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CONTENTS _____ *Pests & Diseases*

_____ *Invasive Plants*

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2008/092 First record of *Aleurocanthus spiniferus* in Italy

The EPPO Secretariat was recently informed by Prof. Porcelli (University of Bari, IT) that *Aleurocanthus spiniferus* (Homoptera: Aleyrodidae – EPPO A1 List) has been found for the first time in Italy and in Europe. In April 2008, a small branch of orange tree infested by an unusual whitefly was submitted for identification. The pest was identified as *A. spiniferus* and this was confirmed by other laboratories (NHM in London and Dutch Plant Protection Service in Wageningen). Because of the importance of this pest for citrus orchards, a survey of the infested site was immediately carried out to obtain more information on the extent of the infestation. It showed that the pest was already widespread in the area of Supersano, province of Lecce (Apulia region). Discussion with local citrus growers indicated that the pest had been noted two years before but misidentified as a scale insect. The origin of the infestation is still unknown and it is considered that *A. spiniferus* is already too widespread to be eradicated.
The situation of *Aleurocanthus spiniferus* in Italy can be described as follows: **Present, first identified in 2008 in the province of Lecce, Apulia region.**

Source: Porcelli F (2008) First record of *Aleurocanthus spiniferus* (Homoptera: Aleyrodidae) in Apulia, Southern Italy.
http://www.eppo.org/QUARANTINE/aleurocanthus_spiniferus_IT/first_record.htm

Additional key words: new record **Computer codes:** ALECSN, IT

2008/093 Further details on the situation of *Rhynchophorus ferrugineus* in Northern Italy in 2007

In addition to the occurrences of *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae – EPPO A2 List) reported in Southern and Central Italy, more specimens were caught after August 2007 in Northern Italy. Adults were trapped at 1 site in the Liguria region (1 site at Bordighera – province of Imperia). In total, 7 adults were caught in the framework of a regional monitoring activity carried out by the Centro Regionale di Sperimentazione ed Assistenza Agricola (CERSAA – Albenga, province of Savona) and the regional Plant Protection Service of Liguria (Servizio Fitosanitario - Regione Liguria). The identity of the insects caught was confirmed by the University of Torino (Di.Va.P.R.A. – Entomologia). In November 2007, infested palm trees (*Phoenix canariensis*) in urban public parks were cut and destroyed. Surveys are being carried out in Liguria, and the monitoring network is currently constituted of 32 trapping sites located in Ventimiglia (province of Imperia), Bordighera (province of Imperia), Imperia, Alassio (province of Savona), Finale Ligure (province of Savona), Varazze (province of Savona), Arenzano (province of Genova), Genova, Moneglia (province of Genova), Sestri Levante (province of Genova) and La Spezia.

Source: Personal communication with Centro Regionale di Sperimentazione ed Assistenza Agricola (CERSAA – Albenga, Savona, IT), 2008-04.

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

2008/094 Situation of *Anoplophora glabripennis* in France

In France, two outbreaks of *Anoplophora glabripennis* (Coleoptera: Cerambycidae – EPPO A1 List) were reported in 2003 and 2004, and both are currently under eradication.

The first outbreak was discovered in 2003 (see EPPO RS 2003/114) in an industrial area in Gien (Loiret department, Centre region). It is thought that the origin of this introduction was infested packing wood from China. The outbreak was relatively old and large (almost 1 km radius) and numerous insects were found (202 larvae, 3 nymphs, 5 adults in their pupal chambers). In 2004, 12 adults were caught and 10 infested trees were found and destroyed. In 2005, 2 adults were caught and 6 trees destroyed. In 2006, 9 adults were caught and 13 trees destroyed. In 2007, surveys carried out in the focus area and its surroundings detected symptoms on 20 trees (17 *Acer* and 3 *Betula* spp.) but no adults could be found. Surveys and eradication measures will continue in 2008.

The second outbreak of *A. glabripennis* was discovered in 2004 (see EPPO RS 2004/163) in the small city of Sainte-Anne-sur-Brivet (Loire-Atlantique department, Pays de la Loire region). It is supposed that infested packing wood from China was also the source of this infestation. In 2004, 77 infested trees were detected and destroyed. A total of 163 larvae and 4 eggs were found, showing that the insect populations were active. This outbreak of approximately 250 m radius was probably detected at a rather late stage. In 2005, 5 adults were found and 33 trees destroyed. In 2006, surveys carried out from March to November in the focus area and its surroundings (1 km radius) did not detect any symptoms of tree infestation and only 1 beetle was found on the ground in October 2006. In 2007, surveys continued but did not detect any insects or symptoms of their presence. Intensive surveys will continue at least for the next 2 years, as 4 successive years of surveys without any findings are necessary before this outbreak can be considered as eradicated.

The status of *Anoplophora glabripennis* in France is officially declared as follows: **Present, only in certain areas, under eradication.**

Source: NPPO of France, 2008-02.

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

2008/095 Situation of *Anoplophora glabripennis* in Germany

Anoplophora glabripennis (Coleoptera: Cerambycidae – EPPO A1 List) was found for the first time in Germany in 2004 at Neukirchen, Bayern (EPPO RS 2004/072). In 2005, the pest was also found at Bornheim near Bonn, Nordrhein-Westfalen. In both outbreaks, the infested trees were located in the immediate vicinity of a distributor of granite stones imported from China. It was therefore suggested that the pest had been introduced with wood packaging material. In both cases, eradication measures were taken. In Bayern, 74 infested trees were destroyed from 2004 to the end of 2007. No further infestations have been detected at Neukirchen (Bayern). At Bornheim (Nordrhein-Westfalen), 32 infested trees were destroyed from 2005 to early 2006. However in November 2007, a tree with typical exit holes was observed in Nordrhein-Westfalen, approximately 1.5 km away from the earlier outbreak in Bornheim. Surveys are being carried out to clarify whether this is a new introduction or related to the outbreak in Bornheim.

The pest status of *Anoplophora glabripennis* in Germany is officially declared as follows: **Present only in two areas (Bornheim and Neukirchen), under eradication.**

Source: NPPO of Germany, 2008-01.

Additional key words: detailed record **Computer codes:** ANOLGL, DE

2008/096 Situation of *Anoplophora chinensis* in the United Kingdom

Between 2005 and 2007, single adult specimens of *Anoplophora chinensis* (Coleoptera: Cerambycidae – EPPO A2 List) have been found at a few locations in the United Kingdom but have not lead to the establishment of the pest. However in 2005, a rather large number of beetles were found in a nursery on a consignment of young *Acer* trees imported from China (see EPPO RS 2006/098). Although the trees and the emerging beetles were under tunnels, there was the risk that some beetles may have escaped. Surveillance, since the interception, in trees surrounding the nursery has not revealed an outbreak. However, given that larvae may not emerge for 2 or 3 years, and that it is very difficult to inspect large trees, the possible presence of *A. chinensis* cannot be ruled out at this stage. The NPPO of the United Kingdom considers that *A. chinensis* has probably been eradicated but that more surveys are still necessary to confirm this.
The pest status of *Anoplophora chinensis* in the United Kingdom was officially declared as follows: **Believed absent after eradication of an earlier interception, surveillance continuing.**

Source: NPPO of the United Kingdom (2008-01).

Additional key words: eradication **Computer codes:** ANOLCH, GB

2008/097 Situation of *Dryocosmus kuriphilus* in France

As reported in the EPPO RS 2007/086, *Dryocosmus kuriphilus* (Hymenoptera: Cynipidae – EPPO A2 List) was observed for the first time in France in 2005. The first detection was made at Saint-Dalmas-Valdéblore (Alpes-Maritimes, Provence-Alpes-Côte d'Azur region) on a small number of chestnut trees (*Castanea sativa*) but was successfully eradicated. Another outbreak was detected in 2007 in the Roya valley close to the infested area in Italy (see also EPPO RS 2007/086). It is considered that this outbreak corresponds to the natural spread of the pest from the nearby infested Italian area (outbreak in Cuneo, Piemonte region). Intensive surveys will continue in 2008 and phytosanitary measures are being taken to limit the spread of the insect, but its eradication seems difficult.
In July 2007, galls were observed in a lot of 10 chestnut trees during a phytosanitary inspection in a nursery located in Haute-Garonne (Midi-Pyrénées region). Laboratory analysis confirmed the identity of the pest and it was noted that galls presented numerous exit holes, thus suggesting that adults had emerged and may have spread to other trees in the nursery or its vicinity. This infested lot had been originally produced by a nursery in Brescia (Lombardia) and then sent to a Spanish nursery for 11 months before being imported into France. However, it is noted that in Spain there were no chestnut trees growing in the vicinity of the nursery. All infested trees were destroyed in August 2007. All movements of chestnut plants are prohibited for a minimum period of 3 years within a

delimited zone of 70 686 ha (focus zone plus a buffer zone of 15 km radius around the infested nursery). In conclusion, two outbreaks have been detected in France in 2007 and placed under official control.
The pest status of *Dryocosmus kuriphilus* in France is officially declared as follows: **Present, only in some areas, under official control.**

Source: NPPO of France, 2008-02.

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

2008/098 *Thrips palmi* is no longer found in Portugal

In 2004, *Thrips palmi* (Thysanoptera: Thripidae – EPPO A1 List) was detected for the first time in Portugal (see EPPO RS 2004/144). The pest was detected in flowers of kiwi (*Actinida chinensis*) at 2 locations in the region of Entre Douro e Minho. Measures to control the pest were taken. Surveys took place every year and all results were negative. *T. palmi* is longer found in Portugal.
The situation of *Thrips palmi* in Portugal can be described as follows: **Absent, isolated findings were made in 2004 but in later surveys the pest was no longer found.**

Source: NPPO of Portugal (2008-02).

Additional key words: absence **Computer codes:** THRIPL, PT

2008/099 Studies on whiteflies occurring in Guadeloupe, Martinique and French Guiana

Studies of the Aleyrodidae fauna in agricultural ecosystems have been carried out in Guadeloupe, Martinique and French Guiana. Whitefly specimens have been collected from cultivated plants over a period of 20 years (1984-2005). As a result, 37 species were reported from Guadeloupe (including 24 new species), 20 from Martinique (7 new) and 11 from French Guiana (7 new). Details were also provided for the Islands of Saint-Barthélemy, Saint-Martin, Marie-Galante and Saint-Kitts. It is pointed out that approximately 30% of these recorded species were non native (many of them of Asian origin). It is considered that these species have been non-intentionally introduced, most probably by human activities. The EPPO Secretariat has extracted new information about the following whitefly species:

Aleurocanthus woglumi (EPPO A1 List) is reported for the first time from Guadeloupe. Its presence is also confirmed in French Guiana and the Island of Saint-Kitts.

- Guadeloupe: several specimens have been collected on *Citrus* species (first specimen collected in 1992) from different locations including the island of Saint-Barthélemy.
- French Guiana: several specimens have been collected. It is suggested that *A. woglumi* was first introduced in 1995. Biological control is being implemented in French Guiana with an *Encarsia* species (first identified as *E. opulenta* but was probably *E. perplexa*) and good results were obtained. This confirms an earlier report (see EPPO RS 2001/028).

- Saint-Kitts and Nevis: a specimen was collected on *Citrus* at Basseterre (Saint-Kitts Island) in 1996, thus confirming an earlier report (see EPPO RS 98/069).

Aleurodicus dispersus (formerly EPPO Alert List) probably originates from the Caribbean or the Northern part of South America. It has been disseminated by human activities across most tropical regions. This highly polyphagous species can cause damage, especially in areas where it has newly been introduced. In the French Antilles, it occurs in Martinique and Guadeloupe, including the Islands of Marie-Galante (where it was collected for the first time in 2001), Saint-Barthélemy, and Saint-Martin.

Bemisia tabaci (EPPO A2 List) occurs in Guadeloupe (including the Island of Saint Barthélemy), Martinique and French Guiana on different crops (*Brassica oleracea, Cucumis melo, Lycopersicon esculentum, Musa, Solanum melongena*).

Lecanoideus floccissimus (formerly EPPO Alert List) was first described in Islas Canarias (Spain, see EPPO RS 98/013) but it probably originates from South or Central America. Its presence has been reported in Ecuador, Panama, Peru and Trinidad. In addition, *L. floccissimus* is reported for the first time in French Guiana. Specimens were collected in 2000 on *Carica papaya* and *Psidium guajava*.

Parabemisia myricae (formerly EPPO A2 List) is reported for the first time from Guadeloupe. Only one puparium was collected in 1998 on *Citrus* sp. It is considered that the situation of this pest should be further studied in Guadeloupe.

Source: Streito JC, Etienne J, Balmès V (2007) Aleyrodidae des Antilles et de la Guyane française (Hemiptera, Sternorrhyncha). *Revue française d'Entomologie* (NS) **29**(2-3), 57-72.

Additional key words: new record, detailed record **Computer codes:** ALECWO, ALEDDI, BEMITA, LECOFL, PRABMY, GF, GP, KN, MT

2008/100 Situation of *Aulacaspis yasumatsui* in Guadeloupe

In Guadeloupe, the recent introduction of *Aulacaspis yasumatsui* (Homoptera: Diaspididae – EPPO Alert List) is threatening *Cycas revoluta* and *C. circinalis* (see EPPO RS 2007/220). *A. yasumatsui* was discovered for the first time in 2003 in the Botanical Garden of Basse-Terre and it is now found in several communes of Guadeloupe where it causes considerable damage and plant mortality.
Possible control methods of *A. yasumatsui* have been studied in the USA. Several insecticides have been tested in Florida (e.g. dimethoate, methidathion, imidacloprid) but did not give satisfactory results. Biological control has also been studied in Florida, Hawaii and Guam with the following species of predators and parasitoids and appeared more promising: *Coccobius fulvus* (Hymenoptera: Aphelinidae, originating from South-East Asia), *Cybocephalus nipponicus* (Coleoptera: Cybocephalidae; previously misidentified as *C. binotatus*) and *Rhyzobius lophanthae* (Coleoptera: Coccinellidae, originating from Australia).

In Guadeloupe it is considered that control methods which are currently applied (i.e. pruning and burning of affected plant parts, insecticide treatments) are not sufficiently effective. It is stressed that studies on the potential establishment and efficacy of biological control agents should urgently be undertaken to eventually save *Cycas* populations from total destruction.

Source: Etienne J (2007) Pour la sauvegarde des Cycas en Guadeloupe. *L'Entomologiste* **63**(5), 271-275.

Additional key words: detailed record **Computer codes:** AULSYA, GD

2008/101 First record of *Plasmopara obducens* in Slovenia

Impatiens downy mildew, *Plasmopara obducens* (EPPO Alert List) has been found for the first time in Slovenia on *Impatiens walleriana* plants. Severe infections were observed in 2 glasshouses in Primorska region (Western littoral area of Slovenia). In both cases, affected plants had been imported from the same Italian producer from Veneto region. In the first case, more than half of the lot was killed (lot of 4000 plants), in the second case 10% of the lot showed symptoms (lot of 3960 plants). Eradication measures were taken immediately. All infected plants were destroyed and the remaining ones were placed under quarantine and treated with a fungicide (metalaxyl). Further monitoring has been imposed.
The situation of *Plasmopara obducens* in Slovenia can be described as follows: **Present, found in 2008 on *Impatiens walleriana* in 2 glasshouses in Primorska region, under eradication.**

Source: NPPO of Slovenia, 2008-04.

Additional key words: new record **Computer codes:** PLASOB, SI

2008/102 First record *Plasmopara obducens* in Italy

In Italy, *Plasmopara obducens* (EPPO Alert List) was detected on a sample of rooted cuttings of *Impatiens walleriana* cv. Fiesta Ole in the province of Padova, Veneto region. These plants originated from China. The identification of the pathogen was confirmed in April 2008 by the regional Plant Protection Service of Lombardia region. This is the first report of *P. obducens* in Italy.
The situation of *Plasmopara obducens* in Italy can be described as follows: **Present, found in 2008 on *Impatiens walleriana* in the province of Padova, Veneto region.**

Source: Regional PPO of Lombardia, Italy, 2008-04.

Additional key words: new record **Computer codes:** PLASOB, IT

2008/103 *Gibberella circinata* eradicated in France

In December 2005, the presence of *Gibberella circinata* (anamorph *Fusarium circinatum* – EPPO A1 List) was detected for the first time in France (see EPPO RS 2006/164). The fungus was found in 5 trees (*Pinus* spp. and *Pseudotsuga menziesii*) in a private garden in Perpignan (Pyrénées-Orientales department, Languedoc-Roussillon region). All infected trees were destroyed in March and April 2006. Intensive surveys were carried out in 2006 and 2007 on the infected site and its surroundings (within a radius of 5 km), in parks, gardens and along the roads. 48 visual inspections were made and 42 samples were collected and tested in the laboratory. All results were negative. The NPPO now declares that *G. circinata* has been eradicated in France.
The pest status of *Gibberella circinata* in France is officially declared as follows: **Absent, pest eradicated.**

Source: NPPO of France, 2008-02.

Additional key words: eradication **Computer codes:** GIBBCI, FR

2008/104 Situation of *Erwinia amylovora* in Morocco

Fireblight (*Erwinia amylovora* – EPPO A2 List) was first detected in Morocco in 2006 in the region of Meknes (see EPPO RS 2007/021, 2007/108). During surveys carried out by the NPPO, new infections have recently been detected in the region of El Hajeb, 30 km south of Meknes. The disease appeared in pear (*Pyrus communis*) orchards in the following 8 communes: Ait Harzallah, Ait Yaazem, Laqsir, Ait Naâman, Tamchachat, Ait Bourazouine, Sbaae Ayoune and Ait Boubidane. The following phytosanitary measures were taken: 1) destruction of severely affected trees, 2) pruning of affected shoots, at least 60 cm away from the infection point and burning of pruned shoots, 3) disinfection of pruning tools, 4) local wound treatment after pruning, 5) restriction on the movement of bee hives and of staff between orchards. In addition, information about the disease has been circulated to the growers. Surveillance has been intensified in the nearby regions of Ifrane, Fes and Khénifra. Finally, it can be recalled that in the region of Meknes since May 2006, 56 ha (corresponding to 5 orchards) have now been destroyed and that 52 ha have been sanitized (by pruning of affected shoots). Eradication measures will continue to be applied in Morocco.
The pest status of *Erwinia amylovora* in Morocco is officially declared as follows: **Present, outbreaks in the regions of Meknes and El Hajeb, under eradication.**

Source: NPPO of Morocco, 2008-05

Additional key words: detailed record **Computer codes:** ERWIAM, MA

2008/105 An emerging root-knot nematode, *Meloidogyne enterolobii*: addition to the EPPO Alert List

The root-knot nematode *Meloidogyne enterolobii* was first described in China in 1983, in the Hainan Province on a tree species (*Enterolobium contortisiliquum,* Fabaceae). It was then reported from other regions in China, mainly on guava (*Psidium guajava*). More recently, it has been suggested that *M. enterolobii* was a senior synonym of *Meloidogyne mayaguensis* (Karssen *et al*., in preparation; Xu *et al*., 2004), a species which had been originally described in Puerto Rico in 1988 on aubergine (*Solanum melongena*). Since the 1980s, this nematode has increasingly been reported on a wide range of host plants from different parts of the world (e.g. Brazil, Cuba, Florida (US), South Africa). *M. enterolobii* has a very wide host range including important crops (e.g. tomato, bean, pepper, many ornamentals). It is considered as an aggressive root-knot nematode which is able to overcome resistance in many cultivars. Considering the potential importance of *M. enterolobii* and the fact that it has been intercepted approximately 10 times from 1991 to 2007 in the Netherlands (although the identity of the nematode could only be confirmed in 2007), the Dutch NPPO suggested that should be added to the EPPO Alert List and kindly provided most of the information which was used to prepare the short article below. Finally, it must be noted that the presence of *M. enterolobii* has been reported in glasshouses in France (Blok *et al*., 2002) and Switzerland (Kiewnick *et al*., 2008) which clearly demonstrates that there are pathways for the introduction of this pest into the EPPO region.

Meloidogyne enterolobii (root-knot nematode)

Why	The NPPO of the Netherlands brought to the attention of the EPPO Secretariat the risk that *Meloidogyne enterolobii* (syn. *M. mayaguensis*) may present for the EPPO region. This nematode species has been intercepted by the Dutch NPPO on various commodities imported from different parts of the world. *M. enterolobii* has a wide host range and in particular, it is able to overcome the resistance of many important cultivars of tomato, soybean and sweet potatoes. Finally, its presence has been reported in a few glasshouse crops in France and Switzerland.
Where	In this distribution, the EPPO Secretariat has considered that *M. mayaguensis* was a junior synonym of *M. enterolobii*. **EPPO region:** France (reported once from Concarneau, Bretagne region), Switzerland. In the Netherlands, *M. enterolobii* has been intercepted approximately 10 times (from 1991 to 2007) in imported plant material from Asia, South America and Africa. Findings before 2007 could only be confirmed in the second half of 2007 when full information needed for reliable identification became available. In Switzerland, unusual damage has recently been observed on glasshouse crops of tomato and cucumber. Typical symptoms of *Meloidogyne* were observed and molecular assays confirmed the presence of *M. enterolobii* in 2 glasshouses. Further studies will be carried out to delimit the extent of the infestation in Switzerland. **Africa**: Burkina Faso, Côte d'Ivoire, Malawi, Senegal, South Africa. **Asia**: China (Hainan, Guangdong). **North America**: USA (Florida, first reported in 2002 on ornamentals and then in a commercial tomato field and a tropical fruit nursery). **Central America and Caribbean**: Cuba, Martinique, Puerto Rico, Trinidad and Tobago. **South America**: Brazil (Bahia, Ceara, Minais Gerais, Parana, Pernambuco, Piaui, Rio de Janeiro, Rio Grande do Norte, Sao Paulo), Venezuela.
On which plants	*M. enterolobii* is a polyphagous species. Although its precise host range is still unknown, it has been found on many different host plants including economically important crops such as: *Capsicum annuum* (pepper), *Citrullus lanatus* (watermelon), *Coffea arabica* (coffee), *Glycine max* (soybean), *Ipomoea batatas*

(sweet potato), *Lycopersicon* esculentum (tomato), *Nicotiana tabacum* (tobacco), *Phaseolus vulgaris* (bean), *Psidium guajava* (guava), *Solanum melongena* (aubergine), ornamental plants (e.g. *Ajuga, Brugmansia, Clerodendron, Tibouchina*) and wild plants (e.g. *Bidens pilosa*). Experiments carried out in the Netherlands have also shown that *Cactus, Ficus, Syngonium, Rosa* and *Vitis* can also be host plants of *M. enterolobii*.

Damage — As with other root-knot nematodes, *M. enterolobii* can induce root galling and plant decline but it is considered to be particularly aggressive (i.e. by a combination of a high reproduction rate, induction of large galls and a very wide host range). In addition, the virulence displayed by *M. enterolobii* against several sources of resistance to *M. incognita, M. javanica* and *M. arenaria* makes it a potential threat. For example, *M. enterolobii* is able to overcome resistance in tomato cultivars carrying the resistance gene Mi-1.

Dissemination — As a root-knot nematode species, it can be easily transmitted with soil and plant root material.

Pathway — Soil and growing medium, plants for planting from counties where *M. enterolobii* occurs.

Possible risks — Recent reports of *M. enterolobii* in glasshouses in the EPPO region clearly demonstrate that it has the potential to enter Europe. It was also recently detected in the USA during routine regulatory sampling at ornamental nurseries in South Florida which has a comparable climate with Southern Europe. It is very likely that this species can survive in the warmer parts of the EPPO region and in glasshouses throughout the EPPO region. In addition, this species was detected on roses (plants for planting) originating from China (see EPPO RS 2008/107), thus suggesting that it can also survive slightly cooler temperatures. Once root-knot nematodes have been introduced, it is in general difficult to control or eradicate them.

Source(s)

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EPPO RS 2008/105
Panel review date - Entry date 2008-05

2008/106 *Ditylenchus destructor* does not occur in Australia

In Australia, although the presence of *Ditylenchus destructor* (EU Annexes) had been reported in the past in New South Wales, South Australia, Tasmania, Victoria, and Western Australia, investigations in each individual states (see below) have shown that all these records were erroneous. In addition, recent surveys or surveillance programmes carried out in Australia have failed to detect this nematode.
The situation of *Ditylenchus destructor* in Australia can be described as follows: **Absent, all previous records arose from taxonomic confusion with other** *Ditylenchus* **species or were erroneous, confirmed by general surveillance.**

New South Wales: there was a single published record for *D. destructor* mentioning that is was found in mushroom compost (Anon., 1959). No other records have been made since 1959. It is now considered that this old record was based on a misidentification of *D. myceliophagus,* a species which was first described in 1958 and closely resembles *D. destructor*.

South Australia: the nematology diagnostic service which has been operating for many years has never detected the presence of *D. destructor* during the testing of a wide variety of susceptible hosts. The record appearing in the EPPO datasheet is considered erroneous.

Tasmania: a paper from Thistlethwayte (1961) seems to be the source of the suggested presence of *D. destructor* in Tasmania which was later quoted in other publications. It is now considered that this most probably resulted from confusion with *D. dipsaci*. Since 1992, Tasmania has undertaken annual surveys of 20% of its potato crops for other nematodes (*Globodera* spp.) and if *D. destructor* was present these surveys should have detected it. In addition, extensive surveys for nematodes have recently been conducted on carrot crops (host plants) in Tasmania and *D. destructor* was not found.

Victoria and Western Australia: *D. destructor* has never been detected in any targeted or general surveillance programmes and there have never been any published records concerning these states. Earlier records appearing in the EPPO datasheet are considered erroneous.

Source: Plant Biosecurity Australia, 2008-06.

Anonymous (1959) *The Agricultural Gazette of New South Wales* **70**, 648-650.
Thistlethwayte B (1961) Plant diseases caused by eelworms. *Tasmanian Journal of Agriculture* **32**, 197-205.

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

2008/107 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered the notifications of non-compliance for 2008 received from EU countries (via Europhyt) and from Switzerland since the previous report (EPPO RS 2008/063). 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 (*).

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.

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Anoplophora	*Acer*	Plants for planting	China	Netherlands	1
	Acer palmatum	Plants for planting	China	Netherlands	2
Anoplophora chinensis	*Acer*	Plants for planting	China	Netherlands	2
	Acer buergerianum, Acer	Plants for planting	China	Netherlands	1
	Acer palmatum	Plants for planting	China	Netherlands	4
Bemisia tabaci	*Ajuga reptans*	Cuttings	Netherlands	United Kingdom	1
	Aster, Trachelium	Cut flowers	Israel	Netherlands	1
	Crossandra	Cuttings	Brazil	Netherlands	1
	Eryngium foetidum	Vegetables	Thailand	Denmark	1
	Eryngium foetidum	Vegetables	Thailand	Ireland	2
	Hypericum	Cut flowers	Zimbabwe	Sweden	1
	Ocimum	Vegetables (leaves)	Thailand	Netherlands	1
	Ocimum	Vegetables (leaves)	Thailand	United Kingdom	1
	Ocimum basilicum	Vegetables (leaves)	Israel	Czechia	1
	Ocimum basilicum	Vegetables (leaves)	Israel	United Kingdom	1
	Ocimum sanctum	Vegetables (leaves)	Thailand	United Kingdom	1
	Ornithogalum	Plants for planting	Israel	France	2
	Ornithogalum	Plants for planting	Israel	Netherlands	1
	Ornithogalum	Plants for planting	Israel	Netherlands	1
	Osteospermum	Cuttings	Costa Rica	Sweden	1
	Psidium guajava	Fruits	India	United Kingdom	1
	Salvinia	Plants for planting	Israel	United Kingdom	1
	Solidago	Cut flowers	Zimbabwe	Netherlands	1
	Unspecified	Vegetables	Nigeria	Ireland	1
Bemisia tabaci, Liriomyza, Thripidae	*Ocimum sanctum*	Vegetables (leaves)	Thailand	United Kingdom	1
Cerambycidae, Lamiinae	*Acer*	Plants for planting	China	Netherlands	1
Diaphania indica, Thripidae	*Momordica charantia, Citrus aurantiifolia*	Vegetables	India	United Kingdom	1
Guignardia	*Citrus maxima*	Fruits	China	Netherlands	1
Helicoverpa armigera	*Alstroemeria, Dianthus, Gypsophila paniculata, Hypericum, Lilium, Rosa*	Cut flowers	Kenya	Netherlands	1
	Dianthus	Cut flowers	Egypt	Netherlands	1
	Dianthus	Cut flowers	Kenya	Netherlands	8
	Eryngium	Cut flowers	Kenya	Netherlands	1
	Pelargonium	Plants for planting	Spain (Canary isl.)	Finland	1
	Pisum	Vegetables	Kenya	Netherlands	2
	Pisum sativum	Vegetables	Egypt	United Kingdom	1
	Rosa	Cut flowers	Ethiopia	Netherlands	1
	Rosa	Cut flowers	India	Czechia	1
	Rosa	Cut flowers	India	Netherlands	1
	Rosa	Cut flowers	Kenya	Netherlands	6
	Rosa	Cut flowers	Uganda	Netherlands	12

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
H. armigera (cont.)	*Rosa*	Cut flowers	Zimbabwe	Netherlands	5
	Solidago	Cut flowers	Zimbabwe	Netherlands	1
Helicoverpa armigera, Spodoptera littoralis	*Rosa*	Cut flowers	Uganda	Netherlands	1
	Rosa	Cut flowers	Zimbabwe	Netherlands	5
Hirschmanniella	Unspecified	Various objects	Singapore	United Kingdom	1
Insecta	*Annona squamosa*	Fruits	Vietnam	Switzerland	1
Leucinodes orbonalis	*Solanum aethiopicum*	Vegetables (leaves)	Ghana	United Kingdom	1
	Solanum melongena	Vegetables	Thailand	Germany	1
	Solanum melongena	Vegetables	Thailand	United Kingdom	1
Liriomyza	*Amaranthus*	Vegetables	India	Ireland	2
	Brassica juncea	Vegetables	Vietnam	Czechia	1
	Ocimum	Vegetables (leaves)	Thailand	Sweden	9
	Ocimum basilicum	Vegetables (leaves)	Thailand	Czechia	1
	Ocimum basilicum	Vegetables (leaves)	Thailand	Denmark	2
Liriomyza huidobrensis	*Carthamus*	Cut flowers	Netherlands	Ireland	1
	Chrysanthemum	Cuttings	Tanzania	Netherlands	1
	Eryngium	Cut flowers	Kenya	Netherlands	1
	Eryngium	Cut flowers	Zimbabwe	Netherlands	1
	Eryngium	Cut flowers	Zimbabwe	United Kingdom	1
	Gypsophila	Cut flowers	Ecuador	Austria	1
	Gypsophila	Cut flowers	Ecuador	Italy	1
	Gypsophila	Cut flowers	Ecuador	Netherlands	7
	Gypsophila	Cut flowers	Ecuador	United Kingdom	1
Liriomyza sativae	*Ocimum*	Vegetables (leaves)	Thailand	Netherlands	2
	Ocimum americanum	Vegetables (leaves)	Thailand	Denmark	1
	Ocimum basilicum, Ocimum americanum, Ocimum	Vegetables	Thailand	Netherlands	1
Liriomyza sativae, Thrips palmi	*Ocimum basilicum, Dendrobium*	Vegetables (leaves) and cut flowers	Thailand	Denmark	1
Liriomyza trifolii	*Apium graveolens*	Vegetables	Thailand	Denmark	1
	Chrysanthemum	Cut flowers	Costa Rica	Netherlands	1
	Gypsophila	Cut flowers	Ethiopia	Netherlands	1
	Gypsophila	Cut flowers	Israel	Netherlands	2
	Solidago	Cut flowers	Israel	Netherlands	1
Meloidogyne enterolobii	*Rosa*	Plants for planting	China	Netherlands	3
Meloidogyne enterolobii, Meloidogyne hapla	*Rosa*	Plants for planting	China	Netherlands	1
Meloidogyne javanica, Radopholus similis	*Anubias barteri*	Aquarium plants	Malaysia	Netherlands	1
Pepino mosaic virus	*Lycopersicon esculentum*	Seeds	China	Poland	2
	Lycopersicon esculentum	Vegetables	Spain	Ireland	1
	Lycopersicon esculentum	Vegetables	Spain	United Kingdom	2
	Lycopersicon esculentum	Vegetables	Spain (Canary isl.)	United Kingdom	3

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
PePMV (cont.)	*Lycopersicon esculentum*	Seeds	USA	United Kingdom	1
Phytophthora ramorum	*Photinia*	Plants for planting	Italy	Ireland	1
	Rhododendron	Plants for planting	Germany	Denmark	1
Plum pox virus	*Prunus persica*	Plants for planting	Serbia	Bulgaria	1
*Pyralidae (*suspect *Etiella zinckenella)*	*Parkia speciosa*	Vegetables	Thailand	Germany	1
Radopholus similis	*Anubias*	Aquarium plants	Thailand	Netherlands	1
Rhizoecus hibisci	*Ficus microcarpa*	Plants for planting	China	Netherlands	1
Spodoptera littoralis	*Pelargonium*	Plants for planting	Spain (Canary isl.)	Finland	1
	Rosa	Cut flowers	Rwanda	Netherlands	1
	Rosa	Cut flowers	Zimbabwe	Netherlands	12
	Rosa	Cut flowers	Zimbabwe	United Kingdom	1
	Solidago	Cut flowers	Zimbabwe	Netherlands	2
Spodoptera litura	*Costus*	Cuttings	Sri Lanka	Netherlands	1
Thripidae	*Momordica*	Vegetables	Thailand	United Kingdom	1
	Momordica charantia	Vegetables	Dominican Rep.	United Kingdom	1
Thrips palmi	*Dendrobium*	Cut flowers	Singapore	Netherlands	1
	Momordica	Vegetables	Dominican Rep.	Netherlands	1
	Momordica	Vegetables	Thailand	Sweden	1
	Orchidaceae	Cut flowers	Thailand	Austria	13
Trialeurodes ricini	*Murraya*	Cut foliage	India	United Kingdom	1
Xanthomonas axonopodis pv. *phaseoli*	*Phaseolus vulgaris*	Seeds	Tanzania	Germany	1
Xiphinema americanum	*Ilex crenata*	Plants for planting	Japan	Netherlands	1

- **Fruit flies**

Pest	Consignment	Country of origin	Destination	nb
Non-European Tephritidae	*Momordica*	Thailand	Netherlands	1

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Bostrichidae	Unspecified	Packing wood	China	Belgium	1
Bursaphlenchus xylophilus	Unspecified	Packing wood	China	Finland	5
Cerambycidae	Unspecified	Packing wood	China	Germany	2
Grub holes > 3 mm	*Larix*	Wood and bark	Russia	Finland	4
	Larix	Wood and bark	Russia	Sweden	2
	Unspecified	Packing wood	China	Belgium	1
Nematoda	Unspecified	Packing wood	China	Finland	1
Sinoxylon, Cerambycidae	Unspecified	Packing wood	India	Germany	1

- **Bonsais**

Pest	Consignment	Country of origin	Destination	nb
Anoplophora chinensis	*Acer*	Japan	Netherlands	1
	Acer palmatum	China	Netherlands	2
Meloidogyne, Pratylenchus	*Acer palmatum, Taxus cuspidata, Trachycarpus excelsa*	Japan	Belgium	1
Pratylenchus	*Acer palmatum*	Japan	Belgium	1
	Juniperus chinensis	Japan	Belgium	1
Pratylenchus vulnus, Scutellonema	*Taxus baccata*	Japan	United Kingdom	1
Rhizoecus hibisci	*Zelkova*	China	Netherlands	2
Trichodoridae, *Tylenchorhynchus*	*Acer palmatum, Ilex crenata*	Japan	Belgium	1
Xiphimena incognitum	*Ulmus*	China	Netherlands	1
Xiphinema	*Ilex crenata*	Japan	Netherlands	1
Xiphinema americanum	*Enkianthus perulatus*	Japan	Belgium	1
	Ilex crenata	Japan	Belgium	2
Xiphinema americanum, Meloidogyne	*Ilex crenata*	Japan	Belgium	1
Xiphinema diffusum	*Ulmus*	China	Netherlands	1

Source: EPPO Secretariat, 2008-05.

2008/108 PRATIQUE: the EU project on Enhancements of Pest Risk Analysis Techniques has now been launched

The new EU project called PRATIQUE (Enhancements of Pest Risk Analysis Techniques) was officially launched on 2008-03-01. This project funded by the EU under the 7th Research Framework Programme (FP7) is composed of 15 partners from 8 EU countries, EPPO, CABI, Australia, New Zealand, and subcontractors in China and Russia. This project will run for 3 years and brings together PRA analysts, phytosanitary experts, invasive alien species specialists, ecologists, economists and risk modellers.

The main objectives of PRATIQUE are:

- to assemble the datasets required to construct effective PRAs valid for the whole of the EU,
- to conduct multi-disciplinary research that enhances the techniques used in PRA,
- to develop an improved web-based, user-friendly decision support scheme for PRA (which will be hosted by EPPO).

PRATIQUE will produce PRA protocols, decision support systems and computer programmes. All project results will be independently validated by phytosanitary experts using a representative range of pests and invasive alien species.

Further information is available on the PRATIQUE website (still under development): www.pratiqueproject.eu

Source: EPPO Secretariat, 2008-04.

2008/109 The decline of arable weed diversity in agroecosystems

It is widely acknowledged that the intensification of agriculture has lead to a decline in agroecosystems' biodiversity. However, few precise and measured data exist to document this process. In France, 158 arable fields distributed across Côte-d'Or (Bourgogne region) were surveyed, in 1968-1976 and then in 2005-2006. The objective of these surveys was to quantify the changes in weed species composition and richness since the 1970s.

The main finding of the study was the significant decline of arable weed diversity at the field scale. The number of species per field decreased by average from 16.6 to 9.3 (40%). Mean cover abundance also experienced a significant 67% decline from 61.5 to 20.2 plants/m². Field hedges maintained a higher diversity compared to the field core area and could be considered both as a refuge area for threatened arable weeds (e.g. *Bunium bulbocastanum*, *Caucalis platycarpos*) but also as a way of entry for species that were formerly only found on roadsides (e.g. *Geranium* spp., *Sysimbrium officinale*).

Four main trends were observed in the changes of species (new, increasing, stable or decreasing):

(1) The most meaningful result was the increase of nitrophilous species that can be directly linked to the 42% increase in the amount of fertilizer used since the 1970s. According to ecological indicator values, decreasing (*Teucrium botrys*, *Legousia speculum-veneris*) or extinct species (*Saxifraga tridactylites*, *Lactuca perennis*, *Nigella arvensis*) have low nitrogen requirements compared to stable (*Poa annua*, *Taraxacum officinale*), increasing (*Rumex obtusifolia*, *Senecio vulgaris*) or new species (*Cirsium vulgare*).

(2) The increase in oilseed rape crop since the 1970s (74% increase of landuse in the studied area) had a significant effect on weed species composition. The repeated use of the same active ingredients (e.g. trifluraline) favoured the presence of weed species that are not sensitive to herbicides used in oilseed rape crop: *Anthriscus caucalis*, *Geranium* spp., *Scandix pecten-veneris*, *Sisymbrium officinale*, etc.

(3) The decline in insect-pollinated species was also observed, while self- and wind-pollinated weed species remained stable. Moreover, not only the number of species in the community has decreased, but also the interactions between species.

(4) The study also showed that decreasing weed species had a specialized ecology, while generalist species (able to grow on a large range of environmental conditions) were the most stable. Generalist species are indeed able to cope with changes, such as farming practices.

The decline of vegetation diversity in cultivated fields has a non-negligible impact on the functioning of agroecosystems (e.g. decline of both insect-pollinated species and weeds used by bird species). A regular and extended monitoring of arable weed flora (e.g. network 'Biovigilance Flore'; see EPPO RS 2008/110) would be of great value to survey and prevent the emergence of new weeds. Such monitoring would also allow to maintain a level of diversity compatible with the functioning of agroecosystems.

Source: Contact : Guillaume Fried, LNPV, FR or Xavier Reboud, INRA, FR.
E-mail: fried@supagro.inra.fr ; reboud@dijon.inra.fr

Dessaint F, Fried G, Barralis G(2007) Déclin et changements au sein de la flore adventice : quelle évolution en 30 ans ? 20ème conférence du Columa. Journées internationales sur la lutte contre les mauvaises herbes. Dijon, FR, 2007-12-11/12, 417-426.

Fried G, Girod C, Jacquot M, Dessaint F (2007) Répartition de la flore adventice à l'échelle d'un paysage agricole : analyse de la diversité des pleins champs et des bordures. Vingtième conférence du Columa. Journées internationales sur la lutte contre les mauvaises herbes. Dijon, FR, 2007-12-11/12, 346-355.

Mots clés supplémentaires : invasive alien plants, diversity **Codes informatiques :** ANRCA, BUIBU, CIRVU, CUCLA, GERSS, LACPE, LEGSV, NIGAR, POAAN, RUMOB, SCAPV, SENVU, SSYOF, SXFTR, TEUBO, FR

2008/110 'Biovigilance Flore': a weed monitoring system in France

In 2002, a survey of weeds in arable crops was set up accross France by the National Plant Protection Organisation (network 'Biovigilance Flore'), which is meant to be a long term project. The primary objective of this survey is to detect and document any change in weed flora due to modifications in cultivation methods (new herbicides, GMO crops, no-tillage systems, etc.). The survey is carried out across 1000 fields chosen to representat the diversity of cultural practices and environmental conditions in arable fields in France. In each field, a 'relevé' of all vascular plant species is performed, over a representative area of 2000 m² (40 m x 50 m) and using six cover classes to measure the abundance of each plant. Relevant data about management practices and ecological conditions are also collected. Moreover, a control plot, located in an untreated area adjacent to the survey area, is also surveyed to identify the potential flora (i.e. weeds that would occur if no herbicides were sprayed).

Between 2002 and 2004, 'Biovigilance Flore' recorded the presence of about 310 taxa which are considered to be representative of the weed flora in France. The total number of weed species per plot (control plot + treated area) varies from 1 to 58 with a median value of 12 and an average of 13.2 (+/- 0.4). In the treated area, the average number of weed species per field is only 4.2, and 135 plots (about 8%) no longer had any weed species. The untreated control plot area counts 8.5 weed species i.e. about twice as many species as the treated plots. Beyond this brief overview, the richness of the dataset enables us: (1) to determine the relative influence of environmental and management factors on weed species composition and (2) to describe and search the underlying ecological rules of weed flora shifts.

(1) Determining the relative influence of environmental and management factors on weed species composition and diversity

A multivariate analysis of data from approximately 700 arable fields was carried out to determine the respective importance of environmental factors and management practices on weed species richness and composition.

This analysis indicated that the major variations in species composition between fields were associated with the following factors (ordered by importance):

- crop management: firstly the current crop type and secondly the preceding crop type. Three main weed communities were identified according to sowing periods: winter, spring and summer crops.
- soil pH and texture to a lesser degree, resulting in highly contrasting weed communities on basic clay soils compared to those on acidic sandy soils.
- climate and geographical position (mainly precipitation and longitude, surprisingly the influence of temperature and latitude was less pronounced).

Species richness also depends on landscape organisation and/or tillage depth. Species richness was 33 % higher in fields located in diversified landscapes surrounded by hedges and meadows than in fields located in open areas, showing that increased landscape

complexity enhances species diversity in arable fields. These results open up possibilities for cropping systems with reduced impacts on plant diversity.

(2) Monitoring and analysing shifts in weed flora

This monitoring, conducted over large spatial and temporal scales, allows regular updates of the distribution of weed species in France and the identification of the most problematic species in each crop. An initial review of changes that occurred since the 1970s was undertaken in the five main crop species (maize, oilseed rape, sugarbeet, sunflower and winter wheat).

- *Increasing arable weed species*

The most successful species nowadays are *Mercurialis annua*, *Lolium* spp., *Senecio vulgaris*, *Cirsium arvense* and *Sonchus asper* that have increased in (almost) all crop types. The large ecological range of these species combined with their ability to make effective use of high nitrogen input and to disperse in the landscape could explain that they have been able to cope with several aspects of agricultural intensification (herbicides, higher amount of fertilizer, competition with the crop, changes in crop rotation, no-tillage systems, etc.).

Some species only increased or decreased in one crop type. These cases often correspond to species favoured by the lack of herbicide selectivity, e.g. *Aethusa cynapium* in sugarbeet, *Datura stramonium* in sunflower, etc.

Species and Family	GCW	Winter wheat	Oilseed rape	Sugar-beet	Sun-flower	Maize
Aethusa cynapium (Apiaceae)	AW, W			+ (N)		
Amaranthus retroflexus # (Amaranthaceae)	AW, EW, NW, W			=	+ (N)	=
Calystegia sepium (Convolvulaceae)	AW, EW, NW, W					+ (N)
Capsella bursa-pastoris (Brassicaceae)	AW, EW, NW, W	+	=	-	=	+ (N)
Chenopodium album (Chenopodiaceae)	AW, EW, NW, W	+	+ (N)	-	+	=
Chenopodium polyspermum (Chenopodiaceae)	AW, EW, W					+ (N)
Cirsium arvense (Asteraceae)	AW, EW, NW, W	+	+ (N)	+ (N)	+ (N)	- (D)
Convolvulus arvensis (Convolvulaceae)	AW, EW, NW, W			+ (N)	=	=
Datura stramonium # (Solanaceae)	AW, EW, NW, W				+ (N)	
Daucus carota (Apiaceae)	AW, EW, NW, W				+ (N)	
Euphorbia helioscopia (Euphorbiaceae)	AW, EW, NW, W				+ (N)	
Galium aparine subsp. *aparine* (Rubiaceae)	AW, EW, NW, W	+	=	=	=	
Geranium dissectum (Geraniaceae)	AW, EW, W	+ (N)	+ (N)			
Kickxia spuria + *elatine* (Scrophulariaceae)	AW, EW, W			=	=	+ (N)
Lamium purpureum (Lamiaceae)	AW, EW, W	+	=			+ (N)

Species and Family	GCW	Winter wheat	Oilseed rape	Sugar-beet	Sun-flower	Maize
Lapsana communis (Asteraceae)	AW, EW, W	+	+ (N)			
Lolium spp. (Poaceae)	AW, EW, W	+	+	+ (N)	+ (N)	
Mercurialis annua (Euphorbiaceae)	AW, EW, W	+ (N)	+	+	+	+
Myosotis arvensis (Boraginaceae)	AW, EW, W	+	+			
Panicum milliaceum (Poaceae)	AW, EW, NW, W					+ (N)
Poa annua (Poaceae)	AW, EW, NW, W	+	=			+ (N)
Polygonum persicaria + lapathifolium (Polygonaceae)	AW, EW, NW, W		+ (N)	=	+	=
Senecio vulgaris (Asteraceae)	AW, EW, NW, W	+ (N)	+		+ (N)	+ (N)
Setaria verticillata + viridis (Poaceae)	AW, EW, NW, W				+ (N)	=
Solanum nigrum (Solanaceae)	AW, EW, NW, W		+ (N)	=	+	+
Sonchus asper + oleraceus (Asteraceae)	AW, EW, NW, W	+ (N)	+ (N)	=	+	+ (N)
Taraxacum officinale (Asteraceae)	AW, EW, NW, W	+				
*Viola arvensis** (Violaceae)	AW, EW, W	+	+	=	- (D)	=

Legend: + (increasing species) ; = (stable species) ; - (decline species) ; + (N) (increasing species not recorded among the top 25 weed species in the 1970s, i.e. species increase) ; (- D) (decreasing species no longer recorded in the top 25 weed species in the 2000s, i.e. dramatic species decline) * characteristic segetal weed species ; # neophyt species (introduced in France after 1500).
Abbreviations for the Global Compendium of Weeds column:
W: Weed; N: Noxious Weed; EW: "Environmental Weed"; AW: "Agricultural weed"

- *Decreasing arable weed species*

Herbicides can also be responsible for the decrease of some sensitive species in particular crops: *Legousia speculum-veneris*, *Ranunculus arvensis* and *Ranunculus sardous* in winter wheat, *Spergula arvensis* and *Galinsoga parviflora* in maize, *Anagallis arvensis* in sugarbeet, etc.

It should be kept in mind that even if the frequency and abundance of some species is considered to be decreasing, these species could however remain major weeds (e.g., *Alopecurus myosuroides*, *Papaver rhoeas* or *Veronica hederifolia* in winter crops; *Polygonum aviculare* or *Fallopia convolvulus* in spring crops) or could be considered to be serious weeds in particular conditions e.g. *Digitaria sanguinalis* and *Setaria pumila* in maize monoculture in Aquitaine.

Species and Family	GCW	Winter wheat	Oilseed rape	Sugar-beet	Sun-flower	Maize
*Alopecurus myosuroides** (Poaceae)	AW, EW, NW, W	-	-	-	-	
Anagallis arvensis (Primulaceae)	AW, EW, W	- (D)		-	-	=
*Anthemis arvensis** + *cotula* (Poaceae)	AW, EW, NW, W	- (D)				

Species and Family	GCW	Winter wheat	Oilseed rape	Sugar-beet	Sun-flower	Maize
*Apera spica-venti** (Poaceae)	AW, W	- (D)				
*Aphanes arvensis** (Rosaceae)	AW, EW, W	-	-			
Arabidopsis thaliana (Brassicaceae)	AW, W	- (D)	- (D)			
Avena sterilis subsp. *ludoviciana* (Poaceae)	AW, W	- (D)	- (D)			
Cerastium spp. (Caryophyllaceae)	AW, EW, W	-	=			
Digitaria sanguinalis (Poaceae)	AW, EW, NW, W					-
Elytrigia repens (Poaceae)	AW, EW, NW, W		- (D)		- (D)	- (D)
Euphorbia exigua (Euphorbiaceae)	AW, W			- (D)		
Fallopia convolvulus (Polygonaceae)	AW, EW, W	-		=	-	-
Fumaria officinalis (Fumariaceae)	AW, EW, W	=	=	=	- (D)	- (D)
Galinsoga parviflora # (Asteraceae)	AW, EW, NW, W					- (D)
Lamium amplexicaule (Lamiaceae)	AW, EW, NW, W				- (D)	
*Legousia speculum-veneris** (Campanulaceae)	AW, W	- (D)				
Matricaria recutita + perforata (Asteraceae)	AW, EW, NW, W	-	-	=	=	=
*Papaver rhoeas** (Papaveraceae)	AW, EW, W	-	-	=		
Picris echioides (Asteraceae)	AW, EW, W				- (D)	
Polygonum aviculare (Polygonaceae)	AW, EW, NW, W	-		-	-	=
Portulaca oleracea (Portulacaceae)	AW, EW, NW, W					- (D)
*Ranunculus arvensis** (Ranunculaceae)	AW, EW, W	- (D)				
Ranunculus sardous (Ranunculaceae)	AW, EW, W	- (D)				
Raphanus raphanistrum (Brassicaceae)	AW, EW, NW, W	-	=	=	- (D)	- (D)
Setaria pumila (Poaceae)	AW, EW, NW, W					- (D)
Sinapis arvensis (Brassicaceae)	AW, EW, NW, W	=	+	-	-	
Sonchus arvensis (Asteraceae)	AW, EW, NW, W			- (D)		
*Spergula arvensis** (Caryophyllaceae)	AW, EW, NW, W		- (D)			- (D)
Stellaria media (Caryophyllaceae)	AW, EW, NW, W	=	-	-	- (D)	+
Valerianella spp.* (Valerianaceae)	AW, EW, W	- (D)				

Species and Family	GCW	Winter wheat	Oilseed rape	Sugar-beet	Sun-flower	Maize
Veronica hederifolia (Scrophulariaceae)	AW, EW, W	=	-	=		
Veronica persica # + *polita* (Scrophulariaceae)	AW, EW, W	-	- (D)	- (D)	(-D)	+ (N)

The use of herbicides cannot explain all changes observed. Other characteristics of weed species (life cycle, competitiveness, etc.) could also be important and should be analyzed through a functional group approach. A functional group gathers a set of plants sharing common biological characteristics as well as common ecological behaviour and/or effects on ecosystem processes. A study conducted in sunflower crops highlighted that nearly two thirds of the increasing species belonged to a single functional group. These species were taller and more nitrophilous (i.e., more competitive), more heliophilous, less sensitive to sunflower herbicides and shared a rapid summer life cycle. In other words, the weed flora occurring in sunflower crops has specialised since the 1970s in favour of 'sunflower mimicking' species.

Due to crop rotation, the success of a species in one crop could also have an impact on the following crops in the rotation. For instance, *Geranium dissectum* increased in winter wheat (although it is well controlled by herbicides in this crop), probably because of its success in oilseed rape which generally precedes winter wheat in the rotation. Some crops can thus be considered as a gateway for 'new' weeds in cultivated fields (e.g. oilseed rape for *Geranium* spp. or *Sisymbrium officinale*; sunflower for *Ambrosia artemisiifolia* ; maize for *Panicum* spp.).

Some 'new' weeds such as *Ambrosia artemisiifolia*, *Orobanche ramosa*, *Cuscuta* spp. are monitored through the 'Biovigilance Flore' network. Nevertheless, the low density of surveyed fields is unlikely to allow the early detection of new invasive plants.

Source: Contact : Guillaume Fried, LNPV, FR or Xavier Reboud, INRA, FR.
E-mail: fried@supagro.inra.fr ; reboud@dijon.inra.fr

Fried G, Bombarde M, Delos M, Gasquez J, Reboud X (2005) Les mauvaises herbes du maïs : ce qui a changé en 30 ans. *Phytoma-La Défense des Végétaux* no. 586, 47-51.

Fried G, Reboud X (2007) Evolution de la composition des communautés adventices des cultures de colza sous l'influence des systèmes de cultures. *Oléagineux, Corps Gras, Lipides* **14**, 130-138.

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Additional key words: weeds **Computer codes:** FR

2008/111 *Landoltia punctata*, a new record for the Netherlands

Landoltia punctata (Lemnaceae) originates from South-Eastern Asia and Australia. It is a small, free-floating plant that has fronds which produce thin roots. The plants can grow into dense mats in stagnant water. It reproduces via vegetative budding and daughter fronds stay attached to mother fronds which gives a cluster-like appearance to the plant. *L. punctata* can also reproduce sexually by seed, but this does not occur often.
In the Netherlands, the species is often found in water tanks in garden centres and pet shops selling aquarium plants. It is therefore thought to have been introduced as a contaminant of aquarium plants from South-East Asia.
Within the EPPO region, according to the Global Invasive Species Database this species is recorded in Spain and Israel, but has never been recorded as invasive, although it can reproduce and spread rapidly. In the Global Compendium of Weeds, this species is quoted as a 'Noxious Weed', an 'Environmental Weed', and an 'Agricultural Weed'. In the Netherlands, it is unlikely that the species will become a nuisance to water management. Additionally, the ecology of this species hardly differs from other indigenous Lemnaceae, and the risk of replacement of a native species is therefore considered very low.

Source: A Global Compendium of Weeds
http://www.hear.org/gcw/alpha_select_gcw.htm

Global Invasive Species Database – *Landoltia punctata*
http://www.issg.org/database/species/ecology.asp?si=1018&fr=1&sts=&lang=EN

Van Valkenburg J, Pot Roelf (2008) [*Landoltia punctata* (G. Mey.) D. H. Les & D. J. Crawford (dotted duckweed), a new record for The Netherlands]. *Gorteria* **33**, 41-50 (in Dutch).

Additional key words: invasive alien plants, new record **Computer codes: ES, IL, NL**

2008/112 *Salvia reflexa*, a new record for France

Salvia reflexa (Lamiaceae) originates from Southern USA. It is an annual, densely pubescent, greyish plant which smells strongly of mint. Flowers are pale blue. The species is not quoted in any European guides to flora, although it was mentioned in the EPPO region in 1884 in Germany, it has also been previously reported in Austria, Hungary, Romania, Slovakia, Switzerland, Ukraine, and is known in Belgium and United Kingdom. It has recently been recorded as naturalized in Serbia. Outside the EPPO region, it is naturalized in California (US), Eastern and Southern Africa, as well as in Australia where it is considered a major weed. In the Global Compendium of Weeds, this species is quoted as a 'Noxious Weed', an 'Environmental Weed', and an 'Agricultural Weed' (e.g. it is a weed in cotton fields). *S. reflexa* is toxic to weak cattle, most probably due to nitrate accumulation in the leaves. It is also thought to be able to release allelopathic substances during rainy periods, inhibiting the germination and growth of plantlets of other species.
In France, the species has been found in Côte d'Or (Bourgogne region), on a North oriented and stony calcareous plateau with low water reserves. *S. reflexa* was very abundant (several hundred plants) on this site, the most important populations being found in two maize fields (separated by 100 m), and on fallow land. This area showed exceptional plant diversity since very rare messicole plants were present: *Thymelea passerine, Nigella arvensis, Polycnemum majus, Adonis flammea*, etc.). This species might have been introduced as a contaminant of seeds. Indeed, seeds of *S. reflexa* have already been found in Leguminosae seeds coming from North America according to the Canadian Food

Inspection Agency (2001). In France, it is considered that this species could represent a risk and therefore should be monitored.

Source: Girod C, Cadet E, Fried G (2007) *Salvia reflexa* Hornem. (Lamiaceae) a new weed for France discovered in Côte d'Or. *Le Monde des Plantes* **493,** 24-26.

Agence canadienne d'Inspection des Aliments (2001) Essai de germination et de pureté des semences: rapport quinquennal 1er juillet 1996 – 30 juin 2001.

Additional key words: invasive alien plants, new record **Computer codes:** FR, SALRE

2008/113 The Australian Weed Risk Assessment System

The Australian Weed Risk Assessment (WRA) system is a question-based scoring method that can be operated using a computer, or manually, using paper-based forms. The WRA system concerns the pathway of voluntary introduction for ornamental purposes. It applies to plants satisfying the IPPC definition of a quarantine pest: plants not yet present in the country, or, if present, having a limited distribution and subject to official control. The WRA system addresses risk assessment and does not evaluate management options; pathway analysis is not included. The scheme has been calibrated using 350 exotic alien plants that have been present for sufficient time in Australia to reveal their invasive potential. The system includes 49 questions dealing with biogeography and a range of biological and ecological attributes that are indicative of, or can contribute to the invasive character of the plant:

A. Biogeography / History

1. Domestication / cultivation

1.01 Is the species highly domesticated?

1.02 Has the species become naturalized where grown?

2. Climate and distribution

2.01 Species suited to Australian climates (0-low; 1-intermediate; 2- high)

2.02 Quality of climate match (0-low; 1-intermediate; 2-high)

2.03 Broad climate suitability (environmental versatility)

2.04 Native or naturalized in regions with extended dry periods

2.05 Does the species have a history of repeated introductions outside its natural range?

3. Weed elsewhere?

3.01 Naturalized beyond native range

3.02 Garden/amenity/disturbance weed

B. Biology / Ecology

4. Undesirable traits

4.01 Produces spines, thorns or burrs

4.02 Allelopathic

4.03 Parasitic

4.04 Unpalatable to grazing animals

4.05 Toxic to animals

4.06 Host for recognised pests and pathogens

4.07 Causes allergies or is otherwise toxic to humans

4.08 Creates a fire hazard in natural ecosystems

4.09 Is a shade tolerant plant at some stage of its life cycle

4.10 Grows on infertile soils
4.11 Climbing or smothering growth habit
4.12 Forms dense thickets

5. Plant type

5.01 Aquatic
5.02 Grass
5.03 Nitrogen fixing woody plant
5.04 Geophyte

6. Reproduction

6.01 Evidence of substantial reproductive failure in native habitat
6.02 Produces viable seed
6.03 Hybridises naturally
6.04 Self-compatible or apomictic
6.05 Requires specialist pollinators
6.06 Reproduction by vegetative fragmentation
6.07 Minimum generative time (years)

7. Dispersal mechanisms

7.01 Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)
7.02 Propagules dispersed intentionally by people
7.03 Propagules likely to disperse as a product contaminant
7.04 Propagules adapted to wind dispersal
7.05 Propagules water dispersed
7.06 Propagules bird dispersed
7.07 Propagules dispersed by other animals (externally)
7.08 Propagules survive passage through the gut

8. Persistance attributes

8.01 Prolific seed production (>2000/m2)
8.02 Evidence that a persistent propagule bank is formed (>1 yr)
8.03 Well controlled by herbicides
8.04 Tolerates, or benefits from, mutilation or cultivation
8.05 Effective natural enemies present in Australia

For each plant assessed, the WRA system generates a score assisting Australian policy-makers to determine if a plant can be introduced. If the score is higher than 6, the plant is rejected. If the score is lower than 1, the plant is accepted, and in between these 2 thresholds, the plant is placed on an unable to complete assessment list. Placing a request to assess a species takes around 3 months to get a response.
Between 1997 and 2003, 1000 proposals of import of plants have been assessed: 30% of these were prohibited from entry into the country, 46% were allowed for entry and the remaining 24% required closer examination.

The WRA system has proven to be an effective and rapid decision-support tool in Australia for managing phytosanitary risks associated with proposals of new ornamental plants. As a matter of fact, the system has been officially adopted for use by the Ministries of Agriculture in New-Zealand and in Hawaii (US). In the Galapagos Islands, it is used by researchers to screen recent and future imports. Recent economic analysis of the WRA has suggested that its implementation was beneficial within a decade, and will save up to 1.8 AUSD over 50 years in Australia. In addition, a recent study (Gordon *et al*., 2008) has showed that when compared with other systems, the WRA generally provided the most accurate results and that this accuracy remained consistent even when the system was applied to different geographical regions.

Source: Gordon DR, Onderdonk DA, Fox AM, Stocker RK (2008) Consistent accuracy of the Australian weed risk assessment across varied geographies. *Diversity and Distribution* **14,** 234-242.

Pheloung P (2005) Use of the weed risk assessment tool in Australia's approach to pest risk analysis. In IPPC Secretariat - Identification of risks and management of invasive alien species using the IPPC framework. Proceedings of the workshop on invasive alien species and the International plant protection Convention, Braunschweig, Germany, 22-26 September 2003. Rome, Italy, FAO. P. 115-116. http://www.fao.org/docrep/008/y5968e/y5968e00.htm

Additional key words: invasive alien plants, weed risk assessment **Computer codes:** AU

2008/114 First International conference on *Ambrosia artemisiifolia*, Budapest (HU), 2008-09-11/13

The Plant Protection Institute of the Hungarian Academy of Sciences and the Ministry of Agriculture and Rural Development will organize the first international conference on *Ambrosia artemisiifolia* on 2008-09-10/13 in Budapest.

The following topics will be addressed:
1. Introduction to the *A. artemisiifolia* problem
2. Ragweed pollen: factors influencing its production and spread
3. Ragweed pollen allergy: immunological and public health issues
4. Ragweed pollen allergy: veterinary aspects
5. Spread of ragweed and regulatory measures in different parts of the world: country reports
6. Roles of NGOs in different parts of the world: country reports

Source: First International Ragweed Conference
http://www.nki.hu/ragweed/Ragweed2008.html

Additional key words: invasive alien plants, conference **Computer codes:** AMBEL, HU