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2009/105 *Tuta absoluta* detected again in the Netherlands

As reported in EPPO RS 2009/024, *Tuta absoluta* (Lepidoptera: Gelechiidae – EPPO A1 List) was detected for the first time in the Netherlands in January 2009. Three specimens were caught in pheromone traps in a packing station of tomatoes. At the beginning of May 2009, limited damage to a few fruits and leaves caused by larvae of *T. absoluta* was observed in a glasshouse producing tomato fruits. This outbreak was detected in the glasshouse of the same company where the pest was first detected in January 2009. This company has tomato packaging and sorting facilities adjacent to a production glasshouse, and is specialized in packaging vine tomatoes originating from Spain. Therefore, it is suspected that the origin of the finding is most likely a consignment of tomatoes that has been transported to the Dutch packaging facility from the infested area in Spain. At this Dutch company, 38 adults were caught in pheromone traps.
A country-wide survey using pheromone traps has been carried out in 80 tomato fruit-producing facilities and in all packaging stations. As a result, another production site was found infested where 11 adults were trapped. In addition, continuous and multiple (several hundreds) adult findings have been recorded in pheromone traps at packaging stations. Eradication measures have been taken at the infested production sites. Active surveillance will continue in the Netherlands, in both production and packaging sites. Tomato growers and trade companies will be informed about this outbreak and the possible risks that *T. absoluta* present for tomato production.
The pest status of *Tuta absoluta* in the Netherlands is officially declared as: **Transient, actionable, under surveillance. Isolated populations not expected to establish. Appropriate phytosanitary measures, including surveillance are being applied.**

Source: INTERNET (last retrieved in 2009-06)
Website of the Dutch Ministry of Agriculture, Nature and Food Quality. Pest Report - *Tuta absoluta* Povolny (*Gelechiidae)* – tomato leaf miner - in tomato fruit greenhouse in The Netherlands.
http://www.minlnv.nl/cdlpub/servlet/CDLServlet?p_file_id=38924

Additional key words: detailed record **Computer codes:** GNORAB, NL

2009/106 *Tuta absoluta* reported for the first time from Lazio region, Italy

In Italy, the presence of *Tuta absoluta* (Lepidoptera: Gelechiidae – EPPO A1 List) was first noted in 2008 in Calabria and then in Campania, Sardegna and Sicilia (EPPO RS 2009/023). During surveys carried out from March to April 2009, *T. absoluta* was found in glasshouse tomatoes in the region of Lazio for the first time. The pest was observed in the communes of Fondi, Terracina (both in the province of Latina), and Fiumicino (Roma).
The situation of *Tuta absoluta* in Italy can be described as follows: **Present, first found in 2008, reported from Calabria, Campania, Lazio, Sardegna, and Sicilia.**

Source: NPPO of Italy, 2009-05.

Additional key words: detailed record **Computer codes:** GNORAB, IT

2009/107 First report of *Dryocosmus kuriphilus* in Switzerland

The NPPO of Switzerland recently informed the EPPO Secretariat of the first record of *Dryocosmus kuriphilus* (Hymenoptera: Cynipidae - EPPO A2 List) on its territory. The insect was first detected on 2009-05-08 on a single high stem *Castanea* tree in the centre of Mendrisio, a small town located at the very South of Ticino. According to the survey which was subsequently carried out from 2009-05-12 to 2009-05-20, typical symptoms could be found on *Castanea* in almost the whole Sottoceneri area, corresponding to the southern part of Ticino. In some cases, experts considered that, according to the type of damage found, trees might have been infested since 2007. The Sopraceneri area, corresponding to the Northern part of Ticino and geographically separated from the Sottoceneri by the Monte-Ceneri mountain chain, has still been found free from the pest. As a result, the Sottoceneri area has been demarcated and the movement of plants of *Castanea* will be prohibited. This precautionary measure should prevent the pest from spreading to the northern part of Ticino and, *a fortiori*, to the northern part of the Alps, and it will affect retailers (garden centres) as well as nurseries. However, the NPPO of Switzerland considers that the eradication of the pest in the demarcated area may not be feasible.
The situation of *Dryocosmus kuriphilus* in Switzerland can be described as follows: **Present, first found in 2009 in Ticino, only in the Sottoceneri area, under official control.**

Source: NPPO of Switzerland, 2009-05.

Additional key words: new record **Computer codes:** DRYCKU, CH

2009/108 Situation of *Dryocosmus kuriphilus* in France in 2008

In France, the first outbreak of *Dryocosmus kuriphilus* (Hymenoptera: Cynipidae - EPPO A2 List) was reported in 2007 in the department of Alpes-Maritimes (Provence-Alpes-Côte d'Azur region), close to the infested region of Cuneo in Italy (EPPO RS 2007/086 and 2008/097). During surveys conducted in 2008 in Alpes-Maritimes, the pest was found in the 4 communes that were already infested in 2007, and in 2 new ones. Despite phytosanitary measures which were implemented to prevent the spread of the pest in France and Italy, the surface of demarcated areas (infested zone + focus zone of 5 km radius + buffer zone of 10 km radius) in both countries increased from 124 632 ha in 2007 (63 362 in FR; 61 270 in IT) to 179 086 ha in 2008 (114 670 in FR, 64 415 in IT). In 2009, it is envisaged to use biological control methods by releasing a parasitoid of *D. kuriphilus*, *Torymus sinensis*, as this has done since 2005 in Italy by the University of Torino. In addition, studies on the possible use of resistant cultivars (*Castanea sativa* cv. 'Bouche de Bétizac') are being initiated.
In 2007, an isolated outbreak of *D. kuriphilus* was detected on 10 young chestnut (*Castanea sativa*) trees in a nursery in Haute-Garonne (Midi-Pyrénées region). The infested lot had been originally produced by an Italian nursery near Brescia (Lombardia) before being re-exported from Spain to France. In 2007, all infested plants were destroyed, no chestnut plants were commercialized by the infected nursery, and no further insects were detected in its vicinity. However in 2008-05-09, *D. kuriphilus* was identified on 5 of the 36 chestnut trees which had remained at the nursery. Observations made on the galls showed that the insects were still inside and did not have the time to complete their life cycle and escape in the environment. All chestnut trees grown at the nursery were destroyed. As no other insects could be found in the surroundings, the NPPO of France considers that this outbreak has now been eradicated.

The pest status of *Dryocosmus kuriphilus* in France is officially declared as: **Present, only in one area, under official control.**

Source: NPPO of France, 2009-01.

Additional key words: detailed record **Computer codes:** DRYCKU, FR

2009/109 *Paysandisia archon* occurs in Veneto, Italy

The NPPO of Italy recently informed the EPPO Secretariat that *Paysandisia archon* (Lepidoptera: Castniidae – EPPO A2 List) has been found for the first time in Veneto region. On 2009-03-10, *P. archon* was observed on several plants of *Trachycarpus fortunei* growing in a nursery at Bardolino (Verona province). All infested palm trees were destroyed.
The situation of *Paysandisia archon* in Italy can be described as follows: **Present, found in several regions (Apulia, Campania, Liguria, Marche, Sicilia, Toscana, Veneto), under official control.**

Source: NPPO of Italy, 2009-04.

Additional key words: detailed record **Computer codes:** PAYSAR, IT

2009/110 First record of *Homalodisca vitripennis* in Cook Islands

In March 2007, the presence of *Homalodisca vitripennis* (Homoptera: Cicadellidae – EPPO A1 List, a vector of *Xylella fastidiosa*) was discovered in Rarotonga, Cook Islands. The pest was initially found near the international airport but then spread to adjacent areas (covering approximately an area of 6 km long x 1 km wide). It is suspected that *H. vitripennis* entered Rarotonga via movements of ornamental plants from Tahiti where it was first detected in 1999. To control the pest, an egg parasitoid, *Gonatocerus ahsmeadi* (Hymenoptera: Myrmaridae) was imported from Tahiti and released on Rarotonga in October 2007. Preliminary results showed that the introduced parasitoid multiplied and spread quickly in areas where *H. vitripennis* was present, and that pest population significantly decreased. Finally, tests were carried out on leaf and insect samples to verify the absence of *X. fastidiosa* on Rarotonga. All results were negative.
The situation of *Homalodisca vitripennis* in Cook Islands can be described as follows: **Present, first found in 2007 on Rarotonga.**

Source: Gunawardana D, Ashcroft T, Braithwaite M, Poeschko M (2008) Bio-control for glassy-winged sharpshooter in Cook Islands. MAF New Zealand, Biosecurity no. 85, 12-13.

Additional key words: new record **Computer codes:** HOMLTR, CK

2009/111 First report of *Globodera rostochiensis* on potatoes in Iran

In June 2008, several ware potato (*Solanum tuberosum*) fields in the western part of Iran (Hamadan Province) showed patches (20 to 200 m^2) of poor growth. Affected potato plants showed severe stunting, leaf yellowing and wilting. The presence of cyst nematodes could be observed on the roots. Cysts and second stage juveniles were extracted from samples of soil and potato roots and were identified (morphology and molecular tests) as *Globodera rostochiensis* (EPPO A2 List). *G. pallida* was not detected in the tested samples. This is the first report of *G. rostochiensis* in Iran.
The situation of *Globodera rostochiensis* in Iran can be described as follows: **Present, first found in 2008 on potato fields in the western part of Iran (Hamadan Province).**

Source: Gitty M, Tanha Maafi Z (2009) First report of a potato cyst nematode, *Globodera rostochiensis*, on potato, in Iran. *New Disease Reports* vol. 19 (February 2009 to August 2009) http://www.bspp.org.uk/publications/new-disease-reports/ndr.php?id=019038

Additional key words: new record **Computer codes:** HETDRO, IR

2009/112 *Ditylenchus destructor* does not occur in New Jersey (US)

For many years, it has been considered that *Ditylenchus destructor* (EU Annexes) was present in New Jersey (US), on the basis of a publication from Thorne (1945) and a single interception made by Canada in 1969 on iris bulbs imported from New Jersey (Sewell, 1970). The later cannot be taken as a solid basis for establishing the presence of *D. destructor* in New Jersey and when looking more closely at the paper from Thorne, its occurrence in New Jersey was only an assumption which has never been confirmed since: *'A population of* Ditylenchus dipsaci *attacking sweet potatoes in Maryland and New Jersey, and causing injury very similar to that of* D. destructor *was studied by Kreis (1937). It is believed by the writer that this probably was D. destructor but, unfortunately, it has not been possible to secure specimens for comparative studies.'*
In more recent years, it can be noted that *D. destructor* has never been detected during routine diagnostics or soil surveys in New Jersey. Official surveys carried out from 2001 to 2004 did not detect the nematode and there are no records of its presence in New Jersey in any US nematode collections. Therefore, it is now considered that *D. destructor* does not occur in New Jersey.
The situation of *Ditylenchus destructor* in New Jersey can be described as follows: **Absent, all previous records arose from confusion with other *Ditylenchus* species or were erroneous, confirmed by general surveillance.**

Source: Sewell R (1970) Plant-parasitic nematodes from Canada and abroad, 1969. *Canadian Plant Disease Survey, September 1970* **50**(3), 102-103. http://www.cps-scp.ca/download/cpds-archive/vol50/CPDS_Vol_50_No_3_4_(102-103)1970.pdf

Thorne G (1945) *Ditylenchus destructor*, n.sp., the potato rot nematode, and *Ditylenchus dipsaci* (Kühn, 1857) Filipjev, 1936, the teasel nematode (Nematoda: Tylenchidae). *Proceedings of the Helminthological Society of Washington* **12**(2), 27-34.

Additional key words: denied record **Computer codes:** DITYDE, US

2009/113 First report of *Phytophthora ramorum* in Serbia

In June 2008, symptoms resembling those of *Phytophthora ramorum* (EPPO Alert List) were observed on 12 plants of *Rhododendron* in a public garden near Zemun, in Serbia. Affected plants showed leaf necrosis and blight. *P. ramorum* could be isolated and identified in symptomatic leaves and petioles (morphology, PCR, pathogenicity tests). The mating type was determined as A1. This is the first report of *P. ramorum* on *Rhododendron* plants in Serbia. All infected plants were destroyed and measures were taken to eradicate the pathogen according to EU legislation (Commission Decision 2007/201/EC). The authors concluded that the discovery of infected *Rhododendron* plants should prompt more detailed surveys, thorough inspections and subsequent testing in other areas of Serbia.
The situation of *Phytophthora ramorum* in Serbia can be described as follows: **Present, first detected in 2008 on *Rhododendron* plants in a public garden near Zemun, under official control.**

Source: Bulajić A, Jović J, Krnjajić S, Djekić I, Krstić B (2008) First report of *Phytophthora ramorum* on *Rhododendron* sp. in Serbia. *New Disease Reports* vol. 18 (August 2008 to January 2009) http://www.bspp.org.uk/publications/new-disease-reports/ndr.php?id=018031

Commission Decision 2007/201/EC of 27 March 2007 amending Decision 2002/757/EC on provisional emergency phytosanitary measures to prevent the introduction into and the spread within the Community of *Phytophthora ramorum* Werres, De Cock & Man in 't Veld sp.nov.
http://www.eppo.org/ABOUT_EPPO/EPPO_MEMBERS/phytoreg/eu_texts/2007-201-EC-e.pdf

Additional key words: new record **Computer codes:** PHYTRA, RS

2009/114 Studies on oak wilt caused by *Raffaelea* species in the Far East

As reported earlier, extensive oak tree mortality has been observed in Japan since the late 1980s (see EPPO RS 99/027, 2003/067, 2007/070), mainly on *Quercus crispula* but also on *Q. serrata*. This Japanese oak wilt (formerly on the EPPO Alert List) is caused by a recently described fungus, *Raffaelea quercivora*, which is carried by an ambrosia beetle, *Platypus quercivorus* (Coleoptera: Platypodidae). It is noted that similar massive mortalities of deciduous and evergreen oaks had taken place in the 1930s in the Prefectures of Yamagata and Kyushu, but at that time the causal agent was not identified. In addition to Japan, oak tree mortality has been reported from the Russian Far East on *Quercus mongolica*, first in 1979 on isolated trees but covering an area of 100 ha in 2002. However, the possible causes of oak tree mortality have not been identified in the Russian Far East.
In the Republic of Korea, massive oak tree mortality was first observed in 2004, on *Q. mongolica*, in the northern part of the country. It was estimated that 680 and 1220 oak trees were killed in 2004 and 2005, respectively. The pathogen involved in this disease is thought to be an undescribed species of *Raffaelea* (apparently different from *R. quercivora*), which is transported by another ambrosia beetle, *Platypus koryoensis*. In Korea, symptoms were similar to those observed in Japan. Shortly after trees are attacked by *P. koryoensis*, necrosis spreads within the sapwood. Wilting and subsequent tree death is thought to be caused by the blockage of the vascular system resulting from the infection by this *Raffaelea* sp. *P. koryoensis* is reported to occur in the Korean Peninsula, Taiwan and the Russian Far East.

In Taiwan, both *P. koryoensis* and *P. quercivorus* are reported to occur but no massive oak tree mortality has been observed. Investigations showed that another *Platypus* species, *P. taiheizanensis*, was able to reproduce in fallen trees belonging to the genus *Castanopsis*. In the sapwood, discoloration similar to the necrosis caused by *R. quercivora* was observed in all cases. However, this necrosis did not develop across the whole trunk section.
Finally, investigations were carried out in Northern China (Liaoning and Jilin provinces) but did not detect the presence of *P. koroyensis* (although it was highly suspected that it occurred there) or of extensive oak tree mortality.
Although several hypothesis have been proposed (*Raffaelea* spp. might be introduced exotic species, climate change could have favoured insect vector development and spread or caused additional tree stress, changes in the forest age structure or poor management might have also weakened oak trees), the reasons for the emergence of these massive oak tree mortalities observed in Japan or the Republic of Korea remain largely unknown.

Source: Hong KJ, Kwon YD, Park SW, Lyu DP (2006) *Platypus koryoensis* (Murayama) (Platypodidae: Coleoptera), the vector of oak wilt disease. *Korean Journal of Applied Entomology* **45**(2), 113-117 (abst.).
Joon Hwan Shin (2007) Forest damage history and future directions for forest landscape restoration in Korea. IUFRO Conference on Forest Landscape Restoration (Seoul, KR, 2007-05-14/19). http://www.iufro.org/download/file/1898/75/10100-et-al-seoul07-stanturf.pdf
Kamata N, Goto H, Komura R, Kubo M, Mikage M, Tsuyuki S, Muramoto KI (2005) Field research in China and Korea by the EMEA group and some implications for Japanese oak wilt. Proceedings of the International Symposium on Environmental Monitoring in East Asia 'Utilization of remote sensing for monitoring of vegetation change' (Kanazawa, JP, 2005-11-28/29), 127-133. http://dspace.lib.kanazawa-u.ac.jp/dspace/bitstream/2297/6340/1/C0000003306-127.pdf

Additional key words: new record, detailed record **Computer codes:** PLTPSP, RAFFSP, CN, KR, RU, TW

2009/115 First report of *Scaphoideus titanus* in Hungary

Scaphoideus titanus (Homoptera: Cicadellidae) was found for the first time in Hungary during a survey carried out in 2006. This insect which is a vector of grapevine flavescence dorée phytoplasma (EPPO A2 List) was caught on yellow sticky traps in the counties of Bács-Kiskun, Somogy and Zala. *S. titanus* was most abundant in abandoned vineyards near the Serbian border. It is noted that the presence *S. titanus* has been reported in the grapevine-growing regions of Serbia since 2004. It is supposed that *S. titanus* was not introduced by propagation material but has spread naturally from the south to the north. Tests were carried out to determine whether grapevine flavescence dorée phytoplasma was present in insect and grapevine leaf samples. So far, all results were negative.
The situation of *Scaphoideus titanus* in Hungary can be described as follows: **Present, first found in 2006 in the counties of Bács-Kiskun, Somogy and Zala.**

Source: Dér Z, Koczor S, Zsolnai B, Ember I, Kölber M, Bertaccini A, Alma A (2007) *Scaphoideus titanus* identified in Hungary. *Bulletin of Insectology* **60**(2), 199-200.

Dér Z, Koczor S, Zsolnai B, Szentkirályi F, Hajdú E, Alma A, Bertaccini A (2008) [New pest of grapevine in Hungary: the American grapevine leafhopper (*Scaphoideus titanus* Ball, 1932)]. *Növényvédelem* **44**(5), 205-211 (in Hungarian).

Additional key words: new record **Computer codes:** SCAPLI, HU

2009/116 Situation of flavescence dorée and its vector *Scaphoideus titanus* in Switzerland

In Switzerland, Grapevine flavescence dorée phytoplasma (EPPO A2 List) remains confined to the canton of Ticino where it was first found in 2004. In 2007, new outbreaks were detected in Ticino, in the Malcantone area (Magliaso and Madonna del Piano). The insect vector of the disease, *Scaphoideus titanus,* occurs in Ticino, as well as in a few vineyards in the cantons of Geneva and Vaud. In 2007, it was observed for the first time in the Valais canton (Port-Valais, Vionnaz) and in new areas in Vaud (Morges and its vicinity). Compulsory control measures against the vector continue to be applied in Switzerland to prevent the spread of flavescence dorée.
The situation of Grapevine flavescence dorée phytoplasma in Switzerland can be described as follows: **Present, few outbreaks found in the canton of Ticino, under official control.**

Source: Anonymous (2008) Faits marquants en 2007 à Agroscope ACW. Maladie et ravageurs. *Revue suisse de Viticulture, Arboriculture, Horticulture* **40**(3), p 160.

Additional key words: detailed record **Computer codes: PHYP64, SCAPLI, CH**

2009/117 A new disease of horse chestnut caused by *Pseudomonas syringae* pv. *aesculi*: addition to the EPPO Alert List

In the Northwest of Europe, increasing numbers of declining and dying horse chestnut trees (*Aesculus hippocastanum*) have been observed since the early 2000s in urban environments, woodlands and nurseries. Affected trees show bark splits and bleeding cankers on the trunk, defoliation, general decline eventually followed by tree death after 2 or 3 years. Although the presence of a *Phytophthora* species was first suspected, investigations have showed that a bacterium, *Pseudomonas syringae* pv. *aesculi,* was consistently associated with the disease. This pathovar of *Pseudomonas syringae* was originally observed from *Aesculus indica* in India, but no further information could be found on the damage it may cause to *Aesculus* spp. trees in India or in other countries. Molecular studies showed that the sequences of gyrase B gene obtained from *P. syringae pv. aesculi* isolated in India (on *A. indica* foliage) and from a *P. syringae* strain isolated in the United Kingdom (on *A. indica* showing leaf spot symptoms in Surrey in 2005) were identical. Inoculations studies carried out in the United Kingdom confirmed the pathogenicity of *P. syringae* pv. *aesculi* to *A. hippocastanum*. 5-years old *A. hippocastanum* saplings were inoculated with *P. syringae* pv. *aesculi* and developed necrotic bark lesions and bleeding; the same bacterium could then be re-isolated from inoculated plants.
Considering the severity of the disease and its current spread in Europe, the EPPO Panel on Phytosanitary Regulations recommended adding *Pseudomonas syringae* pv. *aesculi* to the EPPO Alert List.

Pseudomonas syringae pv. *aesculi* (a new disease of horse chestnut)

Why Since the early 2000s, general decline and bleeding cankers of horse chestnut trees (*Aesculus hippocastanum*) have increasingly been observed in several European countries. Investigations have showed that a bacterium, *Pseudomonas syringae* pv. *aesculi,* was consistently associated with the disease and it is now considered that this bacterium is the main cause of this new disease. Considering the severity of the disease and its current spread in Europe, the EPPO Panel on

	Phytosanitary Regulations recommended adding *Pseudomonas syringae* pv. *aesculi* to the EPPO Alert List.
Where	**EPPO region:** Belgium, France (Nord-Pas-de-Calais), Germany, Netherlands, and United Kingdom (England, Scotland, Wales). **Asia**: India. This pathovar of *P. syringae* was first observed from *Aesculus indica* in India but no further information could be found on the extent or severity of the disease it may cause in India or in other Asian countries. In France, the first diseased trees were observed in 2001 in the city of Roubaix, and then in other locations in the Nord-Pas-de-Calais region (Villeneuve-d'Ascq, Lille, Tourcoing, Hellemmes, Mons-en-Baroeul, Lesquin, Noordpeene). At the same time, similar symptoms were also reported from Belgium. In the Netherlands, surveys carried out in 2007/2008 revealed that 30% of all horse chestnut trees were affected to a greater or lesser extent by the disease. Initially all infections were located in the western part of the Netherlands, but they are now seen across the whole country. In the United Kingdom: previous episodes of bleeding cankers of horse chestnut trees had been attributed in the 1970s to a *Phytophthora* sp. but these bleeding cankers were considered to be uncommon and only seen in the South of England. However, since 2003 an upsurge of the disease has been observed in the United Kingdom. From 4 cases reported in 2001, 60 were seen in 2003, 90 in 2004, 75 in 2005 and more than 110 were reported in 2006, and from locations as far north as Lancashire (north-west of England), and Glasgow and Fife (Scotland). In Germany, the presence of *P. syringae* pv. *aesculi* was confirmed in 2008 in one tree in Hamburg but the disease has been observed from other trees (without further details on their location in Germany).
On which plants	*Aesculus* spp. (horse chestnuts). *A. hippocastanum* (both white and red cultivars) is the most affected species. In particular, *A. hippocastanum* cv. *'Baumanii'* appears to be extremely susceptible the disease. Research is being carried out on the susceptibility of other species (e.g. *A. x mutabilis, A. flava, A. parviflora* and *A. pavia*), with the additional aim of finding possible sources of resistance. Trees of all ages can be affected but younger trees (10-30 years) can succumb to the disease in 3 to 5 years.
Damage	Symptoms usually start with bleeding lesions: scattered drops of rusty-red, yellow-brown or almost black, gummy liquid ooze from patches of dying bark on the stems, branches or trunks. These lesions can be observed at the base of the tree or at approximately 1 metre high on the trunk (then extending upwards). Bleeding from infected tissues can be quite copious and under dry conditions it can leave a dark, brittle crust near the point of exit. Under the bark, mottled and orange-brown discolorations can be observed. Over the years, the areas of dead phloem and cambium underneath the bleeding areas may coalesce and extend until they girdle the entire trunk or branch. Symptoms on the tree crown then become visible, typically consisting of leaf yellowing, premature leaf drop, and eventually tree death. For example in the United Kingdom, on the basis of a survey carried out in 2007, it was estimated that 35 000 to 50 000 trees were affected and probably a few thousand have already been felled as a result of the disease. Pictures of symptoms can be viewed on the Internet: http://www.forestry.gov.uk/fr/INFD-6L4GBT http://www.kastanjeziekte.wur.nl/uk/index_uk.htm
Transmission	So far, the epidemiology of the disease remains unknown. *P. syringae* could be isolated from the surfaces of horse chestnut leaves and branches, as well as on flowers and various parts of the fruits. Bacteria were also detected in rainwater in the vicinity of diseased trees. However more studies are needed to determine the possible role of water, insects, or even human activities (e.g. pruning) in disease transmission.
Pathway	Plants for planting of *Aesculus* spp., plant parts (e.g. foliage, wood, seeds)? soil?
Possible risks	Horse chestnut trees (*Aesculus* spp.) are widely planted across the EPPO region, mainly as amenity trees in parks and gardens or along the roads but they can also

be found in woodlands. As the epidemiology of the disease is largely unknown, few control measures can be recommended. However, prophylactic measures can probably be taken to prevent disease spread (e.g. avoid as much as possible pruning, pruning equipment should be disinfected, diseased plant material should be transported in closed containers, incinerated or carefully composted). Data is generally lacking on the geographical distribution, biology and epidemiology of the disease. Considering the significant tree mortality which has already been observed in north-western Europe, it is desirable to prevent any further spread of *P. syringae* pv. *aesculi* as this pathogen represents a major threat to amenity trees, woodlands and nurseries.

Source(s)

Bardoux S, Rousseau P (2007) Le dépérissement bactérien du marronnier. *Phytoma – La Défense des Végétaux* no. 605, 22-23.

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Schmidt O, Dujesiefken D, Stobbe H, Moreth U, Kehr R, Schroder T (2008) *Pseudomonas syringae* pv. *aesculi* associated with horse chestnut bleeding canker in Germany. *Forest Pathology* **38**(2), 124-128.

Webber JF, Parkinson NM, Rose J, Stanford H, Cook RTA, Elphinstone JG (2008) Isolation and identification of *Pseudomonas syringae* pv. *aesculi* causing bleeding canker of horse chestnut in the UK. *Plant Pathology* **57**(2), p 368.

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EPPO RS 2009/117
Panel review date - Entry date 2009-06

2009/118 Outbreak of *Clavibacter michiganensis* subsp. *michiganensis* in Burgenland, Austria

Outbreaks of *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 List) are occasionally reported in Austria but they are always subject to eradication measures (see EPPO RS 2008/035 and 2008/214). The bacterium was detected in 2009 in one sample of tomato seeds (*Lycopersicon esculentum* cv. 'Kremser Perle') which had been produced in 2008 in Burgenland. Field inspections carried out during the vegetation period in 2008 had not detected any disease symptoms. Since the pre-basic seeds used to produce the infected lot had tested negative, the source of contamination remains unknown. The following phytosanitary measures were taken to eradicate the disease: destruction of the seed lot, disinfection of all machinery and tools, prohibition to grow solanaceous plants for the next three years, increase of official inspections in the vicinity of the production site in 2009.

The pest status of *Clavibacter michiganensis* subsp. *michiganensis* in Austria is officially declared as follows: **Isolated outbreak, eradicated.**

Source: NPPO of Austria, 2009-05.

Additional key words: detailed record **Computer codes:** CORBMI, AT

2009/119 Situation of *Iris yellow spot virus* in France

In France, *Iris yellow spot virus* (*Tospovirus*, IYSV – EPPO Alert List) was first identified on onion crops in 2003 on the island of Réunion (see EPPO RS 2005/041). On the French mainland, surveys were carried out in 2006 and 2007 essentially on *Allium* crops (see also RS 2006/141). In total, 135 plots were inspected and 185 samples were collected and tested in the laboratory. IYSV was detected in 58 samples [3 from *A. schoenoprasum* (chives), 14 from *Allium sativum* (garlic), 17 from *A. cepa* (onion) and 24 from *A. porrum* (leek)]. More than 70% of the positive samples were showing feeding damage caused by *Thrips tabaci* but IYSV symptoms (e.g. diamond-shaped lesions) were not consistently observed on IYSV-infected samples. Apart from the presence of *Thrips tabaci* which can cause direct damage, no economic losses could be attributed to the occurrence of IYSV in the infected crops.
The pest status of *Iris yellow spot virus* in France is officially declared as: **Present**.

Source: NPPO of France, 2008-01.

Additional key words: detailed record **Computer codes:** IYSV00, FR

2009/120 *Iris yellow spot virus* detected in *Lilium* (lily)

In 2006, unusual virus symptoms were observed on a seed-propagated cultivar of *Lilium* x *formelongi* grown in Israel. Affected plants were stunted, and presented necrotic spots and rings on the leaves. Symptoms were seen on many plants and heavy losses were observed. Serological and molecular tests (DAS-ELISA, RT-PCR, sequencing) revealed the presence of *Iris yellow spot virus* (*Tospovirus*, IYSV – EPPO Alert List). It is noted that this outbreak of IYSV in *Lilium* was associated with large populations of *Thrips tabaci* (vector of IYSV). This it is the first report of IYSV on *Lilium*.

Source: Gera A, Siti L, Beckelman Y, Tam Y, Kritzman A, Zeidan M (2008) First report of *Iris yellow spot tospovirus* (IYSV) in lily and impatiens. *Proceedings of the 12th International Symposium on Virus Diseases of Ornamental Plants*, Haarlem, NL, 2008-04-20/24, p 51.

Additional key words: new host plant **Computer codes:** IYSV00, IL

2009/121 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered below the notifications of non-compliance for 2009 received since the previous report (EPPO RS 2009/100). Notifications have been sent directly to EPPO by Croatia and Switzerland, and via Europhyt for the EU countries. The EPPO Secretariat has selected notifications of non-compliance made because of the detection of pests. Other notifications of non-compliance due to prohibited commodities, missing or invalid certificates are not indicated. It must be pointed out that the report is only partial, as many EPPO countries have not yet sent their notifications. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (*).

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Aleyrodidae	*Lobelia cardinalis*	Cuttings	Kenya	Sweden	1
	Lobelia cardinalis	Cuttings	Saint Kitts & Nevis	Sweden	1
Anoplophora chinensis	*Acer palmatum*	Plants for planting	China	Netherlands	1
Aonidiella citrina	*Citrus reticulata*	Fruits	Pakistan	United Kingdom	1
Bemisia tabaci	*Murraya*	Vegetables (leaves)	India	Ireland	2
	Momordica charantia, Mangifera indica, Ribes	Vegetables	India	Ireland	1
	Murraya, Solanum melongena, Mangifera indica	Vegetables	India	Ireland	1
	Ocimum	Vegetables (leaves)	Thailand	United Kingdom	1
	Ocimum basilicum	Vegetables (leaves)	Ethiopia	United Kingdom	1
	Ocimum basilicum	Vegetables (leaves)	Israel	Ireland	1
	Ocimum basilicum	Vegetables (leaves)	Thailand	United Kingdom	2
	Piper sarmentosum, Ocimum basilicum, Ocimum tenuiflorum, Solanum melongena, Solanum torvum	Vegetables	Thailand	Ireland	1
	Solidago	Cut flowers	Zimbabwe	Netherlands	1
***Bemisia tabaci,* Thripidae**	*Ocimum basilicum*	Vegetables (leaves)	Ethiopia	United Kingdom	1
Cryptophagidae	*Zea mays*	Seeds	Puerto Rico	Germany	1
Diaphania indica	*Momordica*	Vegetables	Kenya	United Kingdom	1
***Diaphania indica*, Thripidae**	*Momordica*	Vegetables	Kenya	United Kingdom	1
Ditylenchus dipsaci	*Allium cepa*	Bulbs	Turkey	Bulgaria	3
Globodera, Tylenchorhynchus	*Ilex crenata*	Plants for planting	Japan	Netherlands	1
Guignardia citricarpa	*Citrus aurantium*	Fruits	Ghana	United Kingdom	1
	Citrus sinensis	Fruits	Ghana	United Kingdom	3
Helicotylenchus, Meloidogyne, Pratylenchus, Rotylenchus, Trichodoridae, Tylencho-rhynchus, Xiphinema	*Ficus altissima, Ficus lyrata, Schefflera*	Plants for planting	USA	Netherlands	1
Helicotylenchus, Rotylenchus	*Unspecified*	Soil / growing medium	India	United Kingdom	1
Leptinotarsa decemlineata	*Spinacia oleracea*	Vegetables (leaves)	Italy	Ireland	1
Leucinodes orbonalis	*Solanum aethiopicum*	Vegetables	Ghana	Germany	3
Liriomyza	*Apium graveolens*	Vegetables	Thailand	Denmark	1
	Apium graveolens, Ocimum basilicum	Vegetables	Thailand	Denmark	1
	Coriandrum sativum	Vegetables (leaves)	Thailand	Sweden	1
	Ocimum	Vegetables (leaves)	Thailand	United Kingdom	1
	Ocimum americanum	Vegetables (leaves)	Thailand	Denmark	2
	Ocimum americanum, Centella asiatica	Vegetables (leaves)	Thailand	Denmark	1
	Ocimum basilicum	Vegetables (leaves)	Thailand	Sweden	1
	Ocimum basilicum	Vegetables (leaves)	Vietnam	Czech Republic	1
Liriomyza huidobrensis	*Eryngium*	Cut flowers	Zimbabwe	Netherlands	1
	Gypsophila paniculata	Cut flowers	Kenya	Netherlands	1
	Trachelium	Cut flowers	Ecuador	Netherlands	1
Liriomyza sativae	*Ocimum*	Vegetables (leaves)	Thailand	United Kingdom	1
	Ocimum americanum	Vegetables (leaves)	Thailand	Netherlands	1
Liriomyza sativae, Liriomyza trifolii	*Ocimum basilicum*	Vegetables (leaves)	Israel	Netherlands	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Liriomyza trifolii	*Gypsophila*	Cut flowers	Israel	Netherlands	2
	Ocimum americanum	Vegetables (leaves)	Thailand	Sweden	1
Liriomyza, Guignardia	*Ocimum americanum*	Vegetables (leaves)	Thailand	United Kingdom	1
Meloidogyne	*Adansonia digitata*	Plants for planting	USA	Netherlands	1
	Adonidia	Plants for planting	USA	Netherlands	1
	Phoenix roebelenii	Plants for planting	Japan	Netherlands	1
Meloidogyne, Pratylenchus, Xiphinema	*Ilex crenata*	Plants for planting	Japan	Belgium	1
***Meloidogyne,* Trichodoridae**	*Enkianthus perulatus*	Plants for planting	Japan	Belgium	1
Opogona sacchari	*Washingtonia filifera*	Plants for planting	Netherlands	Germany	1
Potato spindle tuber viroid	*Calibrachoa*	Cuttings	Israel	Germany	1
Pratylenchus, Trichodoridae, Xiphinema	*Ilex crenata*	Plants for planting	Japan	Belgium	1
Puccinia horiana	*Argyranthemum frutescens*	Cut flowers	Netherlands	Finland	1
Radopholus similis	*Anubias*	Aquarium plants	Malaysia	Netherlands	1
Ralstonia solanacearum	*Solanum tuberosum*	Ware potatoes	Egypt	Croatia	2
Spodoptera littoralis	*Rosa*	Cut flowers	Kenya	Netherlands	1
	Rosa	Cut flowers	Uganda	Netherlands	1
	Rosa	Cut flowers	Zimbabwe	Netherlands	10
Spodoptera litura	*Rosa*	Cut flowers	India	Netherlands	1
Synchytrium endobioticum	*Solanum tuberosum*	Ware potatoes	Turkey	Bulgaria	9
Thripidae	*Momordica*	Vegetables	Dominican Rep.	United Kingdom	1
	Momordica charantia	Vegetables	Philippines	Malta	1
Thrips	*Dendrobium*	Cut flowers	Thailand	Germany	1
Thrips palmi	*Dendrobium*	Cut flowers	Thailand	Netherlands	1
	Dendrobium	Cut flowers	Thailand	United Kingdom	1
	Momordica	Vegetables	Dominican Rep.	United Kingdom	1
	Momordica	Vegetables	Thailand	United Kingdom	2
	Orchidaceae	Cut flowers	Thailand	United Kingdom	1
	Solanum	Vegetables	Dominican Rep.	Netherlands	1
Thysanoptera	*Solanum melongena*	Vegetables	Mauritius	France	1
Tomato chlorotic dwarf viroid	*Petunia*	Cuttings	Israel	Belgium	5
Trichodoridae, Tylenchorhynchus,	*Ilex crenata*	Plants for planting	Japan	Netherlands	1
Xanthomonas	*Citrus*	Fruits	India	United Kingdom	1
Xanthomonas axonopodis* pv. *citri	*Citrus*	Fruits	India	United Kingdom	1
Xiphinema americanum, Xiphinema diffusum, Xiphinema incognitum	*Ilex crenata*	Plants for planting	Japan	Netherlands	1

- **Fruit flies**

Pest	Consignment	Country of origin	Destination	nb
Bactrocera latifrons	*Capsicum frutescens*	Thailand	France	1
Ceratitis	*Mangifera indica*	Peru	France	1
Ceratitis capitata	*Mangifera indica*	Brazil	France	1
Non-European Tephritidae	*Capsicum*	Mauritius	France	1
	Mangifera indica	Dominican Rep.	Netherlands	1
	Momordica charantia	Thailand	France	1
	Psidium	Pakistan	United Kingdom	2

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Bursaphelenchus mucronatus	Unspecified	Dunnage	Ukraine	Latvia	1
Bursaphelenchus xylophilus	Unspecified	Dunnage	USA	Finland	1
Monochamus	Unspecified	Dunnage	Russia	Slovakia	1
Nematoda	Unspecified	Dunnage	USA	Finland	1
Sinoxylon	Unspecified (pallet)	Wood packing material	India	Germany	1

- **Bonsais**

Pest	Consignment	Country of origin	Destination	nb
Criconemoides, Tylenchorhynchus	*Pinus pentaphylla*	Japan	United Kingdom	1

Source: EPPO Secretariat, 2009-05.

2009/122 *Salvinia molesta* found in Portugal

Salvinia molesta (Salviniaceae – EPPO Alert List) has recently been found invading a reservoir on a private property in Odemira (Algarve) in Portugal, where it was initially introduced for ornamental purposes. The problem has been tackled by the local authorities, and for one month, the plant was mechanically removed and dried out before being burnt. Nevertheless, living plants are still being found in this locality.

Source: Garcia R (2008) Du danger d'introduire des plantes exotiques. *Courrier international* **969**, 57-58.

Additional key words: invasive alien plants, new record **Computer codes:** SALMO, PT

2009/123 *Acer rufinerve*, a new invasive tree in Belgium

Acer rufinerve (Aceraceae) is a tree, native to Japan, growing up to 8-15 m high. It is described as an early successional species of temperate forests, and is characterized by a very short generation time, high survival and growth rates. It has been introduced as an ornamental in gardens and public green areas of many countries over several decades. Although invasion histories have not been described previously, *A. rufinerve* has been recently reported to invade the understorey of a 300 ha forest near the city of Mons in Belgium. A few individuals were planted there by foresters in 1950-1970, and today, a significant part of the forest is colonized.

A. rufinerve reproduces by seeds, and fruit production is effective when tree stems reach 10 cm in diameter. Seeds may be dispersed over distances of 250 m. The tree tends not to establish in the most dry and acidic soils (pH < 4.0).

Young stems of *A. rufinerve* form very dense thickets where few herbaceous plant species are able to grow. Native plants like *Convallaria majalis* (Convallariaceae), *Lonicera periclymenum* (Caprifoliaceae), *Luzula* spp. (Poaceae), *Pteridium aquilinum* (Dennstaedtiaceae) are likely to be outcompeted by this tree, while *Rubus fruticosus* (Rosaceae) often co-occurs with it, sometimes at high densities.

A rapid eradication of the tree in Belgium seems feasible but is challenging as the tree has a strong resprouting capacity. Experiments on best management practices are being developed.

Source: Rafalowicz T, Branquart E, Halford M (2009) *Acer rufinerve*, a new invasive tree in Belgium. 1 p
http://ias.biodiversity.be/ias/meetings/200905_science_facing_aliens/poster_08_abstract.pdf

Additional key words: invasive alien plants, new record **Computer codes:** ACRRU, BE

2009/124 The most important invasive alien plants in Hungary

A book describing the most important invasive alien plants in Hungary has been published. It provides detailed information on the taxonomy, morphology, origin and distribution, life cycle, habitats preference, biotic interactions, economic importance and nature conservation significance for 21 species, namely: *Ambrosia elatior* (Asteraceae), *Asclepias curassavica* (Asclepiadaceae), *Aster novi-belgii (Asteraceae), Acer negundo* (Aceraceae), *Ailanthus altissima* (Simaroubaceae – EPPO List of Invasive Alien Plants), *Amorpha fruticosa* (Fabaceae – EPPO List of IAP), *Celtis australis* (Ulmaceae), *Cenchrus incertus* (Poaceae), *Echinocystis lobata* (Cucurbitaceae), *Elaeagnus angustifolia* (Elaeagnaceae), *Fallopia japonica, F. sachalinensis* and *F. x bohemica* (Polygonaceae – EPPO List of IAP), *Fraxinus pennsylvanica* (Oleaceae), *Impatiens glandulifera* (Balsaminaceae - EPPO List of IAP), *I. parviflora* (Balsaminaceae), *Phytolacca americana* and *P. esculenta* (Phytolaccaceae), *Prunus serotina* (Rosaceae – EPPO List of IAP), *Robinia pseudoacacia* (Fabaceae), *Solidago gigantea* and *S. canadensis* (Asteraceae – EPPO List of IAP), *Vitis* hybrids (Vitaceae) and *Xanthium strumarium* subsp. *italicum* (Asteraceae).

Source: Botta-Dukát Z & Balogh L (Editors) (2008) The most important invasive plants in Hungary. HAS Institute of Ecology and Botany, Vácrátót, HU. 255 pp.

Additional key words: Invasive alien plants, book.

Computer codes: ACRNE, AILAL, AMBEL, AMHFR, ASCCU, ASTNB, CCHPA, CELTAU, ECNLO, ELGAN, FRXPE, IPAGL, IPAPA, PHTAM, PHTES, POLCU, PRNSR, REYBO, REYSA, ROBPS, SOOCA, SOOGI, XANSI, HU

2009/125 *Stipa trichotoma, Stipa neesiana* and *Stipa tenuissima* in the EPPO region: addition to the EPPO Alert List

Why

Stipa trichotoma (= Nassella trichotoma), Stipa neesiana (= *Nassella neesiana*) and *Stipa tenuissima (= Nassella tenuissima)* (Poaceae – common names: serrated tussock, Chilean needle grass and Mexican feather grass, respectively) are perennial grasses. All three species have been voluntary introduced into the EPPO region for ornamental purposes, where their distribution is still limited. Because these plants have shown invasive behaviour in different continents and are of limited distribution in the EPPO region, they can be considered emerging invaders in Europe.

Where

Geographical distribution of *Stipa trichotoma*

EPPO region: France (including Corse), Italy

Africa: South Africa

North America: USA (Illinois, Kentucky, North Carolina, South Carolina)

South America (native): Argentina, Brazil, Uruguay

Oceania: Australia (New South Wales, Tasmania, Victoria), New Zealand

Note: *S. trichotoma* is regulated in all Australian States and is one of the 20 weeds considered of national significance. It is estimated that it covers more than 1.1 million ha

in Australia. In the USA, it is considered a noxious weed, particularly in southern states. In Corse, the species does not seem to exhibit an invasive behaviour so far.

Geographical distribution of *Stipa neesiana*
EPPO region: France (including Corse), Spain

North America: USA (Alabama)

South America (native): Argentina, Bolivia, Brazil, Chile, Ecuador, Uruguay

Oceania: Australia (New South Wales, Queensland, South Australia, Tasmania, Victoria), New Zealand

Note: *S. neesiana* is regulated in all Australian States and is one of the 20 weeds considered of national significance. Although it had been introduced in 1934 in Australia, it has only been recognized recently as a weed of major importance.

Geographical distribution of *Stipa tenuissima*
EPPO region: France (including Corse), Italy

Africa: South Africa

North America: USA (California, New Mexico (native), Texas (native))

South America (native): Argentina, Chile

Oceania: Australia (New South Wales, Victoria), New Zealand

Note: in Australia, *S. tenuissima* is regulated in Queensland, New South Wales, Southern Australia, Victoria and Western Australia.

Morphology
These three *Stipa* spp. are perennial grasses forming dense tussocks, their leaves are numerous, fine, bristly, tighly rolled, and rough to touch.

Stipa trichotoma
S. trichotoma has a deep fibrous root system and can live more than 20 years. It grows up to 0.6 m high and its leaves are thin, 0.5 mm wide, and glabrous. The seed is 1.5-2 mm long. The species is identifiable via the leaf bases which are more tightly packed than the other *Stipa* spp., slender, and whitish (never purple or blue green).

Stipa neesiana
S. neesiana can grow up to 1 m high, and leaves are 1-5 mm wide. The flowering seed heads show a distinctive purplish colour. In addition to normal flower seeds, *S. neesiana* produces hidden seeds at the node and bases of flower stems. The seed is 8-10 mm long and very sharp.

Stipa tenuissima
S. tenuissima grows up to 0.7 m high. Leaves are thin, 0.5 mm wide. The lower half of glumes are purplish in the lower half. The seed is 2-3 mm long.

Unlike *S. trichotoma*, the mature seeds of *S. tenuissima* do not always fully project and spread, and the flowering stem does not always break at the uppermost stem node when mature.

Biology and ecology

The three species are adapted to a wide range of climates and soils types. They are tolerant to drought, fire and grazing, but are limited by salinity and waterlogging. *S. tenuissima* prefers a dry temperate climate with a mean annual rainfall ranging from 300 to 800 mm. *S. neesiana* grows in temperate regions with annual rainfall greater than 500 mm. *S. trichotoma* seems to have more stringent requirements as hot summer temperatures limit its distribution. *S. trichotoma* does not survive repeated ploughing.

Mature plants of *S. trichotoma* can produce more than 140 000 seeds per plant per year which can be blown by wind over long distances (up to 20 km). *S. neesiana* can produce more than 20 000 seeds. Seedlings are usually out competed by other plants, but become competitive under conditions of drought or overgrazing when more favourable pasture species have already been consumed by stock.

In the state of Victoria in Australia, the area covered by *S. trichotoma* has been multiplied by 4 in 20 years.

In which habitats

According to the Corine Land Cover nomenclature, all three species are recorded in the following habitats: arable land, pastures, natural grassland, road and rail networks and associated land, other artificial surfaces (wastelands).

S. neessiana and *S. tenuissima* also invade banks of continental water, riverbanks / canalsides (dry river beds) and forests.

Pathways

All three *Stipa* spp. are used as ornamental plants. Seeds are spread naturally by wind or water, they adhere to clothing and livestock and can be dispersed on farm machinery or as a contaminant of seeds and fodder.

Impacts

Stipa spp. are vigorous plants which crowd out desirable pasture species, reducing stock carrying capacity. They have a high fibre content and a low nutritive value, and form indigestible balls in the stomach of stock, leading to significant losses in stock production. The sharp seeds may cause injury to stock, including blindness. As seeds contaminate wool, they can devaluate its value.

It is estimated that *S. trichotoma* costs New South Wales' agriculture more than 40 million AUD annually. Additionally, in Australia, the estimated average annual cost of controlling *S. neesiana* is between 60 and 120 AUD per ha, depending on whether the infestation is scattered or dense.

These species also cause environmental damage to native grasslands, in New South Wales, trials on heavily infested areas by *Stipa* spp. can also crowd out native grasses in coastal or open areas, and create a fire hazard in urban areas.

It is predicted that *S. tenuissima* may be more invasive than *S. trichotoma* because of its ability to adapt to a wide range of climates. If left to spread, the economic cost to Australia over the next 60 years is estimated to be 39 million AUD annually.

Control
Prevention is the cheapest and most effective method. It includes avoiding purchasing hay, stock feed or stock from contaminated areas. Stock should be placed in a paddock for 7-10 days before moving them. Maintaining weed-free machinery and equipment is also very important.
All control programs should aim to reduce the amount of seed produced. Management measures include grubbing out small infestations before they flower and set seed, and to destroy them by burning. Larger infestations can be treated annually with an appropriate herbicide before plants flower and set seed. In arable lands, cultivation techniques such as ploughing may reduce the seed bank. Nevertheless, ploughing or herbicide treatment alone usually results in reinfestation of *Stipa* spp. from seed in the soil. Therefore an integrated management strategy should be preferred.
Continued checking and treatment is needed for 5 to 10 years to control young seedlings that germinate from the soil seed bank. Treated areas should be re-planted with desirable species.

Considering the invasive behaviour of these species in Australia, it is considered that pastures, natural grasslands and riverbanks of temperate and Mediterranean EPPO countries might be at risk.

Source:

United States Department of Agriculture Website
http://www.usda.gov/wps/portal/usdahome

Delivering Alien Invasive Species Inventories for Europe
http://www.europe-aliens.org/speciesSearch.do

Stipa trichotoma
Australian Government (2009) Serrated tussock (*Stipa trichotoma*) weed management guide. 6 p.
http://www.weeds.gov.au/publications/guidelines/wons/pubs/n-trichotoma.pdf

Global Invasive Species Database (2009) *Nassella neesiana.*
http://www.issg.org/database/species/ecology.asp?fr=1&si=458&sts=

Système d'Information et de Localisation des Espèces Natives et Envahissantes (SILENE) http://silene.cbnmed.fr/index.php?cont=accueil

Stipa neesiana
Australian Government (2009) Chilean needle grass (*Nassella neesiana*) weed management guide
http://www.weeds.gov.au/publications/guidelines/wons/n-neesiana.html

Tela Botanica (2009) Carte des départements avec *Nassella neesiana*
http://www.tela-botanica.org/page:chorologie_taxons?format=html&module=chorologie&action=carte_presence&pr=25&nt=7014

Stipa tenuissima
Barker J, Randall R & Grive T (2006) Weeds of the future ? Threats to Australia's grazing industry by garden plants. Meat & Livestock Australia Limited. North Sydney, NSW. 120 p.
http://www.mla.com.au/NR/rdonlyres/075176BC-1E50-4D6D-BD9A-C3EE0091F132/0/WEEDSofSIGNIFNBP35720060720FinalReport.pdf

Csurshes S (2008) Pest plant risk assessment – Mexican feather grass *Nassella tenuissima*. The State of Queensland, Department of Primary Industries and Fisheries. 8 p.
http://www.dpi.qld.gov.au/documents/Biosecurity_EnvironmentalPests/IPA-

Mexican-Feather-Grass-Risk-Assessment.pdf

Global Invasive Species Database (2009) *Nassella tenuissima*. http://www.issg.org/database/species/ecology.asp?fr=1&si=463&sts=

Pacific Island Ecosystems at Risk (PIER) (2009) *Nassella neesiana* http://www.hear.org/Pier/species/nassella_tenuissima.htm

Additional key words: invasive alien plants, alert list **Computer codes:** STDNE, STDTN, STDTR

2009/126 Results of the EPPO/CoE Workshop on the Code of conduct on horticulture and invasive alien plants, Ski (NO), 2009-06-04/05

The EPPO/Council of Europe workshop on the Code of conduct on horticulture and invasive alien plants was held in Ski (NO) on 2009-06-04/05 and gathered 40 participants from 19 countries.
EPPO and the Council of Europe have jointly drafted a Code of conduct on horticulture and invasive alien plants for European and Mediterranean countries, to be published in 2009. In Europe, it is estimated that 80% of the invasive alien plants are voluntarily introduced for ornamental purposes, and international trade is increasing yearly. This major pathway must be addressed urgently to prevent entry and spread of invasive alien plants, as at present, few legislation and management programmes are in place. Voluntary measures to tackle the problem and raise awareness among the horticultural sector and the public are therefore considered a priority.
This Code of conduct provides essential information for governments and the horticultural and landscape sectors on regulation concerning invasive alien plants, plant wastes disposal, labelling of plants, proposing alternative plants, publicity, etc.

This workshop was an opportunity to hear the professionals' opinion on this initiative through the International Association of Plants Producers (AIPH), as well as the NPPOs' view. Lessons were learnt on how such a Code of conduct has been implemented in North America. Initiatives taken in the European and Mediterranean region were also presented (e.g. from Belgium, France, Italy, Spain, Sweden, the UK).
Time was dedicated to exchanges and advice, summarized in a recommendation on the drafting and implementation of national Codes of conduct on horticulture and invasive alien plants to Governments and NPPOs, to the horticultural sector, and to international organizations.
This recommendation, the programme of the workshop, the presentations and the list of participants can be found on the EPPO website.

Source: EPPO Website: www.eppo.org

Additional key words: invasive alien plants, code of conduct

2009/127 2nd EWRS international conference on novel and sustainable weed management in arid and semi-arid agro-ecosystems, Santorini (GR), 2009-09-7/10

The European Weed Research Society is organizing the 2nd international conference on novel and sustainable weed management in arid and semi-arid agro-ecosystems to be held in Santorini (GR), on 2009-09-07/10.
The aim of the conference is to establish a forum of weed scientists involved in research in weed biology, distribution and management in arid and semi-arid agriculture. The following topics shall be covered during the symposium:

- weed biology, ecology and modelling,
- invasive weeds: biology, control and quarantine regulations
- integrated weed management in arid and semi arid farming systems: dry land crops and irrigated crops
- cultural, physical and biological weed control practices
- parasitic weeds
- herbicide resistant weeds and crops
- herbicide behaviour in soils, bio-remediation and methyl bromide alternatives
- biotechnology and molecular biology in weed science
- application methods and formulations.

Source: European Weed Research Society Website: http://www.ewrs.org/arid/default.asp

Additional key words: international conference, invasive alien plants