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POUR LA PROTECTION DES PLANTES

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EPPO

Reporting

Service

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2004/128 Appointment of the new Director General of EPPO

As agreed by Council in September 2004, EPPO is beginning the recruitment procedure for the new Director General due to be appointed in January 2006. The procedure is as follows:

- Candidates should submit their applications to the Secretariat not later than 2005-01-31. Any application received after this deadline will not be considered.
- Applications should be submitted by the candidates themselves.
- Applications will be examined by the Executive Committee in April 2005 and a short list will be constituted. The new Director-General will be elected from the short list of pre-selected candidates at the Council session in September 2005.

It is stressed that, since candidates apply directly, NPPOs should not apply on behalf of a candidate. Letters of support for candidates will not be taken into consideration. More than one candidate may apply from a country.

The terms of appointment of the Director General can be obtained from the EPPO Secretariat or from the EPPO website: <http://www.eppo.org/News&Events/director.htm>

Source: **EPPO Secretariat, 2004-09.**



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2004/129 Modifications made to the EPPO A1 and A2 lists

In September 2004, the EPPO Council decided on the following changes to be made to the EPPO A1 and A2 lists:

- **Additions to the EPPO A1 list**

Agrilus planipennis

Tuta absoluta

- **Additions to the EPPO A2 list**

Cucurbit yellow stunting disorder virus

Tomato chlorosis crinivirus

Ips hauseri

Isp subelongatus

Sirex ermak

Xylotrechus namanganensis

- **Transfer from A1 to A2 list:**

Scirtothrips dorsalis

Xanthomonas axonopodis pv. *dieffenbachiae*

- **Deletions from the EPPO lists:**

Apple mosaic ilarvirus (in *Rubus*)

Black raspberry latent nepovirus

Cherry leafroll nepovirus (in *Rubus*)

Strawberry witches' broom phytoplasma

The updated EPPO A1 and A2 lists of pests recommended for regulation as quarantine pests can be found on the EPPO web site: <http://www.eppo.org/QUARANTINE/lists.htm>
Information on these pests (i.e. data sheets) will also be available from the web in due course.

Source: **EPPO Secretariat, 2004-09.**

Additional key words: plant quarantine

Computer codes: AGRLPL, APMV00, CLRV00, CYSDV0, GNORAB, IPSXFA, IPSXHA, SCIRDO, SIRXSP, TOCV00, TSVBLV, XANTDF, XYLOSP



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2004/130 First finding of *Toxoptera citricida* in mainland Portugal

Toxoptera citricida (Homoptera: Aphididae - EPPO A1 list) was detected in isolated citrus plants in the north-west of Portugal (Entre-Douro e Minho region). This is the first finding of *T. citricida* in mainland Portugal. A delimiting survey has immediately been set up and eradication measures applied (phytosanitary treatments and prohibition of movements of citrus plant material). The origin of this infestation remains unknown for the moment, but is being investigated.

EPPO note: It can be recalled that *T. citricida*, which is an efficient vector of *Citrus tristeza closterovirus*, was found for the first time in 1994 on the island of Madeira (PT) where it is subject to an eradication programme.

Source: **NPPO of Portugal, 2004-09.**

Additional key words: detailed record

Computer codes: TOXOCL, PT



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2004/131 First finding of *Anoplophora glabripennis* in Poland

In Poland, *Anoplophora glabripennis* (Coleoptera: Cerambycidae – EPPO A1 list) was reported for the first time in 2003 on a privately owned bonsai plant of *Acer palmatum*. This is the first record of this pest in Poland.

The situation of *A. glabripennis* in Poland can be described as follows: **Present, first found in 2003 on a bonsai plant.**

Source: Białooki, P. (2003) [*Anoplophora glabripennis* – first confirmation in Poland.]. **Ochrona Roślin**, 47(11), 34-35. In: Review of Agricultural Entomology 92(9), April 2004, abst. 8621, p 1333.

Additional key words: new record

Computer codes: ANOLGL, PL

2004/132 Further finding of *Anoplophora glabripennis* in Germany

The NPPO of Germany informed the EPPO Secretariat of another finding of *Anoplophora glabripennis* (Coleoptera: Cerambycidae – EPPO A1 list) in Nordrhein-Westfalen. An earlier finding had been made in Bayern in 2004 (see EPPO RS 2004/072). In July 2004, a single adult of *A. glabripennis* was found on a tree of *Acer palmatum* located in a private garden at Mönchengladbach. Its larvae had caused typical feeding symptoms on the maple bark. The intensive monitoring carried out within the area of 2000 m radius around the place of finding did not result in any further finding of *A. glabripennis*. Investigations done so far did not provide any hint as to the origin of the specimen.

Source: NPPO of Germany, 2004-09.

Additional key words: detailed record

Computer codes: ANOLGL, DE



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2004/133 Occurrence of *Rhagoletis completa* in Germany

The NPPO of Germany recently informed the EPPO Secretariat of the occurrence of *Rhagoletis completa* (Diptera: Tephritidae – EU Annexes) in *Juglans regia* in Baden-Württemberg. In 2002, *R. completa* caused severe damage in walnut (*Juglans* spp.) in the Northern part of Switzerland close to the German border. Therefore, the plant protection service of Baden-Württemberg initiated in 2004 a survey to investigate the situation in the area of Südbaden. Large numbers of *R. completa* were caught on yellow sticky traps (up to 50 individuals per trap). It is assumed that the occurrence of *R. completa* in Südbaden is due to natural spread for several years already. The pest has probably not been recognized before, as it causes symptoms very similar to those of *Xanthomonas campestris* pv. *juglandis*, which is known to occur in that area.

The pest status is declared as follows: **Present; widespread in Southwest Germany.**

Source: **NPPO of Germany, 2004-09.**

Additional key words: new record

Computer codes: RHAGCO, DE

2004/134 Update on the situation of *Diabrotica virgifera* in Belgium

The NPPO of Belgium informed the EPPO Secretariat of the current situation of *Diabrotica virgifera* (Coleoptera: Chrysomelidae – EPPO A2 list) on its territory. It can be recalled that the pest was detected for the first time in Belgium in 2003, near the airport of Zaventem (Brussels, see EPPO RS 2003/143). In 2004, the first finding was made on the 6th of September. One adult was caught in a maize field in Kampenhout, within the existing buffer zone delimited in 2003. Later in September, *D. virgifera* was found in two other localities (Kraainem and Steenokkerzeel). On the 5th of October, the pest was located at Wezembeek-Oppem. All these new infestation sites are located within the existing buffer zone. Focus zones of 1 km radius were delimited around infected fields and the buffer zone (5 km radius) was modified accordingly (maps can be viewed on Internet). Phytosanitary measures are being applied according to EU Decision 2003/766/EC.

The situation of *D. virgifera* in Belgium can be described as follows: **Few specimens trapped near Zaventem airport, under eradication.**

Source: **NPPO of Belgium, 2004-09.**

Web site Agence Fédérale pour la Sécurité de la Chaîne Alimentaire

<http://www.favv-afsca.fgov.be> (secteurs professionnels > production végétale

> aspects phytosanitaires > maladies et Pestes > chrysomèle des racines du



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maïs)

Additional key words: detailed record

Computer codes: DIABVI, BE

2004/135 *Helicoverpa armigera* found on tomatoes in Austria

The NPPO of Austria recently informed the EPPO Secretariat of another incursion of *Helicoverpa armigera* (Lepidoptera: Noctuidae) on its territory. The pest was found in a private garden in the district of Feldbach (Steiermark) on tomato plants (*Lycopersicon esculentum*). The Plant Protection service in Steiermark was notified of this finding, and an official inspection was carried out. No other plants were found infested. An appropriate chemical treatment was ordered by the Plant Protection Service. The source of this infestation is unknown. It can be recalled that another incursion of *H. armigera* was reported in 2003 on *Phaseolus vulgaris* in Niederösterreich (see EPPO RS 2004/012).

The status of *H. armigera* in Austria is declared as follows: **Present, found only in a private garden in Steiermark, under eradication.**

Source: NPPO of Austria, 2004-10.

Additional key words: detailed record

Computer codes: HELIAR, AT

2004/136 Results of 2003 surveys on quarantine pests in Latvia

During 2003, several surveys for different plant quarantine pests were carried out in Latvia (for 2002 results see EPPO RS 2003/119).

***Beet necrotic yellow vein benyvirus* (rhizomania - EPPO A2 list)**

51 samples were collected from 41 beet production farms from a total area of 1397.7 ha. The virus was not found. **Absent, confirmed by survey.**

***Erwinia amylovora* (EPPO A2 list)**

In total, 125 sites with fireblight host plants (*Cotoneaster*, *Crataegus*, *Cydonia*, *Malus*, *Mespilus*, *Pyrus*, *Sorbus*) over a total area of 484.3 ha were visually inspected and 149 samples were taken and tested for the presence of the bacterium. *E. amylovora* was not found. **Absent, confirmed by survey.**

***Clavibacter michiganensis* subsp. *sepedonicus* and *Ralstonia solanacearum* (both EPPO A2 list)**

64 seed-potato production farms were inspected and 195 samples were taken for detection of potato ring rot and brown rot. *C. michiganensis* subsp. *sepedonicus* was



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found in the fields of 7 farms (total area of 17.7 ha). In 2003, a monitoring programme of ware potatoes for the presence of ring rot and brown rot was initiated. 83 ware potato production farms were inspected and 128 samples were taken. *C. michiganensis* subsp. *sepedonicus* was found in 7 farms (total area of 90.2 ha). In all infected sites, control measures are being taken in accordance with EU Council Directive 93/85. In 2003, the Ministry of Agriculture also allocated financial compensations to infested farms in order to reduce their losses due to the application of compulsory phytosanitary measures.

During this survey, *R. solanacearum* was not found.

***C. michiganensis* subsp. *sepedonicus*: Present, found at 6 production sites, under official control.**

***R. solanacearum*: Absent, confirmed by survey.**

Glasshouse pests (*Bemisia tabaci*, *Thrips palmi*, *Liriomyza* spp.)

During surveys on glasshouse pests, 206 glasshouses (total area 48.08 ha) were inspected and 135 samples were collected.

- *Bemisia tabaci* (EPPO A2 list) was not found. **Absent, confirmed by survey.**
- *Liriomyza bryoniae* (EU Annexes) was found in 25 glasshouses (total infested area of 5,17 ha), on the following crops: capsicum, cucumber and tomato. **Present, only in glasshouses.**
- *Thrips palmi* (EPPO A1 list) was not found. **Absent, confirmed by survey.**

***Globodera rostochiensis* and *G. pallida* (both EPPO A2 list)**

8839 soil samples were collected from 74 seed-potato production farms, 105 ware potato production farms and from 112 nurseries, and then tested. Inspections were also carried out on these sites. The presence of *G. rostochiensis* was confirmed in 6 seed potato production farms (infested area of 2.5 ha), in 2 ware potato production farms (8 ha) and in 4 nurseries (4.6 ha). Eradication measures are being taken in the infested areas. *G. pallida* was not found.

***G. rostochiensis*: Present, found in several production sites (6 seed-potato production sites, 2 ware potato production farms and 4 nurseries), under eradication.**

***G. pallida*: Absent, confirmed by survey.**

***Phytophthora ramorum* (EPPO Alert list)**

In 2003, a survey for the presence of *P. ramorum* was initiated. 27 samples from all districts were collected. *P. ramorum* was not detected. **Absent, confirmed by survey.**

***Puccinia horiana* (EPPO A2 list)**

68 production sites of chrysanthemum cut-flowers were inspected and *P. horiana* was found in 7 production sites with a total infested area of 1561,5 m². **Present, found in 7 production sites of chrysanthemum cut flowers.**



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Source: NPPO of Latvia, 2004-09.

Additional key words: detailed records

Computer codes: BEMITA, BNYVV0, CORBSE, ERWIAM, HETDPA, HETDRO, LIRIBO, PHYTRA, PSDMSO, PUCCHN, THRIPL, LV

2004/137 *Pezothrips kellyanus* a new citrus thrips: addition to the EPPO Alert List

During bibliographic search, the EPPO Secretariat noticed several publications about the presence of a new pest, *Pezothrips kellyanus* (Thysanoptera: Thripidae), in Sicilian citrus orchards. As significant fruit damage (scarring) was reported, the EPPO Secretariat felt that it was useful to add this species to the EPPO Alert List.

Pezothrips kellyanus (Thysanoptera: Thripidae - Kelly's citrus thrips)

Why	The EPPO Secretariat noticed several publications mentioning the presence of a new thrips species, <i>Pezothrips kellyanus</i> , causing problems in citrus orchards in Sicilia (IT). Although it is not entirely clear whether this species originates or not from the Mediterranean region, it is indeed an emerging problem, and the EPPO Secretariat felt that it was useful to draw citrus-growing countries attention to this 'new' thrips.
Where	EPPO region: Italy (Southern Italy, first reported in 1998 in Sicilia), Greece (first reported in 1987, Peloponese), Spain (Cataluña), Turkey (Province of Izmir). Oceania: Australia (widespread), New Caledonia, New Zealand (first recorded in 1950). <i>P. kellyanus</i> was first observed in Australia and as a consequence it was thought to originate from this part of the world. But <i>P. kellyanus</i> has recently been re-designated from <i>Megalurothrips</i> which is a tropical genus mainly from South East Asia, to <i>Pezothrips</i> which so far included only Mediterranean and Southern European species. It was then hypothesized that <i>P. kellyanus</i> did not originate from Australia but most probably from the Mediterranean area.
On which plants	Citrus (all citrus can be attacked but lemons (<i>C. limon</i>) and Navel oranges (<i>C. sinensis</i>) are particularly susceptible). <i>P. kellyanus</i> has also been found in flowers of many other plant species, but further studies would be needed to know whether these are incidental or breeding hosts (e.g. <i>Acmena</i> , <i>Brassica</i> , <i>Camellia</i> , <i>Chrysanthemum</i> , <i>Helianthus</i> , <i>Lonicera</i> , <i>Lycopersicon esculentum</i> , <i>Mangifera indica</i> , <i>Medicago sativa</i> , <i>Passiflora</i> , <i>Prunus</i> , <i>Rosa</i> , <i>Sparmannia africana</i> , <i>Zantedeschia</i> , and weeds such as <i>Ranunculus repens</i> and <i>Rumex crispus</i>).
Damage	Adults are black and 2-3 mm long. Life cycle consists of eggs, 2 larval stages, prepupa, pupa and adult. Pictures can be viewed on Internet: http://www.agric.new.gov.au/reader/cit-thrips.htm http://www.ento.sciro.au/aicn/name_s/b_2769.htm <i>P. kellyanus</i> feeds on young tissues (flowers and fruits), particularly near the calyx, producing a circular stem-end scar. Damage is often restricted to a thin ring but heavy infestations can lead to complete scarring of the fruit. Damage to mature fruit is less common but usually more severe, initially showing a silvery which leads to thin scarring over most of the fruit surface. Heavy scarring can render fruits unmarketable. It was observed that fruits were most susceptible to thrips infestations in the period shortly after petal-fall. In Sicilia, <i>P. kellyanus</i> is considered as a key pest in citrus orchards and during recent surveys it was found to be the predominant species (it was



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	<p>found in mixed populations with <i>Thrips tabaci</i> and <i>T. flavus</i>, which appeared to be secondary pests). In New Zealand, it is considered as the most serious pest affecting citrus production.</p>
Dissemination	<p>Adults can fly and are probably carried by winds (but no data is available on how they can disseminate within an orchard). Over long distances trade of infested plants can ensure pest dissemination.</p>
Pathway	<p>Plants for planting of citrus (other hosts?), cut branches of citrus, citrus fruits (?)</p>
Possible risks	<p>Citrus is a major crop in several EPPO countries around the Mediterranean basin. Although data is lacking on its economic impact, <i>P. kellyanus</i> is reported as a pest which can seriously reduce fruit quality. Control measures are available (several chemicals can be used, predatory mites such as <i>Iphiseius (Amblyseius) degenerans</i> were found in infested orchards but their efficacy is not known yet) and research is being carried out on adequate IPM strategies. As for many other thrips species, detection, identification and control are likely to be difficult in practice. More surveys would seem desirable to better know the geographical distribution of <i>P. kellyanus</i> within the EPPO region.</p>
Source(s)	<p>Conti, F.; Tumminelli, R.; Fiscaro, R.; Perrotta, G.; Marullo, R.; Liotta, G. (2003) An IPM system for new citrus thrips in Italy. OIBC wprs Bulletin, 26(6), 203-208. Conti, F.; Tumminelli, R.; Amico, C.; Fiscaro, R.; Frittitta, C.; Perrotta, G.; Marullo, R.; (2001) Monitoring <i>Pezothrips kellyanus</i> on citrus in eastern Sicily. Proceedings of the 7th International Symposium on Thysanoptera (2001-07-02/07, Reggio Calabria, IT), 207-210. Also available on Internet: http://www.ento.csiro.au/thysanoptera/Symposium/Section7/31-Conti-et-al.pdf Froud, K.J., Stevens, P.S.; Steven, D. (2001) Survey of alternative host plants for Kelly's citrus thrips (<i>Pezothrips kellyanus</i>) in citrus growing regions. New Zealand Plant Protection, 54, 15-20. Also available on Internet http://www.hortnet.co.nz/publications/nzpps Marullo, R. (1998) <i>Pezothrips kellyanus</i>, un nuovo tripide parassita delle colture meridionali. Informatore Fitopatologico, 48(10), 72-74. INTERNET NSW Department of Primary Industries – Agriculture - Pezothrips (New South Wales, Australia). http://www.agric.new.gov.au/reader/cit-thrips.htm CSIRO and Department of Agriculture, Fisheries and Forestry. Australia. <i>Pezothrips kellyanus</i>. http://www.ento.csiro.au/aicn/name_s/b_2769.htm</p>
EPPO RS 2004/137	
Panel review date	-
2004-09	Entry date

2004/138 First report of *Impatiens necrotic spot tospovirus* in Austria

The NPPO of Austria recently informed the EPPO Secretariat of the first finding of *Impatiens necrotic spot tospovirus* (INSV - EPPO A2 list) on its territory. The virus was detected on *Nemesia* hybrids (cv. Sunsatia yellow) in two nurseries in Tyrol. The source of infestation is unknown. The infected plants were destroyed under official supervision and control measures against *Thrips* species have been ordered.

The status of INSV in Austria is declared as follows: **Present, under eradication.**

Source: **NPPO of Austria, 2004-10.**

Additional key words: new record

Computer codes: INSV00, AT



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2004/139 First occurrence of *Phytophthora ramorum* in *Pieris japonica* in Germany

In August 2004, in Schleswig-Holstein, *Phytophthora ramorum* (EPPO Alert List) was detected in the underwood (consisting of *Rhododendron*, *Pieris*, and *Leucothoe*) of a forest (around 120 years old) consisting of *Pinus sylvestris*, *Quercus robur*, *Fagus sylvatica*, and other species. The *Pieris* plant showed symptoms similar to those of *P. ramorum*, and the presence of the pathogen was confirmed by microscopic investigation and PCR testing. It is assumed that *P. ramorum* in *Pieris japonica* has been existing in that area for several years already. The forest has been under survey since *P. ramorum* was detected in a *Rhododendron* tree in 2003. This earlier finding was however made at a considerable distance from the present one.

The pest status as to *Pieris* is declared as follows: **One single occurrence.**

Source: **NPPO of Germany, 2004-09.**

Additional key words: detailed record

Computer codes: PHYTRA, DE

2004/140 Update on the situation of *Erwinia amylovora* in Slovakia

In Slovakia, *Erwinia amylovora* (EPPO A2 list) was reported for the first time in 2003 (see EPPO RS 2003/083). The NPPO of Slovakia informed the EPPO Secretariat about the situation of fireblight as of 2004-08-31. In 2004, *E. amylovora* was detected on 20 sites, all but 2 were located in Western Slovakia. On 13 sites, the bacterium was detected for the first time, on the remaining 7 sites, the disease had already been found in 2003. The most frequent host species encountered were *Pyrus*, *Malus*, *Cydonia*, *Crataegus*, *Mespilus*, *Cotoneaster* and *Pyracantha*. *E. amylovora* was detected mainly in private gardens and commercial orchards. Phytosanitary measures are being applied to prevent any further spread of the disease, and to eradicate it.

The situation of *E. amylovora* in Slovakia can be described as follows: **Present, first found in June 2003, 20 infected sites were recorded in 2004 mainly in the west, under eradication.**

Source: **NPPO of Slovakia, 2004-09.**

Additional key words: detailed record

Computer codes: ERWIAM, SK



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2004/141 First report of *Pueraria montana* var. *lobata* (kudzu) in Italy: addition to the EPPO Alert List

The presence of *Pueraria montana* var. *lobata* (Fabaceae - kudzu) has recently been reported in Italy. This species originates from Asia, and has been introduced in other parts of the world for ornamental or other agricultural purposes. But in south-eastern USA, it has escaped control and it is now considered as an invasive and damaging plant. As serious losses are reported from USA, it was felt useful to add kudzu to the EPPO Alert List.

Pueraria montana var. *lobata* (Fabaceae – kudzu)

Why	<i>Pueraria montana</i> var. <i>lobata</i> (kudzu) is thought to originate from Asia. It is known as an invasive plant and damaging weed in south-eastern USA where it has been introduced for ornamental purposes in the 1870s. Its cultivation was then encouraged for forage and soil erosion control, until it was perceived as a weed in the 1950s. In 1998, kudzu was listed as a noxious weed. In Europe, its presence has so far been reported from Switzerland and more recently from Italy. Considering the difficulties caused by this plant species in south-eastern USA, the EPPO Secretariat decided to add it to the Alert List.
Description	Climbing, semi-woody, deciduous, perennial vine with large tuberous roots and dark brown stems (up to 20 m long). Herbaceous stems are hairy. Leaves are alternate with 3 leaflets (hairy on both surfaces and up to 15 cm long). Pea-like flowers are pink to purple, highly fragrant and borne in long hanging panicles (10-25 cm long). Flowering is soon followed by the production of brown and hairy pods, each containing 3 to 10 seeds. Vegetative growth can be very rapid (up to 25 cm per day or 18 m per growing season) and plants produce root crowns where nodes contact soil. Images can be viewed on Internet: http://www.hear.org/starr/hiplants/images/thumbnails/html/pueraria_montana_var_lobata_thumbnails.htm
Where	EPPO Region: Italy (found near Trieste on a small site), Switzerland (few sites in southern Alps & Ticino). Africa: Sierra Leone. Asia: China, Indonesia, Japan, Korea DPR, Korea Republic, Malaysia, Pakistan, Philippines, Thailand, Vietnam. North America: Bermuda, USA (many states, particularly in the southeast, the most severe infestations are reported in Alabama, Georgia and Mississippi – see USDA plant profile). Central America: Dominican Republic, Jamaica, Panama. South America: Brazil, Paraguay. Oceania: Australia, Federated states of Micronesia, Fiji, New Caledonia, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Vanuatu.
Habitat	Forest edges, abandoned fields, roadsides, riparian zones, urban areas and other disturbed habitats. Drought and frost tolerant (only aboveground parts are damaged by frost). Most favourable conditions are 1000 mm precipitation per year, as well as high summer temperatures (above 27°C). Kudzu prefers profound, well-drained loamy soils but is able to establish in less favourable conditions.
Damage	Kudzu climbs vigorously and rapidly over other plants including forest trees, forming large impenetrable masses of vegetation. It completely covers the existing vegetation and finally replaces it. In some areas, biodiversity of flora and also fauna is much reduced. Growth of vines along electric or telephone cables can pose problems. In



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south-eastern USA, it is estimated that over 2.8 million ha are massively overgrown by kudzu. In the forestry sector it is estimated that 340 million USD are lost per year. When including impacts on cultivated plants and urban environments, these losses could reach 500 million USD per year in land productivity and control costs. However, in other areas where *P. montana* var. *lobata* has also been introduced such as South and Central America, it is apparently not considered as a damaging plant. It can be noted that kudzu can be used for many different purposes: starch production from roots, several plant parts can be cooked as vegetables or used as medicines, stems can even be transformed into baskets or other braided objects.

Dispersal

In USA, spread is essentially ensured by vegetative growth (runners, rhizomes and adventitious roots). Seed production is poor in American conditions. This may be due to the lack of efficient pollinators. However these seeds can contribute to further spread of the plants as they may be dispersed by mammals and birds. Over long distances, dispersal is mainly ensured by human activities (movements of infested soil, trade of plants).

Pathway

Plants for planting, soil with living parts (rhizomes, seeds)

Possible risks

Control (mechanical, chemical or biological) is difficult and costly. To be effective in the long-term, control measures should ensure complete destruction of the extensive root system, as any remaining root crown may lead to re-infestation. More data would be needed on the potential of establishment of kudzu in Europe, as it seems that this plant prefers rather hot and humid climates. A PRA carried out by the German NPPO suggested that, in Germany, conditions were only suitable for kudzu in one small region (around Bonn and Köln, near the Rhein). However, considering the highly invasive potential of kudzu in parts of USA, it seems desirable to survey kudzu populations in Europe and try to avoid any further introduction and spread.

Source(s)

CABI Crop Compendium, 2004.

Clabassi, I.; Tome, A.; Otto, S.; Zanin, G. (2003) Segnalazione di una nuova potenziale pianta infestante: *Pueraria montana*. *Informatore Fitopatologico*, 53(9), 30-33.

Schrader, G. (2004) PRA and report of PRA on *Pueraria lobata* (Kudzu). Unpublished documents.

Invasive plants of the Eastern US. Kudzu written by Britton, Orr and Sun, J. <http://www.invasive.org/eastern/biocontrol/25Kudzu.html>

INTERNET

Commission Suisse pour la conservation des plantes sauvages. CPS. Liste noire – Watch list. http://www.cps-skew.ch/francais/liste_noire.htm

Invasive species (US). <http://www.invasivespecies.gov/profiles/kudzu.shtml>

Plant Conservation Alliance (US). Kudzu. <http://www.nps.gov/plants/alien/fact/pulo1.htm>

University of Florida, Center for Aquatic and Invasive Plants Aquatic, Wetland and Invasive Plant Particulars and Photographs. Pictures and datasheet. <http://aquat1.ifas.ufl.edu/puemon.html> & <http://aquat1.ifas.ufl.edu/puemon.pdf>

USDA National Resources Conservation Service. Plant Profile.

http://plants.usda.gov/cgi_bin/plant_profile.cgi?symbol=PUMOL

The World Conservation Union. Global Invasive Species Database. *Pueraria montana* var. *lobata*.

<http://www.issg.org/database/species/ecology.asp?si=81&fr=1&sts=>

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2004/142 New book: 'A Systematic Catalogue of the Diaspididae (Armoured Scale Insects) of the World'

A new book on armoured scale insects has recently been prepared by Yair BEN-DOV and Victoria GERMAN in collaboration with Douglass R MILLER and Gary A P GIBSON:

“A Systematic Catalogue of the Diaspididae (Armoured Scale Insects) of the World, Subfamilies Aspidiotinae, Comstockiellinae and Odonaspidinae”

The armoured scale insects comprise the largest family, Diaspididae, in the superfamily Coccoidea. This catalogue provides an up-to-date data on three subfamilies, namely Aspidiotinae, Comstockiellinae and Odonaspidinae, covering 864 species placed in 118 genera, which have been described in the family since Linnaeus (1758), until December 2002, the cut-off date. This book is a synthesis and catalogue of all of the information published on these genera and species worldwide up to December 2002, and gives information on their correct scientific name, taxonomy, common names, synonyms, host plants, geographical distribution, natural enemies, biology, economic importance, and published references. This catalogue will be of major importance to scale insect students, crop protection specialists, quarantine officers and any entomologist who requires information about armoured scale insects, either for research or for control projects.

This book (ISBN: 1-898298-93-9, 1111 pp; December 2003) can be ordered, at a price of 80.00 GBP, from:

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