



June 2014 PEST Report - THE NETHERLANDS

National Plant Protection Organization
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Update of pest report March 2014

Finding of Potato spindle tuber viroid (PSTVd) in breeding material of *Solanum tuberosum* (potato) – no links with commercial cultivars of potato.

Introduction

Following the first finding of PSTVd in breeding material of *Solanum tuberosum* (potato) on March 7, 2014 at a breeding company, further testing results (549 tests) at the company revealed ten positive accessions in total. Five positive accessions originate from the breeder's greenhouse and the other five positive accessions concern plants in a field of the breeder, where tubers from greenhouse-grown plants had been planted. All related plant material has been destroyed. The possible introduction of PSTVd at the company could date several years ago and may have been introduced from other breeding programmes. Investigations of all companies with direct relationships with the affected company are on-going.

In order to further improve safeguards against the possible introduction of pospiviroids in the future, an intensified testing scheme will be completed by the end of July 2014 at all breeding companies in the Netherlands. Pending the outcome of these investigations no breeding material will be exchanged between companies.

Furthermore the annual survey programme for regular seed potatoes will specifically target PSTVd this year.

The organism is listed as a harmful organism in annex IAI of EU directive 2000/29/EC and is listed on the EPPO A2 list. Thus far no direct links have been identified with any commercially available potato cultivars. All deliveries of breeding material of the company to other EU Member States have been communicated to the NPPO concerned.

Reason for reporting finding of PSTVd in *Solanum tuberosum* (potato) in breeding material of *Solanum tuberosum* (potato).

Identity of the pest *Potato spindle tuber viroid* (PSTVd)

Categorization of the pest Quarantine pest EU Annex IAI

Location: Not relevant.

Pest status

Incidental finding in potato (*Solanum tuberosum*) at a breeding company. Under eradication.

Pest significance

Date of finding:

The identity of PSTVd was officially confirmed on March 7 2014 by the National Reference Centre of the NPPO. Following the first finding of PSTVd in breeding material of *Solanum tuberosum* (potato) on March 7, 2014 at a breeding company, further testing results (549 tests) at the company revealed in total ten positive accessions. Five positive accessions originate from the

breeder's greenhouse and the other five positive accessions concern plants in a field of the breeder, where tubers from greenhouse-grown plants had been planted.

Detection and identification (how the pest was found)

The finding resulted from systematic official controls of candidate material intended for in-vitro multiplication, derived from a breeding line of the breeding company. One potato accession line of a breeding company was found positive for PSTVd. This testing is part of the official surveillance system of the Netherlands for safeguarding the entire potato production column against PSTVd.

Impact

No specific impact has been observed on the plants itself. *In-vitro* propagation of the potato plant material was intended for renewing two accessions of the breeding collection of the company. Thus far no direct links have been identified with any commercially available potato cultivars.

Origin of the pest

Investigations are on-going in relation to the possible origin of the infection. Based on unofficial testing records of the company of retained nucleic acids of breeding material introduced at the company in previous years, the possible introduction of PSTVd at the company could date several years ago and may have been introduced from other breeding programmes.. It is the first time in over 30 years that PSTVd has been detected in potato in the Netherlands.

Phytosanitary measures

All plant material with direct clonal relationships to infected accessions has been destroyed. All other potato material at the company has been destroyed or will be subjected to integral testing (testing of each individual plant). Investigations of all companies having direct relationships with the affected company are on-going.

In order to further improve safeguards against the possible introduction of pospiviroids in the future, an intensified testing scheme will be completed by the end of July 2014 at all breeding companies in the Netherlands. Pending the outcome of these investigations no breeding material will be exchanged between companies. If new findings are detected at other companies, similar measures will be applied (destruction or integral testing of each plant) of all potato breeding material at the company concerned.

Since the beginning of the 1980s an official annual PSTVd testing scheme has been put in place of all newly registered varieties of second year pre-basic nuclear stock. In addition each candidate material (tuber or plant) intended for *in-vitro* propagation of potato material is tested for PSTVd. The latter safeguard system has ensured this finding of PSTVd. Approximately 2,000 to 3,000 PSTVd tests for candidate potato material and for *in-vitro* propagation are completed each year.

Furthermore the annual survey programme for regular seed potatoes will specifically target PSTVd this year.

References:

NPPO The Netherlands