

ILI Lecture – October 14th
Dónall Flanagan – Teagasc Nursery stock advisor
Plant health, pests and imports.



Introduction

- Teagasc
 - Advisory, research and education
 - Advice for growers on production, plant health and plant passports, imports, treatment for P&D
- Protected zones and key pests/hosts
- Sourcing quality plants
- Reducing risk by using resistant varieties



Protection Measures

- EU Priority pests
 - 20 pests
- EU Quarantine pests
 - Completely absent (106) or very limited locations (22)
- Protected Zone plants pests
 - C.24 in Ireland
- Mandatory reporting

Priority & Quarantine pests

- Controlled across the EU
- Emerald Ash Borer
 - » *Agrilus planipennis*



Emerald ash borer –Washington Post

- Citrus longhorn beetle (CLB)
 - » *Anoplophora chinensis*
- Asian longhorn beetle (ALB)
 - » *Anoplophora glabripennis*
- Canker stain of plane
 - » *Ceratocystis platani*



Asian Longhorn beetle – Wild Kratts / EPPO



Canker stain of plane - EPPO

Priority & Quarantine pests

- *Xylella fastidiosa*
- Bacterial infection,
 - Parts of Italy, France, Spain and Portugal
- 563 host species
- Highest risk hosts in the EU are
 - *Polygala myrtifolia*
 - *Olea europaea*
 - *Prunus dulcis*.
 - *Coffea spp.*,
 - *Lavandula dentata*
 - *Nerium oleander*
- Other key hosts: Hebe, Spanish broom, *Acer rubrum*, *Platanus occidentalis*, *Quercus rubra* and *Vinca minor*.
- Control via destruction of hosts within 50m, large scale restrictions for trade in 2.5km



Protected zones and key pests

- Control measures in areas or countries that are free of a priority pest or disease
- <https://www.agriculture.gov.ie/farmingsectors/planthealthtrade/newplanthealthregulations/>



Protected zones and key

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Farming Sectors

- New Plant Health Regulations
- Registering as a Professional Operator
- Procedures for TRACES NT
- Horticulture Link Newsletter

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Protected Zones

A protected zone is a zone in the Community in which certain harmful organisms are absent from specific parts of the territory but are present elsewhere. Their presence would have an impact on the production of certain plants. Protected Zone Pests and EPPO codes for issuing plant passports

- [Ireland's Protected Zones & EPPO Codes \(2016/2031\)](#)
- [All EU Protected Zone Pests and EPPO Codes](#)

Protected Zones

Teagasc Presentation Footer

Horticulture & Plant Health

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EPPO Codes required for the issuing of plant passports in protected zones.

Plant Health Regulation (EU) 2016/2031

These additional requirements apply to movements of specified plants into and within protected zones. Please check other appendices for details of standard plant passports that may be needed for other movements.

Everyone has a responsibility to ensure that the named organisms are not moved into the protected zones irrespective of whether passports are required. All entries are for plants intended for planting (excluding fruit and seeds) unless otherwise specified.

| (a) Insects, mite and nematodes, at all stages of their development: | | |
|--|---|---|
| EPPO Code | Harmful organisms + host genera | Protected zones |
| BEMITA | <i>Bemisia tabaci</i> Genn (European populations) (tobacco whitefly) <small>Plants that feed on an extremely wide range of host plants (800+ Species assigned to 90+ families) and the number of recorded host id continually increasing. They include crops grown outside in the tropics and sub tropics (e.g. cassava, cotton, sweet potato, tobacco and tomato) vegetable and salad crops grown under glass in Europe (e.g. cucumber, aubergine, pepper and tomato) and ornamental plants (e.g. poinsettia).</small> | Ireland, Portugal (Azores, Beira Interior, Beira Litoral, Entre Douro e Minho and Trás-os-Montes), Sweden, UK |
| CEPCAL | <i>Cephalcia lariciphila</i> (European web spinning larch sawfly) <small>Plants for planting of <i>Larix</i></small> | Ireland, UK(NI, Isle of Man, Jersey) |
| DENCM1 | <i>Dendroctonus micans</i> (Large spruce beetle) <small>Plants of <i>Abies</i>, <i>Larix</i>, <i>Picea</i>, <i>Pinus</i> and <i>Pseudotsuga</i> over 3m in height (includes Christmas trees) Wood of conifers that is no bark free. Isolated bark conifers.</small> | Ireland, Greece, UK(NI, Isle of Man, Jersey) |
| DRYCKU | <i>Dryocosmus kuriphilus</i> (oriental chestnut gall wasp) <small>Plants for planting of <i>Castanea</i> not plants in tissue culture, fruit and seed</small> | Ireland, UK |
| GILPPO | <i>Gilpinia hercyniae</i> (European spruce sawfly) | Ireland, Greece, UK(NI, Isle of Man, Jersey) |

HORTICULTURE AND PLANT HEALTH

Insects, mite and nematodes

| Pest | Common name | Host |
|----------------------------------|-----------------------------|--|
| <i>Bemisia tabaci</i> | Tobacco white fly | Many hosts, glasshouse plants, Poinsettia |
| <i>Dryocosmus kuriphilus</i> | Oriental chestnut gall wasp | <u>Castanea</u> |
| <i>Liriomyza huidobrensis</i> | South American leaf miner | <u>Herbaceous plants</u> |
| <i>Liriomyza trifolii</i> | American leaf miner | <u>Herbaceous plants</u> |
| <i>Paysandisia archon</i> | Palm borer | <u>Trachycarpus</u> and <u>palms</u> of 5cm + diameter at base |
| <i>Rhynchophorus ferrugineus</i> | Red palm Weevil | <u>Trachycarpus</u> and <u>palms</u> of 5cm + diameter at base |
| <i>Thaumetopoea processionea</i> | Oak processionary beetle | All <u>Quercus</u> species over 8cm DBH except <i>suber</i> |
| <i>Thaumetopoea pityocampa</i> | Pine processionary beetle | All <u>Pinus</u> species |

Insects, mite and nematodes

| Pest | Common name | Host |
|------------------------------|-------------------------------|---|
| <i>Ips sexdentatus</i> | Six toothed bark beetle | <i>Abies, Larix, Picea, <u>Pinus</u> and <i>Pseudotsuga</i> over 3m in height (includes Christmas trees)</i> |
| <i>Ips typographus</i> | Spruce bark beetle | |
| <i>Gilpinia hercyniae</i> | European spruce sawfly | |
| <i>Ips amitinus</i> | Small spruce bark beetle | |
| <i>Ips cembrae</i> | Larger pine scolytid | |
| <i>Ips duplicatus</i> | Northern Bark Beetle | |
| <i>Cephalcia lariciphila</i> | European web spinning saw fly | <i>Larix</i> |
| <i>Dendroctonus micans</i> | Large spruce beetle | <i>Picea</i> |

Insects, mite and nematodes

| Pest | Common name | Host |
|----------------------------------|-------------------|--------|
| <i>Leptinotarsa decemlineata</i> | Colorado beetle | Potato |
| <i>Liriomyza bryoniae</i> | Tomato leaf miner | |

Example - *Pinus pinaster*

- Ireland has PZ for the following
- Beetles
 - *Dendroctonus micans* Greece, Northern Ireland
 - *Ips amitinus* - Greece, UK
 - *Ips cembrae* - Greece, Northern Ireland
 - *Ips duplicatus* - Greece, UK
 - *Ips sexdentatus* - Greece, Northern Ireland
 - *Ips typographus* - UK
- Fungus
 - *Gremmeniella abietina* – Ireland only
- Caterpillar
 - *Thaumetopoea pityocampa* -



Ips sexdentatus



Bacteria

| Pest | Common name | Host |
|---|-------------|---|
| <i>Erwinia amlovora</i> * | Fire blight | <i>Amelanchier</i> , <i>Chaenomeles</i> , <i>Cotoneaster</i> , <i>Crataegus</i> , <i>Cydonia</i> , <i>Eriobotrya</i> , <i>Malus</i> , <i>Mespilus</i> , <i>Photinia</i> <i>daurica</i> , <i>Pyracantha</i> , <i>Pyrus</i> and <i>Sorbus</i> |
| <i>Xanthomonas arboricola</i> <i>pv.pruni</i> ** | | <i>Prunus sp.</i> |

- **PZ for Fire Blight renewed until 2023*
- *** PZ for Xanthomonas being sought*



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Fungi

| Pest | Common name | Host |
|---------------------------------|---------------------------------|---|
| <i>Cryphonectria parasitica</i> | Chestnut blight | <i>Castanea & Quercus</i> |
| <i>Entoleuca mammata</i> | Poplar canker | <i>Populus</i> |
| <i>Gremmeniella abietina</i> | Scleroderris canker of conifers | <i>Abies, Larix, Picea, Pinus</i> and <i>Pseudotsuga</i> |



Virus

| Pest | Common name | Host |
|---|---|--------------------------------|
| Beet necrotic yellow vein virus (BNYVV) | Beet necrotic yellow vein virus (BNYVV) | <i>Beet and used machinery</i> |



Brexit and 3rd countries

- Roses
 - in growing media
- Seed potato
- Second hand Machinery
 - phyto cert and inspection
 - Parts
 - Track machines



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Sourcing high quality plants

- Quality Assurance Programme
 - Bordbia, MPS
- Inspect nursery, visit to suppliers
- Some growers have a reputation for quality



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Reducing Risk

- Some plants are higher risk
 - Avoid the problem, choose diverse plants, limited numbers
- Select resistant varieties where possible
 - Fireblight
 - » *Pyrus calleryana* 'Redspire', Crab Apple 'PrairiFire', *Pyracantha* Mohavje, *Sorbus x intermedia*...
 - Dutch Elm Disease
 - » *Ulmus* Vada, Columnella, Lobel,
 - Resista Group - Rebona, New Horizon
- Stressed or weak trees are more susceptible to some pests e.g. Spruce bark beetle
 - Climate change will be a stressor



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Thank you

- Further information
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- EPPO
- Teagasc
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Quercus palustris Woodside splendor



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