Netherlands Plant Protection Service

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agriculture, nature
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PEST REPORT

***Tomato yellow leaf curl virus* (TYLCV*)* on *Lycopersicon lycopersicum* (tomato) plants**

Summary
This report concerns the first official findings of TYLCV recorded in the Netherlands. TYLCV is listed as a harmful organism for the European Community which is known to occur in the Community and specifically regulated on tomato plants intended for planting, other than seeds (see Annex IIAII of Council Directive 2000/29/EC as amended). The outbreak was first suspected at one company in the beginning of September and officially identified at the end of September. Currently, findings concern a small number of companies and a very low number of infected plants (varying between three and approximately twenty plants per company). Thus far, no findings have been recorded at companies producing plantlets intended for sale to professional growers. The source of the outbreak has not been identified. A nationwide specific surveillance has been planned to determine the extent of the outbreak.

Pest status: Transient, on *Lycopersicon lycopersicum* (tomato) plants.

Phytosanitary measures
Measures at companies are ongoing in the Netherlands, whereby affected plants are removed and destroyed. Furthermore, relevant companies have to apply insecticide treatments aimed at eradicating populations of *B. tabaci*. A hygienic protocol is required at affected companies for preventing further spread. Trace-back has been initiated for determining the possible source of the outbreak. Trace-forward is not relevant, because the plants are not traded by the companies concerned. A specific survey has been planned for to determine the full extent of the outbreak. Since specific surveillance of companies growing plants for planting (for fruit production, seed production, or propagation purposes) has been carried out during previous years, it is presumed that this is the first outbreak of TYLCV in the Netherlands.

Impact and phytosanitary risk
The impact at relevant companies is limited in terms of damage, as only a very small number of plants is affected.

Means of movement and dispersal
The origin of the infections is unclear.

Detection and inspection methods
Detection has been carried out using PCRs with degenerate primers for begomoviruses (Deng et al., 1994; Wyatt and Brown, 1996) The virus was identified as TYLCV by analysis of the PCR products obtained by PCRs with both primers sets.

References:
- NPPO of the Netherlands
- Deng D, McGrath PF, Robinson DJ & Harrison BD (1994). Detection and differentiation of whitefly-transmitted geminiviruses in plants and vector insects by the polymerase chain reaction with degenerate primers. Annals of Applied Biology 125: 327-336.
- Wyatt SD & Brown JK (1996). Detection of subgroup III Geminivirus isolates in leaf extracts by degenerate primers and polymerase chain reaction. Phytopathology 86: 1288-1293.

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