

Protecting our Plant Supply chain (and your business) how and why.

31st January 2023



Welcome



James Barnes, HTA Chair



Livestream address

The Rt Hon Lord Benyon,
Minister for Biosecurity,
Defra



The need for Biosecurity and the new UK Biosecurity Strategy

Nicola Spence, Defra





Department
for Environment
Food & Rural Affairs

Plant Biosecurity in the UK

Professor Nicola Spence
Chief Plant Health Officer



Key achievements in 2022/23

Publication of the Plant Biosecurity Strategy for Great Britain 2023-28

Delivery of the first International Plant Health Conference

Major public awareness campaigns in partnership with over 30 organisations for International Day of Plant Health and National Plant Health Week

Gold medal at RHS Chelsea for 'Don't risk it'

Launch of the new Centre for Forest Protection – Forest Research and Kew

Opening of the new Holt Laboratory at Forest Research

New tree planting grants – Tree Health Pilot, Local Authority Treescapes Fund, Shared Outcomes Fund

Robust outbreak responses

Trade deals and SPS chapters

Plant and Bee Health and PVS IT Transformation Programme

Plant Healthy 5 year plan

Key achievements in 2022/23 contd.

Success in R&D funding –
FPPH, BBSRC Bacteria, NERC
Treescapes, Action Oak

Implementation of new
plant health legislation and
delivery of EU Exit and post-
transition period legislation
and operations

Powers to implement a civil
sanctions regime in English
and Welsh legislation and
consultation on the details
of a new regime.

Plant Health Outbreak
Readiness Board established

International Strategy and
contribution to UK
Biological Security Strategy

Launch of online training
and newsletter for GB
operators required to issue
plant passports

Increased capacity of the
Plant Health Services to
undertake import controls
and surveillance

Development of the Plant
Health Information Portal to
enable access to
information on plant pests

A Plant Biosecurity Strategy for Great Britain

2023-2028

UK Value of Plants



Summary of the £15.7billion annual value that our plants provide to the UK

Vision for 2023-2028

To protect Great Britain's plants through a strong partnership of Government, industry and the public, working together to reduce and manage risks posed by plant pests and pathogens, and facilitate safe trade.



Outcome 1: A world class biosecurity regime



Outcome 2: A society that values healthy plants



Outcome 3: A biosecure plant supply chain



Outcome 4: An enhanced technical capability

Outcome 1: A world class biosecurity regime

Making the most of opportunities so we can tailor and strengthen our response to prevent the introduction and spread of pests and pathogens that pose a threat to GB plant health.

- **Risk & Horizon Scanning**
 - Strengthen the guidance on reporting of notifiable plant pests and pathogens, including increased promotion of the TreeAlert system.
- **Regulatory Regime**
 - Introduce new biosecurity measures on personal imports and high-risk trees.
- **Outbreak Readiness**
 - Develop a new GB wide, Plant Health Data System to support the emergency response to outbreaks.



Outcome 2: A society that values healthy plants

Setting out how we are raising awareness of the importance of healthy plants and trees and encouraging the adoption of responsible behaviours across society.

- **Raising awareness**
 - Work with 30 signatories of the new (Public Engagement) Plant Health Accord to raise awareness of plant health across GB
- **Education Sector**
 - Work with the Royal Society of Biology and the National STEM Learning Centre to embed biosecurity in the National Curriculum, develop awareness in teachers and develop a network of plant health STEM ambassadors.
- **Professional Training**
 - Expand the Royal Society of Biology Plant Health Professional register to encourage greater participation across sectors.
- **Citizen Science**
 - Deliver increased opportunities for the public to engage in citizen science activities, including expanding existing networks like Observatree



Outcome 3: A biosecure plant supply chain

Government and industry working in partnership to support a biosecure plant supply chain.

- **Intelligence and Monitoring**
 - Work with industry to improve intelligence on horticultural and tree supply chains, their resilience and bottlenecks.
- **Supply chains**
 - Work with the UK Plant Health Alliance to deliver a new 5-year plan for the Plant Healthy certification scheme.
- **Domestic production**
 - Invest in the quality, quantity and diversity of domestic seed and sapling supply, including continued provision of capital and innovation grants to tree nurseries. This includes the Nature for Climate Fund Sector Capacity project and the new Tree Production Capital Grant.



Outcome 4: An enhanced technical capability

Building plant health capability and making use of emerging, innovative science and technology to keep pace with changing threats and ensure preparedness for the future

- **Core Capability**
 - Deliver the new £4.5m virtual Centre for Forest Protection
- **Collaboration and Innovation**
 - Work with UKRI to explore further opportunities for collaborative investment in fundamental and applied plant science, development of technologies, as well as understanding trade routes and consumer behaviour
- **International**
 - Continue to support GB's active participation in the Euphresco research network



FAO/IPPC International Plant Health Conference 21-23 Sept 2022



Looking ahead in 2023/24

- Launch of the Plant Health R&D strategy
 - Plant Health R&D Summit - Bring together research providers and users, to showcase existing work and encourage new interactions
 - Creation of Plant Health Innovation Fund to raise awareness of UK Plant Biosecurity challenges and support new public-private partnerships for innovation
 - Launch of new borders Target Operating Model (TOM)
 - High Risk Plants dossiers to EFSA
 - National Plant Health Week and International Plant Health Day (12 May)
 - Delivery of Plant Health Transformation Programme
 - Plant Healthy 5 year plan
-

UK Plant Health Information Portal

An online hub for plant health information, data and resources


Enter the name of a pest or plant you are interested in



Alternatively, use [additional searches based on risk register priorities for actions](#)

<https://planthealthportal.defra.gov.uk/>


About the UK Plant Health Information Portal


There are many pests and diseases that can seriously damage crops and plants in the UK. Assessing and understanding these threats is essential to informing the actions needed to protect plant health set out in [Protecting Plant Health - A Plant Biosecurity Strategy for Great Britain](#) .

As the Strategy makes clear, tackling threats to plant health is not just a matter for government; success is dependent on partnership working between all those with a role to play. To this end the Portal is a shared resource providing information about plant pests and diseases, including the assessments of risk undertaken by government and the data underpinning those assessments, with links to other sites of interest, including non-government sites, as well as information on the plant health controls and services provided by

Pests and disease

Find out more about the pests and diseases which threaten our gardens and countryside

 [Reporting a pest or disease](#)

 [Contingency plans](#)

Follow me on Twitter @plantchief

← **Nicola Spence**
3,966 Tweets



Nicola Spence
@plantchief

UK Chief Plant Health Officer - botanist, plant pathologist and plant lover; protecting plants, trees and honey bees from pests and diseases

planthealthportal.defra.gov.uk Joined March 2014

2,391 Following 5,451 Followers


Tweets Tweets & replies Media Likes

Nicola Spence @plantchief · 31 Dec 2022 ...
Pests recently added to or updated on the risk register:
Tomato mottle mosaic virus - virus affecting tomatoes, updated following a draft PRA
planthealthportal.defra.gov.uk/pests-and-dise...
974 6 10





Nicola Spence @plantchief · 31 Dec 2022 ...
Pests recently added to or updated on the risk register:
Gnomoniopsis idaeicola - a fungal pathogen which affects Rubus and has been intercepted in the UK.
planthealthportal.defra.gov.uk/pests-and-dise...
915 6 10

You Retweeted

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You might like

-  **UPL UK & IE**
@UPL_UK **Follow**
 Promoted
-  **Elaine Harrison**
@lainy_harri... Follows you **Follow**
-  **Wensleydale Creamery**
@Wdalecreamery **Follow**

[Show more](#)

What's happening

Television · Last night
EastEnders 

Trending in United Kingdom
The Queen Is Dead ...

Trending in United Kingdom
#OurFlagMeansDeath ...
1,352 Tweets

Pest risk horizon scanning of emerging threats and current high-risk pests

Dani Lindley-Klassen and
Duncan Allen, Defra





Department
for Environment
Food & Rural Affairs

Emerging threats on the horizon and current high-risk pests

The Value of Plants



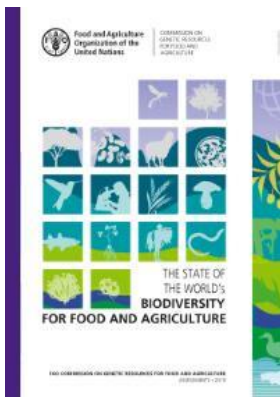
Approximately 82 per cent of the calories, and 60 per cent of the protein, in the human food supply are provided by terrestrial plants.



Plants are responsible for producing 98% of the oxygen we breathe.

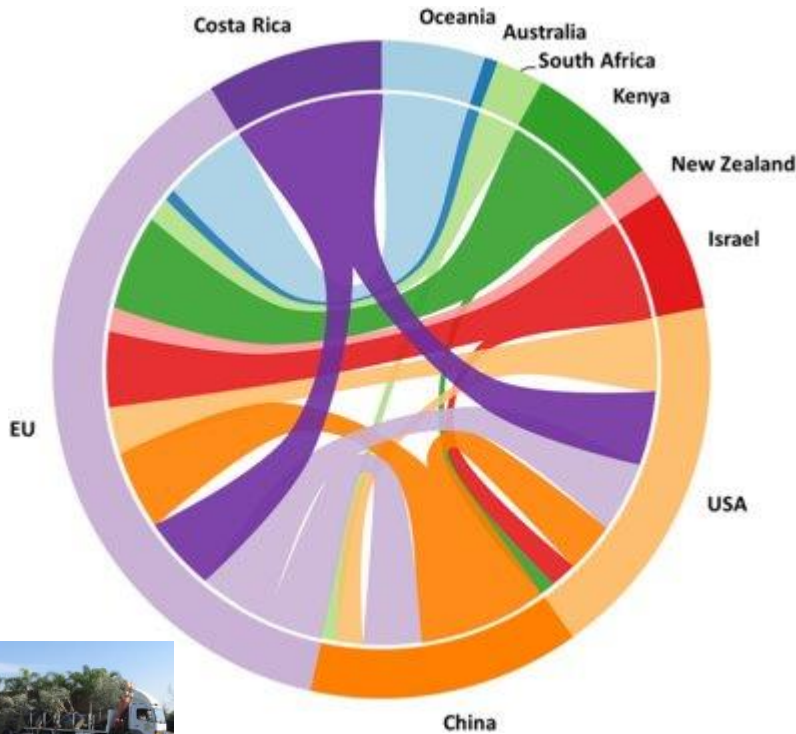


In the UK, the value that our plants and trees provide to society each year is estimated at £9bn.



Pest threats reaching the UK

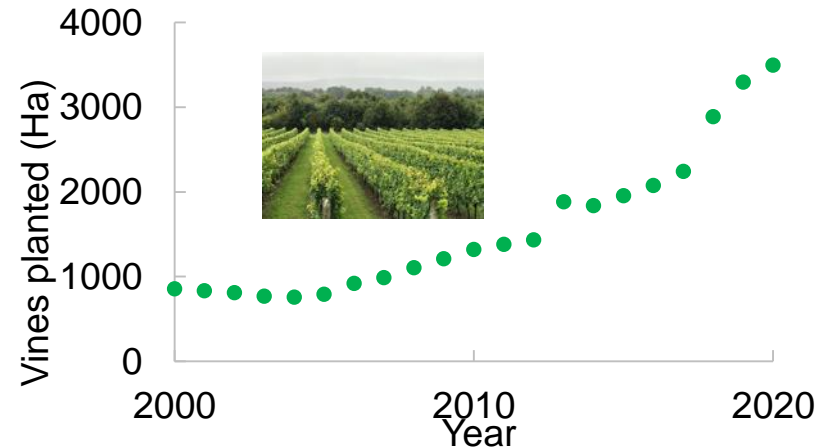
Increasing Global Trade



Trade of plants and plant parts: widths are proportional to 2015 import & export values.



Climate Change: Increasing production & est range shifts



Identification of non-native pest threats

Pre border -
intelligence



Border -
inspections



Post-border –
surveillance



Prioritisation of pests – The Plant Health Risk Register

UK Plant Health Risk Register



Department for Environment, Food & Rural Affairs

UK Risk Register Details for *Rhagoletis pomonella*

This record was last updated on 07/01/2021

Common Names

show / hide

- Apple fruit fly
- Apple maggot
- Apple maggot fly
- Maggot, apple
- Worm, railroad

Scenario and Pathways

Scenario for Risk Register

show / hide

- Pest is introduced

Pathway Assessed for Entry to UK

show / hide

- Plants for planting (except seeds bulbs and tubers)
- Fruits or vegetables

Common Pathways

show / hide

- Plants for planting (except seeds bulbs and tubers)
- Fruits or vegetables
- Soil/growing medium

Risk Ratings and Current Mitigations

Unmitigated Risks

show / hide

Likelihood [1 - 5]	3
Spread [1 - 5]	3
Impact [1 - 5]	5
Value at Risk [1 - 5]	4
Likelihood x Impact [1 - 25]	15
UK Relative Risk Rating [1 - 125]	60

Current Mitigations

show / hide

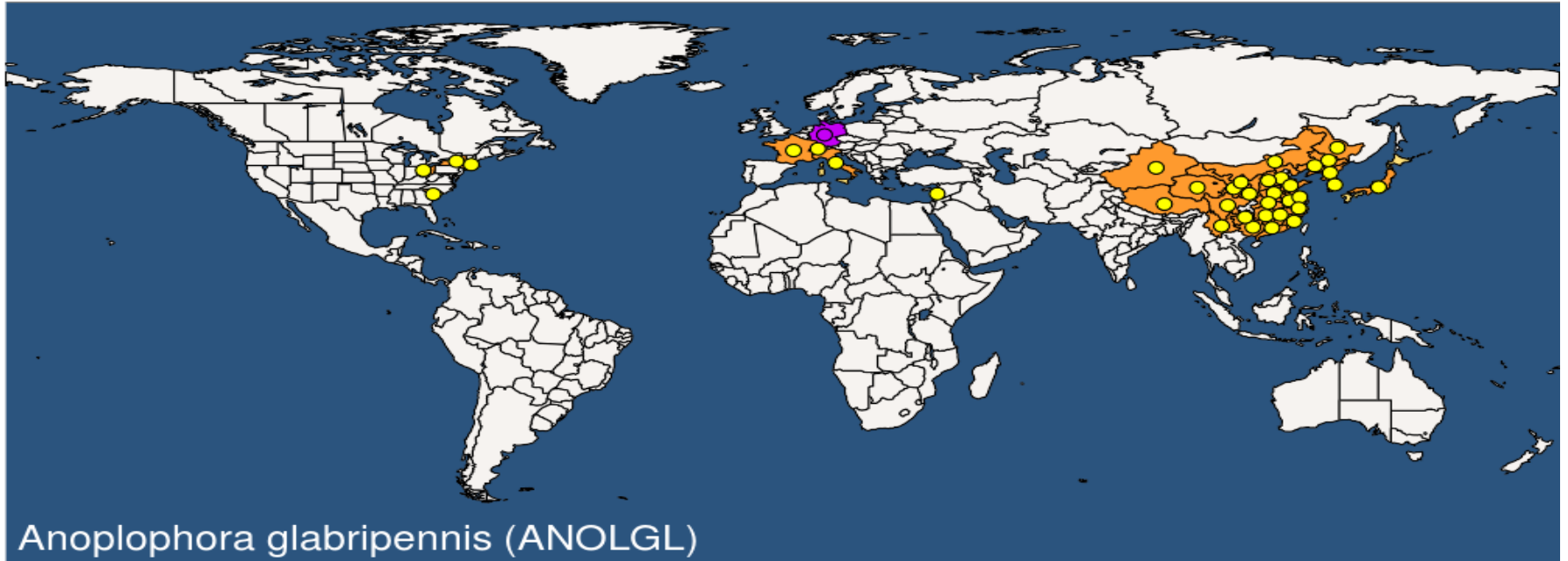
Key mitigation for pest	
Regulated quarantine pest	
Regulation	✓
Surveillance	✗
Industry Scheme	✗
Contingency Plan	✗
Awareness	✗
Research	✗

Mitigated Risks

show / hide

Likelihood [1 - 5]	2
Spread [1 - 5]	3
Impact [1 - 5]	5
Value at Risk [1 - 5]	4
Likelihood x Impact [1 - 25]	10
UK Relative Risk Rating [1 - 125]	40

Anoplophora glabripennis (Asian longhorn beetle)



● Present

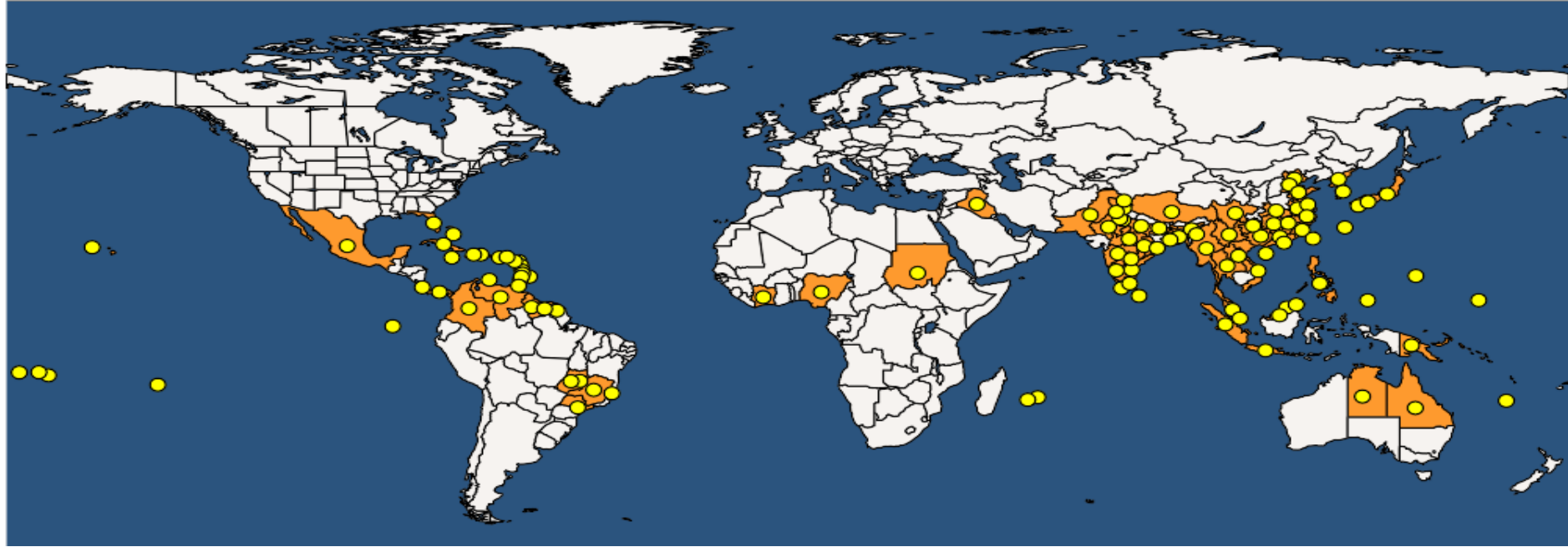
● Transient

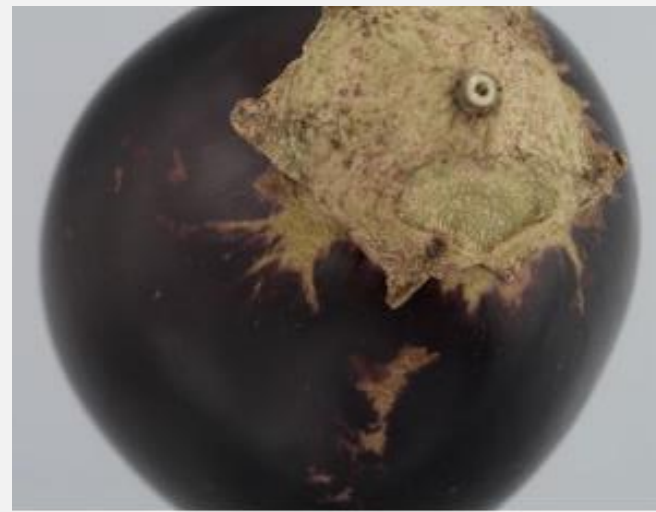
2023-01-27

(c) EPPO <https://gd.eppo.int>



Thrips palmi (melon thrips)

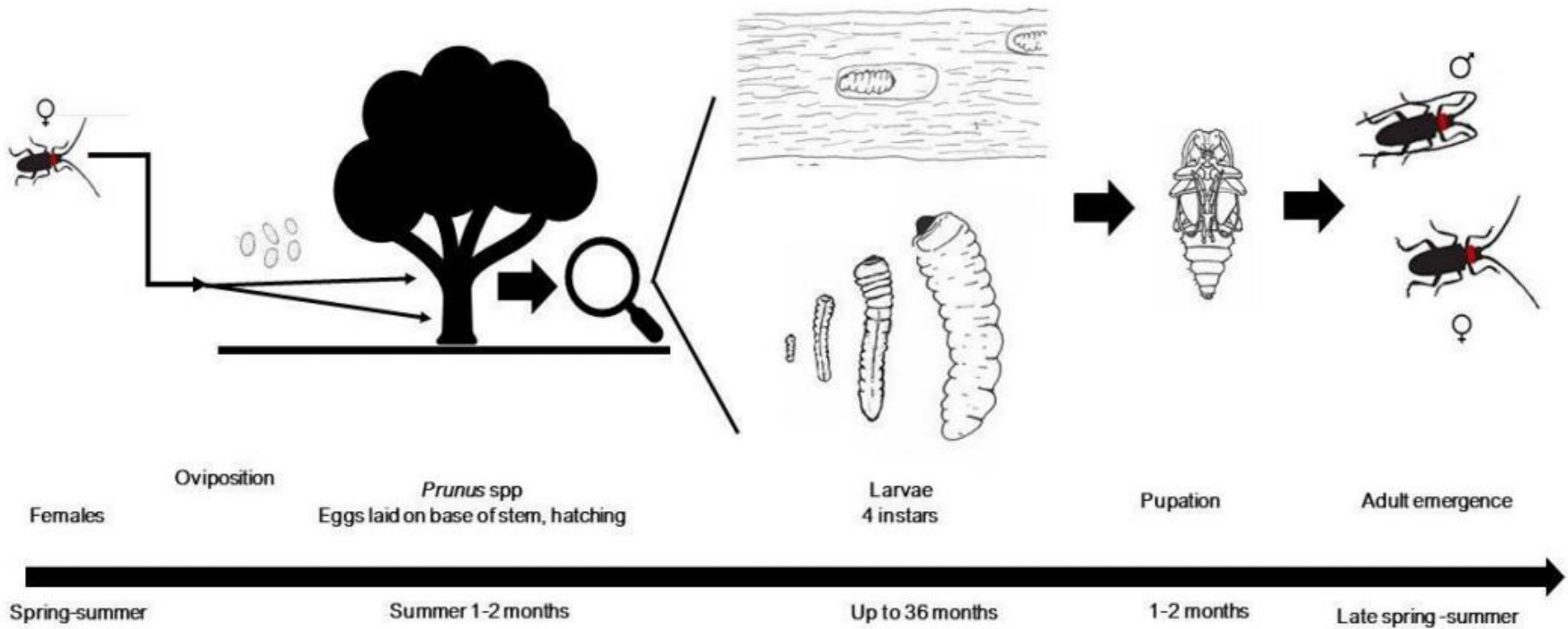




Aromia bungii (red necked longhorn beetle)



Aromia bungii (red necked longhorn)



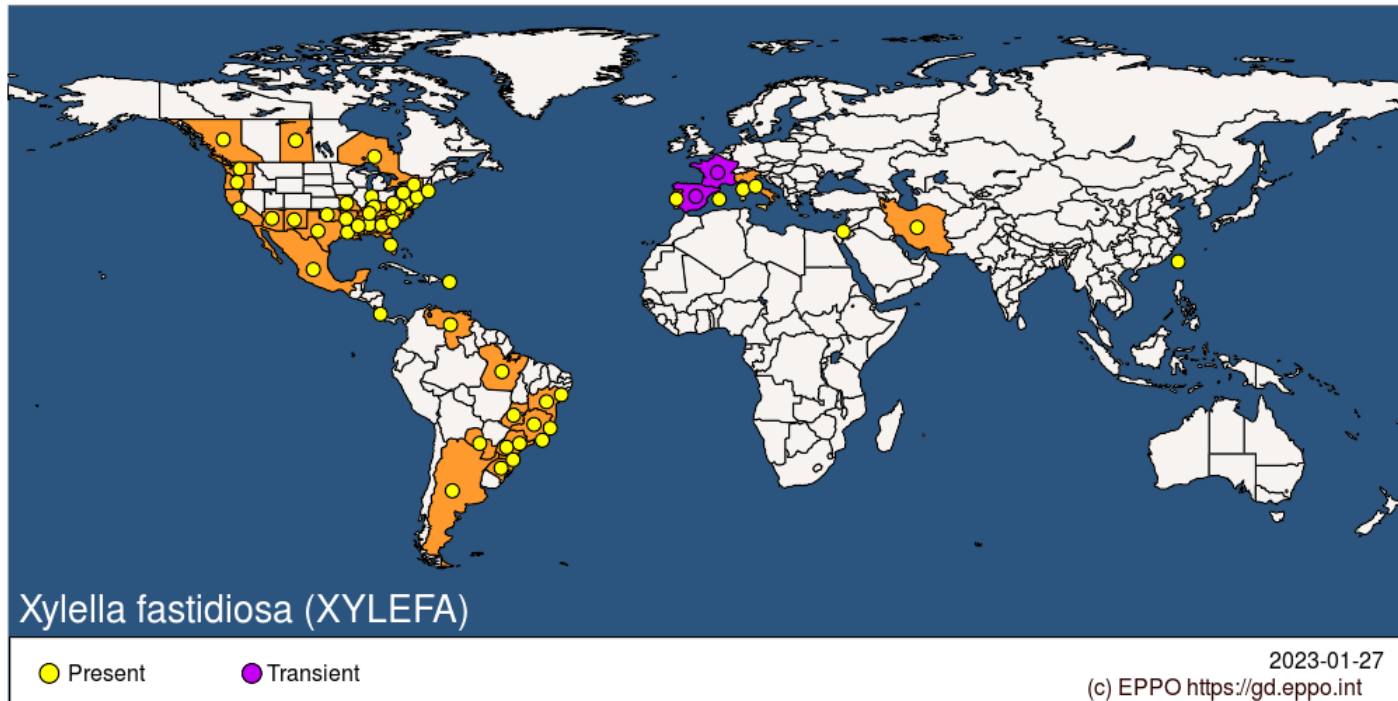
Lycorma delicatula (spotted lanternfly)





Xylella fastidiosa (Pierce's disease of grapevine)

- New finding on citrus in Portugal (2023)
 - https://www.apuntmedia-es.translate.google.com/noticias/economia/portugal-detecta-xylella-fastidiosa-citricos-primera-vegada-ue-1-1582888.html?x_tr_sl=auto&x_tr_tl=en&x_tr_hl=en-US&x_tr_pto=wapp



Pest threats to UK fruit crops

- There are new pests emerging all the time
- The Plant Health Risk Register is a useful screening tool to assess the threat new pests pose
- Key pests for the industry be aware of include; *Thrips palmi*, *Aromia bungii*, and *Lycorma delicatula* among others.
- The Plant Health Portal is a useful source of information for relevant pests to your sector; <https://planthealthportal.defra.gov.uk/>
- If you see any of the pests mentioned contact the relevant Plant Health officials

Plant Health officials contact details

England and Wales:

- Contact your local APHA Plant Health and Seeds Inspector
- PHSI headquarters, in York;
 - Tel: 0300 1000 313 (please select option 3 when calling)
 - Email: planthealth.info@apha.gov.uk
 - Web: <https://planthealthportal.defra.gov.uk/pests-and-diseases/uk-plant-health-risk-register/>

For Scotland, contact the Scottish Government's Horticulture and Marketing Unit or RPID officer:

Agricultural crops contact the local RPID officer:

<http://www.gov.scot/Topics/farmingrural/Agriculture/AOcontacts/contacts>

For non-agricultural crops, email: hort.marketing@gov.scot

Northern Ireland, contact DAERA Plant Health Inspection Branch:

- Tel: 0300 200 7847
- Email: planthealth@daera-ni.gov.uk
- Web: www.daera-ni.gov.uk/topics/plant-and-tree-health

Coffee & tea, networking



Plant Passporting, surveillance and action on interception

Ed Birchall and
Derek McCann, APHA



APHA/Defra/HTA/Plant Healthy seminar for Multiple Retailers

at HTA, Chilton, Oxon

Edward Birchall

APHA Plant Health, Plant passporting

January 2023

Over view

- Back ground
- The process
- UK Plant Passports and
- Pest Free Areas (PFA)
- Sources of information
- Example diseases

UK Plant Passport

A	[Botanical Name]
B	[Registration Number]
C	[Traceability Code]
D	[Country of Origin]
E	[GB(NI) if applicable]

Plant Passports – back ground

UK Plant Passport – PFA

THAUPR

A. Quercus

C. Batch

B. 12345

D. GB

- Plant passporting was introduced in 1993 with the implementation of the EU single market for Plant Health. Plant health checks focused on the place of production, but plant health is a **responsibility of all citizens**.
- Following EU Exit the UK introduced **UK plant passports**.
- Great Britain operates a UK Plant Passport system for internal movements of plants both within and between GB and the Crown Dependencies. Northern Ireland continues to use the EU Plant Passport system (in line with the Northern Ireland Protocol), and EU Plant Passports apply for movements of Qualifying Northern Ireland Goods (QNIGs) from NI to GB. Phytosanitary certificates are required when moving plant health controlled goods from GB to NI.

Plant Passports – back ground

UK Plant Passport – PFA

THAUPR

A. Quercus

C. Batch

B. 12345

D. GB

- Plant passports, are required for all ‘plants’ and must **accompany** material within GB. Plants must leave production nurseries in a healthy condition to prevent the spread of quarantine pests and diseases.
- The onward movement of plants must ensure the UK plant passport is attached and moves with the goods, as a **trace back** mechanism and **assurance** that the plants meet the standards and are free from UK quarantine plant pests and diseases.

Plant Passports – the process

UK Plant Passport – PFA

THAUPR

A. Quercus

C. Batch

B. 12345

D. GB

- All professional operators (PO) must be **registered** and **authorised** by APHA (in England and Wales) to issue plant passports.
- application – renewed **annually** online by the client via eDomero
- Those growing certain species will require a **Growing Season Inspection** (GSI)
- Each authorised client must have an Annual Records Audit
- Both GSI and records audit are chargeable
- Once authorised the client can produce and attach UK plant passports to the goods.

Plant Passports – UK

Standard plant passport:

UK Plant Passport			
A. Narcissus		C. Batch	
B. 12345		D. GB	

OR

UK Plant Passport			
A. Narcissus	B. 12345	C. Batch	D. GB

Plant passport on certification label:

UK Plant Passport	
DEFRA – England and Wales	
Basic Seed Potatoes	
Solanum tuberosum	
Var. Taurus	Union Grade: E
Stock no. 190390	Date sealed:
Grower: GB – 2986	FEB/MAR '20
Size: 30x60	Weight: 1250 KG
Declared chem. treatment: IMAZALIL	
EU Rules and standards	
Country of production: GB	

Plant Passports – Pest Free Area (PFA)

- A PFA is an international term, under the International Plant Protection Convention (IPPC)
- Below is example PFA PP for oak trees; relevant pest is Oak Processionary Moth (OPM) pictured:

Pest Free Area (PFA) passport:

UK Plant Passport – PFA

THAUPR

A. Quercus


C. Batch

B. 12345

D. GB



Plant Passports – Pest Free Area (PFA)

- Many of the EU Protected Zone pests are now GB Quarantine pests e.g. *Bemisia tabaci* (tobacco whitefly)  or PFA pests
- Commodities which are hosts of PFA pests will require PFA UK PPs for their movement within GB
- There is **1 PFA for England**, for oak processionary moth(OPM) (*Thaumetopoea processionea*). The EPPO code for oak processionary moth is 'THAUPR'. (there are 3 others for bark beetle in west of Scotland).
- **Other PFAs are Crown Dependencies** e.g. IOM, Jersey and Guernsey for OPM (detail is: Plants for planting, other than fruits and seeds, of *Quercus*, other than *Quercus suber*, of a girth of at least 8 cm measured at a height of 1.2 m from the root collar).

Sources of information

- your local plant health and seed inspector
- **Plant passporting updates** emailed by APHA to clients authorised to issue plant passports and an ad-hoc list to those that request the updates, with back editions on the Defra [UK Plant Health Information Portal](#)
- The Defra plant health portal policy detail [Registration and Plant Passports - UK Plant Health Information Portal \(defra.gov.uk\)](#) and further technical detail [Plant Passports - UK Plant Health Information Portal \(defra.gov.uk\)](#)
- Your suppliers on their systems
- Accreditation schemes – Plant Healthy, ISO etc.

Sources of information

Gov.uk [Issue plant passports to move regulated plant material in Great Britain - GOV.UK \(www.gov.uk\)](#)

- [When you need a UK plant passport](#)
- [Register as a professional operator and get authorised to issue UK plant passports](#)
- [After you're registered as a professional operator with APHA](#)
- [UK Plant passport content and format](#)
- [Issuing and fixing plant passports for regulated plant material from 1 January 2021](#)
- [Imports with EU plant passports](#)
- [Plant passports and pest-free areas](#)
- [Plant passports and certification labels](#)
- [When to issue a new UK plant passport](#)
- [Attachment of the plant passport](#)
- [Supplier document](#)
- [Keep records](#)
- [Telling APHA about pests or diseases](#)

Phytophthora ramorum symptoms on Rhododendron



Phytophthora austrocedrae symptoms on Juniper



Ralstonia solanacearum symptoms on banana and geranium



Ralstonia solanacearum symptoms on potato



Thank you

Edward.birchall@apha.gov.uk



Animal &
Plant Health
Agency

APHA/Defra/HTA/Plant Healthy seminar for Multiple Retailers

Derek McCann

APHA Plant Health Surveillance & Action

January 2023

Aims

- Provide overview of inland surveillance objectives
- Clarify how action is taken on findings of quarantine pest and disease
- Public reporting & social media
- Collaborative working





Why do we look?

- Plant movement regimes are being operated effectively
- Known quarantine pests and diseases are not spread
- Early warning of any new threat from a previously unknown pest, disease or trade
- Evidence of country freedom to defend import regulations and support export





What do we look at & Where do we inspect?

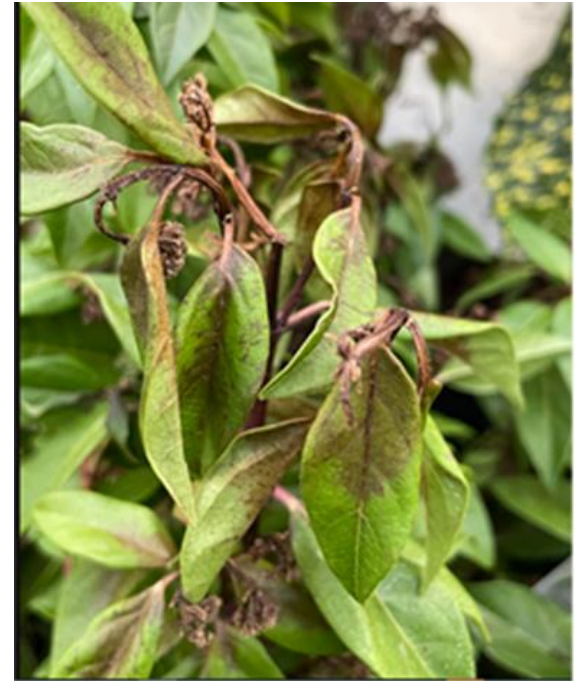
- Annual (20+ QP&D) and Multi-annual (180+ QP&D) surveillance programme
- Ornamentals, crops, the wider environment
 - Inspections carried out at production sites, distribution centres, depots, garden centres and retail units
 - Frequency of site inspections based upon business activity, the hosts traded, the origin of the plants, the volume of trade and the level of distribution i.e. potential to rapidly spread a pest or disease issue





Find instore - action on initial find

- Suspect quarantine pest /disease is found in an individual store, stock put on hold locally and an official sample taken for diagnosis
- Escalated internally within APHA
- The HQ of the multiple is alerted that further details may be required in the event of positive confirmation – at this point we often request:
 - total number of plants in the consignment
 - number/location of stores receiving plants
 - any distribution to devolved administrations
 - the volume of remaining stock on sale
 - supplier delivery notes including PP details



Find instore - Action on positive confirmation

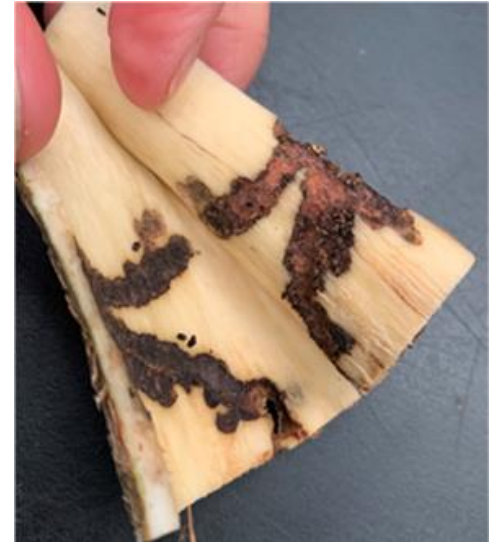
- HQ will serve a national enforcement notice on the head office requiring action against all material identified to that consignment
- **A consignment stands or falls upon the diagnosis of a sample taken from a single store. This is deemed to be representative of the batch/barcode**
- **No further follow up inspections will be made to additional stores to inspect other material**
- Usually HQ office initiates a national recall via its stock system/internal system requiring all material to be removed from sale/destroyed
- Destruction procedure may vary according to the pest /disease present and we will carry out compliance visits



Compounding factors

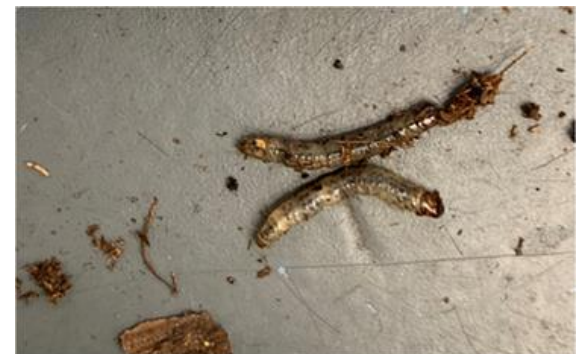
- **Mixing stock of different varieties on a single barcode**

e.g. different varieties or colours of the same genus but only one may be infested. If it is not possible to separate and account for the volume of only the infested variety the whole consignment is destroyed



- **Mixing stock originating from several suppliers onto one barcode**

e.g. different genera within a novelty packaging line. This causes increased losses but also traceability difficulties for APHA in notifying the exporting country and trace back by the NPPO to the affected supplier





Xylella fastidiosa

Key risks	
What is the threat?	<i>Xylella fastidiosa</i> is a highly damaging bacterial pathogen native to the Americas and introduced to Europe (Italy, France, Spain and Germany).
How would it get here?	Most likely to arrive on planting material.
How does it affect UK plants?	<i>Xylella</i> has a vast host range including lucerne, vines, lavender and trees like ash, elm and plane. Bacteria block the xylem (water carrying) vessels leading to dieback, leaf scorch and in some cases mortality.
Other impacts	Massive economic and social impacts due to the removal of ancient olive trees in Italy and the impacts on trade e.g. nurseries under movement restrictions
How quickly does it spread?	It is spread by xylem feeding insects like the meadow spittlebug, and can move in trade of asymptomatic plants.
How controllable is it?	The only control option is destruction of infected plants. Vector populations can be controlled by spraying.
Current actions	All hosts within 100 metres would be destroyed and movement of host plants controlled for 2.5 km.



Leaf scorch of *Platanus occidentalis* (American sycamore) © Edward L. Barnard, Florida Department of Agriculture and Consumer Services



Polygala myrtifolia infected by *X. fastidiosa* in Corsica. © Bruno Legendre, Anses Plant Health Laboratory, Angers

Potential hidden risks within the root ball



Public reporting



-----Original Message-----

From: [REDACTED]
Sent: 07 June 2018 15:26
To: Planthealth Info <Planthealth.Info@fera.gsi.gov.uk>
Subject: PH259 Gall mite

I have just visited the new [REDACTED] store in [REDACTED], Hampshire, they are selling Fuchsia plants that I believe have the Gall mite disease. I did inform the manageress and she has said she will look into it, I am concerned that it obviously has come from there suppliers of the plants and this won't help with trying to stop the spread of this awful disease. I live in Fareham and have lost all my plants to this horrid pest.

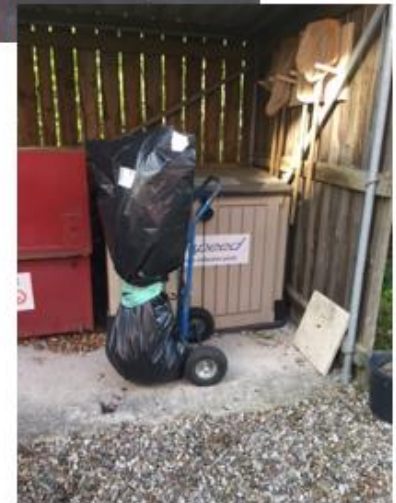
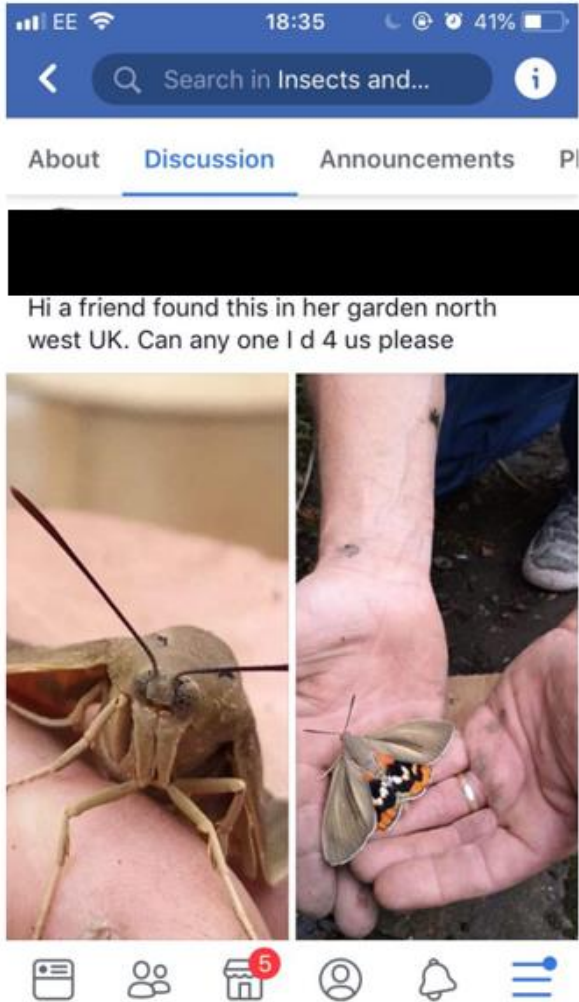
Many thanks, [REDACTED]
[REDACTED]

Public reports

“These Olive trees, which have clearly been imported from Anjou, are displaying a number of worrying features. Namely leaves where discolouration has been present have been snipped to remove evidence. However some discolouration continues and a few of the leaves bear a striking resemblance to leaves on Olive trees infected with *Xylella fastidiosa*.”



Social media



The Plant Healthy Certification Scheme

Alistair Yeomans, Plant Healthy, Pippa
Greenwood, HTA, Merlin Brooke-Little,
Nicholsons, Richard McKenna and
Stuart Tickner,
Provender Nurseries



Plant Health Alliance



Plant Healthy Certification Scheme

Supporting professional horticulturalists help protect our plants from exotic pests

Alistair Yeomans MCIHort MICFor

(Horticulturalist and Forester)



Supporting professional horticulturalists help protect our plants from **exotic pests**

Notifiable pests

Focus is on QPs and RNQS - **biosecurity**

Quarantine Pests (QPs)

A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled

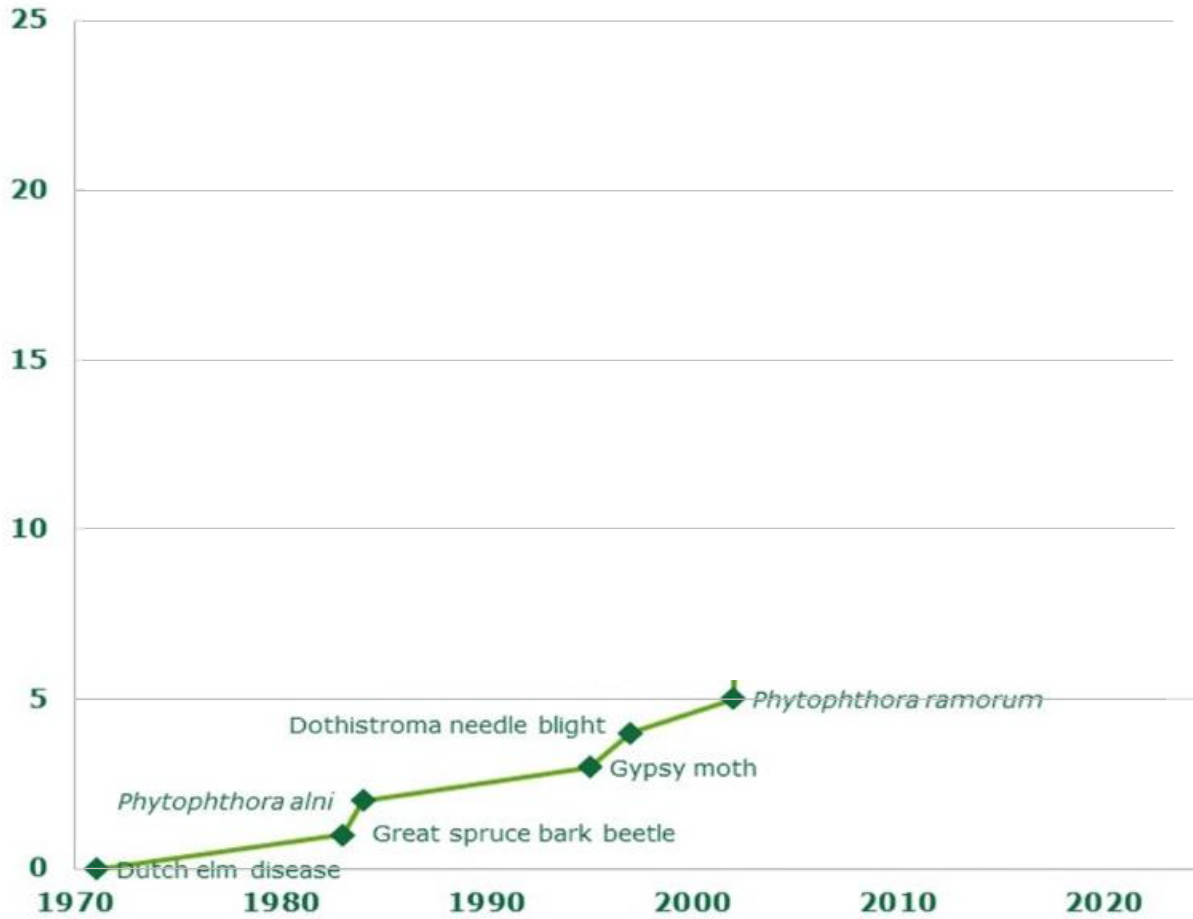
Regulated Non Quarantine Pests (RNQPs)

A non-quarantine pest whose presence in plants for planting affects the intended use of those plants with an economically unacceptable impact and which is therefore regulated within the territory of the importing party

Other pests – **general plant health**



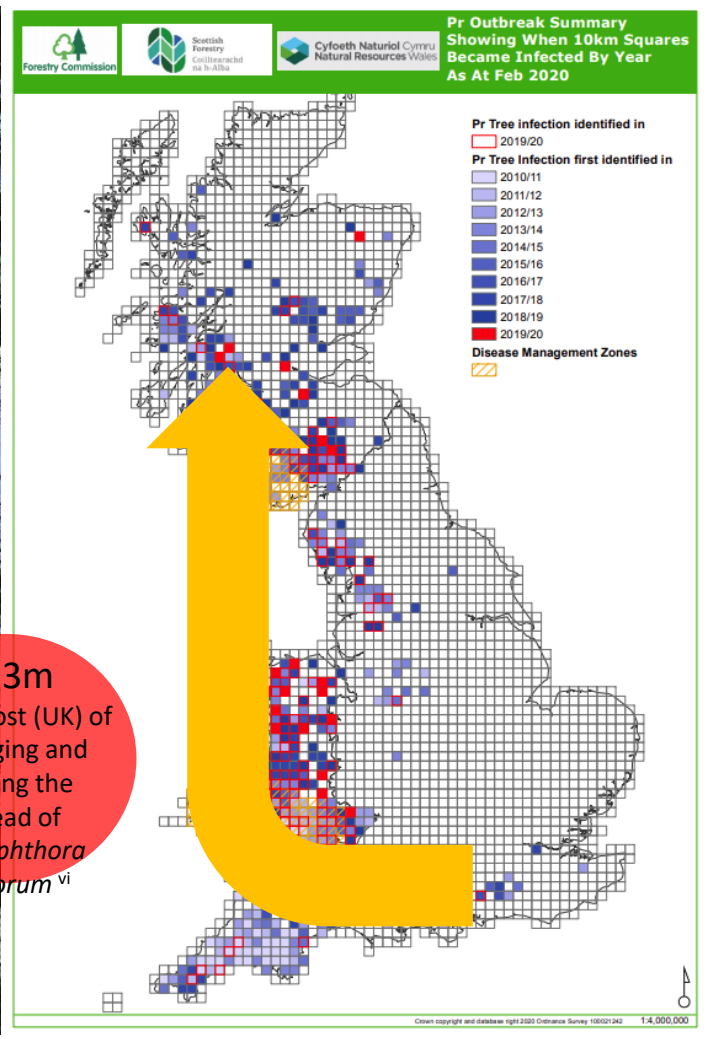
Supporting professional horticulturalists help protect our plants from **exotic pests**





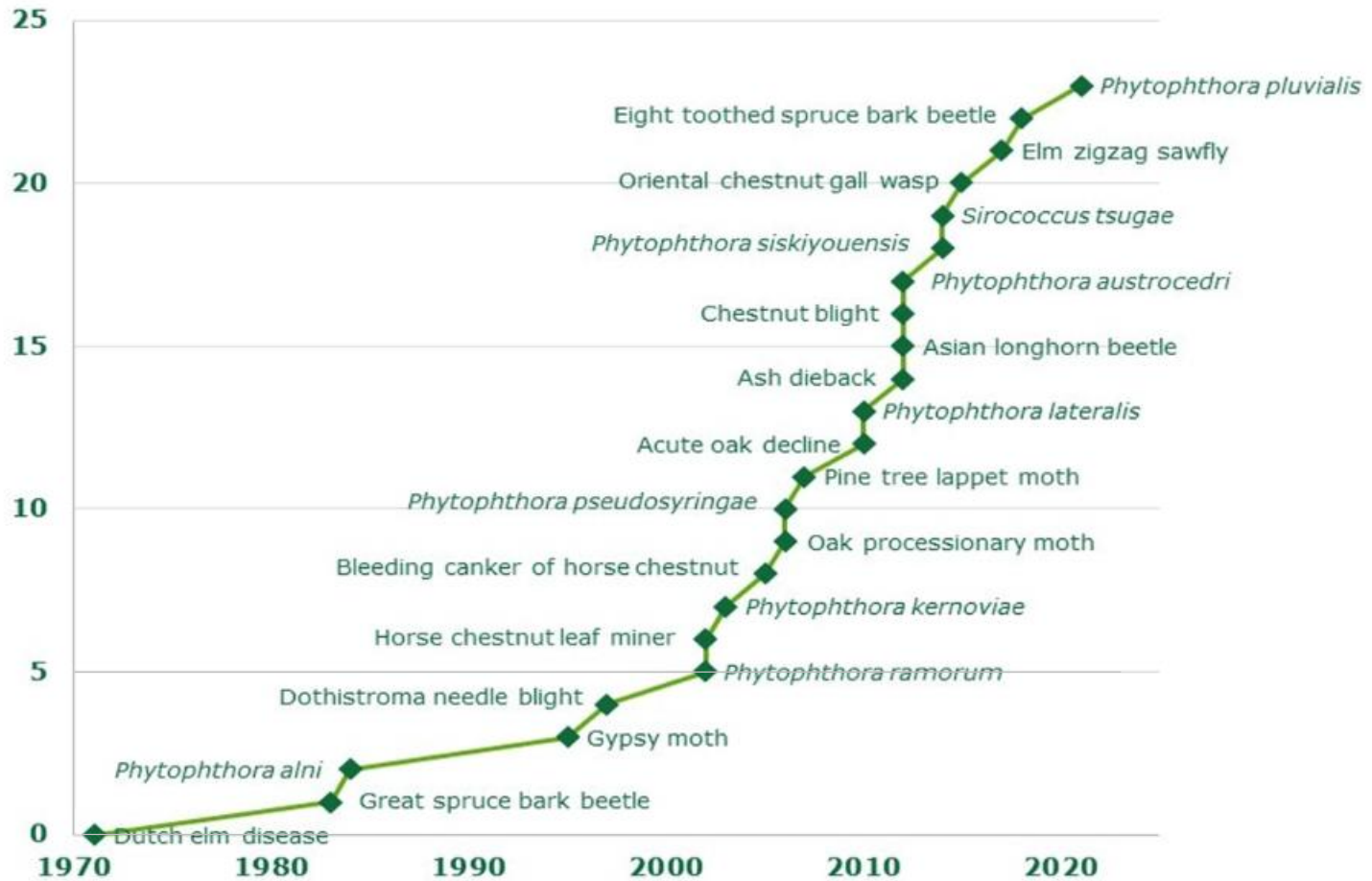
Phytophthora ramorum (PHYTRA) - <https://gd.eppo.int>

£23m
5 year cost (UK) of
managing and
slowing the
spread of
*Phytophthora
ramorum*^{vi}





Supporting professional horticulturalists help protect our plants from **exotic pests**





The European Commission describes *“Xylella as one of the most dangerous plant bacteria worldwide, with huge economic impact for agriculture, public gardens and the environment”*

600 plus
species of plants
currently known
to be susceptible
to Xylella



INTERNATIONAL YEAR OF
PLANT HEALTH
2020



[Xylella - first case of deadly tree bacteria arrives in France](#)



YouTube search:

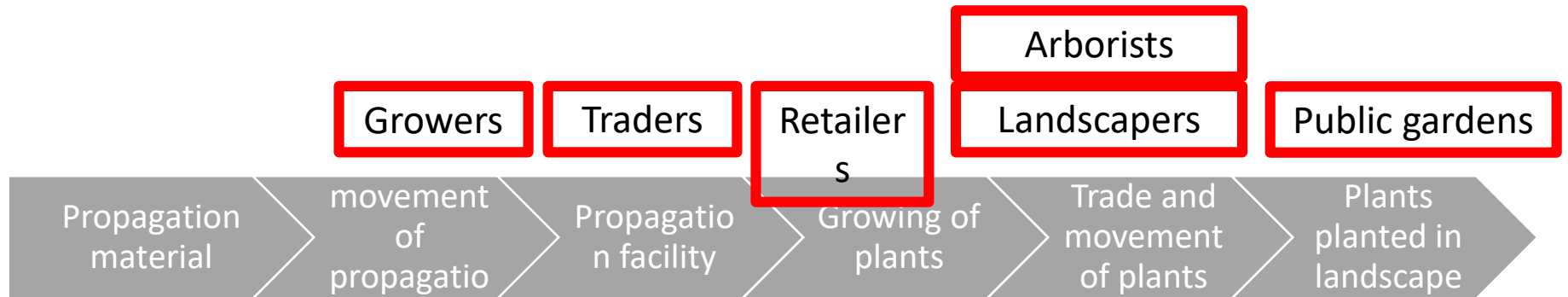
Xylella Helen Mirren

<https://www.youtube.com/watch?v=2xnsdASNvzQ>

The screenshot shows a YouTube video player interface. At the top, the YouTube logo and a search bar containing 'xylella helen mirren' are visible. The video content features a hand-drawn illustration of a building labeled 'GARDEN CENTRE' with a 'CLOSED DOWN' sign in front of it. Below the drawing, a subtitle reads: 'These measures would be catastrophic for any garden centres or nurseries that are inside the 5km area'. The video player controls at the bottom show a progress bar at 2:09 / 4:15, along with icons for play, volume, and other settings. Below the player, the video title 'Xylella : How can we protect our plants?' and view statistics '7,363 views • Jan 12, 2020' are displayed, followed by engagement icons for likes (54), dislikes (3), share, save, and a menu icon.



Supporting professional horticulturalists help protect our plants from **exotic pests**



Reality – over 80% of plants (volume and value come from international sources)

Most common pathway for notifiable plant pests to be introduced to a new area is by the movement of live plants Plant Diseases and Biosecurity, Beales et al. 2019

Plant Pests (and diseases) spread via national and international supply chains



Plant Health Alliance (2018)

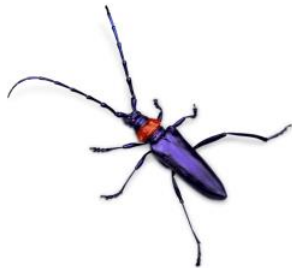
to promote and enhance plant health and biosecurity to protect plant species in the UK and beyond



Governing Body for the Plant Healthy Certification Scheme



Plant Healthy Certification Scheme Manual



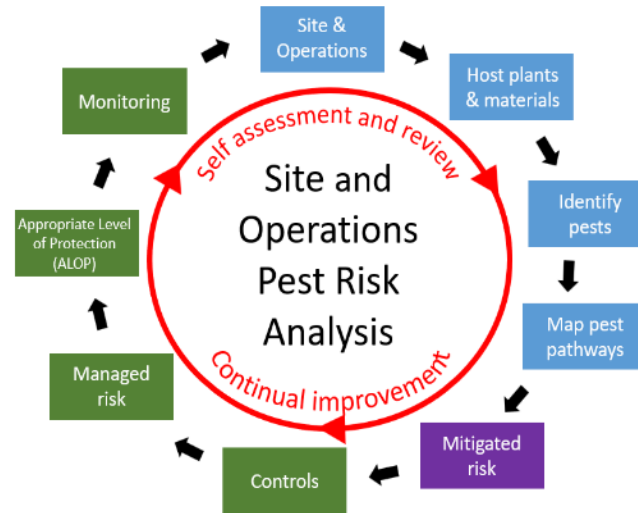
Plant Health Management Standard
Version 1.2

1st July 2022



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Proactive or systems approach to plant biosecurity



Most common pathway for notifiable plant pests to be introduced to a new area is by the movement of live plants Plant Diseases and Biosecurity, Beales et al. 2019

Site & Operations
Pest Risk Analysis

Supply chain
management

Statutory
requirements

On site
monitoring

Wider
environment

Reporting

Traceability



22 priority pests

The Plant Health (Amendment etc.) (EU Exit) Regulations
2020
UK Draft Statutory Instruments
SCHEDULE 1 - New Annex to Commission Implementing
Regulation (EU) 2019/1702



Article 89
knowledge of
notifiable pests

Article 91
Pest Risk
management plan



Pathway / operation (4)	Likelihood	Consequences of pest entry establishment and spread	Risk (5)	Control (6)	Risk with control in place (7)
Seed collection	Highly unlikely	High	Medium risk - of spreading a pest or disease via collection activities	Assess seed collection sites for the presence of the notifiable diseases that are set out in the pest versus hose Risk assessment. Always follow seed collection protocol.	Low
Seed storage	Highly unlikely	Low	Low risk	Monitor seed for signs of pest and disease and contain, assesses and act as required (i.e. report, treat or destroy safely).	Low
Brought in live plant material	Unlikely	High	High risk - the movement of live plant material is considered to be a high risk activity	Salhouse CTN seldom purchases plant material to grow on - if so then purchase from PHY certified nurseries. Do not accept plant material or plants from unknown sources.	Low
Pots and trays	Unlikely	High	Medium risk - from using recycled pots	Clean using suitable sterilisation technique (PHMS - section 6) and / or use new propagation trays and pots	Low
Growing Media - includes all growing media constituents e.g. sand, perlite, bark, soil.	Likely	High	High risk - of most concern are plant diseases spreading via growing media - there is a particular risk with re-cycled growing media and poorly treated green materials	Purchase growing media from reputable supplier with biosecurity policy that states any growing media has been treated appropriately (e.g. PAS 100)	Low
Pot tops	Unlikely	Low	Low risk	Not used at Salhouse CTN	Low
Wood Packaging Material (WPM)	Highly unlikely	High	Medium risk - of spreading a pest or disease via WPM	Directly imported pallets are not used at Salhouse CTN - any pallets used shall be checked for signs of Plant pests - e.g. signs of exit holes etc.	Low
Other packaging material	Highly unlikely	Medium	Low risk - Be aware of plant pests and diseases on packaging material	Little packaging material is received at Salhouse CTN - all items deemed to present a risk to be checked.	Low
Water (irrigation)	Likely	High	High risk - plant pathogens can be carried in contaminated irrigation water	Mains water used - likelihood of pest or diseases being circulated in irrigation is therefore low	Low
Tools, equipment and machinery	Unlikely	Medium	Medium - risk of transmitting pests on tools, equipment and machinery from other sites	Ensure that all are cleaned using suitable sterilisation technique (PHMS - section 6)	Low
People and vehicles	Unlikely	Medium	Medium risk - from on footwear from other sites (e.g. walking in woodlands)	Communicate cleanliness standards to people and vehicles that visit the two sites. Ensure all footwear and vehicles are assessed and treated accordingly. Boot washing facilities provided on allotment site.	Low
Wider environment	Likely	Medium	High risk from spread of pests and diseases across landscapes (e.g. Ash dieback, Phytophthora ramorum and Oak Processionary Moth)	Remain vigilant for pests and diseases that are spread via the wider landscape. Report any suspicious symptoms or identified notifiable pests to the relevant authorities - be particularly aware of pests that may spread from plants cultivated on the Salhouse CTN sites. It is acknowledged that some pests will spread irrespective of Salhouse	MEDIUM / LOW
Water (drainage)	Likely	Medium	High risk - pests and diseases (particularly oomycetes e.g. Phytophthoras)	Site is freely draining with no puddling on either of the two sites	Low
Waste material - growing media, plant material	Likely	Medium	High risk - plant pests can proliferate and be spread in contaminated waste material	Assess waste storage and management systems for potential to harbour and proliferate plant pests - caution of use recycled compost and ensure that suspect waste plant material, growing media and packing are suitably stored and disposed of.	MEDIUM / LOW
Waste pots, packaging material and other items	Unlikely	Medium	Medium risk - pests and diseases can spread from the sites on waste material as eggs or resting spores.	Assess waste storage and management systems for potential to harbour plant pests - ensure that waste material are suitably stored and disposed of.	Low

Growers, garden retailers, landscapers and arborists, together we can help protect our plants from destructive pests and diseases.

Plant Healthy Certification Scheme

[PLANT HEALTHY SCHEME MANUAL](#)

[DIRECTORY OF CERTIFIED BUSINESSES](#)



STAGE 1

Self Assessment

Register and complete the free Self Assessment Tool.

STAGE 2

Application

Apply to an approved certification body for an audit.

STAGE 3

Continual improvement

Key sources of information and training.

Help safeguard your business and our countryside.

Just one disease like ash dieback can cause billions of pounds worth of economic and environmental damage. That's why we need to work together to grow, buy and sell healthy plants.

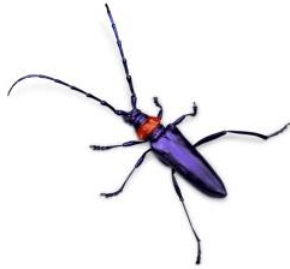
What can you do?

By adopting the Plant Health Management Standard and becoming Plant Healthy certified, you'll be helping to protect our plants, landscape and wildlife.





Plant Healthy Certification Scheme Manual



Plant Health Management Standard Version 1.2



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1st July 2022

PLANT HEALTHY SCHEME MANUAL

DIRECTORY OF CERTIFIED BUSINESSES







Environmental, Social and Governance

Evidence



Practice

Knowledge exchange

Royal Botanic Gardens Edinburgh



"The retail area of RBGE was viewed as particularly high-risk. It became apparent that the risks associated with certain species supplied to us and their provenances was not always clear.

There were also pest risks associated with other products (e.g., bird boxes) and wooden pallets arriving from international suppliers.

The Plant Healthy certification process mitigates and minimises the risk of new pest species arriving and spreading from the retail area to the rest of the garden and beyond."

RHS Garden Harlow



"The Plant Health Management Standard - is a very valuable, logical framework..."

...The Management Standard is helping us to identify potential risks to our gardens, business operations and reputation, enabling us to address them.

...The RHS is keen to encourage improved biosecurity across the entire horticulture supply chain.... Increased visibility of the scheme through the involvement of retailers would give this [scheme] a real boost. "

Lunch break, networking



Raising Consumer Awareness - social and behavioural science

Jake Morris, Defra

Chris Pollard, Forest Research





Department
for Environment
Food & Rural Affairs



Forest Research

Raising Consumer Awareness - Social and behavioural science

Dr Jake Morris, Defra Plant Health

Dr Chris Pollard, Forest Research

APHA/Defra/HTA/Plant Healthy seminar for Multiple Retailers

Date: January 31st, 2023

Strategic and policy context

- **NZ Biosecurity 2025 Strategy - A biosecurity team of 4.7 million** “A collective effort across the country – every New Zealander becomes a biosecurity risk manager”
- **UK Plant Biosecurity Strategy 2023-2028 – Outcome 2: A society that values healthy plants** “We want to create a society that values healthy plants and trees, understands that these values are threatened, makes positive choices, and takes action to safeguard those values”

To do this we will ensure that everyone:

- **recognises the value** that healthy plants have in their everyday lives
- understands that these **values are under threat**
- is clear about the **links between their actions and choices and the risks to the environment**, and is empowered to adopt positive behaviour change
- **understands their responsibility to act**
- feels part of a **national biosecurity culture** where individuals know their role and where risky behaviours are considered socially unacceptable



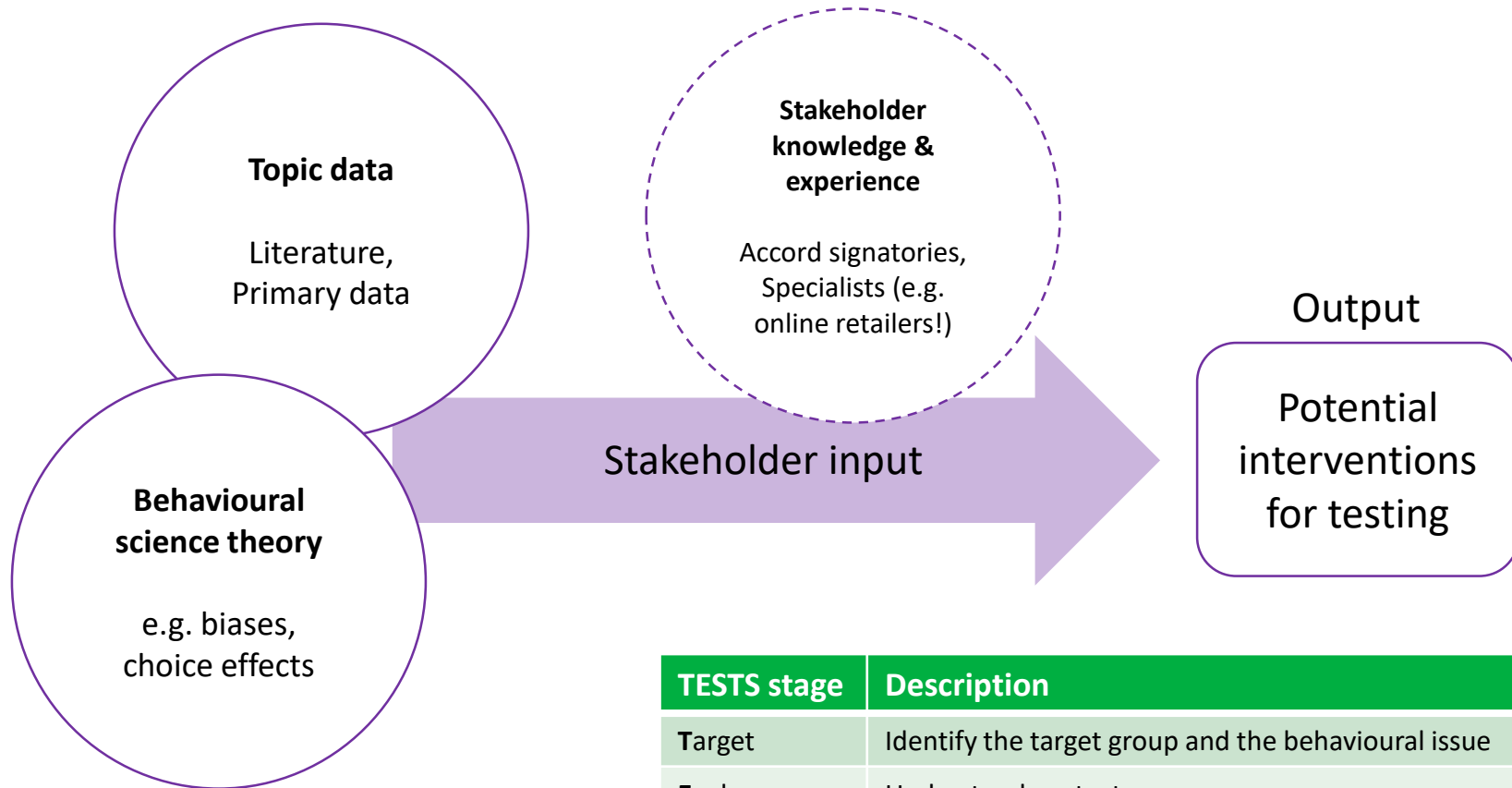
Strategic and policy context

- **Public Engagement in Plant Health Accord** – published as part of the UK Plant Biosecurity Strategy
- 30 signatories – organisations across public, private, charitable sectors

*“We are working together to **promote positive behavioural change** to safeguard the health of our plants and trees and the benefits they provide for society, the environment and the economy. **We believe that considering plant health and good biosecurity practice should be normal for anyone buying and caring for plants, when travelling or spending time in nature, and we will work together to ensure this happens.**”*

- Importance of being **evidence-based** – key role of behavioural insights
- **National Plant Health Week** – research will inform and test how we communicate with the public
- Priority focus on understanding how to **stimulate consumer demand** for good biosecurity

Research approach



TESTS stage	Description
Target	Identify the target group and the behavioural issue
Explore	Understand context
Solution	Design interventions for behaviour change
Trial	Conduct field trials to evaluate potential worth of intervention
Scale	Implement successful trials at a larger scale

Research approach

Year 0 - 20/21

- Rapid literature review
 - What audience characteristics can predict pro-environmental behaviour change?

*National
scale comms
(WS1)*

How could the national conversation be designed and delivered to increase **appreciation, awareness, understanding and support?**

Year 1 - 21/22

- National scale survey (England, 7000 people)
- Focus Groups (before & after survey)

*International
travel (WS2)*

What are potential interventions to support **travellers** to make better biosecurity decisions when **bringing plant material back to GB** from other countries?

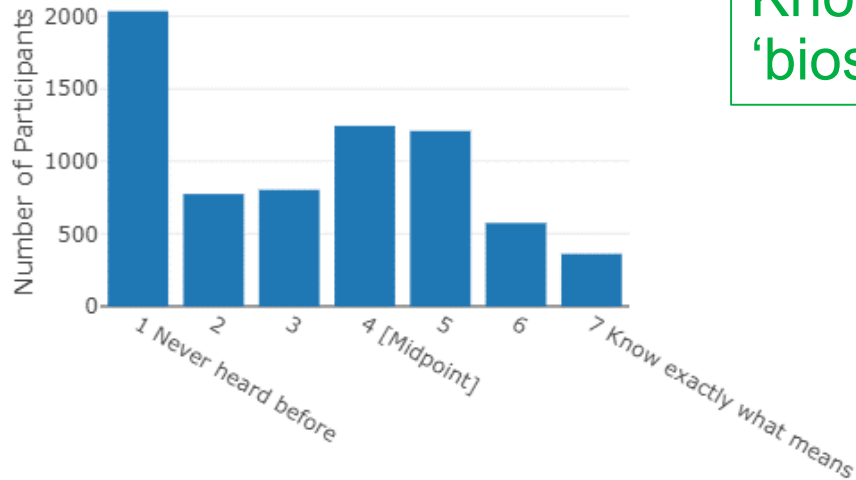
Year 2 & 3 - 22/23 & 23/24

- Research
 - General: National scale
 - Specific: Audience & Issue
- Intervention development, testing, launch
 - National Plant Health Week & beyond

*Online
marketplaces
(WS3)*

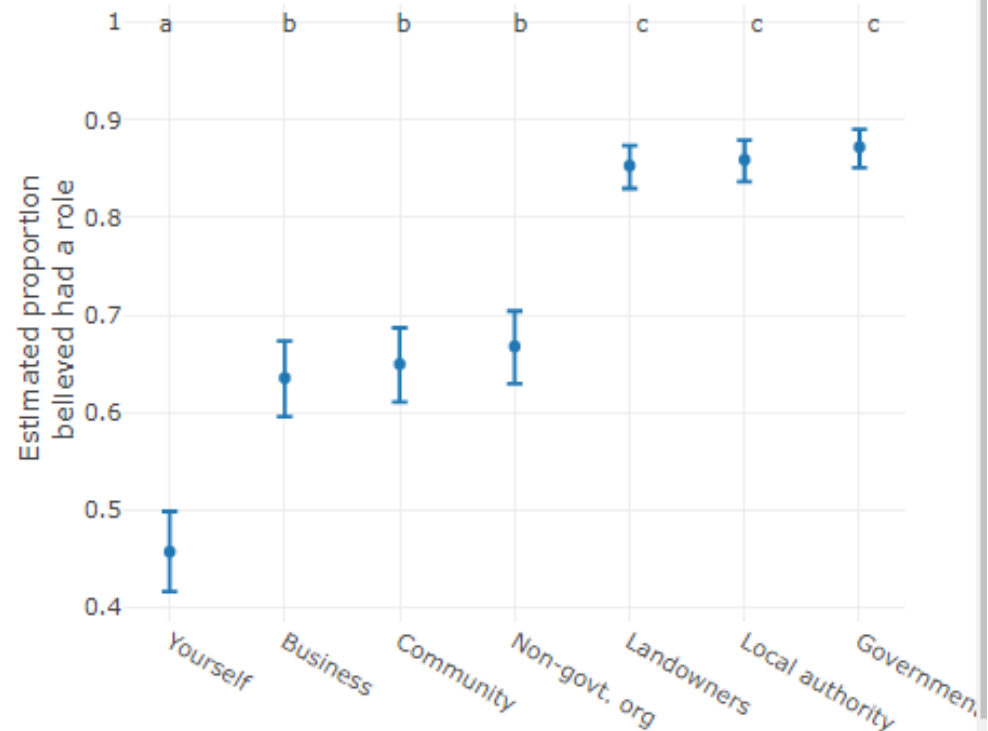
What are potential interventions to support **consumers** to make better biosecurity decisions when **buying plants from online marketplaces?**

Focus 1: Knowledge and responsibility



Knowledge of the term 'biosecurity'

Role of different groups in helping to protect against plant/tree pests and diseases



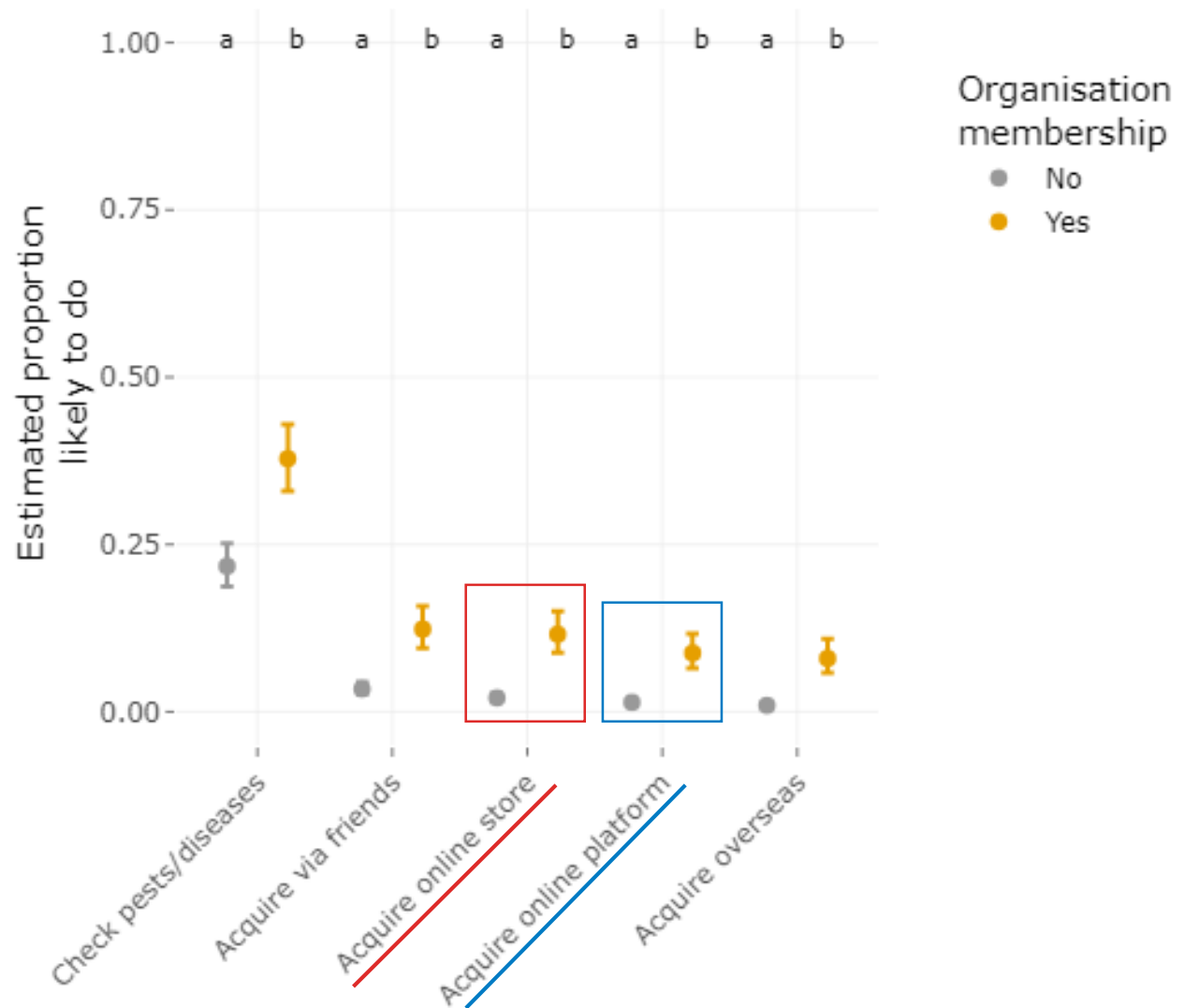
Focus 1 – our response

Low knowledge and low perceived responsibility

Target	Target group – wide demographic focus incl. audiences of partners / signatories
Explore	Research to understand context – previous campaign evaluation, audience segmentation, qualitative / explanatory research
Solution	Design interventions – draw on behavioural theory and models, partner expertise and experience
Trial	Research (e.g. focus groups) to pre-test intervention – will it make a difference?
Scale	Implement <u>and evaluate</u> successful trials at a larger scale – e.g. through National Plant Health week comms

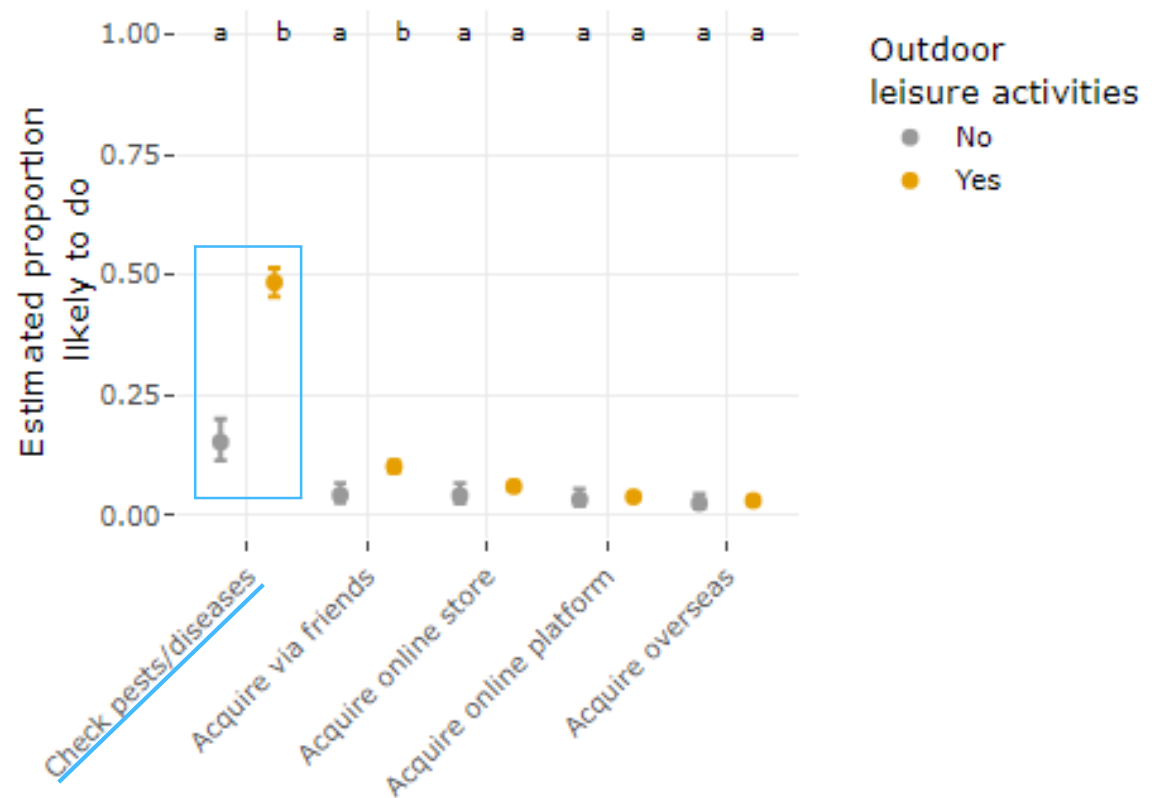
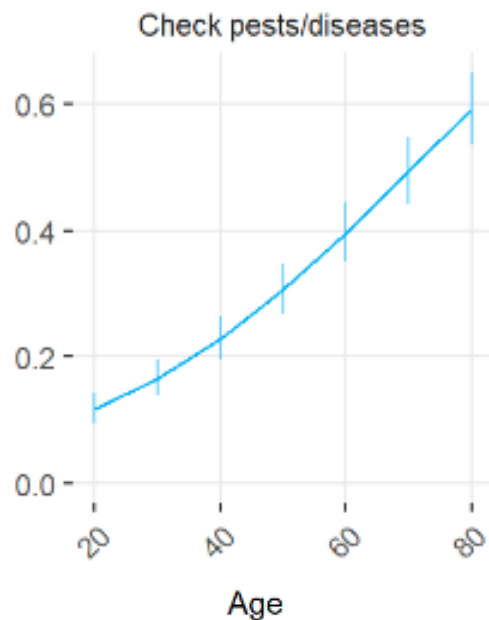
Focus 2: Plant purchasing behaviours

How often do you do the following?



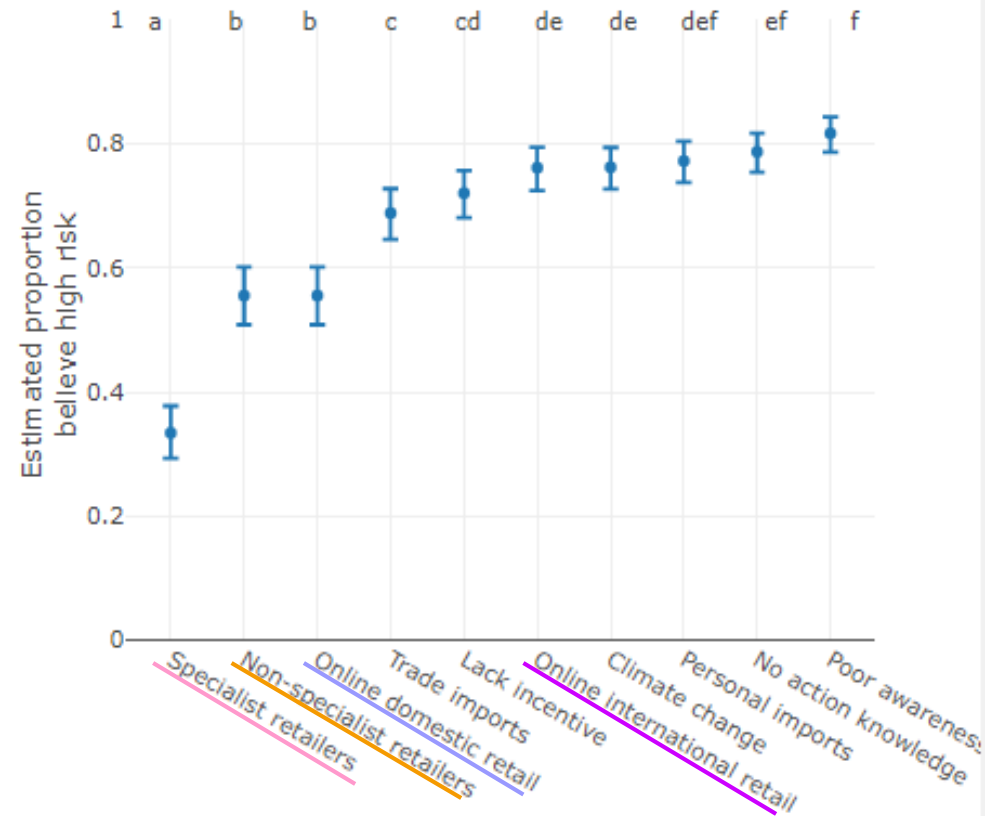
Focus 3: Mitigation behaviours

Checking for signs of pests and disease before purchase



Focus 4: Perceived sources of risk

Risk to plant health from a range of sources



Focus 2 + 3 + 4 – our response

Plant purchasing + risk mitigation behaviours + perceived risk

Define	Desired behaviour – consumers’ plant buying choices (where / what to buy / what to look out for) are ‘biosecurity informed’*
Explore	How people experience buying plants (online) and the specific barriers that information* or choice architecture interventions will need to overcome to influence those behaviours.
Execute	Provide a longlist of ideas for interventions that have the best chance of being effective. Support partners to design specific interventions that will work for their business / customers.

*information about retailer, product, or both? We don’t know yet!

Any questions?

(We have a few!)

- Fostering a biosecurity culture (generally) and stimulating consumer demand for plant biosecurity (specifically) – what do you think?
- Do you see any potential risks / threats to your organisation / business?
- Do you see any benefits / opportunities?
- Do you have any relevant behavioural / consumer insights research or knowledge that you'd be willing to share?
- Would you like to be kept informed? Would you like to be involved?

Opportunities and Challenges – an industry perspective

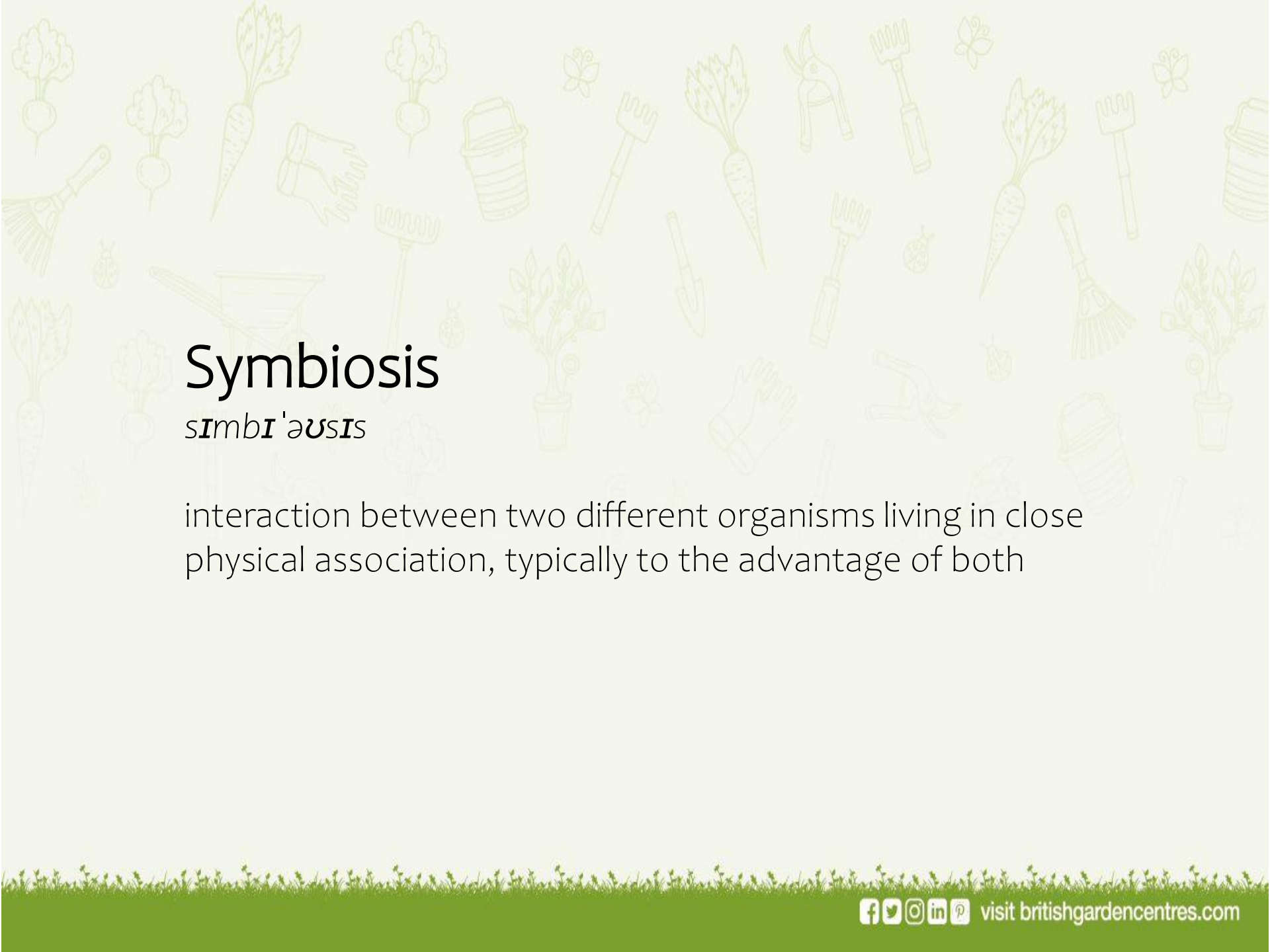
Boyd Douglas-Davies,
British Garden Centres





Opportunities and Challenges

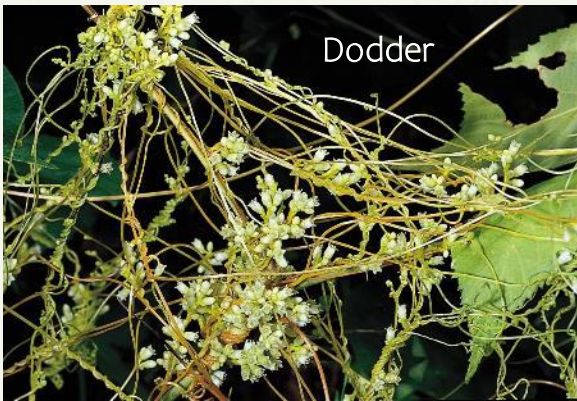




Symbiosis

sɪmˈbaɪəʊsɪs

interaction between two different organisms living in close physical association, typically to the advantage of both



The ideal...
Mutualism





Challenge

'tʃælɪn(d)ʒ

a challenge is something new and difficult which requires great effort and determination

a challenge to something is a questioning of its truth or value







Opportunity 1

ɒpə'tju:nɪti

a time or set of circumstances
that makes it possible to do
something

Eatwell Guide

Check the label on packaged foods

Each serving (150g) contains

Energy 1019kJ 240kcal	Fat 3.0g	Saturated 1.3g	Sugar 34g	Salt 0.9g
	LOW	LOW	HIGH	MED
13%	4%	7%	36%	15%

of an adult's reference intake
Typical values (as sold) per 100g: 697kJ / 167kcal

Choose foods lower in fat, salt and sugars

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.



6-8 a day

Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

Source: Public Health England in association with the Welsh Government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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Grow Well Guide





Opportunity 2

ɒpə 'tju:nɪti/

FOOD HYGIENE RATING

0

1

2

3

4

5

VERY GOOD

Plant Healthy Rating



VERY
GOOD

The background features a repeating pattern of light green line-art icons representing various garden tools and plants, including carrots, gloves, buckets, and shovels.

Thank you!

British Garden Centres

Keeping Britain Growing

Boyd J Douglas-Davies, Director – British Garden Centres,

Chairman – Ornamental Horticulture Roundtable Group

BDD@BritishGardenCentres.com

Ensuring consistency of supply – the Target Operating Model

Will Surman, Defra, Sally Cullimore,
HTA, Geoff Caesar, Allensmore Nursery,
Jonathan Whittemore, Johnsons of
Whixley, Andy Bunker, Tillington Group,
Chair Kelvin Hughes, APHA



Summing up and closing remarks

Nicola Spence, Defra

