



January 2018 PEST Report - THE NETHERLANDS

1.1 First outbreak of tomato chlorosis virus (ToCV) in greenhouse tomato fruit crops (*Solanum lycopersicum*) – Municipality 'Westland' and 'Zuidplas'

1.2 Executive summary

This report concerns the first official finding of tomato chlorosis virus (ToCV) at three tomato fruit production companies in the Netherlands. The virus is not specifically listed as a harmful organism in the EU directive 2000/29/EC, however it concerns a virus that can be transmitted by *Bemisia tabaci*, and as such is listed in annex IAI of Council Directive 2000/29/EC. The virus is established in several EU member states where it is not known to be subject to official measures. It should be noted that the virus can also be transmitted by *Trialeurodes vaporariorum*. The origin of the ToCV infections is unknown.

Official phytosanitary measures

Measures will be taken aimed at eradication of the virus, including control measures to eradicate whiteflies and immediate removal of symptomatic plants (ToCV symptoms). Measures are taken in view of the high density of tomato greenhouses in the vicinity. To trace the possible source of this outbreak a specific survey was completed of adjacent tomato greenhouses and the nursery that supplied the tomato plants of the first infested company. Adjacent companies of the first affected company were found free from the virus, whereas two other fruit production companies which had received plants from the same nursery were found positive. An initial survey of other tomato fruit production companies in the Netherlands will be completed by the end of January 2018.

Identity of the pest Tomato chlorosis virus (ToCV)

Categorization of the pest: Quarantine pest.

Location: Municipalities Westland and Zuidplas

Reason of the notification: First report

How the pest was found

(6) information submitted by professional operator

Information on the infested area, severity and source of the outbreak

Three companies are affected (one company: 5.9 and 3.4 ha; one company: 5 ha; one company: 7 ha). At all three companies, approximately 1,000 plants per company are affected by the virus.

1.3 Type of notification	(1) partial notification
2.1 Single Authority	Notification from the National Plant Protection Organization of the Netherlands – Netherlands Consumer and Product Safety Authority
2.2 Official contact	M.B. de Hoop. +31651584878 Email: m.b.dehoop@nvwa.nl
3. Location of presence of harmful organism	Municipality 'Westland' and 'Zuidplas'
3.2 Map of the location.	NA

4. Reason of the notification and pest status	(1) First presence of the harmful organism First report
4.3 Previous Pest status	Select: (8) Absent: no pest records
4.4 Current Pest status	Select: (15) Transient: actionable, under eradication
5. Information relating to the finding.	6) information submitted by professional operators, laboratories or other persons. The first suspicion of the grower dates back to April 2017. However the grower firstly informed the NPPO in November 2017.
5.2 Date of finding.	<p>The first presence of ToCV was confirmed by the National Reference Laboratory on 28 November 2017. The grower has sent a sample to a private laboratory in another Member State whereby ToCV was confirmed on 8 August 2017.</p> <p>Figure 1: Tomato plant with symptoms (yellow discolouring between the veins of the leaf).</p> 
5.3 Sampling for laboratory analysis	In all glasshouses with symptoms, plants were sampled for RT-PCR.
5.4 Laboratory	Mr M. Aveskamp

	Email: m.m.aveskamp@nvwa.nl National Reference Centre - NPPO of the Netherlands
5.5 Diagnostic method.	Symptomatic samples were tested by RT-PCR with primers amplifying a fragment of ca. 392 nt from the HSP70h-gen. The RT-PCR was validated for the detection of ToCV in single insects of <i>B. tabaci</i> . For final identification of ToCV, nucleotide sequences were analysed after sequencing PCR-products.
5.6 Date of official confirmation of the harmful organism's identity	28 November 2017
6. Information related to the area, severity of the finding and source of the finding	6.1. Size and delimitation of the infested area. Indication of one or more of the following options: (1) infested surface 21.3 ha (2) number of infested plants (pieces); 3,000 .
6.2. Characteristics of the infested area and its vicinity.	(3.1) greenhouse;
6.3. Host plants in the infested area and its vicinity.	<i>Solanum lycopersicum</i> . Many tomato companies are located in the immediate vicinity.
6.4. Infested plant(s), plant product(s) and other object(s).	<i>Solanum lycopersicum</i> , cultivars <i>Merlice</i> , <i>Prunaxx</i> and <i>Prunus</i> on rootstock (Maxifort).
6.5. Vectors present in the area.	Low density of whiteflies: <i>Bemisia tabaci</i> and <i>Trialeurodes vaporariorum</i>
6.6. Severity of the outbreak.	Approximately 150 infected plants were encountered in the initially affected compartment, whereby each week newly infected plants are observed, despite a very low level of whitefly presence. Infected plants show distinctive interveinal yellowing of full-grown leaves. Figure 2: Symptoms on a leaf of a tomato plant observed in the affected greenhouse. Note the regular green zone next to the interveinal yellowing is a typical symptom of ToCV.

	
6.7. Source of the outbreak.	The source is unknown.
7. Official phytosanitary measures	
7.1. Adoption of official phytosanitary measures.	(3) Official phytosanitary measures will be taken
7.2. Date of adoption of the official phytosanitary measures. In case of temporary measures, indication of their expected duration.	28 November 2017.
7.4. Objective of the official phytosanitary measures.	(1) eradication
7.5. Measures affecting the movement of goods.	(2) measures do not affect import into or movement within the Union of goods.

Indication of one of the following options	
7.6. Specific surveys.	<p>All adjacent tomato greenhouses of the first affected company have been investigated.</p> <p>An initial survey of other tomato fruit production companies in the vicinity of affected companies as well as other tomato fruit production companies in the Netherlands will be completed by the end of January 2018. In total at least 20 companies will be surveyed during this period.</p>
8. Pest risk analysis/assessment	<p>Indication of the following options: (2) Pest risk analysis, or preliminary pest risk analysis, under development.</p> <p>A broader inventory will be considered of the risks and management options for viruses which can be transmitted by Bemisia tabaci, taking into account the absence or presence of those viruses in the EU.</p>
9. Links to relevant websites, other sources of information.	<p>https://english.nvwa.nl/topics/pest-reporting</p>