Plant Protection Service of the Netherlands

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Ministry of Economic Affairs, Agriculture & Innovation

PEST REPORT - THE NETHERLANDS

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UPDATE – new finding of TRSV on *Phlox subulata* perennials

1. Summary

This report concerns the second confirmed finding on a variety of *Phlox subulata* (variety 'Temiskaming') in 2010 of *Tobacco ringspot virus* (TRSV) in the Netherlands. This finding results from forward tracing of infested material which was reported in March 2010. However in this case a different variety ('Alexander Surprise') of *Phlox subulata* was found infested. The new finding indicates that TRSV probably has occurred on some varieties of *Phlox subulata* for a longer period in the Netherlands because in the latter case the propagation material has been used by the nuclear stock company for many years.
The harmful organism was intercepted following an official specific surveillance. This specific surveillance was initiated following the finding and eradication of TRSV in *Hemerocallis* and one variety of *Iris* in 2006. Because TRSV can occur without symptoms in many ornamental species (at least *Iris* and *Phlox)* testing of samples is always part of this survey.
This finding reconfirms that vegetative propagation is the only pathway of spread in the Netherlands. Phytosanitary measures will be taken focussing on integral testing requirements of all nuclear stock material of relevant varieties of *Phlox subulata* in 2011, prior to propagation.

TRSV is regulated as a harmful organism for the European Community (Annex IAI of EU directive 2000/29/EC) and is listed on the EPPO A2 list.

Pest status in the Netherlands: Transient on *Phlox subulata* (varieties 'Alexander Surprise' and 'Temiskaming') - under eradication

2. Details on the finding

TRSV was only detected in one lot of 2,480 plants. TRSV was identified with ELISA-DAS and confirmed by test plant reactions after mechanical inoculation. Other varieties of *Phlox subulata* at the same company all tested negative.
The positively tested lot is directly linked to specific nuclear stock obtained from another company which has been used for many years for propagation purposes. The nuclear stock is considered as probably contaminated. Some lots of cuttings from the infected lot have been delivered to customers during the period February to August 2010, including one customer in another Member State. In previous years cuttings from the related nuclear stock have been delivered to several companies throughout Europe, for the production of plants for planting probably destined for the final consumer.

3. Detection/Identification

The Netherlands Plant Protection Service routinely carries out monitoring surveys for TRSV on plant material without symptoms. Samples were found positive on TRSV in a DAS-ELISA test. The results were confirmed by nepovirus-like symptoms on the mechanically inoculated plants of *Chenopodium quinoa*, *Nicotiana benthamiana* and *N. occidentalis*-P1. Final confirmation was by ELISA testing of systemically infected leaves of *N. occidentalis*-P1.

4. Means of movement and dispersal

Because the principal vector (the nematode *Xiphinema americanum*) is absent in the Netherlands, the main pathway for spread is vegetative propagation. Moreover only one variety of *Phlox subulata* was found infested, whereas adjacent lots of other varieties tested

negative. This is also reconfirmed by the fact that both TRSV isolates from both *Phlox subulata* varieties concern different strains, indicating different sources of infestation. For *Phlox* species this is common practice. Cuttings are collected from mother plants and planted, after rooting, in new peat moss. The facts that both mother plants and young plants from these mother plants were infected, indicates that vegetative propagation is the pathway for TRSV spread in The Netherlands. It is presumed that TRSV has been present in certain *Phlox subulata* varieties for many years, although unnoticed.

5. Phytosanitary Measures

Phytosanitary measures will be targeted at all nuclear stock of *Phlox subulata* (varieties 'Alexander Surprise' and 'Temiskaming') to allow for eradication. Lots of nuclear stock which are tested positive for TRSV will be destroyed. By including an obligatory testing protocol starting in the 2011 growing season for this type of propagation material, this will result in eradication of the harmful organism at propagation companies and eventually at producers of products for the final consumer. Depending on the outcome of on-going surveillance efforts in coming years this testing requirement may be widened to other *Phlox* species or other genera of nuclear stock for plants for planting.

6. Phytosanitary risk and impact

In the absence of the nematode vector *Xiphinema americanum*, the possibilities for establishment in the field or in the greenhouse are limited. In addition the infection of *Phlox subulata* is not considered a major pathway for the main crops at risk for TRSV such as *Vaccinium* (blueberry) and *Glycine max* (soybean).

References

NPPO The Netherlands
(pest report March 2010; pest record December 2008; pest report December 2006)