

Mini data sheet on *Sirococcus tsugae*

Added to the EPPO Alert List in 2015 - Deleted in 2019

Reasons for deletion:

Sirococcus tsugae 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 2019, the Working Party on Phytosanitary Regulations agreed that it could be deleted, considering that sufficient alert has been given.

Sirococcus tsugae - shoot blight

Why: *Sirococcus tsugae* is a recently described fungal species which was first reported by Germany in 2014. During the same period, the fungus was also detected in the United Kingdom. Previously, *S. tsugae* was only known to occur in North America. This new species was described following studies on isolates previously regarded as *Sirococcus conigerus*. In these studies, three distinct species could be identified: *Sirococcus conigerus* (sensu stricto, occurring in Europe and North America on various conifers), *Sirococcus tsugae* (isolates from *Cedrus* and *Tsuga* in Western North America), *Sirococcus piceicola* (isolates from *Picea* in Canada and Switzerland). These recent taxonomic changes render the geographical distribution, host range, and biology difficult to ascertain. However, the Panel on Phytosanitary Measures considered that this fungus could usefully be added to the EPPO Alert List, even with a minimal amount of data.

Where: the currently known distribution is as follows, but is probably incomplete.

EPPO region: Belgium (first found in 2018), Germany, United Kingdom. In Germany, it was first found in June 2014 in Niedersachsen on 2 *Cedrus atlantica* mature trees (1 in a private garden in Bad Zwischenahn and 1 a public area in Rastede). In the United Kingdom, the fungus was identified in February 2014 on a *C. atlantica* tree in a private residence. Further surveys detected *S. tsugae* in 21 other locations in England, Wales and Scotland.

North America: Canada (British Columbia), USA (Alaska, Georgia, Maine, Oregon, Vermont, Washington).

On which plants: *Cedrus* spp. (*C. atlantica*, *C. deodara*) and *Tsuga* spp. (*T. canadensis*, *T. heterophylla*, *T. mertensiana*). It is reported that *S. tsugae* appears to be less aggressive on *T. canadensis* than on *T. heterophylla*.

Damage: *S. tsugae* causes shoot tip blight. The disease is characterised by light brown discoloration of needles, followed by dieback of the affected shoots and partial shedding of needles. Blight affects the distal parts of branches, seldom killing more than 4 cm (1.5 inch) of the shoot tip growth. In some cases, it can affect many shoot tips on a single tree. *S. tsugae* can attack seedlings, saplings and larger ornamental and forest trees. On seedlings, blighting may render them unmarketable or cause mortality. Primary infection is believed to occur in the spring, probably shortly after new shoot growth starts.

Pictures can be viewed on the Internet:

<http://www.invasive.org/browse/subthumb.cfm?sub=69861>

Dissemination: conidia of the fungus are dispersed by rain splashes and it is probable that strong winds can also disperse them over longer distances. Seed transmission has been reported for *S. conigerus*, but there is no information about possible seed transmission for *S. tsugae*.

Pathway: Plants for planting, cut foliage? seeds? of *Cedrus* and *Tsuga* spp. from countries where *S. tsugae* occurs.

Possible risks: *Cedrus* and *Tsuga* species are valuable ornamental trees in the EPPO region, planted for forestry purposes in some countries. Currently, there are no known effective control measures in North America against *S. tsugae* in forest stands, and information is scarce about possible control methods in nurseries or in parks and gardens (mainly hygiene methods). Although, much uncertainty remains concerning the geographical distribution of *S. tsugae* its biology and its potential impact in the EPPO region, it cannot be excluded that *S. tsugae* might cause damage to valuable ornamental trees in the public and private gardens and economic losses, in particular for the nursery sector.

Sources:

INTERNET

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