NAME OF THE ORGANISM: Bemisia tabaci (BEMITA)

GENERAL INFORMATION ON THE PEST

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

Pest category:

Insecta **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?

No
Presence in the EU:

Yes
List of countries (EPPO Global Database):

Austria (2011); Belgium (2013); Bulgaria (2003); Croatia (2008); Cyprus (2011); Czech Republic (1994); France (2010); France/Corse (1998); Germany (1993); Greece (2013); Greece/Kriti (1994); Hungary (1993); Italy (1994); Italy/Sicilia (2008); Italy/Sardegna (1994); Malta (2012); Netherlands (2015); Poland (1992); Portugal (2008); Portugal/Madeira (2008); Spain (2015); Spain/Islas Canárias (2012); Spain/Islas Baleares (2011); Sweden (1998); United Kingdom (2010); United Kingdom/England (2009)
Conclusion:

candidate
Justification (if necessary):

Only non-European populations of Bemisia tabaci are listed in annex IA1 of Council directive 2000/29/EC. Data of the presence of this pest on the EU territory are available in EPPO Global Database (<https://gd.eppo.int/>). Experts commented that 'non-European populations' is usually only considered in relation to the origin of the plants/consignment on which the pest is found.

HOST PLANT N°1: Gerbera (1GEBG) for the Ornamental sector.

Origin of the listing:

Commission Directive 93/49/EEC
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):**

No
Conclusion:

Not candidate

Justification:

The host range of B. tabaci covers more than 1 000 species (Mound and Halsey, 1978; De Barro, 1995; Chu et al., 2006; Evans, 2007; Li et al. 2011; EFSA, 2013). De Barro (1995), Evans (2007), DAF-GWA (2008), Dalmon et al. (2008) Li et al., (2011) and EFSA (2013) listed Gerbera as a host species of B. tabaci. Gerbera jamesonii was categorized at the 3rd infestation grade in China (average number of B. tabaci nymphs and pupae between 31–50 /10 cm² leaf area) (Li et al., 2011). Fransen (1994) reported 3 to 7 annual findings of B. tabaci on Gerbera in the greenhouses in the Netherlands and concluded that this is perfect host plant for the pest. Only two interceptions of B. tabaci on Gerbera for plants for planting from third countries are reported in EUROPHYT from 1993 to 2011.
Except in the Mediterranean coastal region (Cyprus, Greece, Malta, Italy, south of France, certain parts of Spain and Portugal), B. tabaci occurrence is restricted in the EU to greenhouses. Growing B. tabaci host plants under exclusion conditions may be highly effective in the management of this pest and its associated viruses in both field and greenhouse-grown crops, however detailed attention must be given to exclusion netting and entrances etc. For crops in fields or partly-covered facilities, in areas where the pest is established (the Mediterranean coastal region), infestation can take place by flying adults, up to a maximum of 7km in a 12-hour period, though this is not a limiting factor because, with the wide range of putative hosts, suitable host plants are mostly available, and under intensive production suitable host plants, densely spaced, are found within a short distance. Under protected cultivation, plant production is throughout the year and suitable crops follow and rotate at tight intervals, favouring the establishment and dispersal of B. tabaci. Whitefly adults can migrate over long distances via passive transport with wind. However, even considering a climate change scenario with an increase of on average + 2 °C, B. tabaci distribution will expand its most Northern limit but still will not establish outdoors in Northern EU Member States (EFSA 2013). Experts concluded that B. tabaci should not be considered as an important pathway on this host. **CONCLUSION ON THE STATUS:**

Disqualified: Not recommended for RNQP status - not an important pathway for this host (few interceptions on plants for planting). **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:**

* Chu D, Zhang YJ, Brown JK, Cong B, Xu BY, Wu QJ & Zhu GR (2006) The introduction of the exotic Q biotype of Bemisia tabaci from the Mediterranean region into China on ornamental crops. Florida Entomologist 89, 168-174;
* Department of Agriculture and Food, Goverment of Western Australia (DAF-GWA) (2008) A list of recorded host plants of Bemisia tabaci including silverleaf whitefly. Previously available at <http://www.agric.wa.gov.au/objtwr/imported_assets/content/pw/ins/slwfhostlist.pdf>;
* Dalmon A, Halkett F, Granier M, Delatte H & Peterschmitt M (2008) Genetic structure of the invasive pest Bemisia tabaci: evidence of limited but persistent genetic differentiation in glasshouse populations. Heredity 100, 316–325;
* Dalton R (2006) Whitefly infestations: the Christmas invasion. Nature 443, 898-900;
* De Barro PJ (1995) Bemisia tabaci biotype B: a review of its biology, distribution and control. CSIRO Australia Division of Entomology Technical Paper. 1-55;
* Drayton GM, Teulon DAJ, Workman PJ & Scott IAW (2009) The Christmas dispersal of Bemisia tabaci (Gennadius) in New Zealand. New Zeland Plant Protection 62, 310-314;
* EFSA Panel on Plant Health (2013) (PLH) Scientific Opinion on the risks to plant health posed by Bemisia tabaci species complex and viruses it transmits for the EU territory. EFSA Journal 11, 3162. Available online: <http://onlinelibrary.wiley.com/doi/10.2903/j.efsa.2013.3162/epdf>;
* European and Mediterranean Plant Protection Organisation (EPPO) (2012) EPPO technical document no. 1061: EPPO study on the risk of imports of plants for planting. Available from www.eppo.int/QUARANTINE/EPPO\_Study\_on\_Plants\_for\_planting.pdf;
* Evans GA (2007) Host plant list of the whiteflies (Aleyrodidae) of the world. USDA/Animal Plant Health Inspection Service (APHIS), 290 pp. Available from <http://www.sel.barc.usda.gov:8080/1WF/WhiteflyHost.pdf>;
* Fransen JJ (1994) Bemisia tabaci in the Netherlands; here to stay? Pesticide Science 42, 129-134;
* Li SJ, Xue X, Ahmed MZ, Ren SX, Du YZ, Wu JH, Cuthbertson AGS & Qiu BL, 2011. Host plants and natural enemies of Bemisia tabaci (Hemiptera, Aleyrodidae) in China. Insect Science 18, 101-120;
* McKenzie CL & Osborne LS (2017) Bemisia tabaci MED (Q biotype) (Hemiptera: Aleyrodidae) in Florida is on the move to residential landscapes and may impact open-field agriculture. Florida Entomologist 100(2):481-484. <https://doi.org/10.1653/024.100.0213>;
* Moraes LA, Marubayashi, Yuli VA, Ghanim M, Bello VH, De Marchi BR, Barbosa LF, Ramos-Sobrinho R, Boykin L, Krause-Sakate R & Pavan MA (2017) New invasion of Bemisia tabaci Mediterraneann species in Brazil associated to ornamental plants. Phytoparasitica, 1-9;
* Mound LA & Halsey SH (1978) Whitefly of the World. A Systematic Catalogue of the Aleyrodidae (Homoptera) with Host Plant and Natural Enemy Data. British Museum (Natural History) and Chichester, Wiley, London, UK, 340 pp;