NAME OF THE ORGANISM: Pratylenchus penetrans (PRATPE)

GENERAL INFORMATION ON THE PEST

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

Pest category:

Nematoda **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: Ornamental sector, Fruits (including hops) sector

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

Not relevant
Conclusion:

* Candidate: Ornamental sector
* Not evaluated: Fruits (including hops) sector

**2 – Status in the EU:**

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

Presence in the EU:

Yes
List of countries (EPPO Global Database):

Belgium (2003); Bulgaria (2003); Cyprus (2011); Czech Republic (2003); Denmark (2003); Estonia (2003); France (2003); Germany (2003); Greece (2003); Hungary (2003); Italy (2003); Netherlands (2003); Poland (2012); Portugal (2003); Romania (2003); Slovakia (2003); Spain (2003); Sweden (2003); United Kingdom (2003)
Conclusion:

Justification (if necessary):

Data of the presence of this pest on the EU territory are available in EPPO Global Database (<https://gd.eppo.int/>).

HOST PLANT N°1: Cydonia oblonga (CYDOB) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°2: Ficus carica (FIUCA) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°3: Lilium (1LILG) for the Ornamental sector.

Origin of the listing:

Commission Directive 93/49/EEC
Plants for planting:

Plants intended for planting **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:

Pratylenchus species are commonly known as lesion nematodes causing root lesions on many host plants in temperate regions. They feed and reproduce in the root and move through the soil and usually only feed on the cortex of the root. Plants from bulbs are not normally transplanted, so bulbs contaminated with infested soil or dried roots are a pathway and would be a significant pathway if planted into uninfested soil or growing media. **5 - Economic impact:**
Are there documented reports of any economic impact on the host?

Yes
Justification:

Lilium species are a great economic importance as cut flowers or sales of bulbs, being one of the most valuable species and the root lesion nematode Pratylenchus penetrans constitutes one of the main pests for lily producers due to the significant root damage it causes (Vieira et al, 2015).
What is the likely economic impact of the pest irrespective of its infestation source in the absence of phytosanitary measures? (= official measures)

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:

 **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:

Oxamyl is a carbamate with contact and systemic activity; it has been shown to be an effective nematicide against many species of Pratylenchus in several production systems including easter lily (Westerdahl et al., 2003). **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:**

Not recommended for listing as an RNQP: This pest/host/intended use combination meets all the criteria for RNQP status. However, the requirement for absence of visual symptoms on the traded material (current general 'Substantially free from' requirement in the EU) was considered to be sufficient. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

No
Proposed Tolerance levels:

Delisting. **9 - Risk management measures:**
Is there a need to change the Risk management measure:

No
Proposed Risk management measure:

Delisting. **REFERENCES:**

* Vieira P, Wantoch S, Lilley CJ, Chitwood DJ, Atkinson HJ & Kamo K (2015) Expression of a cystatin transgene can confer resistance to root lesion nematodes in Lilium longiflorum cv. 'Nellie White'. Transgenic Research 24, 421-432;

HOST PLANT N°4: Malus (1MABG) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°5: Narcissus (1NARG) for the Ornamental sector.

Origin of the listing:

Commission Directive 93/49/EEC
Plants for planting:

Plants intended for planting **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:

Pratylenchus species are commonly known as lesion nematodes causing root lesions on many host plants in temperate regions. They feed and reproduce in the root and move through the soil and usually only feed on the cortex of the root. Plants from bulbs are not normally transplanted, so bulbs contaminated with infested soil or dried roots are a pathway and would be a significant pathway if planted into uninfested soil or growing media. **5 - Economic impact:**
Are there documented reports of any economic impact on the host?

Yes
Justification:

Narcissus species are a great economic importance as cut flowers or sales of bulbs, being one of the most valuable species and the root lesion nematode Pratylenchus penetrans constitutes one of the main pests for narcissus producers due to the significant root damage it causes. Soil applications of nematicides reduced P. penetrans populations and improved plant growth (Wood & Foot, 1982). However in FR, the cultivated area of narcissus is less than 20 hectares.
What is the likely economic impact of the pest irrespective of its infestation source in the absence of phytosanitary measures? (= official measures)

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:

 **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:

 **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:**

Not recommended for listing as an RNQP: This pest/host/intended use combination meets all the criteria for RNQP status. However, the requirement for absence of visual symptoms on the traded material (current general 'Substantially free from' requirement in the EU) was considered to be sufficient. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

No
Proposed Tolerance levels:

Delisting. **9 - Risk management measures:**
Is there a need to change the Risk management measure:

No
Proposed Risk management measure:

Delisting. **REFERENCES:**

* Wood FH & Foot MA (1982) Control of lesion nematode in narcissi. New Zealand Journal of Experimental Agriculture 10, 439-441;

HOST PLANT N°6: Pistacia vera (PIAVE) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°7: Prunus armeniaca (PRNAR) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°8: Prunus avium (PRNAV) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°9: Prunus cerasus (PRNCE) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°10: Prunus domestica (PRNDO) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°11: Prunus dulcis (Prunus amygdalus) (PRNDU) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°12: Prunus persica (PRNPS) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°13: Prunus salicina (PRNSC) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)

HOST PLANT N°14: Pyrus (1PYUG) for the Fruits (including hops) sector.

**CONCLUSION ON THE STATUS:**

Not evaluated: from the fruit Marketing Directive (see Terms of reference)