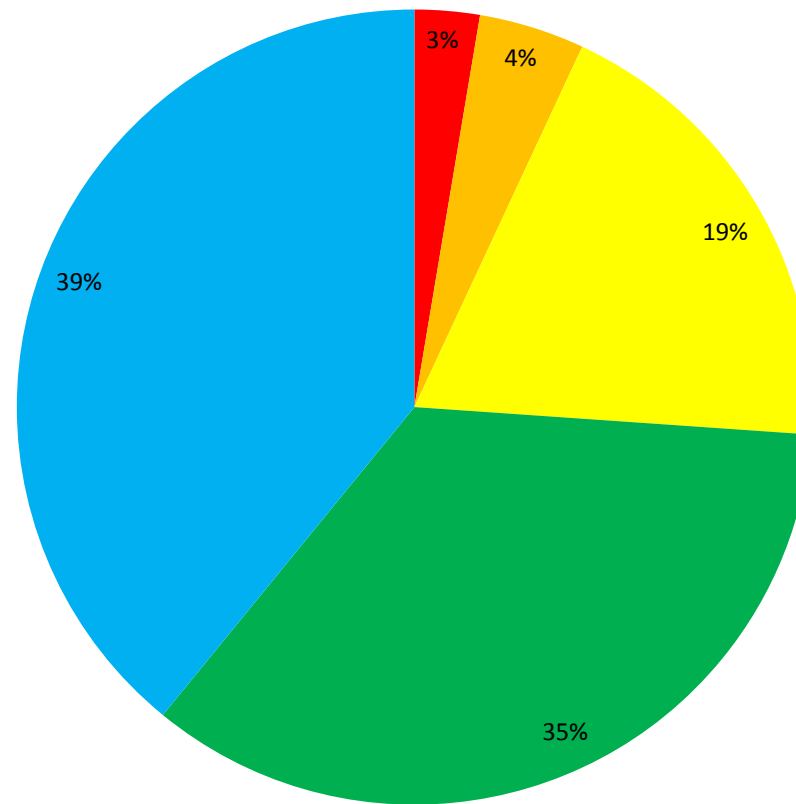


Reasons for new risks

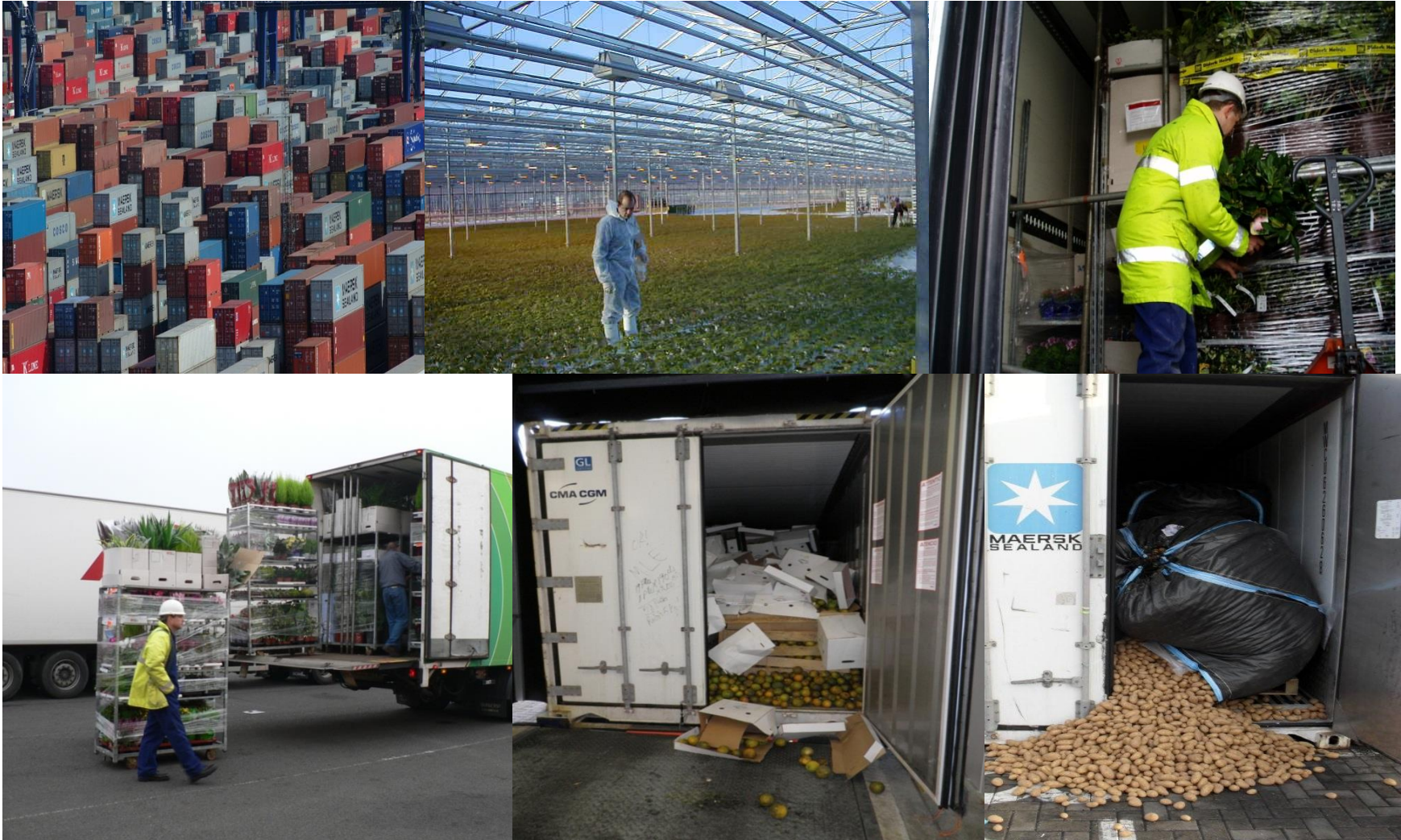


Percentage of pests in each risk category of risk ratings 0 - 125

July 2016



Prevent



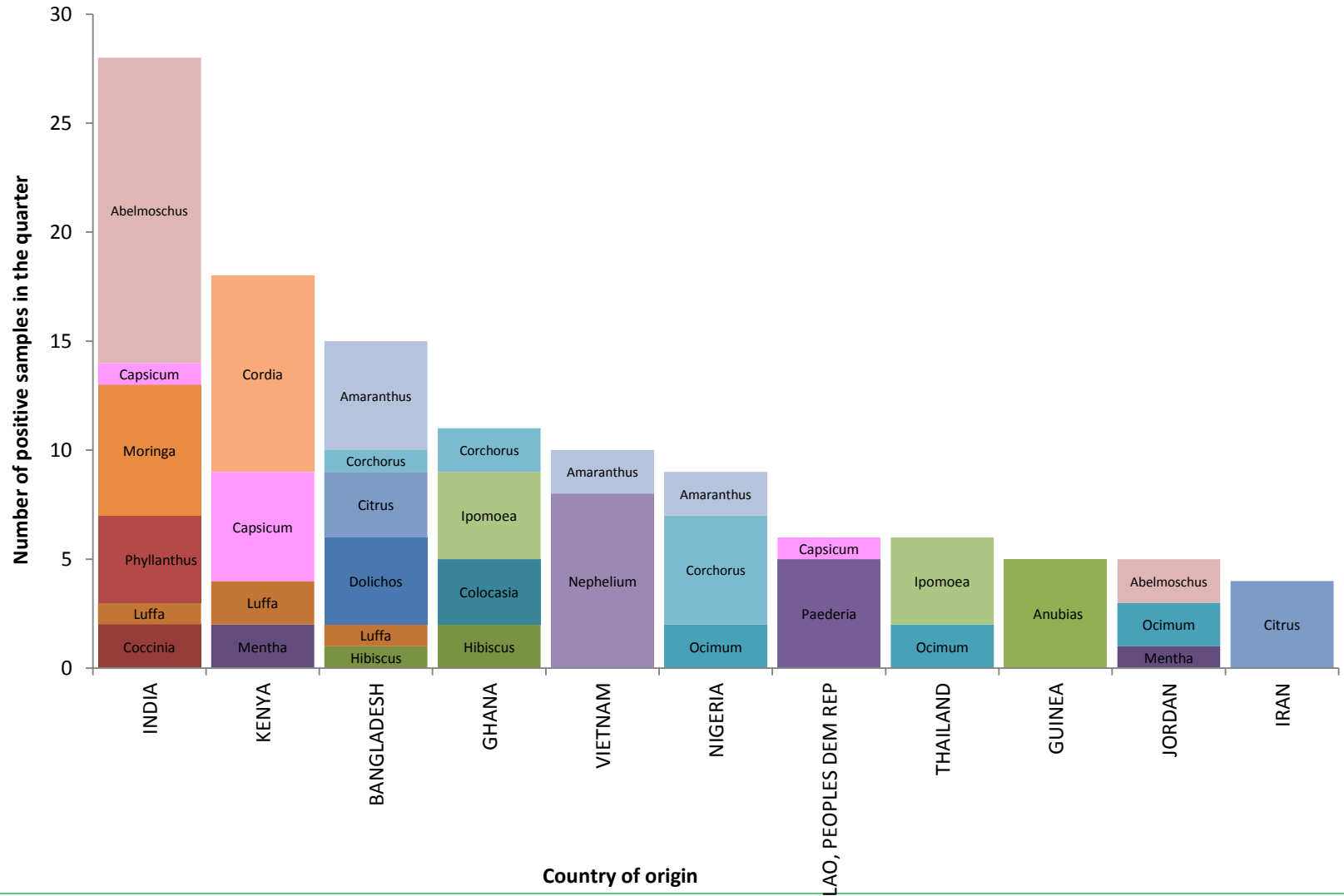
Prevent



Non-compliant wood packaging



Third country interceptions

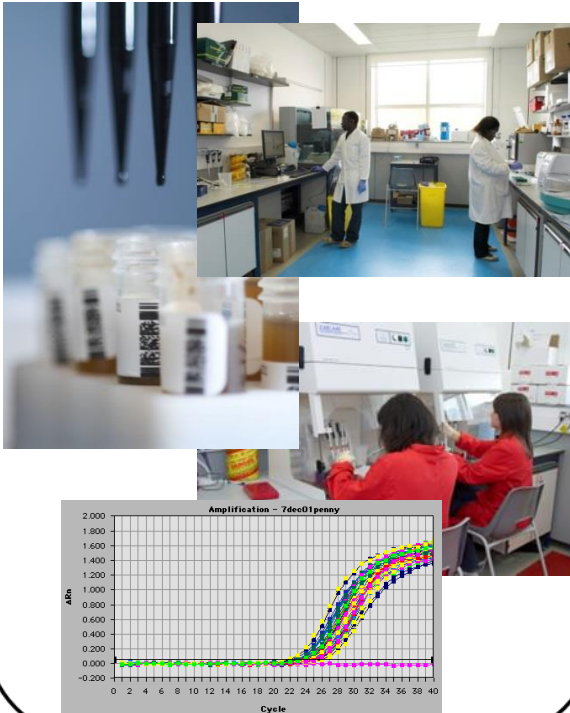


Protect

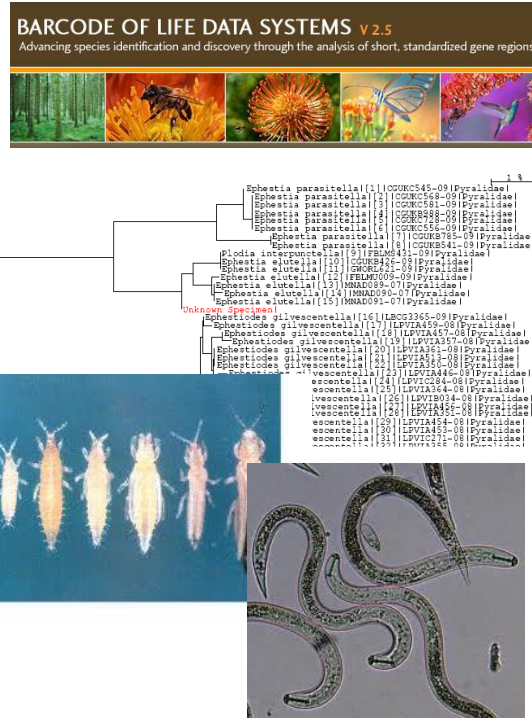


Protect

Real-time PCR
= high throughput



DNA barcoding
= identification



LAMP - Genie
= on-site



Prepare

MailOnline

Science & Tech

THE Sun

Deadly ash disease found in Britain puts 80 MILLION trees at risk

Site Web Enter your search

- Ash dieback has been discovered at countryside sites in East Anglia
- Ash trees make up 30 per cent of the UK's wooded landscape
- Forestry Commission declares national emergency quarantine
- Government will ban ash imports on Monday and introduce tight restrictions on movements of the tree around the country

Fears as ash tree disease is found



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development

Dieback has affected 90% of Denmark's ash trees. Britain faces a similar threat

A killer fungus has attacked ash trees across northern and central Europe, prompting pleas for the UK to ban sapling imports. But it may already be too late



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NEWS

The ash is history — oak could be next

Dieback disease will be followed by other disasters unless we take action soon, say experts

News > UK > Home News

Deadly ash tree 'dieback' disease now found in 115 sites and a further six counties

HOMELESS VETERANS

DO NOT READ OUR

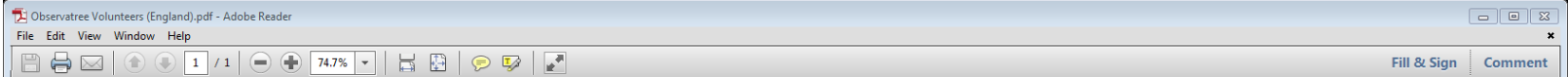
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Partnering

Funded by the EU's LIFE programme



Observatree
monitoring tree health

Have you seen this..?

— Oriental Chestnut Gall Wasp —

Galls formed by immature stages of oriental chestnut gall wasp on sweet chestnut leaves

Oriental chestnut gall wasp adult
2.5-3.0 mm

A gall on the midrib of a chestnut leaf

A sweet chestnut fruiting

You can learn more about the project and the pests and diseases we are most concerned about, please visit www.observatree.org.uk

If you think you have seen something unusual and would like to find out what you need to report, please visit www.forestry.gov.uk/trealert

Observatree Volunteers in England

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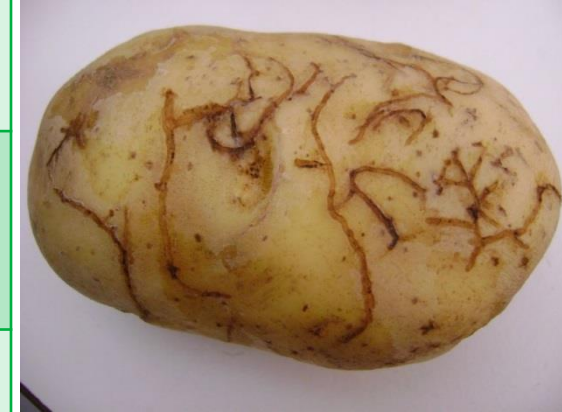
Date: 22.03.15
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Author:



Potato flea beetles: *Epitrix* spp.

Key risks

What is the threat?	Larvae of these beetles could damage UK potato crops if introduced from Europe (Portugal and Spain) or the Americas.
How would/does it get here?	Larvae and adults could travel with ware potatoes from Portugal or Spain.
How does it affect potatoes?	Larvae feed on the tubers, producing both surface tunnelling, but also deeper holes.
Other impacts	Yield is not affected, but commercial value is. Damage can be so severe that crops become unmarketable.
How quickly does it spread?	Natural spread is likely to be local, between fields. Long distance spread more likely via infested tubers.
How controllable is it?	Insecticide treatments are used for control in Europe and North America. Eradication difficult unless detected very early.
Current and proposed actions	Potato tubers are prohibited from the Americas. Tubers imported from Spain and Portugal are pre-notified and a proportion are inspected.



Potato tuber showing feeding damage by *Epitrix* larvae



Potato flea beetle adults are about 2 mm in length. Potato leaves show characteristic 'shot-hole' adult feeding damage.

Interception of *Epitrix* sp. In UK 2015

- 9 UK interceptions in 2015 (185 loads inspected ~ 5% intercepted)
- Dead larvae were found



Additional risk factors

Larvae in galleries in washed potatoes calls into question whether brushing would have been an effective disinfestation technique

	Feeding damage	Washed	Dead larva
20 April 2015	Yes	Yes	Yes
30 April 2015	Yes	Yes	Yes
6 May 2015	Yes	Yes	Yes
26 May 2015	Yes	No	No
2 June 2015	Yes	Yes	No
3 June 2015	Yes	Yes	No
5 June 2015	Yes	Yes	No
10 June 2015	Yes	Yes	No
16 July 2015	Yes	No	No

Greater risk of pest presence in unwashed potatoes



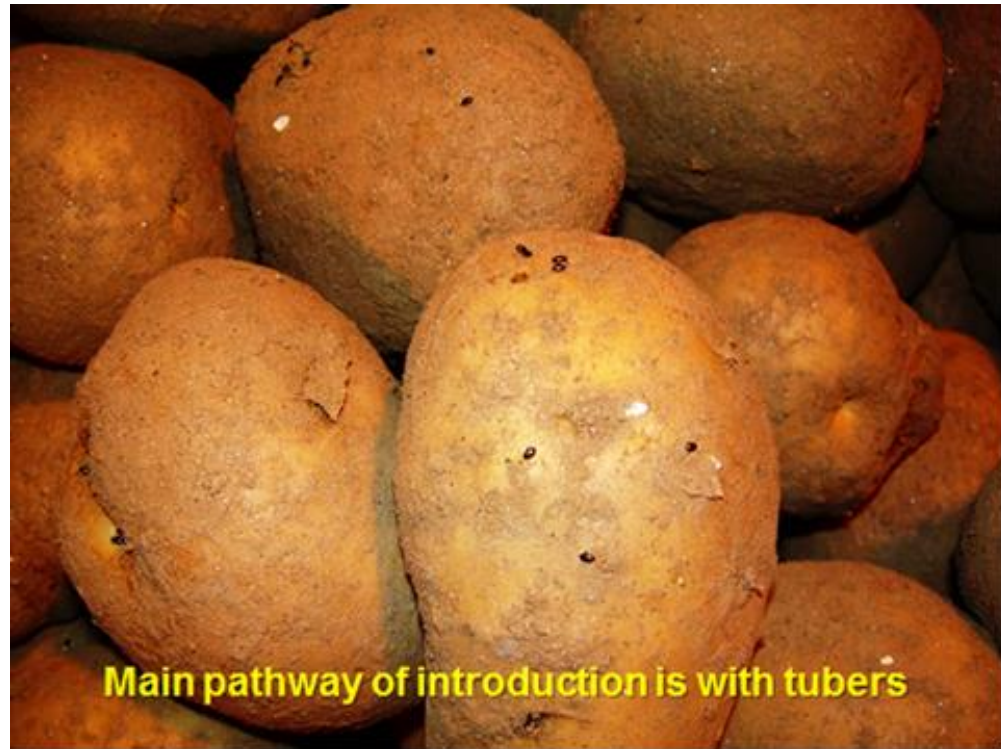
Concerns about extent of spread

- All interceptions were from non-demarkated areas in Andalucía (300 km from the closest known outbreak in Portugal and 900km from closest known outbreaks in Spain)



Uncertainties

- Source of infestation unknown
- Reason for spread unexplained
- Outbreak not detected through surveillance
- Tubers are the main pathway for spread but no control in non-demarcated areas
- Presence of larvae



Progress towards national measures

Date	Action
November 2015	UK consultation, extended to EUROPATAT
16 December 2015	UK verbally notifies SCOPAFF of intention to proceed with national measures
25 January 2016	UK verbal update to SCOPAFF; national measures requiring washing of potatoes close to approval
28 January 2016	Bilateral correspondence between UK/Spain NPPOs explaining content of proposed measures
3 February 2016	National measures approved by UK Ministers
4 February 2016	Written confirmation of measures provided to Commission and Member States
11 February 2016	UK-Spain bilateral meeting
24 February 2016	National measures take effect ahead of imports of new potatoes from March



The future

- Welcome actions by Spain, but too many uncertainties remain, highlighting ongoing risk
- Interceptions and FVO findings confirm that application of EU Decision alone is insufficient
- Additional protection needed now, given impending rise in imports
- Actions needed to reduce uncertainty on pest distribution and correct deficiencies seen by FVO
- Period without interceptions needed and resolution of brushing issue
- Further FVO mission useful, to assess changes





Epitrix: preventing introductions and ensuring preparedness in the event of a UK finding

Predict

- EPPO A2 listed pest and EPPO PRA (2010), following UK recommendations.
- Watching brief on ongoing outbreaks elsewhere in EU.
- Regular review of UK Plant Health Risk Register.

Prevent

- EU emergency measures. Potatoes from demarcated areas in Portugal and Spain must be brushed or washed, and from non-demarcated areas in Spain must be washed (<0.1% soil).

Protect

- Targeted APHA surveillance: 50% of all Spanish and Portuguese notified washed ware consignments. 100% of unwashed potatoes. Surveys of secondary pathways: peppers, aubergines and tomatoes. Surveys of weeds around importers where evidence of Epitrix has been found.

Prepare

- Generic and pest-specific contingency plans; Research – Epitrix species life cycles and detection methods. EPPO Standard.

Partnering

- Defra factsheet and pest alert for industry. Public engagement, articles keeping industry informed of developments.

Colorado beetle: *Leptinotarsa decemlineata*

Key risks

What is the threat?	Serious pest of potatoes widely present in continental Europe.
How would/does it get here?	Adults have been found entering the UK on potatoes from Europe. Also regularly intercepted as a hitchhiker on non-host plant material (often salads).
How does it affect potatoes?	If not controlled, feeding on potato leaves can lead to large scale defoliation and massive crop losses.
Other impacts	Introduction would result in increased use of insecticides and a rise in production costs for farmers.
How quickly does it spread?	When first introduced, spread was rapid in Europe, but has been slowed by efforts to control the pest.
How controllable is it?	Colorado beetle has developed resistance to various chemical controls. Control options are available in the event of an outbreak, but if spreads to weeds eradication may be difficult.
Current and proposed actions	The UK has a Protected Zone and annual surveys are carried out. Good industry awareness. Obtaining approvals for plant protection products for emergency use.



Adult Colorado beetle: 10-12 mm long



Larvae of Colorado beetle: approx. 15 mm long



Colorado beetle: pest is introduced to the UK

Predict

- EPPO A2 listed pest.
- Quarantine pest in the UK for decades.
- Regular review of UK Plant Health Risk Register.

Prevent

- EU regulated pest (Annex IB). The UK is a Protected Zone for this pest. Requirement that plant material originates from a Pest Free Area or that plant products are suitably treated. EPPO Standard for commodity specific phytosanitary measures.

Protect

- Official targeted annual surveillance for this pest. Exporters to the UK should ensure goods are free from Colorado beetle.

Prepare

- Pest specific contingency plan.

Partnering

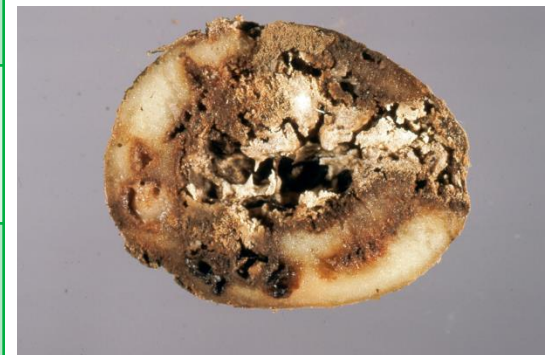
- Publicity, including a Defra pest alert (2015), and update of factsheet to distinguish Colorado beetle from other insects (2016) to raise awareness among industry and others.

Ring rot of potato: *Clavibacter michiganensis* subsp. *sepedonicus*

Key risks	
What is the threat?	A regulated bacterial plant pathogen of potato, establish in North America and parts of Europe.
How would/does it get here?	The disease would most likely enter on contaminated seed potatoes. Contaminated potato waste is another possible source of infection.
How does it affect potatoes?	Yield losses are caused by tuber rotting and in individual U.S. crops have been as high as 50%.
Other impacts	The disease was recently found infecting tomatoes for the first time in Belgium.
How quickly does it spread?	Spread is largely through contaminated seed potatoes, especially via latently (non-symptomatic) infected tubers.
How controllable is it?	Using certified seed, practising good hygiene can help prevent outbreaks.
Current and proposed actions	Yearly surveys, import inspections, publicity.



Early tuber symptoms. Crown Copyright Fera.



Late stages of rotting in potato tubers. Crown Copyright Fera.



Ring rot of potato: pest is introduced

Predict

- EPPO A2 pest
- UK Plant Health Risk Register entry

Prevent

- EU regulated pest, including specific control directive (Commission Directive 2006/56/EC)
- Import surveys

Protect

- Annual field surveys for the pest
- Testing and seed and ware potatoes to monitor for latent infection

Prepare

- UK experience of eradicating outbreaks
- Contingency plan

Partnering

- Publicity to raise awareness with industry
- Industry accreditation scheme

Brown rot of potato: *Ralstonia solanacearum*

Key risks

What is the threat?	<i>Ralstonia solanacearum</i> is a regulated and damaging bacterial pathogen that causes brown rot of potatoes.
How would/does it get here?	<i>Ralstonia solanacearum</i> is present in some river systems and could enter fields via irrigation or flooding. It could also enter on seed potatoes.
How does it affect potatoes?	Yields losses are caused by tubers rotting, wilting of potato plants may also be seen.
Other impacts	If the pest were to establish in seed potato production, exports by the seed potato industry would be severely effected. Tomatoes can also be infected.
How quickly does it spread?	The pest could spread quickly if contaminated seed potatoes were to be used.
How controllable is it?	Planting only with certified seed and avoiding irrigating with contaminated water will help prevent outbreaks.
Current and proposed actions	Annual surveys of potato crops and water courses. Pre-import notification of potatoes from higher risk areas.



Brown rot symptoms in a potato tuber. Photo Crown Copyright Fera/



Wilting of an infected potato plant in the field. Photo Crown Copyright Fera.



Brown rot of potato: pest spreads into crops

Predict

- UK Plant Health Risk Register Entry
- EPPO A2 pest

Prevent

- EU regulated pest
- Pre-notification scheme for import of potatoes from higher risk areas
- Inspection of potatoes at import

Protect

- Yearly surveys of seed and ware crops and sampling and testing of tubers
- Surveys of contaminated water courses and controls on irrigation

Prepare

- Contingency plan for outbreaks

Partnering

- Industry accreditation scheme
- Publicity to raise awareness

Zebra chip: *Candidatus Liberibacter solanacearum* (Lso)

Key risks

What is the threat?	The quality of UK crops could be affected if this bacterium were to be introduced from the Americas or New Zealand.
How would/does it get here?	Spread by a psyllid vector <i>Bactericera cockerelli</i> , which is not present in the EU. It is unclear if European psyllids could be vectors.
How does it affect potatoes?	Growing potato plants show stunting, chlorosis, upward rolling and scorching of leaves. Tubers show discolouration which is accentuated by frying.
Other impacts	Losses to tomatoes and pepper crops.
How quickly does it spread?	Spread is dependent on the vector psyllids, and these may move long distances.
How controllable is it?	Eradication of the psyllid would be very difficult, thus disease control would also be challenging.
Current and proposed actions	Solanaceous imports, including potato tubers and all plants for planting, are prohibited from countries where it is found, but vector and bacterium could be introduced with fruit.



Raw and fried potato slices infected with Lso. Photo courtesy of Joe Munyaneza, USDA/ARS



Lso symptoms in potato. Note leaf curl and discoloration. Photo courtesy of Joe Munyaneza USDA/ARS



Zebra chip: pest is introduced to the UK

Predict

- EPPO Pest Risk Analysis (2010), UK PRA (2014)
- EPPO A1 pest list
- UK Plant Health Risk Register entry

Prevent

- EU controls on the import (from third countries) of potato tubers and Solanaceae plants for planting
- Proposed EU regulation of the vector and possibly the bacterium

Protect

- Surveys for symptoms on growing potato crops and harvested tubers are carried out annually

Prepare

- Development of field diagnostic capability
- Develop a UK contingency plan

Partnering

- Publicity, including a Defra pest alert in 2015, to raise awareness among industry and others

Guatemalan potato tuber moth: *Tecia solanivora*

Key risks

What is the threat?	Larvae could damage UK crops if introduced from South America, the Canary Islands or an outbreak in mainland Spain.
How would/does it get here?	Larvae could travel inside infested potatoes, or in associated packing materials.
How does it affect potatoes?	Larvae tunnel into the tubers, feeding inside and creating tunnels. Both field crops and stored potatoes are vulnerable.
Potential UK impacts	The moth is currently found in countries which are warmer than the UK, and high levels of damage may not occur here.
How quickly does it spread?	Natural spread is quite slow. Spread in trade with infested tubers could be faster.
How controllable is it?	Pheromone traps are available. Cultural practices help to manage pest populations. Chemicals are generally ineffective.
Current and proposed actions	Potato tubers are prohibited from South America and the Canary Islands. Tubers from mainland Spain are controlled.



Cut open potato tubers showing larval feeding damage



Larvae inside a damaged potato tuber



Guatemalan potato moth: pest is introduced to the UK

Predict

- UK Pest Risk Assessment (2001), EPPO PRA (2002)
- EPPO A2 pest list (which led to EU regulation)
- UK Plant Health Risk Register

Prevent

- It is a quarantine pest for the EU: it is prohibited on potato tubers

Protect

- Due to *Epitrix*, 100% inspection of unwashed and 50% inspection of washed Spanish potatoes

Prepare

- Official and industry targeted surveillance for this pest

Partnering

- Publicity, including a Defra pest alert in 2015, to raise awareness among industry and others

Euphresco - European Phytosanitary Research Coordination

- Euphresco, an EU-funded project was launched in 2006 in response to:
 - increasing threats from plant pests and diseases
 - limited and decreasing resources and erosion of the scientific basis
- 2.63M€ funding, 23 partners, 6 observers which aimed to:
 - Improve plant health research coordination at European level
 - Optimise the use of limited resources (funding and expertise)
 - Provide better research outputs that support plant health policy
 - Support Europe's phytosanitary scientific capability

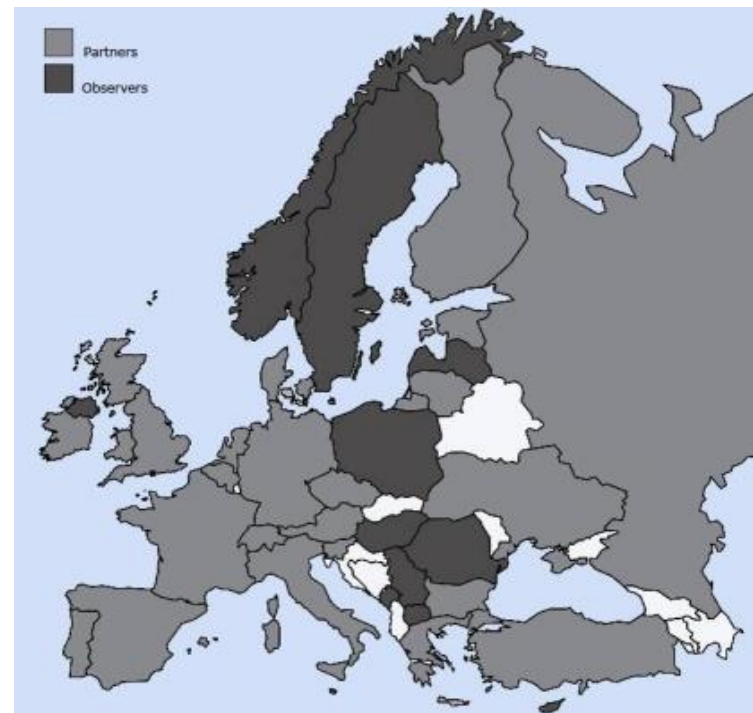
Euphresco 2

- 1M€ EU funding, 31 partners, 14 observers which aimed to:
 - Enlarge the Network and increase transnational research
 - Work towards a long-term self-sustainable Network



EUPHRESCO 1

23 partners and **6** observers

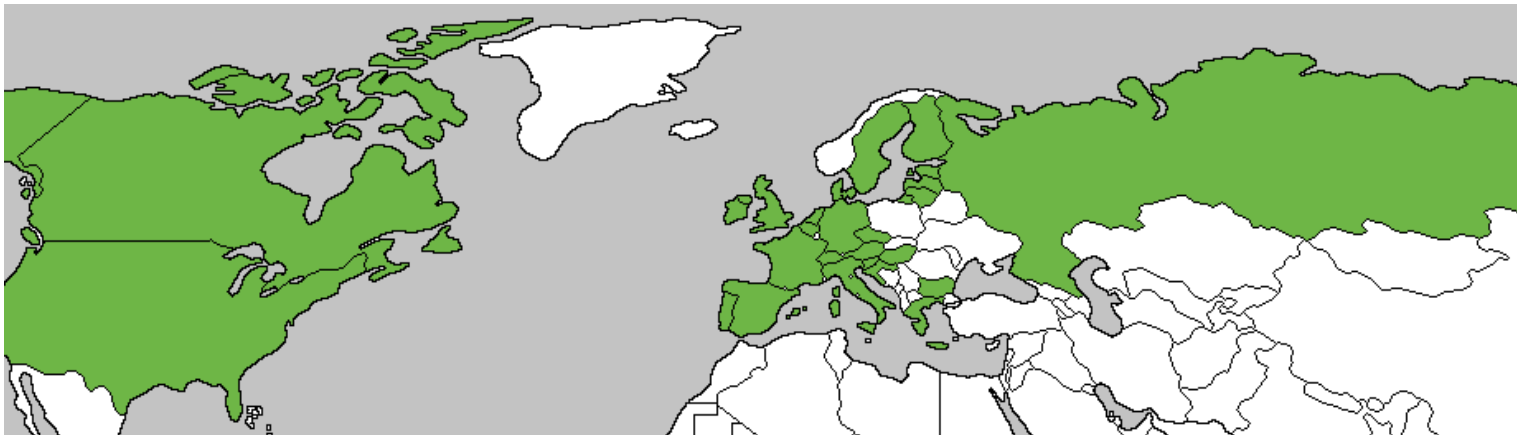


EUPHRESCO 2

32 partners and **14** observers

The Euphresco Network

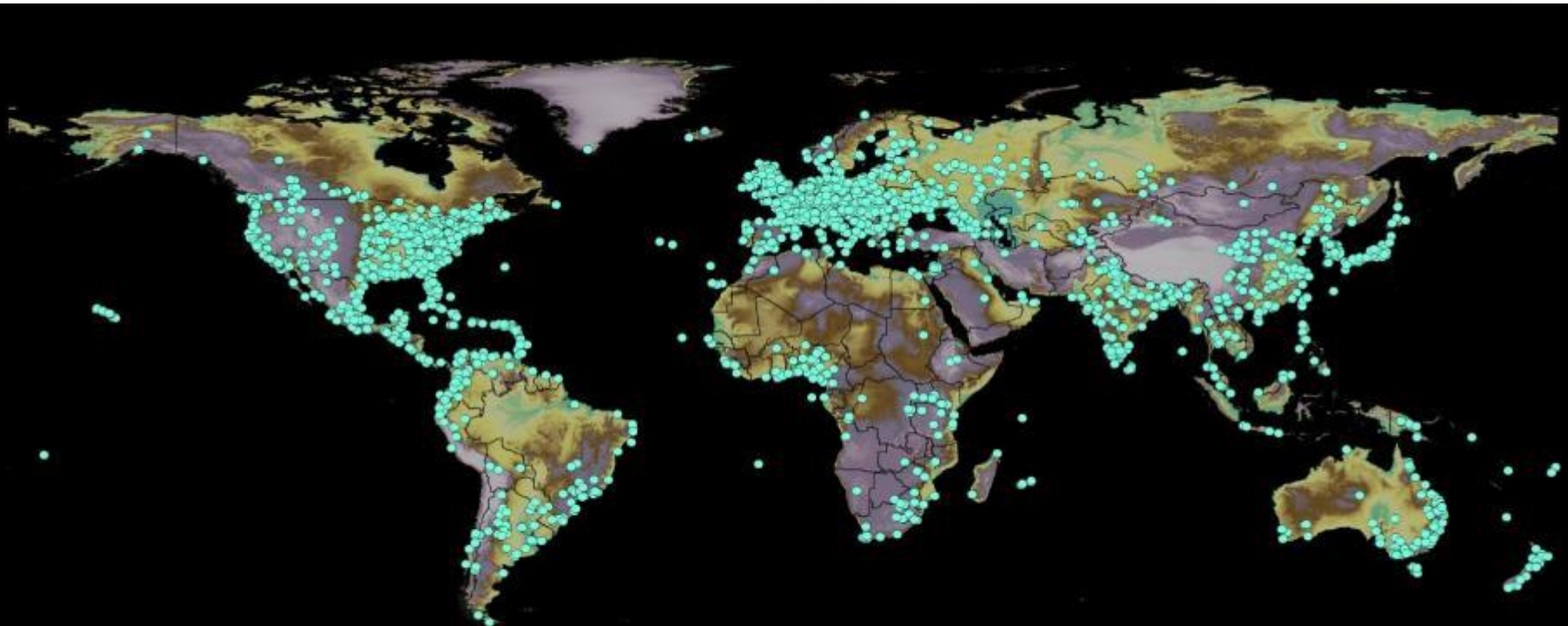
- Euphresco, a self-sustainable network was launched in 2014
 - Network secretariat provided by EPPO
 - 60 research projects funded so far with a total budget of 12.5M€
 - 15 research projects funded in 2015 and 24 in 2016
- 32 partners around the world including USA and Canada
 - Pools funds and expertise, generates critical mass and increases research capacity and preparedness
 - Reduces duplication of effort and improves focus and standards



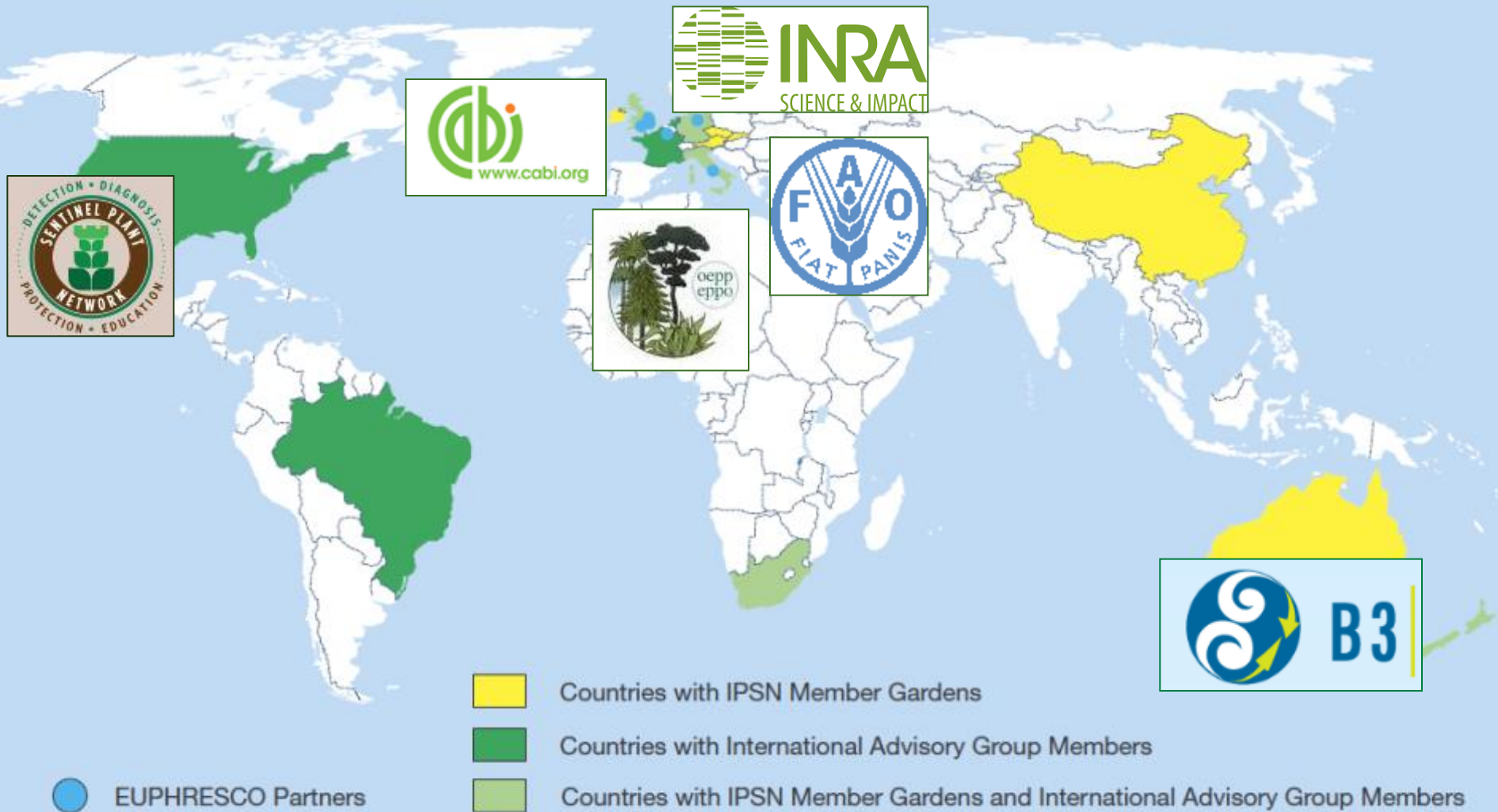
International Plant Sentinel Network – Coordinated by Botanic Gardens Conservation International



- Over 2,500 botanic gardens worldwide
- Collections include 30-40% of known plant species
- Presence of non-native species in collections
- A EUPHRESKO project



International Network and Collaboration



Surveying Materials and Guidance



International Plant Sentinel Network

A reference guide to accompany the deciduous and conifer
IPSN Plant Health Checker



International Plant Sentinel Network
Plant Health Checker - Step 1

Name of Botanic Garden / Address:
Country: _____
Address: _____

Name of IPIN contact:
Survey details
Survey carried out by: _____
Date of survey: _____
Best description of season: _____
Date when the specimen was collected: _____

Plant details:
Species (Authority): _____
Accession number: _____
Country/region species is native to: _____
Age (months) of time plant has been planted in garden: _____

General description of environment:
Site management (e.g. irrigation, soil pH, use of fertiliser) in the region of collection: _____
Description of environment (bearing in mind climate and individual site parameters): _____

For each section of the plant give a rating dependent on the health it shows:
1 = very poor health and of immediate concern due to significant damage potentially resulting in death of individual
2 = Not currently a concern but could develop, should be checked frequently to monitor progress
3 = No visible damage or 'healthy plant'
4 = Abundant/abundant where an orange or red rating is given, ensure you give a description of why you've given it in the survey notes.

1.1 Crown
1 2 3 4

2.1 Crown
1 2 3 4

3.1 New growth
1 2 3 4

4.1 Twigs / Leaves
1 2 3 4

5.1 Bark & Branches
1 2 3 4

6.1 Root system
1 2 3 4

7.1 General pest damage
1 2 3 4

8.1 Pest sightings
1 2 3 4

9.1 General Observations and Additional Notes
Notes: _____

International Plant Sentinel Network
Plant Health Checker - Step 1

Name of Botanic Garden / Address:
Country: _____
Address: _____

Name of IPIN contact:
Survey details
Survey carried out by: _____
Date of survey: _____
Best description of season: _____
Date when the specimen was collected: _____

Plant details:
Species (Authority): _____
Accession number: _____
Country/region species is native to: _____
Age (months) of time plant has been planted in garden: _____

General description of environment:
Site management (e.g. irrigation, soil pH, use of fertiliser) in the region of collection: _____
Description of environment (bearing in mind climate and individual site parameters): _____

For each section of the plant give a rating dependent on the health it shows:
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2 = Not currently a concern but could develop, should be checked frequently to monitor progress
3 = No visible damage or 'healthy plant'
4 = Abundant/abundant where an orange or red rating is given, ensure you give a description of why you've given it in the survey notes.

1.1 Crown
1 2 3 4

2.1 Flowers / Foliage (leaves)
1 2 3 4

3.1 New growth
1 2 3 4

4.1 Twigs
1 2 3 4

5.1 Bark & Branches
1 2 3 4

6.1 Root system
1 2 3 4

7.1 General pest damage
1 2 3 4

8.1 Pest sightings
1 2 3 4

9.1 General Observations and Additional Notes
Notes: _____

International Plant Sentinel Network
Plant Health Checker - Step 2

Please note: This section should be completed if resolution is specified to IPIN & it should be carried out by an appropriately trained staff member who has the relevant knowledge concerning the plant's history, origin, age and cultivation/identification data.

All all symptoms that are an abnormal state or are unexpected for the individual, and are thus cause for concern (i.e. are not of the subspecies, for the plant, due a description and an indication of severity/damage to the table, also note anything else of importance or interest).

1. Crown
Dead: _____
Yellowing: _____
Dead wood: _____

2. Flowers/Flowers
Dead: _____
Malformed: _____
Shedding: _____

3. New Growth (Shoots and Buds)
Dead: _____
Yellow: _____
Malformed: _____

4. Leaves
Dead: _____
Smaller than expected (partial): _____
Sticky: _____
Roll: _____

5. Bark and Branches
Canker or lesions: _____
Die: _____
Approx. height of canker from ground (m): _____
Galls: _____
Trunk bleeding (weeping patches): _____
Approx. height of bleed from ground (m): _____
Approx. number of bleeds over trunk:
Vertical bleeds (in a line up the trunk): _____
Horizontal bleeds (around the trunk): _____
Lower bark / bark flaking / oozing off readily: _____

6. Base and Roots (if exposed)
Root/branch/stem attack (2 down): _____
Fungal separation/rot (branch): _____
Rot/decay/lesions on plant:
Normally by symptoms: _____
Sticky / weeping: _____
Dead / dry: _____

7. General pest damage
Insect galleries under bark: _____
Bark: _____
Wood: _____
Chewing damage: _____
Insect webbing: _____
Insect exites: _____
Fungi: _____
Bore holes: _____
Other: _____

8. Pest sightings
Insect: _____
Date: _____
Time: _____
Notes: _____

9. General Observations and Additional Notes
Notes: _____

What does this look like in a survey with this plant?
1.1 is a reference to the plant's history, origin, age and cultivation/identification data.
2.1 is a reference to the plant's history, origin, age and cultivation/identification data.
3.1 is a reference to the plant's history, origin, age and cultivation/identification data.
4.1 is a reference to the plant's history, origin, age and cultivation/identification data.
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9.1 is a reference to the plant's history, origin, age and cultivation/identification data.

4. Needles
This may not needles may



Single bands



Multiple bands



Light green / yellow banding

Brown / red bands

All banding included on this page are examples of Dothistroma needle blight damage

7. General



Bore holes - small holes found on the trunk and branches, which are the exit holes of wood boring insects



Insect mines - tunnels forming patterns made by leaf mining insects



Training Materials and Resources



IPSN brief overview

The International Plant Sentinel Network (IPSN) aims to provide an early warning system to identify new and emerging pest and disease threats to plants. The IPSN is a working network of national and international scientists bringing plant protection knowledge and resources across all continents and the world.

The IPSN will:

- Develop standardized methods to identify and monitor for emerging plant pests and pathogens.
- Provide training to increase capacity among national governments.
- Develop systems to rapidly respond to emerging plant pests and pathogens.
- Provide resources to help identify and monitor emerging plant pests and pathogens.
- Provide resources to help identify and monitor emerging plant pests and pathogens.

For more information please go to: www.plantsentinel.org



International Plant Sentinel Network

IPSN EUROPE partners

- The Royal and Botanic Gardens, Kew (UK)
- Leibniz Institute of Plant Genetics and Crop Science Research (IPK), Gatersleben, Germany
- Department for Innovation in Biological, Natural and Social Sciences (DIBIS), University of Tübingen, Germany
- Department for Innovation in Biological, Natural and Social Sciences (DIBIS), University of Tübingen, Germany
- Institute for Plant Protection and Quarantine (IPQ), University of Applied Sciences, Hohenheim, Germany
- Institute for Plant Protection and Quarantine (IPQ), University of Applied Sciences, Hohenheim, Germany
- Plant Research, UK
- Plant Research, UK

Introduction

Plant pests and pathogens present a significant risk to agriculture, forestry, horticulture and ecosystems. The introduction of new pests and pathogens can have a major impact on the environment, the economy and the well-being of the public. The early detection of new pests and pathogens is essential to prevent their spread and to manage them effectively. The IPSN provides a platform for scientists to share information and resources to help identify and monitor emerging plant pests and pathogens.

Sentinel plants

Plant species considered suitable for their natural range but which are not native to the area offer a unique opportunity to understand and predict potential threats to a nearby urban forest. These sentinel plants can be monitored for damage by pests and pathogens present in their natural habitat, but which are not currently established in the nearby urban forest.

Benefits for member gardens

The IPSN provides a number of benefits to member gardens including:

- Training capacity in pest and pathogen monitoring, identification and diagnosis.
- Contribution to international networks where professional plant care is required.
- Networking opportunities.

The network will also offer the capacity and resources to support the identification, monitoring and management of plant pests and pathogens. For more information please go to: www.plantsentinel.org



International Plant Sentinel Network

Biosecurity Guidance for Botanic Gardens



What to take pictures of...

Take pictures representative of the problem

- Damage and/or symptoms (the more detail the better)
- Pests (when possible) or traces of pests
- Deformities



EMERGING PEST AND DISEASE THREATS TO TREES IN THE UK

European Ash *Fraxinus excelsior*

Emerald ash borer (EAB) *Agrilus planipennis*

Ash dieback *Chalara ash dieback*

Black timber bark beetle *Scolytus ratzeburgi*



EMERGING PEST AND DISEASE THREATS TO TREES IN THE UK

English Oak *Quercus robur*

Goldspotted oak borer *Agrilus auripunctatus*

Oak wilt *Ceratostoma foveosum*

Red oak borer *Pityrogramma foveola*



International Plant Sentinel Network

Classification of damage by leaf-feeding (Phyllophagous) arthropods

Workshops & training



Huntington Library, Art Collections and Botanical Gardens, U.S.



Shenzhen Fairy Lake Botanical Garden (CAS), China



Royal Botanic Gardens Kew, UK



Coming soon: Plant Health Information Portal


Tree and Plant Health Information Portal

Information Resource Catalogue About

Department for Environment, Food & Rural Affairs

An online hub for all your tree and plant health information, data and resources

Search the portal




The Chalara Viewer

The Chalara Viewer shows areas where Chalara dieback has been confirmed to be affecting ash trees in the natural environment in England, Scotland and Wales.

[Visit the Chalara Viewer Website](#)

UK Plant Health Risk Register

 **752**
Recorded pests

The UK Plant Health Risk Register records and rates risks to UK crops, trees, gardens and ecosystems from plant pests and pathogens.

[Visit the Risk Register](#)

What's new?


<p>News Trade & Industry</p> <p>27 January 2015</p> <p>Plant disease factsheet for Xanthomonas arboricola pv. pruni (Bacterial spot and canker on Prunus)</p>	<p>News Academic</p> <p>27 January 2015</p> <p>Extension of statutory notification scheme for certain tree species to include Prunus spp.</p>	<p>News All</p> <p>27 January 2015</p> <p>Review of the regulatory status of certain organisms listed in the Annexes of the Plant Health Directive (2000/29/EC)</p>
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UK Register of Plant Health Professionals

Plant health register - Google Chrome
https://www.rsbi.org.uk/careers-and-cpd/registers/plant-health-register

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Royal Society of Biology


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You are here ▶ Home ▶ Careers & CPD ▶ Registers ▶ Plant health register

Careers & CPD

- Registers
- RSciTech
- RSci
- Chartered
- Qualified person
- UK Register of Toxicologists
- International Diploma in Toxicology
- Fetal morphologists
- BSAS
- Plant health register**
- External examiners database
- Careers
- Careers resources
- Going to university
- Work experience
- Studentships & Placements
- Bioscience Careers Festival
- Postgraduate study
- Employment
- Returner's resources
- Careers committee
- Make a difference
- Training
- Past training events
- CPD
- CPD award annual

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Plant Health Professionals

The Plant Health Professional Register has been created in response to the Department of Environment, Food and Rural Affairs (Defra) and Government Office of Science reports¹ recommending development of plant health skills and creating opportunities for a wider community of trained plant health professionals.

The Department is working with professional bodies to embed greater awareness of plant health as a key competency and component of continuous professional development, and to enhance the official training programme for inspectors, providing a better and more professional service.

Defra with assistance from the York, North Yorkshire & East Riding Enterprise Partnership have funded the establishment of the Professional Register overseen by the Royal Society of Biology. An advisory group² comprising representatives from Plant Health agencies from England, Scotland, Wales, Northern Ireland and the Forestry Commission has compiled the competencies.

Following a successful pilot exercise, a plan is now in place to register 300 government employees by 2018 with the intention of including other professional roles where a significant involvement in plant health is required.

For further information, contact Celia Knight (celia@ckconsult.co.uk)


¹ [Defra/GoS \(Dec 2014\) Animal and Plant Health in the UK: Building our science capability](#)
[Defra \(April 2014\) Protecting Plant Health-a Plant Biosecurity Strategy for Great Britain](#)

² Plant Health Professional Register Advisory group
Nicola Spence (Defra Chief Plant Health Officer)

Royal Society of Biology

Enter our amateur photography competition

From **big** to small



Deadline: 31 Aug 2016

THANK YOU

