

Mini data sheet on *Melampsora euphorbiae*

Added in 2008 - Deleted in 2012

Reasons for deletion:

Melampsora euphorbiae 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 2012, it was therefore considered that sufficient alert has been given and the pest was deleted from the Alert List.

Melampsora euphorbiae (a rust of *Euphorbia* spp.)

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| Why | In 2006, an outbreak of <i>Melampsora euphorbiae</i> was observed for the first time in Norway on different cultivars of poinsettias (<i>Euphorbia pulcherrima</i>) causing economic damage. Although this rust is known to occur on many wild species of <i>Euphorbia</i> in Europe and other continents, it was the first time that it was reported causing damage to a valuable ornamental crop in Europe. The NPPO of Norway suggested that <i>M. euphorbiae</i> should be added to the EPPO Alert List. |
| Where | <i>M. euphorbiae</i> is quoted in the literature as a worldwide rust but data is lacking to substantiate its presence in individual countries and the problems it may cause. The following distribution is therefore most likely to be incomplete. EPPO region: Austria, Germany, Hungary, Italy, Norway, Serbia, Spain, Switzerland, Turkey, United Kingdom. Asia: China, India, Iran, Pakistan, Oman, Saudi Arabia, Turkey. Africa: Mauritius, Tanzania, Zimbabwe. Oceania: Australia, New Zealand. North America: Canada. |
| On which plants | <i>M. euphorbiae</i> lives on a large number of wild or cultivated species of <i>Euphorbia</i> (e.g. <i>E. amygdaloides</i> , <i>E. cyparissias</i> , <i>E. esula</i> , <i>E. exigua</i> , <i>E. helioscopia</i> , <i>E. heterophylla</i> , <i>E. hiberna</i> , <i>E. inarticulata</i> , <i>E. lagascae</i> , <i>E. paralias</i> , <i>E. pekinensis</i> , <i>E. peplus</i> , <i>E. rigida</i> , <i>E. seguieriana</i>). On <i>E. pulcherrima</i> (poinsettia) which is apparently the only host of economic importance, the rust has been reported in 4 cases only (i.e. India, Mauritius, Tanzania and Norway). <i>M. euphorbiae</i> is an autoecious rust (completing its life cycle on one host). Some authors have distinguished different <i>formae speciales</i> of <i>M. euphorbiae</i> , each infecting only one or two species of <i>Euphorbia</i> . |
| Damage | <i>M. euphorbiae</i> causes typical rust symptoms with orange pustules. On poinsettias in Norway, necrotic spots appeared on the upper surface of the leaves with orange spore masses on the lower surface. Images of symptoms on wild <i>Euphorbia</i> spp. can be viewed on the Internet: http://www.bioimages.org.uk/html/T32028.HTM http://zipcodezoo.com/Fungi/M/Melampsora_euphorbiae.asp http://www.asturnatura.com/fotografia/setas-hongos/melampsora-euphorbiae/3844.html |
| Dissemination | Little data is available in the literature about the biology of <i>M. euphorbiae</i> but as for other rusts, it is likely that spores can be spread by air currents over long distances. Trade of infected plants can also transport the pathogen. |
| Pathway | Plants for planting of <i>E. pulcherrima</i> (and possibly other <i>Euphorbia</i> species traded for ornamental or medicinal purposes). |
| Possible risks | <i>M. euphorbiae</i> is obviously a pathogen which can cause severe damage to its host plants. It has even been studied as a potential biocontrol agent of weeds such as <i>E. esula</i> and <i>E. cyparissias</i> in North America. Data is lacking on many aspects of the fungus biology, in particular, it is not clear whether fungal populations occurring on wild <i>Euphorbia</i> species can affect cultivated poinsettias (as host specialization has been suggested in the past). Nevertheless, because poinsettias are valuable ornamental crops in Europe and are subjected to an important international trade, more attention should be paid to the possible presence of <i>M. euphorbiae</i> in crops and on traded plants. |

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