NAME OF THE ORGANISM: Candidatus Phytoplasma solani (Phytoplasma solani) (PHYPSO)

GENERAL INFORMATION ON THE PEST

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

Pest category:

Bacteria **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: Other crops

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

Not relevant
Conclusion:

* Candidate: Other crops

**2 – Status in the EU:**

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

No
Presence in the EU:

Yes
List of countries (EPPO Global Database):

Austria (2014); Bulgaria (2014); Croatia (2015); Czech Republic (2009); France (2014); Germany (2010); Greece (2014); Hungary (2011); Italy (2010); Italy/Sicilia (1995); Poland (1999); Slovakia (2000); Slovenia (2011); Spain (2014)
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/>).

HOST PLANT N°1: Lavandula (1LAVG) for the Other crops.

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:

Candidatus Phytoplasma solani' (CPs) is transmitted by grafting and vegetative propagation of infected hosts, and by several insect vector species (EU COM, 2016). With the exception of lavender (and maize), most crops affected by CPs are dead-end hosts as they are not hosts for the insect vectors. However weed species can act as a reservoir (EFSA, 2014). Plants for planting are the main pathway in areas where vectors are not present and may pose an entry risk for the nymphal stages of vector. **5 - Economic impact:**
Are there documented reports of any economic impact on the host?

Yes
Justification:

CPs has a high impact on lavender crops. After displaying early symptoms, characterised by low vigour and leaf yellowing, the canopy of infected lavender dries by sectors and plants eventually die. Because of epidemic propagation by H. obsoletus, able to complete its life cycle on this crop, fields of L. angustifolia are usually destroyed within 4–5 years in south-eastern France. Hybrids between L. angustifolia and L. latifolia, previously considered to be tolerant, exhibit the same symptoms and can reach an equivalent level of infection (EFSA-PLH, 2014). In a report from France, the disease incidence in lavender fields ranged from 1% to 68% at spring time and increased from 17% to 99% during fall, while at the same time the mean disease severity also increased significantly (Danet et al., 2010). Between 2006 and 2010 some French regions lost almost half of the harvest, and a significant part of the areas was uprooted (Grebenicharski, 2016).
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:

 **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?**

Conclusion:

Justification:

Remark: lack of data on the economic impact in the places of production as well as on the genetic variability of the strains and their host specificity. **CONCLUSION ON THE STATUS:**

Recommended for listing as an RNQP, based on data. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

Yes
Proposed Tolerance levels:

Zero tolerance based on visual examination and/or testing (see following risk management measures). **9 - Risk management measures:**
Is there a need to change the Risk management measure:

Yes
Proposed Risk management measure:

(a) Pest free site of production;
or
(b) No symptoms seen during visual inspections of the lot in the last complete cycle of vegetation;
or
(c) Plants showing symptoms have been rogued out and destroyed, and the lot has been tested on the basis of a representative sample of remaining plants and found free.
Justification (if necessary):

Experts recommended the following risk management measures, on the basis of the recommendation of the Annex working group in charge of the revision of annex IIA2 of Council Directive 2000/29/EC. However they considered that an additional consultation of the Lavandula perfume sector is needed before adoption of these measures. **REFERENCES:**

* Badcock L (2013) Is lavender under threat? Essential. Wholesale & labs. Available from: <http://library.essentialwholesale.com/is-lavender-under-threat/>
* Danet J-L, Sémétey O, Gaudin J, Verdin E, Chaisse E & Foissac X (2010) Lavender decline is caused by several genetic variants of the Stolbur phytoplasme in south eastern France. In: Bertaccini A, Lavina A, Torres E (eds.) Current status and perspectives of phytoplasma disease research and management. p. 9. European cooperation in science and technology (COST) action FA0807, Sitges, Spain;
* EFSA Panel on Plant Health (PLH) (2014) Scientific Opinion on the pest categorisation of Candidatus Phytoplasma solani. EFSA Journal 2014;12(12):3924, 27 pp. doi:10.2903/j.efsa.2014.3924 <http://www.efsa.europa.eu/en/efsajournal/doc/3924.pdf>;
* 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 Potato stolbur mycoplasma, renamed Candidatus Phytoplasma solani;
* Fialova R, Válová P, Balakishiyeva G, Danet J-L, Safárová D, Foissac X & Navrátil M (2009) Genetic variability of Stolbur phytoplasma in annual crop and wild plant species in south Moravia. Journal of Plant Pathology 91, 411-416;
* Grebenicharski S (2016) Lavender production in Bulgaria-Market and opportunity analysis. Inteliagro. Available from: <http://inteliagro.bg/Files/ed87d116-5fc3-4fcd-a0fb-5853f327a52bLavender%20production%20in%20Bulgaria_ENG.pdf>;