

Mini data sheet on *Plasmopara obducens*

Added in 2005 - Deleted in 2008

Reasons for deletion:

The PRA concluded that the pest *Plasmopara obducens* could be managed without phytosanitary measures. In 2008, it was therefore removed from the EPPO Alert List.

Plasmopara obducens (a downy mildew of *Impatiens*)

Why	New outbreaks of <i>Impatiens</i> downy mildew caused by <i>Plasmopara obducens</i> have been reported almost simultaneously (2003/2004) in European countries (Germany and United Kingdom) as well as in North America (e.g. Québec, California, Michigan).
Where	<p>EPPO region: Germany, Italy (found in Lombardia in 2008), Slovenia (found in 2 glasshouses in 2008), United Kingdom. In UK, it is suspected that the origin of the outbreak observed in 2004 was a nursery in Guatemala. According to records of specimens conserved at the US National Fungus Collection (BPI), <i>P. obducens</i> had been found in the past on wild balsam (<i>I. noli-tangere</i>) in Bulgaria, Czech Republic, Denmark, Finland, Germany, Romania, Russia. Its presence on <i>I. noli-tangere</i> was confirmed recently in Lithuania. So far in UK, <i>P. obducens</i> has not been found on wild <i>I. noli-tangere</i>.</p> <p>Asia: China, India, Korea Republic.</p> <p>North America: Canada (Manitoba, Québec), USA (California, Indiana, Michigan, Minnesota, Mississippi, Missouri, Montana, West Virginia, Wisconsin). In USA, the disease was first reported in 1942, and since then it has occurred sporadically. In 2004, it was detected for the first time in California and Michigan. In Canada, it is mentioned that <i>P. obducens</i> was found for the first time in Québec in April 2004 on <i>I. walleriana</i>.</p> <p>South and Central America: Costa Rica, Guatemala.</p>
On which plants	Cultivated and wild species of <i>Impatiens</i> (e.g. <i>I. balsamina</i> , <i>I. noli-tangere</i> , <i>I. walleriana</i>). There are unconfirmed reports of New Guinea hybrids being hosts of <i>P. obducens</i> .
Damage	<p>The upper surface of affected leaves becomes pale green to yellow with no distinct lesions. White to greyish 'fungal' growth is observed on the underside of leaves. Premature leaf fall is commonly observed. Affected plants become stunted with distorted leaves. Number of flower buds can be reduced. When young plants and seedlings are infected they generally do not survive. Another downy mildew has been described on <i>Impatiens</i> (<i>Bremiella sphaerosperma</i>) but it causes slightly different symptoms. With <i>P. obducens</i>, leaves are mottled with no distinct leaf lesions whereas <i>Bremiella sphaerosperma</i> causes distinct leaf spots. The pathogens also present morphological differences. <i>Impatiens</i> downy mildew is favoured by cool and humid conditions. Pictures can be viewed on Internet</p> <p>http://www.plantpathology.msu.edu/labs/hausbeck/hausbeckDownyMildew.htm http://www.defra.gov.uk/plant/pestpics/downy2.pdf</p>
Dissemination	Spores can be disseminated by air and water splash. It is reported that <i>P. obducens</i> can survive for a long time in the soil and infected plant debris (but without any further details). Data is lacking on possible seed transmission. Over long distances, trade of infested plants can spread the disease.
Pathway	Plants for planting (including cuttings), soil.
Possible risks	<i>Impatiens</i> are commonly grown in the EPPO region for ornamental purposes (indoors and outdoors). Control measures can be applied (chemicals, hygiene measures), but may not be fully effective (in particular, chemical treatments may mask symptoms for a while). In UK, as serious damage was observed during the 2003/2004 outbreaks, emergency phytosanitary measures were taken ('notifiable pest') and a cost-benefit analysis was conducted. Trade of cuttings and young plants is important in Europe, and there is an obvious risk of moving

infected plants. However, data is lacking on biology, epidemiology and economic impact of the disease. The situation of *P. obducens* on wild *I. noli-tangere* would also need to be clarified in Europe, as these plants may act as reservoirs for the disease.

Source(s)

Cunnington JH, Aldaoud R, Loh M, Washington WS, Irvine G (2006) First record of *Plasmopara obducens* (downy mildew) on impatiens in Australia. New Disease Reports. BSPP website (last retrieved 2007-7-04). <http://www.bspp.org.uk/ndr/jan2007/2006-96.asp>

NPPO of Slovenia, 2008-04.

Regional PPO of Lombardia, Italy, 2008-04.

Wegulo SN, Koike ST, Vilchez M, Santos P (2004) First report of downy mildew caused by *Plasmopara obducens* on impatiens in California. Plant Disease 88(8) p 909.

INTERNET

DEFRA, Plant health - Downy mildew.

<http://www.defra.gov.uk/plant/pestnote/findimp.htm>

<http://www.defra.gov.uk/plant/newsitems/cost.pdf>

<http://www.defra.gov.uk/plant/newsitems/downy.htm>

New Disease Reports. BSPP website (last retrieved 2007-04). Cunnington JH, Aldaoud R, Loh M, Washington WS, Irvine G (2006) First record of *Plasmopara obducens* (downy mildew) on impatiens in Australia. <http://www.bspp.org.uk/ndr/jan2007/2006-96.asp>

Michigan State University - Department of Plant Pathology. Extension. Dr Hausbeck publications on Impatiens downy mildew

<http://www.plantpathology.msu.edu/labs/hausbeck/hausbeck.htm>

Ministerio de Agricultura y Ganadería. Servicio Fitosanitario del Estado (Costa Rica). Lista de enfermedades de los cultivos agrícolas de Costa Rica
<http://www.protecnet.go.cr/plagas/LISTA%20ENFERMEDADES%20ACTUALIZADA.htm>

USDA-ARS. Systematic Botany and Mycology Laboratory

Invasive Fungi. *Plasmopara obducens* by ME Palm.

<http://nt.ars-grin.gov/sbmlweb/OnlineResources/FungiOnline.cfm>

EPPO RS 2005/108, 2007/073, 2008/101, 2008/102

Panel review date 2007-03

Entry date 2005-07