NAME OF THE ORGANISM: Erwinia amylovora (ERWIAM)

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: Ornamental sector

Is it justified that the pest is listed at a taxonomic rank below species level?
 
Not relevant  
Conclusion:

* Candidate: Ornamental sector

Justification (if necessary):
 
Fire blight has been described in nearly 200 plant species, mostly within the family Rosaceae, and within the subfamily Maloideae. The most frequent host genera are Chaenomeles, Cotoneaster, Crataegus, Cydonia, Eriobotrya, Malus, Mespilus, Pyrus, Photinia, Pyracantha, Sorbus and Stranvaesia (EFSA PLH, 2014). This is justified to continue the evaluation of E. amylovora on host plants listed at the genus level. **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); Belgium (2015); Bulgaria (2012); Croatia (2007); Cyprus (1990); Czech Republic (2013); Denmark (1987); Estonia (2013); Finland (2014); France (2011); Germany (2013); Greece (2000); Greece/Kriti (1990); Hungary (2012); Ireland (2010); Italy (2013); Italy/Sicilia (1992); Latvia (2014); Lithuania (2010); Luxembourg (1984); Netherlands (2015); Poland (2001); Romania (2011); Slovakia (2005); Slovenia (2003); Spain (2016); Sweden (2008); United Kingdom (2014); United Kingdom/England (2014); United Kingdom/Northern Ireland (2014); United Kingdom/Scotland (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: Mespilus (1MSPG) 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:
 
The main risk of introduction and spread of fire blight over medium and long distances is through plant material contaminated with E. amylovora, and mainly through plant nursery materials, because the pathogen can live as an epiphyte or an endophyte in buds and shoots. Once infections have taken place, rain and wind (especially thunderstorms) play an important role in the transport of inoculum over short distances and probably also over medium to long distances (aero currents). Insect pollinators are efficient carriers over short and medium distances. Workers in orchards can serve as an efficient system of disseminating E. amylovora, especially over short to medium distances, by means of hands, clothing, pruning and spraying tools (EFSA PLH, 2014). To conclude, if the pest is present on the plants for planting, it may be easily spread over the place of production and no curative measure will be available. Taking preventive measures into account (e.g. spraying of copper compounds), plants for planting are considered to be a significant pathway compared to others. It is justified to regulate this pathway. **5 - Economic impact:**  
Are there documented reports of any economic impact on the host?
 
No  
Justification:
 
Many publications list the genera as an ornamental host of E. amylovora. In 1989 new disease symptoms were recorded on quince in the region of Plovdiv, Bulgaria and were also found on pear, Mespilus germanica and apple (Bobev et al 1999). After its first finding, the pest is described as having caused during year 1996 in Hungary most damage on apple, pear, quince and medlar (Zsolt, 2004). In Croatia, medlar and quince had the highest percentage of infected trees, with apple and pear susceptibility depending on cultivar (Cvjetkovic & Halupecki, 1999). The main hosts im Bulgaria are quince and pear (over 40% of affected trees), then apple, medlar and Cotoneaster (Dimitrova & Andreev, 2004). During 1986-91 pear, quince and medlar (Mespilus) trees were most severely affected by fire blight while damage to apple and loquat trees was less severe (Benlioglu & Ozakman, 1999). Recent reports of the presence of E. amylovora on Medlar (without information on impact) are available for Montenegro (Balaz et al., 2012), Bulgaria (Bobev et al, 2011) and Serbia (Gavrilovic et.al., 2008). Whatever the direct economic impacts on this host, E. amylovora can have indirect unacceptable economic impacts on Malus and Pyrus plants for planting.  
What is the likely economic impact of the pest irrespective of its infestation source in the absence of phytosanitary measures? (= official measures)
 
Medium  
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:
 
Existing control is mainly based on prevention and exclusion. The use of chemical or biological products can prevent infection, and sanitation methods applied to infected plants can control the disease to a certain extent. No curative chemical control agents are available to eradicate E. amylovora (EFSA, 2014). **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 its indirect unacceptable economic impact on Malus, Pyrus and Cydonia plants for planting. **8 - Tolerance level:**  
Is there a need to change the Tolerance level:
 
No  
Proposed Tolerance levels:
 
Zero tolerance based on visual examination. **9 - Risk management measures:**  
Is there a need to change the Risk management measure:
 
Yes  
Proposed Risk management measure:
 
The proposed measures are without prejudice to additional measures needed to provide the appropriate level of assurance in relation to plants moving into the protected zone or other areas where Erwinia amylovora is recognised as a quarantine organism:  
(a) Plants produced in areas known to be free from Erwinia amylovora;  
or  
(b) The production site has been inspected at an appropriate time during the last growing season and plants showing symptoms, and any surrounding host plants, have been immediately rogued out and destroyed.  
Justification (if necessary):
 
Plants grown in buffer zones for passporting for movement into the protected zone, if this measure is maintained, would meet the requirements of either the first or the second option for movements within the rest of the EU. **REFERENCES:**

* Balaz J, Radunovic D & Krstic M (2012) Status of Erwinia amylovora in Montenegro. Proceedings of the International Symposium on Current Trends in Plant Protection, Belgrade, Serbia, 25-28th September, 2012. 373-378;
* Benlioglu K & Ozakman M (1999) Characterization of Turkish isolates of Erwinia amylovora. Acta Horticulturae 489, 127-131;
* Bobev S, Garbeva P, Crepel C, Maes M & Hauben L (1999) Fire blight in Bulgaria - characteristics of E. amylovora isolates. Proceedings of the Eighth International Workshop on Fire Blight, Kusadasi, Turkey, 12-15 October, 1998 . Acta Horticulturae 489, 121-126;
* Bobev SG, Vaerenbergh J, van Tahzima R & Maes M (2011) Fire blight spread in Bulgaria and characteristics of the pathogen Erwinia amylovora. Acta Horticulturae 896; 133-140;
* Cvjetkovic B & Halupecki E (1999) Experiences in controlling fire blight (Erwinia amylovora) in Croatia. Zbornik predavanj in referatov 4. Slovenskega Posvetovanja o Varstvu Rastlin v Portorozu od 3. do 4. Marca 1999, 197-200;
* Dimitrova E & Andreev L (2004) Fireblight situation in Bulgaria and measures undertaken by the NPPO. Bulletin OEPP 34, 343-345;
* EFSA Panel on Plant Health (PLH) (2014) Scientific Opinion on the pest categorisation of Erwinia amylovora (Burr.) Winsl. et al. EFSA Journal 2014;12(12):3922, 37 pp. doi:10.2903/j.efsa.2014.3922 <http://www.efsa.europa.eu/en/efsajournal/doc/3922.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 Erwinia amylovora (Burr.) Winsl. et al.;
* Gavrilovic V, Milijasevic S & Zivkovic S (2006) Characterization of epiphytic bacteria originating from quince and medlar trees and their antagonistic activity against Erwinia amylovora in vitro. Mitteilungen aus der Biologischen Bundesanstalt fur Land- und Forstwirtschaft 408, 270;
* Zsolt M (2004) Fireblight in Bekes County (Hungary) in 1996/2002. Bulletin OEPP 34, 391-394;