



## June 2017 PEST Report - THE NETHERLANDS

National Plant Protection Organization  
POBox 9102  
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The Netherlands

### 1.1 Confirmation of eradication:

**First outbreak of Potato spindle tuber viroid on seedless *Capsicum annuum* plants for planting, without specific symptoms, in five professional greenhouses.**

### 1.2 Executive summary

This report confirms eradication of PSTVd in *Capsicum annuum*, following completion of eradication measures at affected companies and one year of surveillance of other *C. annuum* production companies, without further findings. The initial outbreak was reported in April 2016 (see earlier pest report on <https://english.nvwa.nl/topics/pest-reporting/contents/pest-reports>).

The first outbreak of PSTVd on seedless, or vegetatively propagated *C. annuum* plants for planting was detected on 30 March 2016 in five professional greenhouses. All findings were linked to the same propagation material. The suspicion was first reported to the NPPO of the Netherlands by the breeding company of these selections.

The propagation (stock) material of these *C. annuum* plants was imported by a Dutch nursery from Israel in 2014 and 2015. After making own mother plants, plants for planting of these selections were distributed to the affected companies in the Netherlands and some other EU Member States, who have been duly informed. All selections concerned small lots of plants intended for demonstration purposes. In one greenhouse in the Netherlands, the neighbouring tomato fruit crop also tested positive (1 ha) and following completion of the growing season the entire crop was destroyed.

In the Netherlands the same PSTVd sequence was found in all samples taken at the five greenhouses. This sequence appeared very similar to earlier findings of PSTVd on *Solanum jasminoides*. Early November 2016 one additional greenhouse with seedless *C. annuum* tested positive (3.28 ha), whereby specific measures for removal and destruction of the crop were applied. By the of 2016, measures for eradication at all six locations were completed.

PSTVd is listed as a harmful organism in the EU directive 2000/29/EC and is listed on the EPPO A2 list.

Identity of the pest: Potato spindle tuber viroid (PSTVd).

Categorization of the pest: Quarantine pest, EU Annex IAI, EPPO A2.


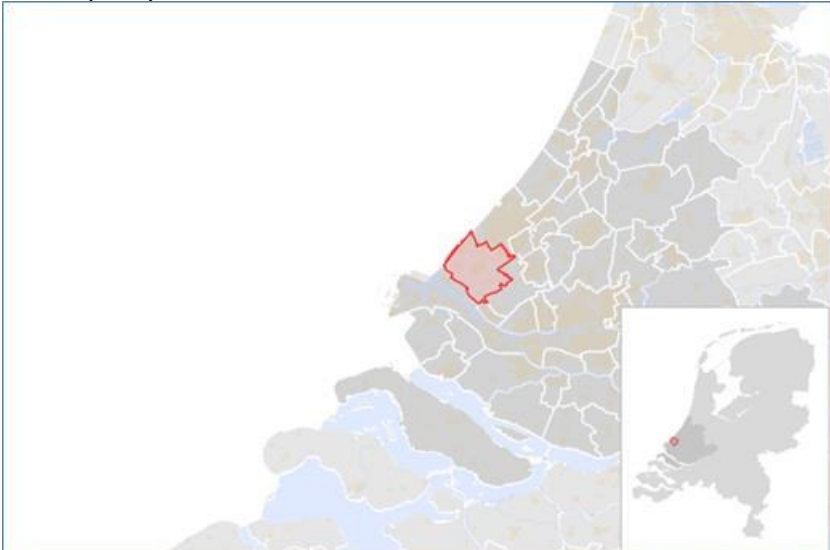
Location: One greenhouse in municipality 'Peel en Maas' and five greenhouses in municipality Westland


Reason of the notification: Close-out note following a finding in March 2016.

How the pest was found: (6) information submitted by a professional operator

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

No specific symptoms were observed on the plants. PSTVd infections were confirmed at five locations (Up to 1700 plants at three locations, 1 ha at two locations and 3.28 at one location). The infections concern young *C. annuum* plants for planting at five companies for demonstration purposes and one tomato fruit production crop.

<p><u>Official phytosanitary measures:</u> All infected material has been destroyed. All measures at affected companies were completed by 1 December 2016. In the course of 2016 a specific surveillance and testing of samples from 25 other fruit production companies of <i>C. annuum</i> was completed whereby no further findings of PSTVd were recorded.</p>	
<p><b>1.3 Type of notification</b></p>	<p>(4) closing note indicating the termination of the taken measures following confirmation of eradication based on surveillance and testing.</p>
<p><b>2.1 Single Authority</b></p>	<p>Notification from the National Plant Protection Organization of the Netherlands – Netherlands Consumer and Product Safety Authority</p>
<p><b>2.2 Official contact</b></p>	<p>M.B. de Hoop. +31651584878 Email: <a href="mailto:m.b.dehoop@nvwa.nl">m.b.dehoop@nvwa.nl</a></p>
<p><b>3. Location of presence of harmful organism</b></p>	<p>One greenhouse in municipality 'Peel en Maas' and five greenhouses in municipality Westland</p>
<p>3.2 Map of the location.</p>	<p>Municipality 'Peel en Maas'</p>  <p>Municipality Westland</p> 

<p><b>4. Reason of the notification and pest status</b></p>	<p>(2) appearance of the harmful organism in part of the territory, in which its presence was previously unknown. This concerns the first report of PSTVd on <i>C. annuum</i> plants for planting in the Netherlands. Earlier records of PSTVd in the Netherlands concern findings on <i>Brugmansia</i>, <i>Dahlia</i>, <i>S. jasminoides</i>, <i>S. lycopersicum</i> and <i>S. tuberosum</i>. See <a href="https://english.nvwa.nl/topics/pest-reporting/contents/pest-reports">https://english.nvwa.nl/topics/pest-reporting/contents/pest-reports</a></p>
<p><b>4.3 Previous Pest status</b></p>	<p>(17) Other. Transient: under eradication in <i>Solanum tuberosum</i> breeding material and <i>Capsicum annuum</i>; transient in ornamentals (<i>S. jasminoides</i>); Pest eradicated in <i>Dahlia sp</i> and <i>Solanum lycopersicum</i> fruit production</p>
<p><b>4.4 Current Pest status</b></p>	<p>(16) Other. Transient in ornamentals (<i>S. jasminoides</i>); Pest eradicated in <i>Dahlia</i>, <i>Solanum lycopersicum</i> fruit production, <i>Capsicum annuum</i> fruit production and <i>Solanum tuberosum</i> breeding material.</p>
<p><b>5. Information relating to the finding.</b></p>	<p>5.1 (6) information submitted by a professional operator as based on non-official testing results.</p> 

	Row of seedless <i>Capsicum annuum</i> (100 plants in a greenhouse for demonstration purposes) which tested positive for PSTVd.
5.2 Date of finding.	The finding was first reported by the operator on 23 March 2016, as based on non-official testing results carried out by the operator. Official testing confirmed PSTVd on 30 March 2016.
5.3 Sampling for laboratory analysis	One sample consists of up to 25 leaves for each lot of selections of plants for planting of <i>C. annuum</i> . Samples were taken at all six affected locations of each lot (normally selection).
5.4 Laboratory	Mr Anton T.C. van der Sommen. Tel: +31 65 124 7175 Email: a.t.c.vandersommen@nvwa.nl National Reference Centre - NPPO of the Netherlands
5.5 Diagnostic method.	(1) According to international standard protocol IPPC DP 07 ( <a href="https://www.ippc.int/en/publications/8073/">https://www.ippc.int/en/publications/8073/</a> ); Validation data published in the EPPO database on Diagnostic expertise – Validation data for diagnostic tests ( <a href="http://dc.eppo.int/validationlist.php">http://dc.eppo.int/validationlist.php</a> ). To confirm the presence of PSTVd, official samples taken by the NPPO were tested by RT-PCR using primers described by Shamloul et al. (1997). The identity was confirmed by sequence analysis of the complete genome obtained by sequencing of the obtained PCR product.
5.6 Date of official confirmation of the harmful organism's identity	Official testing confirmed PSTVd on 30 March 2016.
<b>6. Information related to the area, severity of the finding and source of the finding</b>	The infections concerned young <i>C. annuum</i> plants for planting at six locations (up to 1700 plants at three locations 1 ha at two locations, 3.28 ha at one location) and 1 crop of <i>S. lycopersicum</i> at one location (1 ha).
6.2. Characteristics of the infested area and its vicinity.	(3) Physically closed conditions (3.1) greenhouse; plants for planting of <i>C. Annuum</i> and <i>S. lycopersicum</i> ..
6.3. Host plants in the infested area and its vicinity.	In addition to plants for planting of <i>C. annuum</i> , also plants for planting of <i>S. lycopersicum</i> were cultivated at one location (1ha).
6.4. Infested plant(s),	Plants for planting of four selections of seedless of <i>C.</i>

plant product(s) and other object(s).	<i>annuum</i> and one tomato fruit crop.
6.5. Vectors present in the area.	Not relevant.
6.6. Severity of the outbreak.	No specific symptoms have been observed on the plants. However, it should be noted that non-infected control plants for comparison were absent and due to the plant age hardly any fruits were present.
6.7. Source of the outbreak.	The propagation (stock) material of <i>C. annuum</i> plants was imported by a nursery in the Netherlands from Israel both in 2014 and 2015. In the Netherlands a similar PSTVd sequence was found in all samples taken at the four locations. This sequence is very similar to earlier findings of PSTVd on <i>S. jasminoides</i> .
<b>7. Official phytosanitary measures</b>	
7.1. Adoption of official phytosanitary measures.	(1) Official phytosanitary measures in the form of destruction of all infected material have been taken. All affected greenhouses have been demarcated.
7.2. Date of adoption of the official phytosanitary measures. In case of temporary measures, indication of their expected duration.	Measures have been imposed at each location following official suspicion or confirmation of PSTVd (from 30 March 2016 onwards). The measures have been lifted following clearing and disinfection of the greenhouses by December 2016.
7.4. Objective of the official phytosanitary measures.	(1) Eradication.
7.5. Measures affecting the movement of goods. Indication of one of the following options	(2) measures do not affect import into or movement within the Union of goods.
7.6. Specific surveys.	A specific survey at 25 other companies cultivating fruits of <i>C. annuum</i> was completed in 2016, not resulting in any findings.
<b>8. Pest risk analysis/assessment</b>	(1) Pest risk analysis is not required (harmful organism is listed in Annex I or Annex II of Directive 2000/29/EC, or is subject to measures adopted pursuant to Article 16(3) of that

	Directive.
<b>9. Links to relevant websites, other sources of information.</b>	<p>Earlier records of PSTVd in the Netherlands concern findings on <i>Brugmansia</i>, <i>Dahlia</i>, <i>S. jasminoides</i>, <i>S. lycopersicum</i>, <i>C. annuum</i> and <i>S. tuberosum</i>. Detailed pest reports are accessible via the following link:</p> <p><a href="https://english.nvwa.nl/topics/pest-reporting/contents/pest-reports">https://english.nvwa.nl/topics/pest-reporting/contents/pest-reports</a></p>

#### **References**

Shamloul, A. M., Hadidi, A., Zhu, S. F., Singh, R. P., Sagredo, B. (1997). Sensitive detection of potato spindle tuber viroid using RT-PCR and identification of a viroid variant naturally infecting pepino plants. *Canadian Journal of Plant Pathology*, 19, 89-96.