

Mini data sheet on *Cydalima (=Diaphania) perspectalis*

Added in 2007 - Deleted in 2011

Reasons for deletion:

Cydalima (=Diaphania) perspectalis has been included in EPPO Alert List for more than 3 years and during this period no particular international action was requested by the EPPO member countries. In 2011, it was therefore considered that sufficient alert has been given and the pest was deleted from the Alert List.

Cydalima (=Diaphania) perspectalis (Lepidoptera: Pyralidae)

Why	<i>Cydalima perspectalis</i> (synonyms <i>Diaphania perspectalis</i> , <i>Glyphodes perspectalis</i>) is a pest of <i>Buxus</i> originating from Asia which was reported for the first time in 2007 in Europe, in Germany. <i>C. perspectalis</i> was detected in May 2007 in the city of Weil am Rhein and its surroundings (Baden-Württemberg). In the following years, the pest continued to spread in Germany and nearby countries. Although data is lacking on the biology, geographical distribution and economic impact, <i>C. perspectalis</i> is apparently able to cause severe defoliation to <i>Buxus</i> plants.
Where	EPPO region: Austria (first report in 2009 - Niederösterreich, Steiermark, Vienna, Vorarlberg), France (first found in August 2008 in Alsace and in 2009 in Ile-de-France), Germany (first found in 2007 in Baden-Württemberg, and then in Hessen, Niedersachsen, Nordrhein-Westfalen, Sachsen), Netherlands (found in 2008 in 4 locations), Switzerland (first found in 2007 in 5 locations near Basel, then in Aargau, Graubünden, Jura, Solothurn, Thurgau, Vaud, Zürich and Zug), United Kingdom (first found in September 2008 in southern England).
On which plants	Asia: Japan, China, Korea Republic. <i>Buxus</i> species (e.g. <i>B. microphylla</i> , <i>B. microphylla</i> var. <i>insularis</i> , <i>B. sempervirens</i> , <i>B. sinica</i>).
Damage	Larvae feed on leaves and shoots and severe infestations can lead to almost complete defoliation of the plants. Data is lacking on the biology of the pest but in China (Shanghai), 3 to 4 generations per year have been observed with 6 to 7 larval instars. Larvae pupate on the leaves. Pictures can be viewed on the Internet: http://www.lepiforum.eu/cgi-bin/lepiwiki.pl?action=browse&id=Glyphodes_Perspectalis&revision=9 http://www.klaus-rennwald.de/neubuerger/index.html http://nafoku.de/butfly/htm/17102007_0836.htm
Dissemination	Adults can fly but no data is available on the natural dispersal of this insect. Trade of infested <i>Buxus</i> plants or parts of plants can disseminate the pest over long distances. In Germany, it was observed that <i>C. perspectalis</i> was found in the vicinity of a shipping centre for commodities imported from China, so it might be possible that the pest could also be transported as a hitchhiker on various commodities.
Pathway	Plants for planting of <i>Buxus</i> .
Possible risks	<i>Buxus</i> are commonly planted in European gardens (parterres, hedges, topiary work) and are also growing in forests as understorey shrubs. Severe attacks of <i>C. perspectalis</i> can lead to defoliation and therefore completely disfigure <i>Buxus</i> plants which in many cases are grown for ornamental purposes. Although data is lacking on the control of <i>C. perspectalis</i> , chemical and biological control methods (e.g. with nematodes such as <i>Steinernema</i> sp.) are mentioned in the literature. The introduction of such a new pest in Europe could represent a threat to nurseries, parks and gardens, and <i>Buxus</i> shrubs growing in the wild.
Source(s)	Bin-Cheng Zhang (1994) Index of economically important Lepidoptera. CABI Wallingford, GB, 599 pp. Billen W (2007) [Diaphania perspectalis (Lepidoptera: Pyralidae) - a new moth in Europe]. <i>Mitteilungen der Entomologischen Gesellschaft Basel</i> 57(2/4), 135-137 (abst.). CABI Crop Protection Compendium. http://www.cabicompendium.org/cpc/

- Mally R, Nuss M (2010) Phylogeny and nomenclature of the box tree moth, *Cydalima perspectalis* (Walker, 1859) comb. n., which was recently introduced into Europe (Lepidoptera: Pyraloidea: Crambidae: Spilomelinae). *European Journal of Entomology* 107, 393-400.
- Maruyama T (1993) Life cycle of the box-tree pyralid, *Glyphodes perspectalis* (Walker) (Lepidoptera: Pyralidae). IV. Effect of various host plants on larval growth and food utilization. *Japanese Journal of Applied Entomology and-Zoology* 7(3), 117-122 (abst.).
- NPPO of Austria, 2010-02.
- NPPO of Germany, 2007-07.
- NPPO of the Netherlands, 2008-10. <http://www.minlnv.nl.pd/>
- Tang SJ, Qin HZ, Sun W (1990) Studies on bionomics of *Diaphania perspectalis*. *Journal of Shanghai Agricultural College* 8(4), 307-312 (abst.).
- Zhou-Wei, Xia-CaiYun, Sun-XingQuan, Zhu-Bing, Liu-XiaoPing, Liu-ZhiCheng, Wang-Yan (2005) Studies on the biological characteristics and control of *Diaphania perspectalis* Walker. *Journal of Shanghai Jiaotong University Agricultural Science* 23(1), 52-56 (abst.).
- INTERNET
- Fera. Plant pest fact sheet. Box tree caterpillar *Diaphania perspectalis*.
<http://www.fera.defra.gov.uk/plants/plantHealth/pestsDiseases/documents/boxTreeCaterpillar.pdf>
- Institut fédéral de recherches sur la forêt, la neige et le paysage WSL, Birmensdorf (CH). Meier F, Engesser R, Forster B, Odermatt O, Angst A (2008) Protection des forêts - Vue d'ensemble 2007.
<http://www.wsl.ch/forschung/forschungsunits/walddynamik/waldschutz/wsinfo/fsueb/fsueb07f.pdf>
- Lepiforum. Bestimmungshilfe für die in Europa nachgewiesenen Schmetterlingsarten.
http://www.lepiforum.de/cgi-bin/lepiwiki.pl?Glyphodes_Perspectalis
- Rennwald E (2008) Bestimmungshilfe für die in Europa nachgewiesenen Schmetterlingsarten.
http://www.lepiforum.eu/cgi-bin/lepiwiki.pl?action=browse&id=Glyphodes_Perspectalis
- Société Alsacienne d'Entomologie. Société Entomologique de Mulhouse. Brua C. (undated) La pyrale du buis *Diaphania perspectalis* présence d'une nouvelle espèce envahissante en France.
http://sites.estvideo.net/sae/pyrale_du_buis.html
- University of Basel. Department of Environmental Sciences. Conservation Biology. Media Release (2009-10-14) Wiederholte Einführung des Buchsbaumzünslers beschleunigt seine Ausbreitung.
<http://www.conservation.unibas.ch/news/buchsbaum/medien2.php?lang=de>

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