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2011/129 First report of *Erwinia amylovora* in Algeria

In Algeria, symptoms resembling those of fireblight were detected in several pear orchards (*Pyrus communis*) in the wilayahs of Algiers, Blida, Tipaza and Boumerdès. Samples were tested in the laboratory, and the presence of *Erwinia amylovora* (EPPO A2 List) was confirmed in 2011. Phytosanitary measures are being taken to contain the disease and include: surveys in both infected and non-infected areas, destruction of infected trees, prohibition to move plant material from infected areas, prohibition to move bee hives from infected areas during flowering, pruning of symptomatic shoots and disinfection of pruning tools, information for fruit tree growers and nursery workers. A national committee has been constituted with different stakeholders (administration, growers) to coordinate this action plan.

The situation of *Erwinia amylovora* in Algeria can be described as follows: Present, first detected in 2011 in the wilayahs of Algiers, Blida, Tipaza and Boumerdès, under official control.

Source: IPPC website. Pest report from Algeria (2011-06-16). Signalement du feu bactérien. [https://www.ippc.int/index.php?id=1110879&frompage=251&tx_pestreport_pi1\[showUid\]=217051&type=pestreport&L=0](https://www.ippc.int/index.php?id=1110879&frompage=251&tx_pestreport_pi1[showUid]=217051&type=pestreport&L=0)

Additional key words: new record

Computer codes: ERWIAM, DZ

2011/130 First report of *Pseudomonas syringae* pv. *actinidiae* in Australia

The NPPO of Australia has recently reported the occurrence of bacterial canker of kiwifruit, caused by *Pseudomonas syringae* pv. *actinidiae* (EPPO Alert List), on its territory. The bacterium has been detected on 2 properties in south-east Victoria during the surveillance activities which followed the first detections made in New Zealand at the end of 2010. The growers indicated that the disease symptoms had been present for a number of years, but were thought to be caused by *Pseudomonas viridaflava* which is endemic in Australia. For the moment, no economic losses have been observed. The results of specific PCR testing and DNA sequence analysis have confirmed the identity of the Australian isolates as *P. syringae* pv. *actinidiae* haplotype 2 (corresponding to the 'Asian' strain which is considered to be a 'mild' one). Recent studies have also confirmed that a stored sample from an earlier survey conducted in Western Australia in 1992 belonged to be the same strain (i.e. *P. syringae* pv. *actinidiae* haplotype 2). This is the first record of bacterial canker of kiwifruit in Australia.

The pest status of *Pseudomonas syringae* pv. *actinidiae* in Australia is officially declared as: Present: only in some areas.

Source: IPPC website. Pest Report from Australia (2011-07-12). [https://www.ippc.int/index.php?id=1110879&frompage=72&tx_pestreport_pi1\[showUid\]=217068&type=pestreport&L=0](https://www.ippc.int/index.php?id=1110879&frompage=72&tx_pestreport_pi1[showUid]=217068&type=pestreport&L=0)

Additional key words: new record

Computer codes: PSDMAK, AU

2011/131 *Pseudomonas syringae* pv. *actinidiae* found in Calabria, Campania, and Friuli-Venezia Giulia regions (IT)

In 2011, *Pseudomonas syringae* pv. *actinidiae* (EPPO A2 List) continued to spread in Italy and was detected for the first time in the following regions:

- In Calabria, *P. syringae* pv. *actinidiae* was detected in some plants of *Actinidia chinensis* grown in an orchard in the municipality of Rosarno (Province of Reggio Calabria).
- In Campania, the bacterium was detected in plants of *A. deliciosa* cv. 'Jin Tao'. These plants had been planted in 2010 and the orchard was located in the municipality of Sessa Auruca (Province of Caserta).
- In Friuli-Venezia Giulia, *P. syringae* pv. *actinidiae* was detected in 4 young orchards of *A. deliciosa* cv. 'Hayward' located in the municipalities of Bertiole, Camino al Tagliamento and Codroipo (province of Udine) and in the greenhouse of a nursery located in the municipality of Sacile (Province of Pordenone).

In all regions, emergency measures have been taken to control or eradicate the bacterial canker of kiwifruit in accordance with the Italian Ministerial decree of February 2011.

Source: NPP0 of Italy (2011-05).

Decreto Ministeriale (2011-02-07) Misure di emergenza per la prevenzione, il controllo o l'eradicazione del cancro batterico dell'actinidia causato da *Pseudomonas syringae* pv. *actinidiae*. Gazzetta Ufficiale della Repubblica Italiana no. 69, 15-22.
<http://www.regioni.it/upload/Decreto070211Misureperprevenzione250311.pdf>

Additional key words: detailed record

Computer codes: PSDMAK, IT

2011/132 First report of '*Candidatus Phytoplasma mali*' in Belgium

Until recently, apple proliferation (associated with '*Candidatus Phytoplasma mali*' - EPPO A2 List) was not considered to be present in Belgium. Symptomatic trees had sporadically been reported and found infected, but they were subsequently destroyed. A research project has recently been carried out to evaluate the possible presence of apple proliferation in Belgium, and for the first time included samples collected from asymptomatic trees. Root samples were collected on asymptomatic trees in both commercial and non-commercial apple orchards. These samples were then tested in the laboratory (real-time PCR assays). DNA extracts from psyllid vectors of apple proliferation were also tested. This study revealed the presence of '*Ca. Phytoplasma mali*' in all locations where root or psyllid samples had been collected. The phytoplasma was detected in the provinces of Hainaut, Liège, Limburg, Namur, Oost-Vlaandere, and Vlaams-Brabant. The situation of '*Candidatus Phytoplasma mali*' in Belgium can be described as follows: Present, confirmed for the first time in 2011 and detected in the provinces of Hainaut, Liège, Limburg, Namur, Oost-Vlaanderen, and Vlaams-Brabant.

Source: NPP0 of Belgium (2011-06)

Additional key words: new record

Computer codes: PHYPPMA, BE

2011/133 Updated situation of 'Candidatus Phytoplasma mali' in Norway

In Norway, 'Candidatus Phytoplasma mali' (associated with apple proliferation - EPPO A2 List) was detected for the first time in 1996, although it is suspected that it has been present since the 1970s. From 2009 to 2011, studies were conducted on *Malus* spp. (mainly *Malus domestica*) in commercial orchards (31), nurseries (4) and in 1 private garden. Results showed that the pathogen occurred in several municipalities in the counties of Telemark (Sauherad), Hordaland (Ullensvang) and Sogn og Fjordane (Sogndal, Leikanger, Lærdal, Aurland). In many affected fruit orchards, high incidence of infection (up to 70-80% trees affected) and severe damage (unmarketable fruit) were observed. Phytosanitary measures were taken, and included the destruction of host plants and the application of chemical control against insect vectors when there was risk of spread to nurseries. Official surveys will continue in 2011 (in fruit orchards located in the vicinity of nurseries producing *Malus*) and the official production checks will be intensified in nurseries. The pest status of 'Candidatus Phytoplasma mali' in Norway is officially declared as: Present, only in some areas, subject to official control.

Source: NPP0 of Norway (2011-06)

Additional key words: detailed record

Computer codes: PHYPMA, NO

2011/134 First reports of *Monilia polystroma* in Hungary and the Czech Republic

Monilia polystroma (anamorph of an unknown teleomorph) was described as a new species in 2002 from samples of *Malus pumila* collected from Japan (Leeuwen *et al.*, 2002). The host range of *M. polystroma* and other *Monilinia* species are similar, including *Malus*, *Pyrus*, *Cydonia* and *Prunus*. In Asia, *M. polystroma* was also reported from China (Zhu and Guo, 2010). It was detected on mummified plums (*Prunus aitianli*) which had been collected in August 2008 from one orchard in Mudanjiang city (Heilongjiang).

In Europe, the presence of *M. polystroma* was reported for the first time from Hungary in 2009 (Petroczy and Palkovics, 2009). In April 2006, unusual symptoms were observed on apple trees (*Malus domestica* cv. 'Ashton Bitter') in Újfehértó (Szabolcs-Szatmar-Bereg county). Brownish lesions were present on leaf petioles and lamina, as well as on small fruits and pedicels. Infected areas were covered with yellowish exogenous stromata. The fungus was identified by classical and molecular methods as *M. polystroma*. It is noted that *M. polystroma* did not seem to present a significant impact on fruit production because it was only found in 2006, and was sporadic within the orchard concerned.

The situation of *Monilia polystroma* in Hungary can be described as: Present, found once in 2006 in one apple orchard (Újfehértó).

In 2011, the NPP0 of the Czech Republic reported the first occurrence of *M. polystroma* on its territory. The first findings resulted from an official survey for the presence of *Monilinia fructicola* (EPPO A2 list). In August and September 2010, fruit samples were collected from apple and peach trees (*M. domestica*, *Prunus persica*) growing in orchards in 2 localities (10 km apart). The sampled fruits showed typical symptoms of brown rot (*Monilinia* spp.). Laboratory tests (PCR, RFLP) confirmed the presence of *M. polystroma*. The source of this infection is unknown. In both infected localities, delimiting surveys are being conducted. No eradication measures were taken but specific pest management options were recommended to growers. It is also acknowledged that data is generally

lacking on the distribution and biology of *M. polystroma* and that, for the moment, it is difficult to evaluate its possible impact on European fruit crops.

The pest status of *Monilia polystroma* in the Czech Republic is officially declared as: Present, found in two localities, under surveillance.

Source: NPP0 of the Czech Republic (2011-04).

Leeuwen GCM, van Baayen RP, Holb IJ, Jeger MJ (2002) Distinction of the Asiatic brown rot fungus *Monilia polystroma* sp. nov. from *M. fructigena*. *Mycological Research* 106(4), 444-451.

Petroczy M, Palkovics L (2009) First report of *Monilia polystroma* on apple in Hungary. *European Journal of Plant Pathology* 125(2), 343-347.

Zhu XQ, Guo LY (2010) First report of brown rot on plum caused by *Monilia polystroma* in China. *Plant Disease* 94(4), 478.

Additional key words: new records

Computer codes: MONIPO, CN, CZ, HU, JP

2011/135 Further findings of *Phytophthora lateralis* and first record of *Phytophthora austrocedrae* in Scotland (GB)

In the United Kingdom, the presence of *Phytophthora lateralis* (EPPO A1 List) was recorded for the first time in Scotland (EPPO RS 2011/026) in October 2010, at the Balloch Castle Country Park. In March 2011, *P. lateralis* was reported from two other sites in Scotland. In addition, in one of these sites, the presence of *Phytophthora austrocedrae* was detected on one *Chamaecyparis nootkatensis* tree. *P. austrocedrae* is a newly described species which was isolated from necrotic lesions of stem and roots of dying trees of *Austrocedrus chilensis* (Cupressaceae) in Patagonia, Argentina (Greslebin *et al.*, 2007 - see also EPPO RS 2009/007). So far, *P. austrocedrae* had not been reported outside Argentina, or on another conifer species such as *C. nootkatensis*.

Site 1: dieback and mortality were noticed on 21 trees of *Chamaecyparis lawsoniana* in a public park near Greenock (Inverclyde). Affected trees showed similar symptoms to the initial finding of *P. lateralis* in Scotland, and the identity of the pathogen was confirmed (PCR, sequencing) on bark samples from 3 trees. The ITS sequences for the 3 *P. lateralis* isolates from Greenock were found to be distinctly different from those of the initial finding, thus suggesting that this might be an independent introduction of *P. lateralis*. All infected trees were destroyed by April 2011.

Site 2: in another public park in East Renfrewshire, dieback and mortality were also noticed on 3 *C. lawsoniana* and 2 *C. nootkatensis* trees. Similarly, the identity of the pathogen was confirmed by molecular tests. On this site, two other *Phytophthora* species were also detected: *P. cambivora* on *C. lawsoniana* and *P. austrocedrae* on *C. nootkatensis*. All infected trees were destroyed by May 2011.

It has not yet been possible to identify the source of introduction of *P. lateralis* or *P. austrocedrae* on either site and both pathogens could have been present for more than 1 year. Introduction of nursery stock has probably played an important role but tracing-back studies are under way to verify this assumption. It was also noticed that both sites have a high level of public access. In addition to tree destruction, phytosanitary measures were put into place to avoid any further spread of *P. lateralis* or *P. austrocedrae*, such as:

prohibition to remove plant material from infected sites (including composted material), thorough cleaning and disinfection of all machinery and equipment used to fell and dispose of the infected material, warning notices for members of the public and disinfectant foot mats placed at all exit points.

Source: NPP0 of the United Kingdom (2011-05).

Greslebin AG, Hansen EM, Sutton W (2007) *Phytophthora austrocedrae* sp. nov., a new species associated with *Austrocedrus chilensis* mortality in Patagonia (Argentina). *Mycological Research* 111(3), 308-316.

Additional key words: detailed record, new record

Computer codes: PHYTAU, PHYTLA, GB

2011/136 Detection of *Phytophthora drechsleri* in the Czech Republic

The NPP0 of the Czech Republic recently informed the EPPO Secretariat of the first finding of *Phytophthora drechsleri* on its territory. *P. drechsleri* is reported from all continents and infects a wide range of plants including potato, tomato lucerne, cucurbits, ornamentals and trees. It causes various symptoms on its different hosts (tuber or root rot, damping-off, soft rot, bark canker) which may lead to economically significant damage. Relatively high temperatures and wet conditions are needed for disease development. *P. drechsleri* can be transmitted with plants for planting and attached growing medium.

In the Czech Republic, the pathogen was confirmed in 2010 on *Gerbera jamesonii* plants in one glasshouse (hydroponic cultivation) producing cut flowers. Affected plants showed sudden wilting and dieback, and the disease spread to most gerbera plants in the glasshouse. Samples were collected and tested in the laboratory (isolation, morphology, PCR and RFLP). Although the source of this infection could not be fully ascertained, it is suspected that imports of infected *G. jamesonii* plants were the source of the disease in the glasshouse concerned. Phytosanitary measures were taken to eradicate *P. drechsleri*. All *G. jamesonii* plants were destroyed and the glasshouse disinfected. The efficacy of the eradication measures will be officially monitored.

The pest status of *Phytophthora drechsleri* in the Czech Republic is officially declared as: Transient, recorded in one premises, actionable, under eradication.

Source: NPP0 of the Czech Republic (2011-04).

CABI (1985) *Phytophthora drechsleri*. CMI Descriptions of pathogenic fungi and bacteria no. 840, 2 pp.

CABI (1991) *Phytophthora drechsleri*. Distribution maps of plant diseases no. 281, 2 pp.

Additional key words: new record

Computer codes: PHYTDR, CZ

2011/137 First report of *Paysandisia archon* in the Czech Republic

The NPP0 of the Czech Republic recently informed the EPPO Secretariat of the first record of *Paysandisia archon* (Lepidoptera: Castniidae - EPPO A2 List) on its territory. In 2011, palm trees (*Trachycarpus fortunei*) planted in the Dvůr Králové Zoological garden showed damage symptoms. Palm trees were infested by larvae which were identified as *P. archon*. The presence of the pest was associated with a lot of 30 plants of *T. fortunei* that had

been imported from Italy and delivered to the zoo in September 2009. The infestation became apparent when most of these *T. fortunei* plants were overwintering in a glasshouse. Other palm tree species placed in the same glasshouse or in other glasshouses of the zoo did not show any symptoms of infestation. The infested lot of palm trees has been destroyed to eradicate *P. archon*.

The pest status of *Paysandisia archon* in the Czech Republic is officially declared as: Transient, recorded in one premises, actionable, under eradication.

Source: NPPPO of the Czech Republic (2011-05).

Additional key words: new record

Computer codes: PAYSAR, CZ

2011/138 First report of *Drosophila suzukii* in Slovenia

In early October 2010, the presence of *Drosophila suzukii* (Diptera: Drosophilidae - EPPO Alert List) was confirmed for the first time in Slovenia. Several infested localities were found throughout the western part of the country. The pest was then found in two additional localities in central Slovenia. The first signs of attack were detected on grapes (*Vitis labrusca*) and raspberries (*Rubus idaeus*) but no yield losses were reported.

The situation of *Drosophila suzukii* in Slovenia can be described as follows: Present, first detected in 2010, mainly in the western part of Slovenia.

Source: Seljak G (2011) [Spotted wing Drosophila - *Drosophila suzukii* (Matsumura), a new pest of berry-fruit in Slovenia]. *Sadjarstvo* 22(3), 3-5 (in Slovene).

Additional key words: new record

Computer codes: DROSSU, SI

2011/139 Situation of *Trioza erytreae* in Madeira (PT)

In 1994, the presence of *Trioza erytreae* (Hemiptera: Triozidae - EPPO A1 List - psyllid vector of citrus huanglongbing) was reported for the first time in Madeira (PT). Intensive surveys were carried out and eradication measures (including insecticide treatments every 15 days) were implemented in the affected areas. In addition, growers were given detailed information on how to recognize the pest and control it. Until 1998, *T. erytreae* was well contained, even though the number of affected trees was slowly rising. In 1999, the pest started spreading to other areas and by 2008 the whole island was affected. Today, no specific treatments are applied to control *T. erytreae* (treatments are made against citrus pests in general). However, the NPPPO of Portugal stressed that it is prohibited to move citrus plants from the island of Madeira and that no plant passports can be issued. Annual surveys carried out in all the other parts of the Portuguese territory have showed that *T. erytreae* only occurs in Madeira.

The situation of *Trioza erytreae* in Portugal can be described as follows: Present, restricted to Madeira only.

Source: NPPPO of Portugal (2011-06).

Additional key words: detailed record

Computer codes: TRIZER, PT

2011/140 *Batocera rubus* detected in a bonsai plant in France

The NPPO of France recently informed the EPPO Secretariat of the finding of *Batocera rubus* (Coleoptera: Cerambycidae) in Nanterre (Hauts-de-Seine, Ile-de-France region) on a single bonsai plant (*Ficus microcarpa*). One adult beetle (5 cm long) emerged from the bonsai and was captured by the owner of the plant. This bonsai had been bought in a French shop but had originally been imported from the Netherlands most probably from an Asian country (investigations are under way to identify the exact origin of the plant). This bonsai plant was examined and subsequently destroyed, but no other insect specimens were found. A short PRA will be carried out by the French NPPO to evaluate the potential risks that *B. rubus* may present. Interestingly, the NPPO of the Netherlands had detected a similar species, *B. rufomaculata* (mango tree stem borer) in a glasshouse nursery in February 2005. One larva of *B. rufomaculata* was found in a stem of a *Ficus* bonsai originating from China. These incidents highlight once again the risk of introducing tree borers (even large species) with imports of bonsai plants.

B. rubus is widespread in Asia, and according to the CABI Crop Protection Compendium (CPC) it occurs in the following countries:

Asia: Bangladesh, Brunei Darussalam, Cambodia, China (Fujian, Guangdong, Hainan, Hong Kong, Sichuan, Taiwan Xizhang), India (Assam, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Tamil Nadu, West Bengal), Indonesia (Java, Kalimantan, Nusa Tenggara, Sumatra), Laos, Malaysia (Peninsular, Sabah, Sarawak), Myanmar, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Vietnam.

B. rubus is a polyphagous insect which attacks many tree species but its main hosts are mango (*Mangifera indica*), fig (*Ficus carica*), rubber (*Hevea brasiliensis*) jack fruit (*Artocarpus heterophyllus*) and bread fruit trees (*Artocarpus altilis* and other species). According to Hill (1975), *B. rubus* and its larger relative *B. rufomaculata* are frequently encountered in fruit trees and various woody ornamentals in Asia, but *B. rubus* is seldom a serious pest (whereas *B. rufomaculata* can be a more damaging pest, in particular on fig and mango trees). Larvae of *B. rubus* (fully grown larvae can reach 60-80 mm long) bore into the trunk and main branches. On damaged branches, the foliage may die and fruit set may be impaired. Mortality is not commonly seen but it has been reported from Sri Lanka on infested breadfruit trees. Adult beetles emerge through of holes of approximately 20 mm diameter. They are greyish-brown longhorn beetles (30-60 mm long) with conspicuous spots (usually white) on the elytra. Adults feed on green stems and leaves. The number of generations probably varies according to the climatic conditions (from 1 to 3 or more generations per year).

Many pictures of the adults can be viewed on the Internet, for example:

www.zin.ru/Animalia/Coleoptera/eng/ziarko2.htm

www.singaporeinsects.com/lamiinae/Batocera%20Rubus.jpg

Source: NPPO of France (2011-05).

NPPO of the Netherlands (2005-10). Short PRA. *Batocera rufomaculata*, mango tree stem borer. <http://www.vwa.nl/onderwerpen/english/dossier/pest-risk-analysis/evaluation-of-pest-risks>

Hill D (1975) Agricultural insect pests of the tropics and their control. 2nd edition. Cambridge University Press (GB), p 448.

CABI Crop Protection Compendium (2011) *Batocera rubus*. www.cabi.org/cpc

Additional key words: incursion

Computer codes: BATCRB, BATCRF, FR, NL

2011/141 *Potato spindle tuber viroid* does not occur in Poland

The presence of *Potato spindle tuber viroid* (*Pospiviroid*, PSTVd - EPPO A2 list) in Poland has been mentioned in the past on two occasions, in the EPPO RS 509/17 (1991) and in a publication from Gora *et al.* (1994). In the first case, the source used in 1991 could not be traced. In the second case, one of the authors could confirm that the three isolates mentioned in their laboratory study had been obtained from the collection of the Potato Research Centre, Unit Młochów (now called Plant Breeding and Acclimatisation Institute, Research Division in Młochów). The origin of the PSTVd isolates was not indicated in the paper and could not be traced back because of elapsed time and staff changes within the Institute. Therefore, both records should now be considered doubtful.

In addition, the NPPO of Poland recently informed the EPPO Secretariat that PSTVd was not detected during the official surveys that have been conducted from 2002 to 2010 across the country. All seed potato crops were subjected to visual inspections, and all lots of elite seed potatoes were sampled and tested in the laboratory (R-PAGE, and PCR assays). From 2002 to 2010, 1133 samples were tested and all gave negative results. Moreover, all potato genotypes used in the Polish breeding system (maintained *in vitro* in the genotype bank by the Plant Breeding and Acclimatisation Institute) have been tested and found free from PSTVd. Finally, official checks have also been performed since 2007 on all propagation material of tomato and on plants for planting of ornamental Solanaceae (in particular *Brugmansia* sp. and *Solanum jasminoides*). As a result, PSTVd was detected in 2 samples of *S. jasminoides*. In these 2 cases, infected plants derived from imported material and all infected lots were destroyed. In conclusion, the NPPO considers that PSTVd is absent from Poland.

The pest status of *Potato spindle tuber viroid* in Poland is officially declared as: Absent, confirmed by survey, intercepted only.

Source: NPPO of Poland (2011-03, 2011-06).

Gora A, Candresse T, Zagorski W (1994) Analysis of the population structure of three phenotypically different PSTVd isolates. *Archives of Virology* 138(3-4), 233-245.

Additional key words: absence

Computer codes: PSTVD0, PL

2011/142 EPPO report on notifications of non-compliance (Israel)

The EPPO Secretariat has gathered below the notifications of non-compliance for 2010 sent by Israel.

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Aegilops cylindrica</i>	<i>Triticum</i>	Stored products	Russia	Israel	1
	<i>Triticum</i>	Stored products	Turkey	Israel	1
<i>Alopecurus pratensis</i>	<i>Triticum</i>	Stored products	Turkey	Israel	1
<i>Alternaria brassicicola</i>	<i>Brassica oleracea</i> var. <i>capitata</i> (<i>alba</i>)	Seeds	Italy	Israel	1
<i>Alternaria ricini</i>	<i>Ricinus communis</i>	Seeds	India	Israel	1
<i>Ambrosia</i>	<i>Glycine</i>	Stored products	USA	Israel	6
	<i>Zea mays</i>	Stored products	USA	Israel	1
<i>Anchusa officinalis</i>	<i>Triticum</i>	Stored products	Russia	Israel	1
	<i>Triticum</i>	Stored products	Ukraine	Israel	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Anthriscus caucalis	<i>Allium schoenoprasum</i>	Seeds	Italy	Israel	1
	<i>Daucus carota</i>	Seeds	France	Israel	1
Aphelenchoides fragariae	<i>Oxalis</i>	Bulbs	Netherlands	Israel	1
	<i>Scilla</i>	Bulbs	Netherlands	Israel	1
Aphididae	<i>Amaranthus</i>	Cut flowers	Netherlands	Israel	1
	<i>Begonia</i>	Pot plants	Netherlands	Israel	1
	<i>Freesia</i>	Cut flowers	Netherlands	Israel	1
Aphis gossypii	<i>Alstroemeria</i>	Cut flowers	Netherlands	Israel	1
Aphis nasturtii	<i>Helianthemum</i>	Cuttings	Spain	Israel	1
Arabis mosaic virus	<i>Vitis vinifera</i>	Cuttings	France	Israel	3
Arnica	<i>Glycine</i>	Stored products	Brazil	Israel	1
Arrhenatherum elatius	<i>Anthriscus</i>	Seeds	Netherlands	Israel	1
Ascochyta fabae	<i>Vicia faba</i>	Seeds	Italy	Israel	1
Atriplex patula	<i>Petroselinum crispum</i>	Seeds	Italy	Israel	1
Aulacorthum solani	<i>Fuchsia</i>	Cuttings	United Kingdom	Israel	2
	<i>Lilium</i>	Cut flowers	Netherlands	Israel	1
	<i>Peperomia</i>	Pot plants	Netherlands	Israel	1
	<i>Rhododendron</i>	Pot plants	Germany	Israel	1
Bacillus	<i>Bee pollen</i>	Stored products	Netherlands	Israel	1
Bifora radians	<i>Brassica napus</i>	Stored products	Bulgaria	Israel	1
	<i>Triticum</i>	Stored products	Turkey	Israel	1
Brachymyrmex obscurior	<i>Ananas comosus</i>	Fruits	Dominican Republic	Israel	1
Bromus arvensis	<i>Triticum</i>	Stored products	France	Israel	1
Bromus hordeaceus	<i>Triticum</i>	Stored products	France	Israel	1
Cadra cautella	Unspecified	Stored products (dehydrated fruits)	Thailand	Israel	1
Carpophilus hemipterus	<i>Malus</i>	Fruits	France	Israel	1
Caucalis platycarpus	<i>Hordeum</i>	Stored products	Ukraine	Israel	1
Cernuella virgata	<i>Malus</i>	Fruits	France	Israel	1
Chenopodium hybridum	<i>Raphanus sativus</i>	Seeds	France	Israel	1
Chorispota tenella	<i>Triticum</i>	Stored products	France	Israel	1
	<i>Triticum</i>	Stored products	Russia	Israel	1
Cirsium arvense	<i>Brassica napus</i>	Stored products	Romania	Israel	1
	<i>Hordeum</i>	Stored products	Moldova	Israel	1
	<i>Petroselinum crispum</i>	Seeds	Italy	Israel	1
Cirsium palustre	<i>Triticum</i>	Stored products	Turkey	Israel	1
Clavibacter michiganensis subsp. <i>michiganensis</i>	<i>Lycopersicon esculentum</i>	Seeds	Spain	Israel	1
Claviceps purpurea	<i>Festuca</i>	Seeds	USA	Israel	1
	<i>Lolium</i>	Seeds	USA	Israel	2
	<i>Secale cereale</i>	Stored products	Canada	Israel	1
	<i>Triticum</i>	Stored products	France	Israel	2
	<i>Triticum</i>	Stored products	Moldova	Israel	1
	<i>Triticum spelta</i>	Stored products	Germany	Israel	1
Cochlicella acuta	<i>Malus</i>	Fruits	France	Israel	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Cochliobolus carbonum</i>	<i>Zea mays</i>	Seeds	USA	Israel	1
<i>Colletotrichum gloeosporioides</i>	Unspecified	Stored products (straw)	USA	Israel	1
<i>Commelina benghalensis</i>	<i>Cocos</i>	Stored products (fibers)	India	Israel	1
	<i>Eleusine coracana</i>	Stored products	India	Israel	1
<i>Cornu aspersum</i>	<i>Malus</i>	Fruits	France	Israel	1
Cryptostigmata: Oribatida	<i>Malus</i>	Fruits	Italy	Israel	1
<i>Curculio elephas</i> (larva)	<i>Castanea</i>	Stored products	China	Israel	1
<i>Cuscuta</i>	<i>Beta vulgaris</i> var. <i>cicla</i>	Seeds	Italy	Israel	1
	<i>Guizotia abyssinica</i>	Stored products	Ethiopia	Israel	1
	<i>Organum</i>	Seeds	Italy	Israel	1
	<i>Triticum</i>	Stored products	Ukraine	Israel	1
<i>Deroceras reticulatum</i>	<i>Ardisia</i>	Pot plants	Netherlands	Israel	1
<i>Digitaria ischaemum</i>	<i>Guizotia abyssinica</i>	Stored products	Ethiopia	Israel	1
<i>Dysmicoccus brevipes</i>	<i>Ananas comosus</i>	Fruits	Dominican Republic	Israel	2
<i>Echinochloa crus-galli</i>	<i>Daucus</i>	Seeds	USA	Israel	1
<i>Echium vulgare</i>	<i>Triticum</i>	Stored products	Romania	Israel	1
<i>Elytrigia repens</i>	<i>Hordeum</i>	Stored products	Moldova	Israel	1
	<i>Triticum</i>	Stored products	France	Israel	1
	<i>Triticum</i>	Stored products	Hungary	Israel	1
	<i>Triticum</i>	Stored products	Moldova	Israel	1
	<i>Triticum</i>	Stored products	Russia	Israel	1
<i>Endrosis sarcitrella</i>	<i>Brassica oleracea</i> var. <i>capitata</i> (<i>alba</i>)	Vegetables	Netherlands	Israel	1
<i>Eruca vesicaria</i>	<i>Daucus</i>	Seeds	USA	Israel	1
<i>Euphorbia</i>	<i>Hordeum</i>	Stored products	Kazakhstan	Israel	1
<i>Euphorbia cyparissias</i>	<i>Hordeum</i>	Stored products	Ukraine	Israel	1
	<i>Triticum</i>	Stored products	Ukraine	Israel	1
<i>Euphorbia heterophylla</i>	<i>Glycine</i>	Stored products	Brazil	Israel	3
	<i>Glycine</i>	Stored products	Paraguay	Israel	1
<i>Euphorbia platyphyllos</i>	<i>Hordeum</i>	Stored products	Moldova	Israel	1
<i>Eupodidae</i>	<i>Brassica oleracea</i> var. <i>capitata</i> (<i>alba</i>)	Vegetables	Netherlands	Israel	2
<i>Frankliniella occidentalis</i>	<i>Alstroemeria</i>	Cut flowers	Netherlands	Israel	1
	<i>Rhipsalis</i>	Pot plants	Netherlands	Israel	1
<i>Fusarium oxysporum</i>	<i>Lycopersicon esculentum</i>	Seeds	China	Israel	1
	<i>Lycopersicon esculentum</i>	Seeds	Kenya	Israel	1
	<i>Lycopersicon esculentum</i>	Seeds	Morocco	Israel	1
	<i>Lycopersicon esculentum</i>	Seeds	Netherlands	Israel	1
	<i>Ricinus communis</i>	Seeds	India	Israel	1
<i>Fusarium verticilliodes</i>	<i>Dianthus</i>	Cuttings (unrooted)	Spain	Israel	1
<i>Galeopsis tetrahit</i>	<i>Brassica napus</i>	Seeds	Ukraine	Israel	1
	<i>Hordeum</i>	Stored products	Moldova	Israel	1
	<i>Triticum</i>	Stored products	Moldova	Israel	1
	<i>Triticum</i>	Stored products	Romania	Israel	1
<i>Geotrichum candidum</i>	<i>Actinidia chinensis</i>	Fruits	New Zealand	Israel	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Gnomonia petiolorum</i>	<i>Solanum melongena</i>	Seeds	Spain	Israel	1
<i>Idiopterus nephrolepidis</i>	Ferns	Pot plants	Netherlands	Israel	1
<i>Ipomoea lacunosa</i>	<i>Glycine</i>	Stored products	Brazil	Israel	3
	<i>Sorghum</i>	Seeds	USA	Israel	1
<i>Kluyvera</i>	Bee pollen	Stored products	Netherlands	Israel	1
<i>Lappula squarrosa</i>	<i>Brassica napus</i>	Seeds	Romania	Israel	1
	<i>Brassica napus</i>	Seeds	Ukraine	Israel	1
	<i>Hordeum</i>	Stored products	Ukraine	Israel	1
	<i>Triticum</i>	Stored products	France	Israel	1
	<i>Triticum</i>	Stored products	Russia	Israel	1
	<i>Triticum</i>	Stored products	Ukraine	Israel	1
<i>Lapsana communis</i>	<i>Triticum</i>	Stored products	Romania	Israel	1
<i>Limothrips ceralium</i>	<i>Brassica oleracea</i> var. <i>capitata</i> (<i>alba</i>)	Vegetables	Netherlands	Israel	1
<i>Macdunnoughia confusa</i>	<i>Cyclamen</i>	Plants for planting	Netherlands	Israel	1
<i>Macrosiphum euphorbiae</i>	<i>Alstroemeria</i>	Cut flowers	Netherlands	Israel	1
<i>Malvella leprosa</i>	<i>Glycine</i>	Stored products	Brazil	Israel	1
<i>Melampyrum arvense</i>	<i>Triticum</i>	Stored products	Romania	Israel	1
<i>Meligethes</i>	<i>Malus</i>	Fruits	France	Israel	1
<i>Myzus ascalonicus</i>	<i>Brassica oleracea</i> var. <i>capitata</i> (<i>alba</i>)	Vegetables	Netherlands	Israel	1
<i>Neslia paniculata</i>	<i>Triticum</i>	Stored products	Turkey	Israel	1
<i>Onopordum acanthium</i>	<i>Hordeum</i>	Stored products	Moldova	Israel	1
	<i>Triticum</i>	Stored products	Turkey	Israel	1
<i>Papaver rhoeas</i>	<i>Brassica napus</i>	Stored products	Bulgaria	Israel	1
	<i>Triticum</i>	Stored products	Russia	Israel	1
<i>Penicillium</i>	<i>Actinidia chinensis</i>	Fruits	New Zealand	Israel	1
	Unspecified	Stored products (straw)	USA	Israel	1
	<i>Zea mays</i>	Seeds	France	Israel	1
<i>Persicaria bungeana</i>	<i>Hordeum</i>	Stored products	Ukraine	Israel	1
<i>Persicaria hydropiper</i>	<i>Triticum</i>	Stored products	Russia	Israel	1
<i>Persicaria maculosa</i>	<i>Petroselinum crispum</i>	Seeds	Italy	Israel	1
<i>Phoma</i>	<i>Solanum melongena</i>	Seeds	France	Israel	1
	<i>Solanum melongena</i>	Seeds	Spain	Israel	1
Phoridae <i>Planococcus</i>	<i>Glycine</i>	Stored products (oil cake)	China	Israel	1
	<i>Citrus medica</i>	Fruits	Italy	Israel	1
<i>Planococcus citri</i>	<i>Pelargonium</i>	Cuttings	France	Israel	1
Potato spindle tuber viroid	<i>Lycopersicon esculentum</i>	Seeds	China	Israel	1
	<i>Lycopersicon esculentum</i>	Seeds	Kenya	Israel	1
	<i>Lycopersicon esculentum</i>	Seeds	Netherlands	Israel	1
	<i>Lycopersicon esculentum</i>	Seeds	USA	Israel	1
Pseudococcidae	<i>Vitis</i>	Fruits	South Africa	Israel	1
<i>Pseudococcus viburni</i>	<i>Malus</i>	Fruits	France	Israel	1
<i>Pseudomonas syringae</i>	<i>Pisum sativum</i>	Seeds	Hungary	Israel	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Psocoptera	<i>Coffea</i>	Stored products	Colombia	Israel	1
<i>Quadraspidiotus perniciosus</i>	<i>Malus</i>	Fruits	France	Israel	1
<i>Ralstonia solanacearum</i>	<i>Solanum melongena</i>	Seeds	Spain	Israel	1
Reduviidae	<i>Malus</i>	Fruits	Italy	Israel	1
<i>Rumex acetosella</i>	<i>Daucus</i>	Seeds	Germany	Israel	1
<i>Rumex obtusifolius</i>	<i>Triticum</i>	Stored products	France	Israel	1
<i>Sclerotinia sclerotiorum</i>	<i>Brassica napus</i>	Stored products	Bulgaria	Israel	1
	<i>Brassica napus</i>	Stored products	Romania	Israel	1
	<i>Coriandrum sativum</i>	Seeds	USA	Israel	1
	<i>Glycine</i>	Stored products	Brazil	Israel	3
	<i>Petroselinum crispum</i>	Seeds	Italy	Israel	1
	<i>Pisum sativum</i>	Seeds	Hungary	Israel	1
	<i>Raphanus sativus</i>	Seeds	Netherlands	Israel	1
<i>Setaria pumila</i>	<i>Brassica napus</i>	Seeds	Romania	Israel	1
	<i>Brassica napus</i>	Stored products	Romania	Israel	1
	<i>Daucus</i>	Seeds	USA	Israel	1
	<i>Triticum</i>	Stored products	Hungary	Israel	1
<i>Setaria pumila</i> subsp. <i>pumila</i>	<i>Hordeum</i>	Stored products	Ukraine	Israel	1
	<i>Triticum</i>	Stored products	Moldova	Israel	1
	<i>Triticum</i>	Stored products	Romania	Israel	1
<i>Sida spinosa</i>	<i>Glycine</i>	Stored products	Brazil	Israel	1
	<i>Guizotia abyssinica</i>	Stored products	Ethiopia	Israel	1
<i>Silene latifolia</i>	<i>Triticum</i>	Stored products	Turkey	Israel	1
<i>Sium sisarum</i>	<i>Brassica napus</i>	Stored products	Bulgaria	Israel	1
<i>Solidago</i>	<i>Glycine</i>	Stored products	Brazil	Israel	1
<i>Stachys recta</i>	<i>Triticum</i>	Stored products	Moldova	Israel	1
<i>Stenocarpella maydis</i>	<i>Zea mays</i>	Seeds	France	Israel	1
	<i>Zea mays</i>	Seeds	USA	Israel	4
<i>Syrphophilus bizonarius</i>	<i>Malus</i>	Fruits	Italy	Israel	1
<i>Tapinoma simrothi</i>	<i>Malus</i>	Fruits	Italy	Israel	1
<i>Tetranychus urticae</i>	<i>Dipladenia</i>	Cuttings	Germany	Israel	1
<i>Thrips tabaci</i>	<i>Alstroemeria</i>	Cut flowers	Netherlands	Israel	1
<i>Tilletia controversa</i>	<i>Poa</i>	Seeds	USA	Israel	1
Tomato chlorotic dwarf viroid	<i>Calibrachoa</i>	Tissue culture	Germany	Israel	1
	<i>Calibrachoa</i>	Tissue culture	Poland	Israel	1
<i>Trichoderma</i>	Unspecified	Stored products (straw)	USA	Israel	1
Trombidiidae	<i>Malus</i>	Fruits	Italy	Israel	1
<i>Vicia hirsuta</i>	<i>Triticum</i>	Stored products	Moldova	Israel	1
<i>Xanthomonas campestris</i> pv. <i>campestris</i>	<i>Brassica oleracea</i> var. <i>capitata</i> (<i>alba</i>)	Seeds	Italy	Israel	1
<i>Xerosecta explanata</i>	<i>Malus</i>	Fruits	France	Israel	1

• Wood

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Arhopalus ferus</i>	Unspecified	Wood packing material (dunnage)	Unknown	Israel	1
<i>Calopertha truncatula</i>	Bambuseae	Wood (canes)	Thailand	Israel	1
Cerambycidae (larvae)	Unspecified	Wood packing material (dunnage)	Unknown	Israel	1
	Unspecified	Wood packing material (dunnage)	Unknown	Israel	1
<i>Cerocephala</i>	Bambuseae	Wood (canes)	China	Israel	1
<i>Cryptophagus</i>	Bambuseae	Wood (canes)	China	Israel	1
<i>Dinoderus minutus</i>	Bambuseae	Wood (canes)	China	Israel	1
<i>Eugamasus</i>	Unspecified	Wood	France	Israel	1
Formicidae	Bambuseae	Wood (canes)	Thailand	Israel	1
<i>Monotoma</i>	Bambuseae	Wood (canes)	China	Israel	2
<i>Noctua pronuba</i>	Unspecified	Wood	Netherlands	Israel	1
Psocoptera	Bambuseae	Wood (canes)	China	Israel	2
	Ferns	Wood (canes)	China	Israel	3
	<i>Salix</i>	Wood (canes)	China	Israel	1
	<i>Typha</i>	Wood (canes)	China	Israel	1

Source: EPPO Secretariat, 2011-06.

2011/143 A new illustrated version of the Code of conduct on horticulture and invasive alien plants

A new illustrated version of the Council of Europe/EPPO Code of conduct on horticulture and invasive alien plants has been released and is available in an electronic format at the following address:

http://www.coe.int/t/dg4/cultureheritage/nature/Bern/IAS/default_en.asp

This document is also available in French at:

http://www.coe.int/t/dg4/cultureheritage/nature/bern/ias/default_FR.asp

In addition, a new illustrated version of the European strategy on invasive alien species is available from the same webpages in both English and French.

Copies of these documents can be obtained upon request at the following address, mentioning the number of copies requested, the language (English or French), as well as the ISBN Number:

Council of Europe Publishing

Council of Europe

67075 Strasbourg Cedex

France

E-mail: publishing@coe.int;

Electronic library: <http://book.coe.int/EN/>

Code of conduct on horticulture and invasive alien plants: ISBN 978-92-871-7039-2

European strategy on invasive alien plants: ISBN 978-92-871-7041-5

Additional key words: Invasive alien plants, Code of conduct

2011/144 Results of the survey on the implementation of the Code of conduct on horticulture and invasive alien plants in European and Mediterranean countries

In 2009, EPPO and the Council of Europe (CoE) jointly drafted and published a Code of conduct on horticulture and invasive alien plants. Following its publication, EPPO and the Council of Europe organized a workshop to reflect on how this Code of conduct could be implemented and made recommendations in this regard (see http://archives.eppo.org/MEETINGS/2009_conferences/conf_codeofconduct.htm).

In order to assess the implementation of this Code of conduct within countries, EPPO, the Council of Europe and the European Environment Agency (EEA) joined forces to launch an electronic questionnaire in June 2011. This questionnaire remained open for one month and was addressed to the 50 National Plant Protection Organizations of the EPPO region, the Ministries of the Environment of the Council of Europe Member States, NGOs and the general public.

This survey yielded 33 answers from 22 countries (Belgium, Croatia, Czech Republic, Denmark, Estonia, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Liechtenstein, Luxembourg, Moldova, Norway, Poland, Slovakia, Slovenia, Spain (incl. Canary Islands and Menorca for Balears), Sweden, Switzerland, the Netherlands, and Great Britain). Among the respondents, 2 were representatives of Universities, 4 were from NGOs, 9 were from NPPOs and 18 were from Ministries of Environment, the two latter institutions being fused in some countries.

Only 5 respondents were not aware of the existence of the CoE/EPPO Code of conduct on horticulture and invasive alien plants, and their respondents were either from a non-EPPO member country, an NGO, or a University. Among the 28 persons who were aware of the existence of the European Code of conduct, 12 reported national initiatives involving Codes of conduct either on-going or planned in Belgium, Denmark, Estonia, Ireland, Liechtenstein, Norway, Poland, Slovakia, Slovenia, Spain, the Netherlands, the Great Britain.

The description of the initiatives taken by Belgium, Denmark, Estonia, Ireland and Northern Ireland are presented in this issue of the Reporting Service. Those in Norway, Poland, Slovakia, Slovenia, Spain, the Netherlands and Great Britain will be described in the next issue of the Reporting Service.

It is worth noticing that many existing initiatives are coupling the implementation of the Code of conduct and a national legislation on invasive alien plants. In addition, many countries are also gathering sightings of invasive alien species through citizen observations.

Respondents to the survey from countries where the Code of conduct is not being implemented provided the following suggestions to improve the situation:

- The economic benefits of selling invasive alien plants may initially appear to be superior to the management costs of these species. However, showing the actual costs of the impacts caused by invasive alien plants could rectify this. Identifying alternative species which could replace the lost markets could increase willingness to implement the Code of conduct.
- Spreading the information on the Code of conduct among Universities and involving the general public could enhance its implementation.
- EPPO, the CoE and the EEA may support the translation of the Code of conduct into other languages and publicize these translations.
- Improve communication on various lists of invasive alien plants to differentiate those species that should be regulated and those that should be dealt by the Code of conduct could enhance its implementation.

Source: Respondents to the survey on the implementation of the EPPO/CoE/EEA Code of conduct on Horticulture and Invasive Alien Plants in European and Mediterranean countries.

Additional key words: Invasive alien plants, Code of conduct

2011/145 Belgium: national initiatives on Code of conduct

The answers provided by Belgium to the questionnaire on the implementation of the Council of Europe/EPPO Code of conduct on horticulture and invasive alien plants in European and Mediterranean countries are summarized below. The general conclusions of the questionnaire are presented in EPPO RS 2011/144.

A Belgian Code of conduct is currently being elaborated within the framework of the Life+ AlterIAS project and it will become publicly available in the next few weeks.

Stage and scale of implementation: A consultation of the horticultural sector is ongoing in order to develop the Belgian Code of conduct. Round table discussions were held November 2010 and May 2011 and the Code is reaching completion It will be implemented

at a national scale, involving the major federations of ornamental plant producers and other stakeholders such as end-users in Belgium.

Partners associated: The associated partners and their roles are as follows:

- the Life+ AlterIAS team (University of Liège Gembloux Agro-Bio Tech, Proefcentrum voor Sierteelt, Centre Technique Horticole de Gembloux, Federal Public Service): coordination of the beneficiaries of the project, responsible for the preparation (consultation), implementation and promotion of the Code of conduct;
- Belgian Forum on Invasive Species: production of the listing system for invasive ornamental plants ;
- DG Environment of the European Commission: co-funding of the project (Life+ programme);
- Federal and regional administrations in Belgium: co-funding of the project;
- Professional horticultural sector in Belgium: communication and promotion of the Code of conduct to the nursery industry.

Target of the Belgian Code of conduct: The target audience includes: plant producers/sellers (terrestrial and aquatic plants), managers of public spaces, private managers in the sector (landscape architects, garden contractors), botanical gardens and garden amateurs. Plant export is not covered by this Code of conduct.

Financing of the initiative: The AlterIAS project started in January 2010 and will last 4 years (2010-2013). It is co-financed by the LIFE+ program of the EU Commission and by all regional and federal administrations responsible for the environment in Belgium. The project has a total budget of 1 002 964 euros. The planned budget for preparing, implementing and promoting the Belgian Code of conduct is approximately 315 600 euros.

Use of legislation: Several legal instruments are being developed in parallel to the implementation of the Belgian Code of conduct:

- A federal Royal Decree to prohibit the import of invasive alien plants that are not yet established or not widely distributed in the country should be enforced. It includes the following species: *Carpobrotus acinaciformis* and *C. edulis* (Aizoaceae, EPPO List of Invasive Alien Plants), *Crassula helmsii* (Crassulaceae, EPPO A2 List), *Egeria densa* (Hydrocharitaceae, EPPO List of IAP), *Lagarosiphon major* (Hydrocharitaceae, EPPO List of IAP), *Ludwigia grandiflora* and *Ludwigia peploides* (Onagraceae, EPPO List of IAP), *Myriophyllum aquaticum* (Haloragaceae, EPPO List of IAP) and *Myriophyllum heterophyllum* (Haloragaceae, EPPO Alert List).
- Regional legislation prohibiting the plantation and trade of specific species or imposing control measures against them is under preparation.

Criteria to establish lists of invasive alien plants: The list of invasive alien plants in Belgium is based on assessments performed by experts of the Belgian Forum on Invasive Species using a quick assessment protocol (see the ISEIA protocol and list system).

As a ban on the production and planting of the full list of invasive alien species in Belgium would not be immediately accepted by the horticultural sector, it has been decided to develop a Code of conduct with three levels of engagement. The first level is a commitment to stop selling or planting a shorter list of plant species (including cultivars and varieties). This list includes 28 terrestrial and aquatic plants (which represent around 70% of the Belgian black list species and 30% of the watch list species). This consensus list has been approved unanimously by all horticulture professionals and federations consulted while preparing the Code. The second level of engagement refers to an extended list that includes all the black-listed species in addition to the consensus list species. The third level includes the complete list with the 57 invasive alien plants in Belgium. The

willingness of the sector representatives to include species in the consensus list is directly linked to the economic value of the species: no agreement could be found to include plant species with a high economic importance in this list. In addition, species that only invade very specific habitats were hardly perceived as detrimental by horticulturists because of their limited distribution.

Main requirements of the Code:

- know the list of invasive alien plants;
- disseminate information about invasive alien plants to customers or citizens;
- stop selling/planting invasive alien plants (three options, as described above);
- communicate and promote the use of non-invasive alternative plants;
- participate in early detection (of new potential invasive alien plants);
- display a logo (mentioning the involvement in the Code of conduct).

All those requirements were approved by the horticultural sector during the consultation phase.

Use of incentives or sanctions: A positive public image of stakeholders endorsing the Belgian Code of conduct is developed through communication campaigns. The AlterIAS project will promote efforts of the horticultural sector for protecting biodiversity.

Revision or update of the Code of conduct: The Belgian Code of conduct will be reviewed on a three yearly basis by an ad hoc committee involving representatives of horticulture professionals, scientists and policy makers.

Prevention of the spread of Invasive alien plants: Other preventive actions are and will be developed in the future under the responsibility of regional authorities.

Communication activities: Various communication tools are being developed to promote the Code through the Life+ AlterIAS project: a website, a DVD, TV and radio reports, newsletters, articles in horticultural magazines, etc.

Monitoring of the implementation of the Code of conduct: The key criterion to measure the effectiveness of the Belgian Code of conduct is the limitation in the use of invasive ornamental plants. Horticulture professionals and gardeners involved in the Code of conduct should be registered in the AlterIAS website and located on a google map system. The impacts of the Life+ AlterIAS project will be monitored with a set of indicators, including measurable change of attitude of the target audience through public surveys (e.g. number of persons adopting the Code of conduct, reduction rate in the number of invasive plants in horticultural catalogues, etc.). It is nevertheless difficult to monitor the occurrence and spread of all species that are subject to the Code of conduct. This was not part of the existing project and may be done on a longer term. There are specific monitoring activities of plant occurrence in the wild linked to control measures (e.g. for *Heracleum mantegazzianum* or *Hydrocotyle ranunculoides*), but not all the species covered by the Code of conduct are systematically surveyed.

Source: The Life + AlterIAS project: <http://www.alterias.be>

The Belgian Forum on Invasive Species (including information on the ISEIA protocol and list system): <http://ias.biodiversity.be>

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Additional key words: Invasive alien plants, Code of conduct Computer codes: CBSAC, CBSED, CSBHE, ELDDE, LGAMA, LUDUR, MYPBR, BE

2011/146 Denmark: national initiatives on Code of conduct

The answers provided by Denmark to the questionnaire on the implementation of the Council of Europe/EPPO Code of conduct on horticulture and invasive alien plants in European and Mediterranean countries are summarized below. The general conclusions of the questionnaire are presented in EPPO RS 2011/144.

Stage and scale of implementation: In progress at national level.

Partners associated: The two national organizations of plant nurseries and retailers are involved.

Target of the Danish Code of conduct: The Danish Code of conduct is directed to plant producers and importers, as well as to plant retailers.

Financing of the initiative: Financial support for the development of the Danish Code of conduct is expected from the Nature Agency. For the implementation and future running of the Code of conduct, no budgetary estimates are available.

Use of legislation: Currently, only *H. mantegazzianum* (Apiaceae, EPPO List of IAP) is being regulated in Denmark. The implementation of the Danish Code of conduct is therefore independent from the existing legislation on IAP.

Criteria to establish lists of invasive alien plants: The species to be taken into account are those that appear on the national list of invasive alien plants that could establish or are already established in Denmark. This list is being elaborated by consensus among experts of the National Advisory Group on invasive alien species that also includes representatives from the horticultural industry.

Main requirements of the Code: The Danish Code of conduct requests that users do not produce, import or trade species listed as invasive, and should propose alternatives and information to customers.

Use of incentives or sanctions: Incentives to producers in the form of a 'certificate of participation' is foreseen.

Revision or update of the Code of conduct: Updating mechanisms shall be determined through the participation of plant trade organizations in the National Advisory Group.

Prevention of the spread of Invasive alien plants: This aspect has not been explicitly dealt with.

Communication activities: Not considered at this stage.

Monitoring of the implementation of the Code of conduct: Not considered at this stage.

Source: Contact: Ebbe Nordbo, Plant Directorate, E-mail: eno@pdir.dk

Additional key words: Invasive alien plants, Code of conduct

Computer codes: HERMZ, DK

2011/147 Estonia: national initiatives on Code of conduct

The answers provided by Estonia to the questionnaire on the implementation of the Council of Europe/EPPO Code of conduct on horticulture and invasive alien plants in European and Mediterranean countries are summarized below. The general conclusions of the questionnaire are presented in EPPO RS 2011/144.

Two illustrated books on invasive alien species targeting the general public and schools have been published and give advice on the handling alien species. These documents (in Estonian) are available for free. The first book released in 2008 concerned terrestrial habitats, the second published in 2011 dealt with aquatic habitats (mainly marine ones).

Stage and scale of implementation: In progress at national level.

Partners associated: The Ministry of Environment and several governmental agencies under the Ministry of Environment have been the main enforcers of initiatives on invasive alien plants. Cooperation with border control and Environmental inspectorate has also been undertaken.

Target of the Estonian Code of conduct: Any citizen, including the nursery industry and private garden owners.

Financing of the initiative: Projects consisting in information campaigns on invasive alien species are financed through the Estonian Environmental Investment Center.

Use of legislation: Initiatives will be undertaken in the framework of the Nature Conservation Act stating that the release of IAS into the natural environment is illegal. This legislation produced by the Estonian Ministry of Environment lists species for which import and trade is illegal: *Acroptilon repens* (Asteraceae, EPPO List of IAP), *Ambrosia* spp. (Asteraceae), *Bidens frondosa* (Asteraceae, EPPO List of IAP), *Egeria densa* (Hydrocharitaceae, EPPO List of IAP), *Elodea nuttallii* (Hydrocharitaceae, EPPO List of IAP), *Fallopia japonica*, *F. sachalinensis* and *F. x bohémica* (Polygonaceae, EPPO List of IAP), *Heraclium mantegazzianum* (Apiaceae, EPPO List of IAP), *H. sosnowskyi* (Apiaceae, EPPO A2 List), *Impatiens glandulifera* (Balsaminaceae, EPPO List of IAP), *Solidago canadensis* and *S. gigantea* (Asteraceae, EPPO List of IAP).

Criteria to establish lists of invasive alien plants: Traded invasive alien plants are the targeted species. Although there is no standardized risk assessment in Estonia, lists of plants were compiled by experts considering the invasive behavior of the species in Estonia and in neighboring countries, as well as their use as ornamental plants.

Main requirements of the Code: It is prohibited to sell or to import blacklisted invasive alien plants. Deliberate or accidental release of these species into the wild shall be avoided. Where appropriate, the eradication or management of the listed species is requested.

Use of incentives or sanctions: The Nature Conservation Act includes the use of fines. Proposal of alternative non-invasive plants shall be further explored.

Revision or update of the Code of conduct: The Estonian black list is revised when needed.

Prevention of the spread of Invasive alien plants: In the case of *Heracleum* spp., an eradication campaign is in progress and includes overall information sharing on IAP.

Communication activities: An educational video on *Heracleum* spp., as well as leaflets have been released. Invasive alien species are given particular attention in summer 2011 through a 'nature observation database contest' which encourages members of the public to report their observations on IAS. The main objective is to map 25 invasive alien species, but all IAS sightings are welcome. The list of 25 species includes the following plants: *Amelanchier spicata* (Rosaceae), *Aquilegia vulgaris* (Ranunculaceae), *Bellis perennis* (Asteraceae), *Bunias orientalis* (Brassicaceae), *Chaenorhinum minus* (Plantaginaceae), *Conyza canadensis* (Asteraceae), *Fallopia japonica* and *F. sachalinensis* (Polygonaceae, EPPO List of IAP), *Galega orientalis* (Fabaceae), *Galinsoga ciliata* (Asteraceae), *Heracleum mantegazzianum* (Apiaceae, EPPO List of IAP), *H. sosnowskyi* (Apiaceae, EPPO A2 List), *Impatiens glandulifera* (Balsaminaceae, EPPO List of IAP), *Impatiens parviflora* (Balsaminaceae, EPPO List of IAP), *Lupinus polyphyllus* (Faciaeae), *Solidago canadensis* and *S. gigantea* (EPPO List of IAP).

Monitoring of the implementation of the Code of conduct: It is not planned to monitor the implementation of the Code of conduct. Monitoring of the occurrence and spread of *Heracleum* spp. by the Ministry of Environment is planned, as well as eradication actions for this species.

Source: Estonian Ministry of Environment, books on invasive alien species:
<http://www.envir.ee/95541>

Estonian Ministry of Environment, list of regulated invasive alien species:
<https://www.riigiteataja.ee/akt/12828512>

Educational 19 min video about *Heracleum* spp. 'Tige tulnukas':
ftp://ftp-esitlused-www:7GYFhfYR94VUEIEVZFfe@www.keskkonnaamet.ee/Tige-tulnukas_est.avi in Estonian and
'Злой пришелец': ftp://ftp-esitlused-www:7GYFhfYR94VUEIEVZFfe@www.keskkonnaamet.ee/Tige-tulnukas_vene.avi in Russian.

Leaflet on *Heracleum* spp. 'Karuputke vöörliigid: Sosnovski ja hiid-karuputk':
http://www.envir.ee/orb.aw/class=file/action=preview/id=1165581/Putked_voldik.pdf

Leaflet on *Heracleum sosnowskyi* 'Sosnovski karuputk':
http://www.envir.ee/orb.aw/class=file/action=preview/id=1165583/Sosnovski_voldik.pdf

Source: Merike Linnamägi, Ministry of Environment, E-mail:
merike.linnamagi@envir.ee

Additional key words: Invasive alien plants, Code of conduct

Computer codes: 1AMBG, AMESP, AQIVU, BELPE, BIDFR,
 BUNOR, CENRE, CHNMI, ELDDE, ELDNU, ERICA, GAGOR,
 GASCI, HERMZ, HERZO, IPAGL, IPAPA, LUPPO, POLCU, REYBO,
 REYSA, SOOCA, SOOGI, EE

2011/148 Ireland and Northern Ireland: national initiatives on Codes of conduct

The answers provided by Ireland to the questionnaire on the implementation of the Council of Europe/EPPO Code of conduct on horticulture and invasive alien plants in European and Mediterranean countries are summarized below. The general conclusions of the questionnaire are presented in EPPO RS 2011/144.

An Irish Code of conduct was initially published in 2008, and is currently being updated based on the EPPO Guidelines for the development of a Code of conduct on horticulture and invasive alien plants.

Stage of implementation: Under revision.

Scale of implementation: The Code of conduct covers the Republic of Ireland and Northern Ireland.

Partners associated: Statutory Nature Conservation Organizations are leading the project. In the Republic of Ireland, the National Parks and Wildlife Service is the main body involved. In Northern Ireland, the Northern Ireland Environment Agency plays this role.

Target of the Irish Code of conduct: Plant producers, plant sellers, public bodies, botanical gardens and landscape architects are targeted.

Financing of the initiative: The programme is financed through the 'Invasive Species Ireland project', by the National Parks and Wildlife Service (Republic of Ireland), and the Northern Ireland Environment Agency (Northern Ireland). The 'Invasive Species Ireland project' has an annual budget of 100 000 GBP. The project makes 51 requirements in total with some relating to the Code of conduct. Estimates of costs are not available.

Use of legislation: This Code of conduct is based on the Draft European Communities Regulations (Birds and Natural Habitats) of 2010.

Criteria to establish lists of invasive alien plants: The following species are listed in the Code of conduct: *Azolla filiculoides* (Salviniaceae, EPPO List of IAP), *Carpobrotus edulis* (Aizoaceae, EPPO List of IAP), *Crassula helmsii* (Crassulaceae, EPPO A2 List), *Elodea nuttallii* (Hydrocharitaceae, EPPO List of IAP), *Gunnera tinctoria* (Gunneraceae), *Hydrocotyle ranunculoides* (Apiaceae, EPPO A2 List), *Impatiens glandulifera* (Balsaminaceae, EPPO List of IAP), *Lagarosiphon major* (Hydrocharitaceae, EPPO List of IAP), *Lemna minuta* (Araceae), *Myriophyllum aquaticum* (Haloragaceae, EPPO List of IAP), *Nymphoides peltata* (Menyanthaceae), *Prunus laurocerasus* (Rosaceae, EPPO List of IAP) and *Rhododendron ponticum* (Ericaceae, EPPO List of IAP). This list of species was derived from a risk assessment process; and the nursery industry was consulted. The risk assessment accounts for the following criteria: distribution of the species, expansion range

of the species, its known invasive behavior either in Ireland/Northern Ireland or elsewhere, its spread potential, its establishment potential, its ecological impacts, its impacts on human and animal health, its economic impacts, the potential to control or eradicate the species and the societal barriers to control.

The updated Code of conduct will include additional species. This risk assessment process will differ slightly to the original risk assessment. The industry will be consulted on the lists again.

Main requirements of the Code:

- know what you are growing;
- know what you are selling and recommending;
- know what you are specifying;
- know what you are buying;
- follow control advice;
- watch out for hitchhikers on plants and soil;
- inspect incoming consignments of plants;
- maintain good hygiene, prevent spread;
- report sightings.

Additional pests covered by the Code

Additional measures are specifically targeting flatworms (*Arthurdendyus triangulatus*, *Australoplana sanguinea*): growing sites and commercialized plants should be inspected for the presence of flatworms, and traps should be put in place.

Use of incentives or sanctions: Inclusion of the Code of conduct in quality insurance manuals for nursery stock, potted plants and bedding plants, as well as the involvement of landscape and garden contractors and garden centers are on-going actions recommended by the revision process.

Prevention of the spread of Invasive alien plants: The monitoring of some species is undertaken. Records on the occurrence of invasive alien species are being aggregated through citizen sightings by the Invasive Species Ireland under the project ‘alien watch’ and in the National Invasive Species Database.

Communication activities: The implementation of the Code of conduct will be supported by a range of measures linked to communication activities through the ‘Invasive Species Ireland project’:

- production of education / awareness materials such as posters and leaflets (in development);
- development of a dedicated webpage on the Invasive Species Ireland website (already in place but it will be updated when the new Code is available);
- elaboration of a dedicated section on the website on high risk invasive alien plants in Ireland (already in place but it will be updated when the risk assessment process is updated) and release of this information in hard copy (on-going action);
- production of training material on invasive species to be provided upon request (on-going action);
- setting of a programme of engagement to the Code by the horticultural sector.
- development of a communication campaign to raise awareness about the Code of conduct and its aims (to be developed);
- inclusion of the Code in horticulture courses in Universities and other institutions (to be developed).

Monitoring of the implementation of the Code of conduct: It is not planned to monitor the implementation of the Code of conduct.

Source: Maguire CM & Kelly J (2008) Horticulture Code of Practice. Prepared for NIEA and NPWS as part of Invasive Species Ireland.

Available at http://invasivespeciesireland.com/wp-content/uploads/2010/07/Horticulture_COP.pdf

Draft European Communities (Birds and Natural Habitats) Regulations 2010
<http://www.environ.ie/en/Legislation/Heritage/NatureConservation/FileDownload,23675,en.pdf>

Invasive Species Ireland, Alien watch project,
<http://invasivespeciesireland.com/alien-watch/>

National Invasive Species Database
<http://invasives.biodiversityireland.ie/>

Contact: John Kelly, Invasive Species Ireland, E-mail: jkelly@envirocentre.co.uk

Additional key words: Invasive alien plants, Code of conduct

Computer codes: AZOFI, CSBHE, ELDNU, GUATI, HYDRA, IPAGL, LEMMT, LGAMA, MYPBR, NYPPE, PRNLR, RHOPO, IE

2011/149 ERRATUM: *Solidago virgaurea* is not included in the new Swiss Ordinance on invasive alien plants

Contrarily to what was written in EPPO RS 2011/123, the new Swiss Ordinance on invasive alien plants does not prohibit the handling in the environment of *Solidago virgaurea* (Asteraceae). This species is native to Europe and only alien *Solidago* species are the object of the Ordinance.

Source: Swiss Federal Council (2008) Ordinance on the Handling of Organisms in the Environment (Release Ordinance, RO) of 10 September 2008 (Status as at 1 October 2008), 814.911

http://www.admin.ch/ch/e/rs/814_911/index.html#id-ni5-7

Thanks to Emmanuel Delbart for spotting this mistake.

Additional key words: invasive alien plants, legislation

Computer codes: S00VI, CH