Netherlands Food and Consumer
Product Safety Authority
*Ministry of Economic Affairs*

**National Plant Protection Organization**
POBox 9102
6700 HC Wageningen
The Netherlands

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## First finding of Potato spindle tuber viroid (PSTVd) in seeds of *Solanum sisymbriifolium,* originating in Asia.

This report concerns the first interception of PSTVd on seeds of *Solanum sisymbriifolium* originating in Asia. Thus far *S. sisymbriifolium* was not known as a host plant of PSTVd.

The suspicion of PSTVd on *S. sisymbriifolium* was reported by a NL breeding company in May 2017.It concerned a seed lot of 1400 kg that had been exported to a third country. Upon receipt the consignee reported a suspicion of PSTVd. Therefore, the remainder of this seed lot was sampled and tested at the laboratory of Naktuinbouw in the Netherlands. The suspicion of PSTVd was confirmed by real-time PCR with relatively high Ct values of 29-31, suggesting a low contamination rate. For identification, conventional RT-PCR and sequence analysis of the obtained amplicon were performed by the National Reference Centre of the NPPO in the Netherlands on 6 June 2017. The nucleotide sequence of a fragment of 157 nt confirmed the presence of a pospiviroid, and showed the highest identity with sequences of PSTVd. These results indicate that the detected species is most probably PSTVd. For definite identification of pospiviroids, however, the complete genome sequence should be considered. Due to a low viroid concentration it was not possible to obtain the complete genome sequence thus far.

The entire seed lot of 1400 kgs has mixed origins and was produced in 2012, 2014 and 2015 in two countries in Asia, by order of the breeding company in the Netherlands. All seed lots at the NL company are under investigation and traceback and – forward are ongoing. In the Netherlands, one seed lot of this company has been sown of which the crop will be destroyed. It is unknown whether PSTVd can be transmitted from contaminated seeds to the cultivated cropvia germination.

A preliminary risk analysis will be prepared to investigate the phytosanitary risk and possible management options.

*Solanum sisymbriifolium* is a tropical crop and only used occasionally as a trap crop for fields infested with potato cyst nematodes in the Netherlands. The use of *S. sisymbriifolium* for this purpose, may pose a risk to neighbouring and succeeding potato crops. Volunteers following cultivation have not been recorded. Moreover, full development of the crop is difficult in temperate climates. Since 2002 the plant breeder has gradually developed and marketed this crop. In 2008 and 2009 the NPPO sampled and tested 15 fields with crops of *S. sisymbriifolium.* All tests were negative for PSTVd. Since 2012 seed propagation shifted from Thailand to China.

The pest status for PSTVd in the Netherlands has not changed. Only occasional findings are recorded in ornamental solanaceous plants (*Solanum jasminoides*). Earlier outbreaks of PSTVd in a tomato fruit crop, vegetatively-propagated peppers, and breeding material of potato have been eradicated.