



March 2016 PEST Report - THE NETHERLANDS

1.1 Update of pest reports March, June and September 2014 Confirmation of eradication of *Potato spindle tuber viroid* (PSTVd) in breeding material of *Solanum tuberosum* (potato) – no links with commercial cultivars of potato.

1.2 Executive summary

Full eradication of PSTVd in breeding material of potato is confirmed following two years of compulsory testing of all breeding plants actively used for crossing experiments, without any findings at other companies.

Following the first finding of PSTVd in breeding material of *Solanum tuberosum* (potato) on March 7, 2014 at one breeding company, all measures at the affected company and affiliated companies (integral testing, destruction: see June 2014 pest report) have been completed in September 2014. Also during fall 2014, as part of surveillance of breeding material, eleven samples tested positive at one research institute, which had exchanged potato germplasm with the breeding company in the past. Measures were imposed including destruction or integral testing of all remaining potato material to guarantee absence of PSTVd. No further findings were confirmed in 2015 (553 tests of genitors, 593 tests of potato research material at the affected research institute, and 97 voluntary tests). There are no links with commercial cultivars and no infections were found in the annual survey programme for regular seed potatoes in 2014 and 2015 (approximately 800 samples per year).

Official safeguards for preventing any contamination of registered cultivars will remain in place. Since the beginning of the 1980s an annual official PSTVd testing scheme has been in place of all newly registered varieties and second year pre-basic nuclear stock and no findings have been recorded in potato varieties of Dutch origin.

IMPORTANT:

Symptoms of PSTVd can be absent in young plants of potato or in certain varieties or in outdoor cultivation and, especially in germ plasm, may be difficult to discern from other artefacts (growth reduction and deformation of tubers and leaves). Testing is therefore a crucial instrument for determination of pest freedom.

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.

Reason for reporting Update report no. 3 – confirmation of eradication 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.

4. Reason of the notification and pest status

4.4 Current Pest status

(7) Absent: Pest found present but eradicated;

(12) Other.

Transient in ornamentals. One outbreak in *Dahlia* sp. 2013, eradicated.

Two findings in potato breeding material (*Solanum tuberosum*) in 2014, eradicated.
Incidental finding in tomato (*Solanum lycopersicum*) fruit production in 2013, eradicated.
Not known to occur in pepper (*Capsicum* L.).

4.3 Previous Pest status

Transient: 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. (see pest report March 2014).

A second finding at a research institute was confirmed at the beginning of September.

Detection and identification (how the pest was found)

See pest report March 2014.

Impact

Impact was limited to destruction of affected material. No direct links have been identified with any commercially available potato cultivars.

Origin of the pest

No specific origin of the infected material could be determined. The identified PSTVd genotypes indicate that the infections must have been present in potato germplasm for a long time and did not concern introductions from other plant genera.

Phytosanitary measures

a) eradication measures at affected companies

The first finding of PSTVd in breeding material was reported in March 2014. The origin could possibly be linked to a research institute. This triggered full investigation of all genitors at the research institute, whereby eleven samples tested positive in September 2014. Future use of remaining potato material of the research company was only permitted following repeated (twice) testing of each genitor prior to use.

b) Integral testing programme at all breeding companies

An integral testing programme of all breeding companies has been completed. As part of this programme in total more than 2,500 tests (1 test = 100 plants) were completed not resulting in any findings in 2014. No further findings were confirmed in any genitors during 2015 (553 tests of genitors (all companies), 593 tests of potato research material at the affected research institute, and 97 voluntary tests by other companies).

c) New safeguards for 2015 and thereafter

In order to further improve safeguards for the future, an integral testing programme at breeding companies has been made compulsory, whereby all breeding plants actively used for crossing experiments are tested each year. In 2015 audits were carried out at all crossing greenhouses (53 audits in 2015) as well as 175 field inspections.

d) Continuation survey programme of candidate material and newly registered varieties

The annual routine survey programme of all newly registered varieties has been completed. In addition each candidate material (tuber or plant) intended for *in-vitro* or tuber propagation of potato material is tested for PSTVd. The latter safeguard system has ensured the finding of PSTVd in March 2014. In total 3,500 samples are tested each year of which 2,000 applications of candidate material for in-vitro propagation and 1,500 samples of 2nd year prebasic stocks. Since the beginning of the 1980s an official annual PSTVd testing scheme has been put in place

of all newly registered varieties and second year pre-basic nuclear stock and no findings have been recorded since in varieties of Dutch origin.

References:

NPPO The Netherlands

March 2014 pest report NPPO NL

June 2014 pest report NPPO NL

September 2014 pest report NPPO NL