NAME OF THE ORGANISM: Potato spindle tuber viroid (PSTVD0)

GENERAL INFORMATION ON THE PEST

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

Pest category:

Viruses and viroids **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

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

Not relevant
Conclusion:

* Candidate: Ornamental sector

**2 – Status in the EU:**

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

Yes
Presence in the EU:

Yes
List of countries (EPPO Global Database):

Austria (2011); Croatia (2014); Czech Republic (2014); Germany (2011); Italy (2011); Malta (2013); Poland (2016); Slovenia (2013); Spain (2011)
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/>).
This pest is considered to be already a quarantine pest for the whole EU (annex IA1 of the directive 2000/29/EC). However, in view of its presence in the EU (see data of the presence of this pest on the EU territory available in EPPO Global Database: <https://gd.eppo.int/>), classification within the directive should be revised. This pest is not evaluated in the context of the EU RNQP Project but because it was submitted for evaluation by the Working Party on Phytosanitary Regulation (WPPR, 2016). As a consequence, evaluation continues.

HOST PLANT N°1: Capsicum annuum (CPSAN) for the Ornamental sector.

Origin of the listing:

EFSA PRA (EFSA PLH, 2011)
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:

A number of Capsicum annuum varieties are bred and grown for ornamental use and in the absence of other information, are assumed to react similarly as vegetable pepper types. Although PSTVd in Capsicum annum seed has not been reported, a high probability rating of this is suggested by analogy, but this rating is associated with a high uncertainty (EFSA-PLH, 2011). However, if present, any infection arising from seed will likely spread rapidly to neighbouring pepper plants or other susceptible plant species by mechanical means in the nursery (EFSA-PLH, 2011). This would have an indirect economic impact.
Therefore young plants as plants for planting (arising from infected seed, or by mechanical means from other hosts), can be considered a main pathway for this pest/host/intended use combination. **5 - Economic impact:**
Are there documented reports of any economic impact on the host?

Yes
Justification:

PSTVd has been recorded in three pepper crops in New Zealand, though none were ornamental varieties. The infected pepper plants displayed only very mild symptoms (i.e. a certain “waviness” or distortion of the leaf margins near the top of the plants). However, after artificial (mechanical) inoculation of PSTVd to pepper cv. Yolo Wonder, fruit size was significantly reduced. It was concluded (in the absence of other pospiviroids) that PSTVd has the potential to cause minor damage in pepper (EFSA-PLH, 2011). Peppers may be grown on premises growing other susceptible crops such as tomato, so could act as a source of transmission during the growing season. Remark: other ornamental solanaceous hosts such as S. jasminoides or Brugmansia sp. could also act in a similar way.
What is the likely economic impact of the pest irrespective of its infestation source in the absence of phytosanitary measures? (= official measures)

Minor
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?

Yes
Is there unacceptable economic impact caused to other hosts (or the same host with a different intended use) produced at the same place of production due to the transfer of the pest from the named host plant for planting?

Yes
Conclusion:

Candidate
Justification:

Direct economic impact of PSTVd is acceptable on ornamentals. Navarro et al. (2009) demonstrated that the same isolate of PSTVd identified on symptomless S. jasminoides plants was found in a symptomatic plant of tomato grown close of the ornamentals. Experts concluded that ornamentals could represent a source of inoculum for susceptible crops produced at the same place of production. **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:**

Recommended for listing as an RNQP, based on data and potential indirect economic impact. This pest would qualify for RNQP status if it were to be deregulated as a quarantine pest, but the SEWG makes no recommendation on the removal of the quarantine pest status. In the case of a RNQP listing, all of the potentially infected Solanaceae should be covered, and not only ornamental Capsicum. Moreover an alternative to the listing under the RNQP Status could be to recommend, in the risk management measures for tomato, isolation from other potential sources of infection, including other infected host plants. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

No
Proposed Tolerance levels:

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

No
Proposed Risk management measure:

 **REFERENCES:**

* EFSA Panel on Plant Health (PLH) (2011) Scientific Opinion on the assessment of the risk of solanaceous pospiviroids for the EU territory and the identification and evaluation of risk management options. EFSA Journal 2011;9(8):2330 [132 pp.]. doi:10.2903/j.efsa.2011. 2330; www.efsa.europa.eu/efsajournal;