NAME OF THE ORGANISM: Tomato black ring virus (TBRV00)

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: Seed potato sector, Fruits (including hops) sector, Ornamental sector

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

Not relevant
Conclusion:

* Candidate: Seed potato sector, Fruits (including hops) sector, 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):

Belgium (2007); Bulgaria (2002); Croatia (2002); Czech Republic (1994); Finland (2011); France (1992); Germany (1993); Greece (1997); Hungary (1992); Ireland (1993); Netherlands (2015); Poland (2012); Sweden (1993); United Kingdom (1993); United Kingdom/England (1997); United Kingdom/Scotland (1997)
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: Fragaria (1FRAG) for the Fruits (including hops) 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?**

Yes
Conclusion:

Qualified **CONCLUSION ON THE STATUS:**

Recommended for listing as an RNQP, based on EPPO PM 4 Standard. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

No
Proposed Tolerance levels:

Zero tolerance based at least on visual examination for all categories of material, and on testing for Pre-basic and Basic material. A failure rate at 2%, for all viruses together, is proposed for the certified Fragaria material. **9 - Risk management measures:**
Is there a need to change the Risk management measure:

Yes
Proposed Risk management measure:

Based on a visual examination carried out during the last growing season at an appropriate time for the expression of symptoms.
- Non-certified material (‘CAC’): Plants showing symptoms of nepoviruses at the site of production should be rogued out and destroyed immediately (or if symptoms are not clear, plants may be tested and need not be destroyed if found free).
- Pre-basic, Basic, Certified material, additional measures (in addition to non-certified) could include:
• Testing of pre-basic and basic;
• Isolation;
• Soil testing for virus vector nematodes.
Justification (if necessary):

For Fragaria, two visual examinations are mandatory in the Marketing directive. However the SEWG concluded that for this virus, only one inspection would be sufficient. **REFERENCES:**

* EFSA Panel on Plant Health (PLH) (2013) Scientific opinion on the risk to plant health posed by Arabis mosaic virus, Raspberry ringspot virus, Strawberry latent ringspot virus and Tomato black ring virus to the EU territory with the identification and evaluation of risk reduction options. EFSA Journal 2013;11(10):3377, 83 pp. doi:10.2903/j.efsa.2013.3377". <http://www.efsa.europa.eu/en/efsajournal/doc/3377.pdf>;
* EU COM (2014) 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 Arabis mosaic virus, Raspberry ringspot virus, Strawberry latent ringspot virus and Tomato black ring virus;

HOST PLANT N°2: Fragaria (1FRAG) 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?**

Yes
Conclusion:

Evaluation continues

Justification (if necessary):

Fragaria x ananassa is covered by EPPO PM 4/11 Standard. There are various varieties of ornamental strawberry grown, of different species such as F. chiloensis or F. vesca, with different flower colours or foliage. Fragaria chiloensis, F. vesca and F. x ananassa (cultivated strawberry) are all minor hosts according to the EPPO Global Database. Ornamental strawberry may be propagated vegetatively (e.g. cv. Lipstick) or by seed (alpine strawberry F. vesca). **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:

No references could be found to the susceptibility or resistance of ornamental strawberry to infestation by Tomato black ring virus, as compared to the variation in normal strawberry cultivars, so it is concluded they would react to the pest in a similar way. Therefore it is concluded plants for planting are a pathway, and can be considered a significant pathway compared to others. **5 - Economic impact:**
Are there documented reports of any economic impact on the host?

No
Justification:

No specific documented references could be found for impacts on ornamental strawberry.
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?

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?

Conclusion:

Not candidate
Justification:

There are no data available on the economic impact on ornamental strawberry. Experts considered that ornamental Fragaria is a very minor use. Therefore they concluded that the ‘substantially free from’ requirement is sufficient to prevent indirect unacceptable economic impacts. **CONCLUSION ON THE STATUS:**

Disqualified: no data of economic impact on ornamentals. Experts considered that ornamental Fragaria is a very minor use. Therefore they concluded that the ‘substantially free from’ requirement is sufficient to prevent indirect unacceptable economic impacts. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

Yes
Proposed Tolerance levels:

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

Yes
Proposed Risk management measure:

Delisting. **REFERENCES:**

* EFSA Panel on Plant Health (PLH) (2013) Scientific opinion on the risk to plant health posed by Arabis mosaic virus, Raspberry ringspot virus, Strawberry latent ringspot virus and Tomato black ring virus to the EU territory with the identification and evaluation of risk reduction options. EFSA Journal 2013;11(10):3377, 83 pp. doi:10.2903/j.efsa.2013.3377". <http://www.efsa.europa.eu/en/efsajournal/doc/3377.pdf>;
* EPPO (2008) Certification scheme for strawberry. Bulletin OEPP/EPPO Bulletin 38, 430–437;
* EU COM (2014) 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 Arabis mosaic virus, Raspberry ringspot virus, Strawberry latent ringspot virus and Tomato black ring virus;

HOST PLANT N°3: 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°4: 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°5: Rubus (1RUBG) for the Fruits (including hops) 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?**

Yes
Conclusion:

Qualified **CONCLUSION ON THE STATUS:**

Recommended for listing as an RNQP, based on EPPO PM 4 Standard. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

No
Proposed Tolerance levels:

Zero tolerance based at least on visual examination for all categories of material, and on testing for Pre-basic and Basic material. A failure rate at 0.5%, for all viruses together, is proposed for the certified Rubus material. **9 - Risk management measures:**
Is there a need to change the Risk management measure:

Yes
Proposed Risk management measure:

Based on a visual examination carried out during the last growing season at an appropriate time for the expression of symptoms.
- Non-certified material (‘CAC’): Plants showing symptoms of nepoviruses at the site of production should be rogued out and destroyed immediately (or if symptoms are not clear, plants may be tested and need not be destroyed if found free).
- Pre-basic, Basic, Certified material, additional measures (in addition to non-certified) could include:
• Testing of pre-basic and basic;
• Isolation;
• Soil testing for virus vector nematodes. **REFERENCES:**

* EFSA Panel on Plant Health (PLH) (2013) Scientific opinion on the risk to plant health posed by Arabis mosaic virus, Raspberry ringspot virus, Strawberry latent ringspot virus and Tomato black ring virus to the EU territory with the identification and evaluation of risk reduction options. EFSA Journal 2013;11(10):3377, 83 pp. doi:10.2903/j.efsa.2013.3377". <http://www.efsa.europa.eu/en/efsajournal/doc/3377.pdf>;
* EU COM (2014) 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 Arabis mosaic virus, Raspberry ringspot virus, Strawberry latent ringspot virus and Tomato black ring virus;

HOST PLANT N°6: Rubus (1RUBG) 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?**

Yes
Conclusion:

Evaluation continues

Justification (if necessary):

Rubus is covered by EPPO PM 4/10 Standard. There are at least 10 species of Rubus grown for ornamental purposes for different flower colours or foliage. However experts recommended analysing the economic impact for Rubus ornamentals. Evaluation continues on the economic impact only. **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:

Usually propagated vegetatively and no references could be found to the susceptibility or resistance of ornamental Rubus as compared to the variation in normal Rubus cultivars, so it is proposed to conclude they would react to the pest in a similar way. **5 - Economic impact:**
Are there documented reports of any economic impact on the host?

No
Justification:

No specific documented references could be found for impacts on ornamental Rubus species as distinct from fruiting species.
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?

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?

Conclusion:

Not candidate
Justification:

There are no data available on the economic impact on ornamental rubus. Experts considered that ornamental Rubus is a very minor use. Therefore they concluded that the ‘substantially free from’ requirement is sufficient to prevent indirect unacceptable economic impacts. **CONCLUSION ON THE STATUS:**

Disqualified: no data of economic impact on ornamentals. Experts considered that ornamental Rubus is a very minor use. Therefore they concluded that the ‘substantially free from’ requirement is sufficient to prevent indirect unacceptable economic impacts. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

Yes
Proposed Tolerance levels:

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

Yes
Proposed Risk management measure:

Delisting. **REFERENCES:**

* EFSA Panel on Plant Health (PLH) (2013) Scientific opinion on the risk to plant health posed by Arabis mosaic virus, Raspberry ringspot virus, Strawberry latent ringspot virus and Tomato black ring virus to the EU territory with the identification and evaluation of risk reduction options. EFSA Journal 2013;11(10):3377, 83 pp. doi:10.2903/j.efsa.2013.3377". <http://www.efsa.europa.eu/en/efsajournal/doc/3377.pdf>;
* EPPO (2009) Certification scheme for Rubus. Bulletin OEPP/EPPO Bulletin 39, 271–277;
* EU COM (2014) 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 Arabis mosaic virus, Raspberry ringspot virus, Strawberry latent ringspot virus and Tomato black ring virus;

HOST PLANT N°7: Solanum tuberosum (SOLTU) for the Seed potato sector.

Origin of the listing:

PM 4/28 (1)
Plants for planting:

Plants intended for planting of nuclear stock, other than [true] seeds **3 - Is the pest already listed in a PM4 standard on the concerned host plant?**

Yes
Conclusion:

Qualified

Justification (if necessary):

Experts agreed that the nuclear stock should be tested or derived from mother plants which have been tested for this virus. **CONCLUSION ON THE STATUS:**

Recommended for listing as an RNQP, based on EPPO PM 4 Standard, only for the nuclear stock. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

Yes
Proposed Tolerance levels:

Zero tolerance, only for nuclear stock. **9 - Risk management measures:**
Is there a need to change the Risk management measure:

Yes
Proposed Risk management measure:

Nuclear stock should be tested or derived from mother plants which have been tested for Tomato black ring virus. **REFERENCES:**