NAME OF THE ORGANISM: Dothistroma pini (DOTSPI)

GENERAL INFORMATION ON THE PEST

Name as submitted in the project specification (if different to the preferred name):

Pest category:

Fungi **1- Identity of the pest/Level of taxonomic listing:**
Is the organism clearly a single taxonomic entity and can it be adequately distinguished from other entities of the same rank?

Yes
Is the pest defined at the species level or lower?:

Yes
Can listing of the pest at a taxonomic level higher than species be supported by scientific reasons or can species be identified within the taxonomic rank which are the (main) pests of concern?

* Not relevant: Forest reproductive material sector, Ornamental sector

Is it justified that the pest is listed at a taxonomic rank below species level?

Not relevant
Conclusion:

* Candidate: Forest reproductive material sector, Ornamental sector

Justification (if necessary):

When replying to the Questionnaire for the Forest reproductive material sector, ENA only proposed the listing of a defined list of host species (Pinus halepensis, P. leucodermis, P. nigra, P. sylvestris, P. brutia, P. radiata, P. pinea, P. canariensis, P. pinaster, P. contorta, P. cembra). However, 19 host species are listed as 'highly susceptible' and 28 species as 'moderately susceptible' (EFSA, 2013). The latest review by Drenkhan et al. listed 109 Pinaceae host taxa documented for Dothistroma species, spanning six genera (Abies, Cedrus, Larix, Picea, Pinus and Pseudotsuga), with Pinus being the dominant host genus, accounting for 95 host taxa. The relative susceptibilities of these hosts to Dothistroma species are reported (Drenkhan et al., 2016). As the three pine needle blight should be regulated together and do not have the same major hosts, experts proposed to keep a listing at the genus level for Pinus.
Remark: Dothistroma pini and Dothistroma septosporum were both covered by the Council Directive 2000/29 at the time of the listing of Scirrhia pini in the regulation. They can only be differentiated by molecular tests. Nowadays only Dothistroma septosporum is a synonym of Scirrhia pini. **2 – Status in the EU:**

Is this pest already a quarantine pest for the whole EU?

No
Presence in the EU:

Yes
Conclusion:

candidate
Justification (if necessary):

Data of the presence of this pest on the EU territory are available in EPPO Global Database (<https://gd.eppo.int/>). The list of countries should be revised according to Drenkhan et al. (2016).

HOST PLANT N°1: Pinus (1PIUG) for the Forest reproductive material sector.

Origin of the listing:

IIA2AWG
Plants for planting:

Plants intended for planting, other than seeds **3 - Is the pest already listed in a PM4 standard on the concerned host plant?**

No
Conclusion:

Evaluation continues **4 - Are the listed plants for planting the main\* pathway for the "pest/host/intended use" combination? (\*: significant compared to others):**

Yes
Conclusion:

Candidate

Justification:

In areas where the pest is present, hosts plants intended for planting/grafting (excluding fruit and seeds) and natural spread appears to be both significant pathways (Mulet et al., 2016). Natural spread cannot be effectively reduced (fungicide treatment is not feasible in infested forest stands) (Bulman et al., 2016). Isolation distances (buffer zones) of several hundred meters around nurseries, if used, do not appear to be sufficient barrier in forest environment. However there is an exception for the plantation of Christmas trees if placed remotely from the forest. Even though natural spread is playing an important role (one expert is of the opinion that natural spread may be more important in areas where the pest is present than plants for planting), expert view is that plants for planting can be a significant pathway leading to economic damage in places of production (nurseries and forests). Other pathways than plants for planting and natural spread, such as plant parts, are less significant. **5 - Economic impact:**
Are there documented reports of any economic impact on the host?

Yes
Justification:

D. pini is likely to have similar consequences than D. septosporum on its hosts (EFSA, 2013).
What is the likely economic impact of the pest irrespective of its infestation source in the absence of phytosanitary measures? (= official measures)

Major
Is the economic impact due to the presence of the pest on the named host plant for planting, acceptable to the propagation and end user sectors concerned?

No
Conclusion:

Candidate
Justification:

Impact is considered major on a number of Pinus species. As the three pine needle blight should be regulated together and do not have the same major hosts, experts agreed to keep a listing at the genus level for Pinus. **6 - Are there feasible and effective measures available to prevent the presence of the pest on the plants for planting at an incidence above a certain threshold (including zero) to avoid an unacceptable economic impact as regards the relevant host plants?**

Yes

Conclusion:

candidate
Justification:

Pest Free Area, Pest Free Place/Site of Production; treatment and inspection **7- Is the quality of the data sufficient to recommend the pest to be listed as a RNQP?**

Yes

Conclusion:

Candidate
Justification:

 **CONCLUSION ON THE STATUS:**

Recommended for listing as an RNQP - based on data. Experts concluded that the RNQP status is justified for the three needle blight pathogens considered together for practical reasons (only distinguishing Dothistroma needle blight and Lecanosticta needle blight during inspections), and the expert view is that plants for planting can be a significant pathway leading to economic damage in places of production (nurseries and forests). The measures should take account of the wide distribution of the pathogens, and the importance of natural spread locally. Where more stringent measures are needed to protect a large area from introduction, these could be considered under quarantine legislation (protected zone status). **8 - Tolerance level:**
Is there a need to change the Tolerance level:

No
Proposed Tolerance levels:

Zero tolerance, based on the absence of symptoms, for all categories of forest reproductive material (basic, certified and non-certified). **9 - Risk management measures:**
Is there a need to change the Risk management measure:

Yes
Proposed Risk management measure:

(a) The plants originate in areas known to be free from Dothistroma pini, Dothistroma septosporum and Lecanosticta acicola;
or
(b) No symptoms of needle blight [caused by Dothistroma pini, Dothistroma septosporum or Lecanosticta acicola] have been observed at the site of production or its immediate vicinity since the beginning of the last complete cycle of vegetation;
or (possibly only applicable to ‘source-identified’ and ‘selected’ material)
(c) Appropriate treatments have been carried out against needle blight [caused by Dothistroma pini, Dothistroma septosporum or Lecanosticta acicola] and the plants have been inspected before dispatch and found free from symptoms of needle blight.
Justification (if necessary):

The place of production is too large and the SEWG proposed to restrict the risk management measures to the production site. Indeed the definition of measures for the whole place of production is necessary especially when there is a risk of infection by workers, machines … Because of local spread, an isolation distance ('immediate vicinity') is necessary. The use of two appropriate treatments per year may be sufficient to prevent an unacceptable economic impact on the intended use. Risk management options may depend on the quality of the concerned material (last option possibly only applicable to ‘source-identified’ and ‘selected’ material). **REFERENCES:**

* Bulman LS, Bradshaw RE, Fraser S, Martín-García J, Barnes I, Musolin DL, La Porta N, Woods AJ, Diez JJ, Koltay A, Drenkhan R, Ahumada R, Poljakovic-Pajnik L, Queloz V, Piškur B, Doğmuş-Lehtijärvi HT, Chira D, Tomešová-Haataja V, Georgieva M, Jankovský L, Anselmi N, Markovskaja S, Papazova-Anakieva I, Sotirovski K, Lazarević J, Adamčíková K, Boroń P, Bragança H, Vettraino AM, Selikhovkin AV, Bulgakov TS & Tubby K (2016) A worldwide perspective on the management and control of Dothistroma needle blight. Forest Pathology 46, 472–488;
* Drenkhan R, Tomešová-Haataja V, Fraser S, Bradshaw RE, Vahalík P, Mullett MS, Martín-García J, Bulman LS, Wingfield MJ, Kirisits T, Cech TL, Schmitz S, Baden R, Tubby K, Brown A, Georgieva M, Woods A, Ahumada R, Jankovský L, Thomsen IM, Adamson K, Marçais B, Vuorinen M, Tsopelas P, Koltay A, Halasz A, La Porta N, Anselmi N, Kiesnere R, Markovskaja S, Kačergius A, Papazova-Anakieva I, Risteski M, Sotirovski K, Lazarević J, Solheim H, Boroń P, Bragança H, Chira D, Musolin DL, Selikhovkin AV, Bulgakov TS, Keča N, Karadžić D, Galovic V, Pap P, Markovic M, Poljakovic Pajnik L, Vasic V, Ondrušková E, Piškur B, Sadiković D, Diez JJ, Solla A, Millberg H, Stenlid J, Angst A, Queloz V, Lehtijärvi A, Doğmuş-Lehtijärvi HT, Oskay F, Davydenko K, Meshkova V, Craig D, Woodward S & Barnes I (2016) Global geographic distribution and host range of Dothistroma species: a comprehensive review. Review article. Forest Pathology 46, 408-442;
* EFSA Panel on Plant Health (PLH) (2013) Scientific Opinion on the risk to plant health posed by Dothistroma septosporum (Dorog.) M. Morelet (Mycosphaerella pini E. Rostrup, syn. Scirrhia pini) and Dothistroma pini Hulbary to the EU territory with the identification and evaluation of risk reduction options. EFSA Journal 2013;11(1):3026 [173 pp.];
* EU COM (2016) 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 Dothistroma septosporum (Dorog.) M. Morelet (Mycosphaerella pini E. Rostrup, syn. Scirrhia pini) and Dothistroma pini Hulbary;
* Mullett MS, Tubby KV, Webber JF & Brown AV (2016) A reconsideration of natural dispersal of the pine pathogen Dothistroma septosporum. Plant Pathology;

HOST PLANT N°2: Pinus (1PIUG) for the Ornamental sector.

Origin of the listing:

IIA2AWG
Plants for planting:

Plants intended for planting, other than seeds **3 - Is the pest already listed in a PM4 standard on the concerned host plant?**

No
Conclusion:

Evaluation continues **4 - Are the listed plants for planting the main\* pathway for the "pest/host/intended use" combination? (\*: significant compared to others):**

Yes
Conclusion:

Candidate

Justification:

Host plants intended for planting/grafting (excluding fruit and seeds) is a significant pathway. Other pathways are natural means and host plants and plant parts with foliage not intended for planting. **5 - Economic impact:**
Are there documented reports of any economic impact on the host?

Yes
Justification:

D. pini is likely to have similar consequences than D. septosporum on its hosts (EFSA, 2013)
What is the likely economic impact of the pest irrespective of its infestation source in the absence of phytosanitary measures? (= official measures)

Major
Is the economic impact due to the presence of the pest on the named host plant for planting, acceptable to the propagation and end user sectors concerned?

No
Conclusion:

Candidate
Justification:

Impact is considered major on a number of Pinus species. As the three pine needle blight should be regulated together and do not have the same major hosts, experts agreed to keep a listing at the genus level for Pinus. **6 - Are there feasible and effective measures available to prevent the presence of the pest on the plants for planting at an incidence above a certain threshold (including zero) to avoid an unacceptable economic impact as regards the relevant host plants?**

Yes

Conclusion:

candidate
Justification:

Pest Free Area, Pest Free Place/Site of Production; treatment and inspection **7- Is the quality of the data sufficient to recommend the pest to be listed as a RNQP?**

Yes

Conclusion:

Candidate
Justification:

 **CONCLUSION ON THE STATUS:**

Recommended for listing as an RNQP - based on data. Experts concluded that the RNQP status is justified for the three needle blight pathogens considered together for practical reasons (only distinguishing Dothistroma needle blight and Lecanosticta needle blight during inspections), and the expert view is that plants for planting can be a significant pathway leading to economic damage in places of production (nurseries and forests). The measures should take account of the wide distribution of the pathogens, and the importance of natural spread locally. Where more stringent measures are needed to protect a large area from introduction, these could be considered under quarantine legislation (protected zone status). **8 - Tolerance level:**
Is there a need to change the Tolerance level:

No
Proposed Tolerance levels:

Zero tolerance, based on visual examination and/or treatments. **9 - Risk management measures:**
Is there a need to change the Risk management measure:

Yes
Proposed Risk management measure:

(a) The plants originate in areas known to be free from Dothistroma pini, Dothistroma septosporum and Lecanosticta acicola;
or
(b) No symptoms of needle blight [caused by Dothistroma pini, Dothistroma septosporum or Lecanosticta acicola] have been observed at the site of production or its immediate vicinity since the beginning of the last complete cycle of vegetation;
or
(c) Appropriate treatments have been carried out against needle blight [caused by Dothistroma pini, Dothistroma septosporum or Lecanosticta acicola] and the plants have been inspected before dispatch and found free from symptoms of needle blight. **REFERENCES:**

* Drenkhan R, Tomešová-Haataja V, Fraser S, Bradshaw RE, Vahalík P, Mullett MS, Martín-García J, Bulman LS, Wingfield MJ, Kirisits T, Cech TL, Schmitz S, Baden R, Tubby K, Brown A, Georgieva M, Woods A, Ahumada R, Jankovský L, Thomsen IM, Adamson K, Marçais B, Vuorinen M, Tsopelas P, Koltay A, Halasz A, La Porta N, Anselmi N, Kiesnere R, Markovskaja S, Kačergius A, Papazova-Anakieva I, Risteski M, Sotirovski K, Lazarević J, Solheim H, Boroń P, Bragança H, Chira D, Musolin DL, Selikhovkin AV, Bulgakov TS, Keča N, Karadžić D, Galovic V, Pap P, Markovic M, Poljakovic Pajnik L, Vasic V, Ondrušková E, Piškur B, Sadiković D, Diez JJ, Solla A, Millberg H, Stenlid J, Angst A, Queloz V, Lehtijärvi A, Doğmuş-Lehtijärvi HT, Oskay F, Davydenko K, Meshkova V, Craig D, Woodward S & Barnes I (2016) Global geographic distribution and host range of Dothistroma species: a comprehensive review. Review article. Forest Pathology 46, 408-442;
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* EU COM (2016) 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 Dothistroma septosporum (Dorog.) M. Morelet (Mycosphaerella pini E. Rostrup, syn. Scirrhia pini) and Dothistroma pini Hulbary ;