

EU project number 613678

Strategies to develop effective, innovative and practical approaches to protect major European fruit crops from pests and pathogens



Work package 1. Pathways of introduction of fruit pests and pathogens

Deliverable 1.3.

PART 8 - Other interesting findings:

- pests listed in one or several of the Alert Lists which are also important for other fruit crops grown in the EU**
- pests of interest for other crops identified during the study**

Pests listed in one or several of the Alert Lists which are also important for other fruit crops grown in the EU

Information was extracted from the datasheets prepared for the Alert list. Please refer to the datasheets for more information (e.g. on Distribution, full host range, etc).

Pest (taxonomic group)	Hosts/damage	Alert List
<i>Aegorhinus superciliosus</i> (Coleoptera: Curculionidae)	<i>A. superciliosus</i> is mentioned as the most important pest of raspberry and blueberry in the South of Chile. It is also a pest on currant, hazelnut, fruit crops, berries, gooseberries.	Apple Vaccinium
<i>Amyelois transitella</i> (Lepidoptera: Pyralidae)	<i>A. transitella</i> is a serious pest of some nut crops (e.g. almonds, pistachios, walnut)	Grapevine Orange- mandarine
<i>Archips argyrospilus</i> (Lepidoptera: Tortricidae)	In the past, heavy damage in the USA and Canada, with serious outbreaks mostly on Rosaceae (especially apple and pear with 40% fruit losses in some cases)	Apple Orange- mandarine
<i>Argyrotaenia spheropa</i> (Lepidoptera: Tortricidae)	This species also damage <i>Diospyrus kaki</i> and pear in Brazil	Grapevine Orange- mandarine Vaccinium
<i>Carpophilus davidsoni</i> (Coleoptera: Nitidulidae)	Polyphagous. Belongs to most serious pests of stone fruit in South Australia (peaches, nectarines and apricots). Raising problem in almond production. The host range of the Genus <i>Carpophilus</i> is broadening and it became a significant pest of new crops like cherries and strawberries	Grapevine
<i>Coscinoptycha improbana</i> (Lepidoptera: Carposinidae)	In New Zealand, it has become a pest of soft fruit in Norfolk Island, affecting commercial peach production, and infests a range of soft fruit and nuts year-round, including citrus, peach, plum, pear	Orange- mandarine
<i>Cotinis nitida</i> (Coleoptera: Scarabidae)	Adults of <i>C. nitida</i> cause injuries to many fruits, including grape, peach, raspberry, blackberry, apple, pear, quince, plum, prune, apricot and nectarine	Grapevine
<i>Ctenopseustis obliquana</i> (Lepidoptera: Tortricidae)	It is a cause of rejection of fruit at export for avocado. It is considered as a pest of kiwi. In the past it was considered as a pest of a wide variety of fruit crops, such as pome and stone fruit, kiwi, citrus, grape, berry crops.	Apple Orange- mandarine Vaccinium
<i>Deudorix isocrates</i> (Lepidoptera: Lycaenidae)	<i>Punica granatum</i> (Zalom et al., 2009) is the main host. <i>D. isocrates</i> and <i>D. epijarbas</i> are important pests of pomegranate in East Asia, especially in the Indian peninsula; they may cause loss of entire crops.	Orange- mandarine
<i>Dichocrocis punctiferalis</i> (Lepidoptera: Crambidae)	Polyphagous. <i>D. punctiferalis</i> is one of the most important insect pests of peaches in South China	Apple Grapevine Orange- mandarine
<i>Eotetranychus sexmaculatus</i> (Acarida: Tetranychidae)	Polyphagous. In New Zealand, it is a serious pest of avocado	Orange- mandarine
<i>Erthesina fullo</i> (Hemiptera: Pentatomidae)	<i>E. fullo</i> is recorded as a major pest of pear in China.	Orange- mandarine
<i>Euzophera pyriella</i> (Lepidoptera: Pyralidae)	Important insect pests in Xinjiang fragrant pear orchards with crop losses reaching 90%, may cause death of trees	Apple
<i>Leptoglossus zonatus</i> (Hemiptera: Coreidae)	In the USA, <i>L. zonatus</i> is considered an emerging pest on various other of crops such as peach, pomegranate, watermelon	Orange- mandarine
<i>Lobiopa insularis</i> (Coleoptera: Nitidulidae)	<i>L. insularis</i> is considered an important pests of strawberry in Brazil, with damage reaching 20%.	Orange- mandarine
<i>Lygocoris communis</i>	It has been an important pest of pears and apples in Nova Scotia	Apple

(Heteroptera: Miridae)		
<i>Lygus lineolaris</i> (Heteroptera: Miridae)	Apples, peaches and other fruits can develop dimpling (catfacing) around the feeding sites. Damage has also been recorded in other crops, such as blackberry, raspberry, pear	Apple
<i>Naupactus xanthographus</i> (Coleoptera: Curculionidae)	<i>N. xanthographus</i> attacks deciduous fruit trees, like peach	Grapevine
<i>Pandemis pyrusana</i> (Lepidoptera: Tortricidae)	moderately important pest of pear, cranberries in the Western US states and British Columbia	Apple
<i>Paracoccus marginatus</i> (Hemiptera: Pseudococcidae)	Its importance has recently increased; it causes damage also on avocado, citrus, mango, cherry, and pomegranate.	Orange- mandarine
<i>Phlyctinus callosus</i> (Coleoptera: Curculionidae)	Adults of <i>P. callosus</i> cause also damage to fruit on nectarine, pear, plum and peach	Apple Grapevine Vaccinium
<i>Platynota flavedana</i> (Lepidoptera: Tortricidae)	On strawberry, it causes weakening of plants. Peach orchards in Indiana had damage rates above 2%.	Apple Orange- mandarine
<i>Platynota stultana</i> (Lepidoptera: Tortricidae)	Damages by this species is also reported from other economic important crops like <i>Actinidia deliciosa</i> , <i>Pyrus</i> , <i>Prunus persica</i> , <i>Prunus domestica</i> , <i>Rubus</i>	Grapevine
<i>Proeulia chrysopteris</i> (Lepidoptera: Tortricidae)	Of quarantine importance on kiwi	Grapevine Orange- mandarine
<i>Pseudococcus maritimus</i> (Hemiptera: Pseudococcidae)	Since the 1970s <i>P. maritimus</i> has become an increasingly severe pest of pear and apple in the USA	Apple Grapevine Orange- mandarine
<i>Rhynchites heros</i> (Coleoptera: Attelabidae)	Also attacks pear, peach, plum, loquat and other fruits	Apple
<i>Thaumatotibia leucotreta</i> (Lepidoptera: Tortricidae)	Polyphagous, incl. peach, avocado	Grapevine Orange- mandarine
<i>Tortrix excessana</i> (Lepidoptera: Tortricidae)	<i>T. excessana</i> is a pest of strawberry, walnut, stonefruit in New Zealand.	Apple Vaccinium
<i>Zaprionus indianus</i> (Diptera: Drosophilidae)	Highly polyphagous. High damage of fig (<i>Ficus carica</i>)	Grapevine Orange- mandarine

Pests of interest for other crops identified during the study

During the elaboration of the Alert lists, some polyphagous pests were identified, which were not important for the fruit species selected for the Alert List, but more important on other plants. They are listed below.

Pest (taxonomic group)	Distribution	Hosts	Basic information
<i>Acalymma trivittatum</i> (Coleoptera: Chrysomelidae)	North America to Central America	Host: Cucurbitaceae (major); <i>Zea mays</i> , <i>Solanum lycopersicum</i> , <i>S. tuberosum</i> , <i>Phaseolus vulgaris</i> , <i>Helianthus annuus</i> , <i>Morus</i> , <i>Malus sylvestris</i> , <i>Prunus persica</i> , <i>P. armeniaca</i> .	Major pest of cucurbits (at least in California and Utah) and vector of several viruses (<i>Wild cucumber mosaic</i> , <i>Squash mosaic</i> , <i>Broad bean mottle</i>). Larvae feed on roots, causing serious damage (stunting and death of young plants), and adults on leaves or fruit. Adults also feed on leaves, stems and blossoms of various plants.
<i>Amphipyra pyramoides</i> (Lepidoptera: Noctuidae)	North America	<i>Malus</i> (major), <i>Acer</i> , <i>Quercus</i> , <i>Juglans</i> , <i>Rubus</i> , <i>Vitis</i> , <i>Vaccinium</i> , <i>Prunus</i>	Larvae also feed on leaves and on developing fruit on various species such as cherry, apple and other fruit trees. (CABI CPC considers that <i>Amphipyra pyramoides</i> is a synonym of <i>A. pyramidea</i> , which widespread in Europe)
<i>Costelytra zealandica</i> (Coleoptera: Scarabaeidae)	New Zealand	Polyphagous including grasses, <i>Prunus</i> , <i>Vitis</i> , <i>Vaccinium</i> , <i>Actinidia</i>	Larvae feed on roots of grasses and fruit trees, and adults feed on leaves. A damaging pest of pastures.
<i>Rachiplusia nu</i> (Lepidoptera: Noctuidae)	South America	soybean, sunflower, potato, <i>Helianthus</i> , <i>Brassica</i> , <i>Nicotiana tabacum</i> , but also <i>Vaccinium corymbosum</i> , <i>Cucurbita pepo</i> , artichoke, <i>Solanum lycopersicum</i>	Highly polyphagous, mostly on herbaceous plants such as. Major defoliator of herbaceous plants in South America, and emerged as major soybean pest in Argentina in recent years. Larvae feed on foliage.
<i>Scirtothrips mangiferae</i> (Thysanoptera: Thripidae)	Asia, Africa		Outbreaks on <i>Vaccinium</i> plants in Spain (not established), which was the first record on <i>Vaccinium</i> . Otherwise polyphagous on other species, and causing damage to mango (leaves), and cotton (leaves, flower buds).
<i>Chileulia stalactitis</i> (Lepidoptera: Tortricidae)	South America (Argentina, Chile)	<i>Vitis vinifera</i> , <i>Cotoneaster</i> , <i>Prunus cerasus</i> , <i>Prunus domestica</i> , <i>Thuja</i> , <i>Citrus sinensis</i> , <i>Prosopis tamarugo</i> , <i>Austrocedrus chilensis</i> , <i>Citrus paradisi</i> , <i>Prunus armeniaca</i> , <i>Libocedrus chilensis</i>	Polyphagous, incl. native species and introduced crops such as <i>Prunus</i> , <i>Vitis vinifera</i> , <i>Thuja</i> , <i>Citrus</i> . <i>Chileulia stalactitis</i> feeds on foliage, mature fruit and developing fruit. It is considered a secondary pest of <i>Vitis</i> in Chile. Damage caused to <i>Prunus</i> is considered more significant than that caused by <i>Proeulia</i> spp.
<i>Amorbia cuneana</i> (Lepidoptera: Tortricidae)	North America	Hosts: <i>Persea americana</i> (main host). Also <i>Arctostaphylos</i> , <i>Laurus nobilis</i> , <i>Abies concolor</i> , <i>Pseudotsuga menziesii</i> , <i>Prunus ilicifolia</i> , <i>Pyracantha</i> , <i>Ulmus americana</i> , <i>Vitis</i> , <i>Rubus</i> (new host)	Causes occasional damage in citrus, but is mostly a pest of avocado in California, occasionally causing severe fruit damage. Larva feeds on leaves and fruit (peel of young or maturing fruit and under the calyx).
<i>Aulacophora femoralis</i> (Coleoptera: Chrysomelidae)	Korea Rep., China, Myanmar, Vietnam	Host: Cucurbitaceae	Destructive pest of melon in China. Adults feed on seedling and young leaves of host plants.

<i>Cnephasia jactatana</i> (Lepidoptera: Tortricidae)	New Zealand	Hosts: Actinidia. Also Crataegus, Diospyros, Eucalyptus, Fuchsia, Vitis.	Important pest of kiwi (feeding on leaves and superficially on fruits).
<i>Dictyoploca japonica</i> (Lepidoptera: Saturniidae)	Korea Rep., China, Japan Russia (probably Far- East only)	Hosts: <i>Juglans</i> , <i>Salix</i> , <i>Fagus</i> , <i>Quercus</i> , <i>Populus tremula</i> , <i>Betula</i> , <i>Diospyros</i> , <i>Malus</i> , <i>Pyrus</i> .	Important forest pest causing outbreaks in China. In 2006, more than 140000 ha of walnut trees were defoliated, resulting in huge economic losses. Also important for medical reasons.
<i>Plautia stali</i> / <i>P. crossota stali</i> (Hemiptera: Pentatomidae)	Asia, Congo, Gambia, Russia (East), Hawaii	Hosts: Reproduces on <i>Chamaecyparis obtusa</i> and <i>Cryptomeria japonica</i> . Feeds on various plants, incl. <i>Morus</i> , <i>Syringa</i> , <i>Crataegus</i> , <i>Vigna unguiculata</i> , <i>Gossypium</i> , <i>Malus</i> , <i>Prunus</i> , <i>Chrysanthemum</i> , <i>Helianthus annuus</i> , <i>Brassica</i> , <i>Phaseolus lunatus</i> , <i>Bambusa</i> .	<i>P. crossota stali</i> is one of the most devastating pests of fruit crops in Japan, and infestation levels have increased since the 1990s. It attacks fruit crops when resources in forests are depleted. Fruit is mostly attacked when ripe or near ripening. Reported as minor in some other countries.
<i>Tetranychus pacificus</i> (Acarida: Tetranychidae)	Asia (Japan), North America (Canada, USA).	Polyphagous, including grape (<i>Vitis vinifera</i>), melon (<i>Cucumis melo</i>), soybean (<i>Glycine max</i>), cotton (<i>Gossypium</i> spp.), common bean (<i>Phaseolus vulgaris</i>), stone fruit (<i>Prunus</i> spp.)	<i>Tetranychus pacificus</i> is a major pest of almonds and grapes. Damage is similar to that of other mites, except that low populations are able to cause an inordinate amount of damage, suggesting that the mites inject toxins into their host plants. The damage can appear as though the tree crowns have been burnt by fire. Grape, prune and almond seem to be highly susceptible. Fruit is unlikely to be a pathway for introduction
<i>Chinavia hilaris</i> (<i>Acrosternum hilare</i> , <i>Nezara hilaris</i>) (Hemiptera: Pentatomidae)	Asia: Pakistan North America: USA, Canada, Mexico	Highly polyphagous. Favourite hosts such as black cherry and elderberry, flowering dogwood, evergreen blackberry, basswood and pine trees, and attacking a large number of important economic crops, including <i>Malus domestica</i> (apple), <i>Prunus armeniaca</i> (apricot), <i>Asparagus officinalis</i> (asparagus), <i>Phaseolus</i> (beans), <i>Prunus avium</i> (cherry), <i>Zea mays</i> (maize), <i>Gossypium</i> (cotton), <i>Solanum melongena</i> (aubergine), <i>Prunus persica</i> (peach), <i>Pyrus communis</i> (pear), <i>Pisum sativum</i> (pea), <i>Glycine max</i> (soybean), <i>Nicotiana tabacum</i> (tobacco), <i>Solanum lycopersicum</i> (tomato).	Reported as a serious pest of tomato and other vegetable crops, more damaging in Southern USA. <i>C. hilaris</i> attacks fruit and seeds and reduce their quality. It also favours entry of pathogens.
<i>Ponticulothrips diospyrosi</i> (Thysanoptera: Phlaeothripidae)	Asia: Japan, Korea	<i>Malus pumila</i> . <i>Diospyros kaki</i>	Significant damage recorded in <i>Diospyros kaki</i> orchards in Korea