

**Recommendation of the Working Group on the Annexes of the Council Directive 2000/29/EC – Section II – Listing of Harmful Organisms as regards the future listing of *Stagonosporopsis chrysanthemi* (Stevens) Crous, Vaghefi and Taylor [syn. *Didymella ligulicola*]<sup>1</sup>**

**Current regulatory status**

*S. chrysanthemi* is regulated as *D. ligulicola* under Annex II, Part A, Section II (c4) of Council Directive 2000/29/EC on plants of *Dendranthema* intended for planting, other than seeds.

Specific requirements are listed for import and movement within the Union: official statement for unrooted cuttings (Annex IVAI(28)), no symptoms of *Didymella ligulicola* were observed either on the cuttings or on the plants from which the cuttings were derived, or that, in case of rooted cuttings, no symptoms of *Didymella ligulicola* were observed either on the cuttings or on the rooting bed; (Annex IV AII (21.1) no symptoms of *Didymella ligulicola* were observed either on the cuttings or on the plants from which the cuttings were derived, or that, in case of rooted cuttings, no symptoms of *Didymella ligulicola* were observed either on the cuttings or on the rooting bed

Plant passport obligations are in place (Annex V AI, (2.1)) for professional producer for plants intended for planting other than seeds of the genera *Dendranthema*, together with phytosanitary certificate for parts of plants, other than fruits and seeds of the genera *Dendranthema* imported from third countries (Annex V BI, (2)).

Hosts of *S. chrysanthemi*, i.e. *Chrysanthemum* spp. (as *Dendranthema*) are further regulated in Council Directive 98/56/EC of 20 July 1998 on the marketing of propagating material of ornamental plants.

**Identity of the pest**

The taxonomy of *Didymella ligulicola* has been confusing in the past for the taxonomy of the ray blight pathogen has undergone many changes. Current name of the causal agent of ray blight of chrysanthemum is *Stagonosporopsis chrysanthemi* (*Didymella ligulicola*).

*S. chrysanthemi* is a single taxonomic entity and can be easily differentiated from other related *Stagonosporopsis* species based on cultural and morphological characters and its positive reaction to NaOH, as well as on molecular sequencing.

There are three *Stagonosporopsis* species (*S. chrysanthemi*; *S. inoxydabilis* and *S. tanacetii*) that cause ray blight symptoms, but they differ in their host range and geographical distribution.

The current EU legislation refers to *S. chrysanthemi* as *D. ligulicola*.

**Distribution of the pest**

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<sup>1</sup> Scientific basis for the recommendation: EFSA PLH Panel (EFSA Panel on Plant Health), 2013. Scientific Opinion on the risks to plant health posed by *Stagonosporopsis chrysanthemi* (Stevens) Crous, Vaghefi and Taylor [*Didymella ligulicola* (Baker, Dimock and Davis) Arx var. *ligulicola*; syn. *Didymella ligulicola* (Baker, Dimock and Davis) Arx] in the EU territory, with identification and evaluation of risk reduction options. EFSA Journal 2013;11(10):3376, 72 pp. doi:10.2903/j.efsa.2013.3376

*S. chrysanthemi* seems to be indigenous to Japan, but it was first reported in 1904 in the south-eastern USA. The pathogen was detected for the first time in Europe (southern England) in several nurseries on plants grown from cuttings imported from the USA.

According to EPPO Global Database, the pathogen is present in some EU MS (Belgium, France, Germany, Ireland, Italy, Lithuania, Luxembourg, Moldova, Norway, Poland, Romania, Serbia, Slovakia and United Kingdom) though with a restricted distribution. Outside Europe the pest is reported present in Africa-Kenya, Malawi, Tanzania, Tunisia, Zimbabwe; America- Canada, Mexico, United States of America; Asia- Israel, Japan; Oceania- Australia, New Zealand, Papua New Guinea.

The information on the presence of the organism should be treated with caution due to the uncertainty about the correspondence between the organism isolated in the past from *Chrysanthemum × morifolium* plants showing ray blight-like symptoms and the causal agent of ray blight under its current taxonomic status.

### **Potential for establishment and spread in the PRA area**

The potential hosts of *S. chrysanthemi* would be cultivars of *Chrysanthemum × morifolium* (cut flowers, cultivars for pot chrysanthemum, and cultivars for multiflora plants) grown outdoors and under protection. Cultivars of *Chrysanthemum × morifolium* are widely grown in open fields and greenhouses as well as in private and public gardens in both rural and urban regions in the EU.

*S. chrysanthemi* can infect its hosts over a wide range of temperatures (6–30 °C), given there is sufficient moisture and can survive over a wide range of temperatures (–23 to 30 °C) and relative humidity (6–85 %). Also the fact that *S. chrysanthemi* is present in many Member States, indicating that the climatic conditions prevailing at least in some areas of the EU are favourable for infection, sporulation, spread and survival of *S. chrysanthemi*.

Once introduced into the risk assessment area, *S. chrysanthemi* can spread by both natural means (wind, rain) to susceptible plants in close proximity (up to 400 m). Long-distance spread of *S. chrysanthemi* in the risk assessment area may occur by human assistance through the movement of infected propagation material.

Symptoms on flowers consist of reddish to brownish spots, which spread rapidly and cause the complete rot of the flower. The symptoms then develop down the peduncle, resulting in drooping and wilting of the flower head. As a result, the affected plants and/or plant parts are not marketable. Asymptomatic symptoms may develop during transit to the market.

Cultural practices and chemical control measures currently in the EU for the control of other chrysanthemum pathogens can reduce the severity of the disease caused by *S. chrysanthemi*, but they are unlikely to prevent the establishment of the pathogen in the EU for host plants of *S. chrysanthemi* are also grown in private and public gardens, where the application of chemical sprays is either not feasible or not a common practice.

### **Potential for consequences in the PRA area**

No recent reports on the effects of *S. chrysanthemi* on chrysanthemum crops have been found in the published literature. Therefore, under the current host plant production system and the EU legislation, the overall impact of *S. chrysanthemi* in the EU is considered minor. The hosts are not considered rare species, and thus they do not play an important environmental role in the EU so the establishment and further spread of the pathogen is not expected to have any environmental consequences.

The disease can develop with dramatic rapidity under favourable weather conditions in the field, causing complete loss of entire blocks of susceptible varieties. In the absence of control measures, losses up to 100 % may occur on highly susceptible cultivars.

## **Recommendation**

The damage caused by the pathogen in the risk assessment area is currently minor and it is unlikely to increase in future because of the existing agricultural practices applied to chrysanthemum crops. Plants for planting are considered to be the main pathway of spreading, and can be well addressed as part of the certification schemes.

The Working Group, therefore, recommends re-classifying this organism as Regulated Non-Quarantine Pest. *S. chrysanthemi* is specific for *Chrysanthemum*. The host range of other *Stagaonosporopsis* species is very specific, so there is no need to regulate those species also for *Chrysanthemum*.