Netherlands Plant Protection Service

Ministry of Agriculture, Nature and Food Quality
P.O.Box 9102
6700 HC Wageningen
The Netherlands

agriculture, nature
and food quality

PEST RECORD

***Tuta absoluta* Povolny (*Gelechiidae)* – tomato leaf miner - in tomato packaging facility in The Netherlands**

Introduction
This record concerns the first official finding of 3 specimen of *Tuta absoluta* in the Netherlands as a result of a pheromone trap survey in a tomato packaging and sorting facility specialised in packaging vine tomatoes. At the time of capture most fruit tomatoes at the packing station originated in Spain. The findings were detected on 22 January 2009 following an occurrence survey targeted at trading facilities that are specialised in packaging tomatoes. *T. absoluta* is not listed as a harmful organism in the EU directive 2000/29/EC). *T. absoluta* is listed on the EPPO A1 list . *T. absoluta* is a serious pest for tomato production in South America and Spain and based on a preliminary pest risk analysis conducted by The Netherlands it can be a serious pest in greenhouses with continuous tomato production as well.

Geographical distribution
South America: present (EPPO2005, Datasheet *Tuta absoluta* datasheet. *OEPP/EPPO Bulletin 35: 434-435.*
Spain: present in several areas (EPPO, 2008; Additional information provided by Spain on EPPO A1 pests. EPPO reporting service (ES-Ta/2008-01); letter of NPPO Spain to EU commission on 11-08-2008 and 12-09-2008).
Algeria: present and under official control (EPPO 2008 First record of *Tuta absoluta* in Algeria. EPPO reporting service 2008/135.)
Morocco: present, under eradication (EPPO 2008, First record of *Tuta absoluta* in Morocco. EPPO reporting service 2008/174),
France: 1 record (letter of NPPO France to EU commission on 19-01-2009)

Pest status in the Netherlands: Absent, confirmed by surveys. Incidental finding (this pest record).
Host plant range: *Lycopersicon esculentum (*tomato), *Solanum tuberosum* (potato), solanaceous weeds (*S. nigrum),* ornamental *Solanaceae* (e.g. Petunias, Schizanthus)

Impact
The finding was detected at a central tomato packaging facility, located in an industrial area close to a greenhouse area with tomato production. At this location, assortment and packaging of bulk vine tomatoes from growers in The Netherlands and Spain is common practice. From November until April, the volume of Spanish tomatoes packed at this location is high compared to the volume of Dutch tomatoes.The finding has no direct impact on the production of tomatoes in The Netherlands, because the packaging location is not adjoining a production facility. Dispersal from the packaging location to greenhouses may be possible in spring and summer, but is not likely in winter. Since the number of specimen found in the survey is low (3 adults), there is no evidence of a population.
The potential impact of *T. absoluta* can be very high, in case of introduction of the pest in greenhouses. Both yield and fruit quality can be significantly reduced and crop losses up to 100% have been reported. Unacceptable levels of cosmetic fruit damage may occur in fresh market tomato production due to the mining habit of the organism. Without any control measure the potential damage may be 100%. In case specific control measures are applied, crop losses would still amount to 1-5 % damage.

DATE: February 2009

Surveillance
Since April 2008, The Netherlands is monitoring the occurrence of *T. absoluta* on 10 tomato packaging facilities and tomato production facilities known to process tomatoes from other countries then the Netherlands during the period when the production volume in The Netherlands is low. *T. absoluta* has never been found in annual surveys in tomato production facilities and nurseries in The Netherlands.

Origin of the finding
The origin of the finding is most likely a consignment of tomatoes that has been transported into the packaging location in The Netherlands from the infected area in Spain. The production facility in Spain is located in Almeria, close to Murcia.

Inspection and detection methods
The specimen were detected in a deltatype trap with pheromone lures of *T. absoluta* located in the vicinity of a machine that is used for grading and packaging of Spanish tomatoes. The inspection was executed on January 22 after placement of the trap on December 16.
Identification was performed by the Netherlands Plant Protection Organisation through comparison of a genital dissection of two of the adults with:
- reference material obtained from a Spanish laboratory strain
- original description of the species by Povolny
- photomaterial of a dissection by J-F.Germain on the EPPO-website.

The identification was confirmed by Mr.O.Karsholt (Zoological Museum, University of Copenhagen), based on photographs of the dissection, and was also supported by molecular comparison of one of the specimens and reference material: the sequences of the Co1- and Cytb-gene where 100% identical for both specimen.

Phytosanitary risks
Based on the conclusions of the pest risk analysis of the Netherlands, the occurrence of *T. absoluta* in packaging facilities can pose a risk for production facilities that are located in the vicinity of these packaging facilities. Assortment and packaging of tomatoes usually takes place at central facilities located amid greenhouses for the production of tomato fruits, or sometimes even at the same location. Bulk transports of tomato from areas where the pest occurs may enter these facilities and spread to these places of production**.** The trade volume of tomato fruits from Spain to The Netherlands is large during the winter. The import of tomato from other infected countries is low.
The risk is considerably high for tomato production in greenhouses, but is low for the outdoor production of potato. The organism is not able to survive winter conditions in The Netherlands, and although potato field maybe infected during summer months, it is not expected that this will lead to significant damage, because the organism will not directly affect the tubers.

Phytosanitary measures
No specific control measures have been taken on the location, because the risk of spread of *T. absoluta* from the concerned location to greenhouses is low: there are no greenhouses in the direct vicinity of this packaging location. Measures will be taken to further monitor the occurrence of *T. absoluta* in tomato packaging facilities and production facilities, especially focussinged on facilities that produce tomatoes and pack tomatoes from other (Spanish) growers at the same location. Furthermore, growers and trade will be informed about the finding and about the possible risk of *T. absoluta* for tomato production.

Reference:
NPPO of the Netherlands

DATE: February 2009