Institut für nationale und internationale Angelegenheiten der Pflanzengesundheit
Institute for National and International Plant Health

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Federal Research Centre for Cultivated Plants

www.jki.bund.de

Completed notification of the presence of a harmful organism according to Article 16(2) of Council Directive 2000/29/EC

1 General information	
1.1 Title	First finding of *Liberibacter solanacearum (Candidatus Liberibacter solanacearum)* in Germany
1.2 Executive summary	This is the first finding of *L. solanacearum* in Germany. Symptoms in carrots have been observed for 4-5 years on the concerned field in Lower-Saxony. The disease was investigated only last year by a scientist who notified the finding to the responsible official body. The disease is transmitted by the vector Carrot psyllid (*Trioza apicalis*) that is widespread in Europe. The pathogen has been identified by PCR. In 2015 the region will be officially surveyed to define the infested area.
1.3 Notification status	Notification in accordance with Article 2(4) of Decision 2014/917/EU
2 Information concerning the single authority and responsible persons.	
2.1 Notification from	Julius Kühn-Institut (JKI), Institute for national and international Plant Health, Germany
2.2 Official contact:	Katrin Kaminski, Tel: +49(0)531 299 3378, notify@jki.bund.de
3 Location	
3.1 Location	Administrative district Hameln-Pyrmont, community Aerzen in Lower-Saxony

3.2 Further information about the location	No further information available about the exact locations of the relevant fields in Aerzen in the last few years.
4 Reason of the notification and the pest status	
4.1 First finding in Germany or in the area	First confirmed presence of the harmful organism in the territory of Germany
4.2 Pest status of the area where the harmful organism has been found present, after the official confirmation.	Present, only in one area (Hameln/Aerzen)
4.3 Pest status in Germany before the official confirmation of the presence, or suspected presence, of the harmful organism.	Absent, no pest records.
4.4 Pest status in Germany after the official confirmation of the presence of the harmful organism.	Present, only in one area (Hameln/Aerzen)
5 Finding, sampling, testing and confirmation of the harmful organism.	
5.1 How the presence or appearance of the harmful organism was found.	Information submitted by professional operator and scientist of the JKI
5.2 Date of finding:	The responsible body received first information from the scientist on 15 December 2014. The symptoms of the disease were already present for 4-5 years but misinterpreted. It was presumed that the carrot psyllid *Trioza apicalis* caused the symptoms.
5.3 Sampling for laboratory analysis.	The carrots were sampled after harvest.
5.4 Name and address of the Laboratory.	Julius Kühn-Institut, Institute Plant Health, Stahnsdorfer Damm 81, 14532 Kleinmachnow
5.5 Diagnostic method.	PCR according to peer reviewed protocol: Levy, J.; Ravindran, A.;Gross, D.; Tamborindeguy, C.; Pierson, E. (2011): Translocation of 'Candidatus Liberibacter solanacearum', the Zebra Chip pathogen, in potato and tomato. Phytopathology

	101 (11); 1285-91
5.6 Date of official confirmation of the harmful organism's identity.	8 March 2015
6 Infested area, and the severity and source of the outbreak in that area.	
6.1 Size and delimitation of the infested area.	The extent of the infestation is unknown yet.
6.2 Characteristics of the infested area and its vicinity.	Open air – production area: carrot field (plants for consumption) in organic farming
6.3 Host plants in the infested area and its vicinity.	Carrot (*Daucus carota*) and potato fields (*Solanum tuberosum*)
6.4 Infested plant(s), plant product(s) and other object(s).	*Daucus carota*
6.5 Vectors present in the area.	Carrot psyllid *Trioza apicalis*
6.6 Severity of the outbreak.	Crinkled leaves and stunt symptoms were observed before harvest of the carrots. Official sampling and diagnosis toke place after harvest. Based on the symptoms it is suspected that 50-100 % of the carrot stock was infested.
6.7 Source of the outbreak.	It is presumed that the pathogen might have been spread naturally by the vector. According to EPPO PQR the pathogen has been notified from other European countries in 2011/12 (FI, NO, SE, FR, ES).
7 Official phytosanitary measures.	
7.1 Adoption of official phytosanitary measures.	The decision on whether official phytosanitary measures will be taken is pending. As carrots were already harvested at the date of official confirmation of *L. solanacearum* no phytosanitary measures were adopted so far. At the date of confirmation, the harvested carrots had been either already discarded

	or already sold by the farmer. Yet, no organic pesticide is known to regulate the vector. In this context, a project will be performed in the concerned area to gain more knowledge of measures to effectively control *Trioza apicalis.* Furthermore, surveys of carrot and potato fields in the concerned area are planned for the current growing season (see 7.6)
7.2 Date of adoption of the official phytosanitary measures.	n/a
7.3 Identification of the area covered by the official phytosanitary measures.	The official survey will be carried out on carrot and potato fields of different growers in Hameln/Aerzen.
7.4 Objective of the official phytosanitary measures.	The focus of the measures to be undertaken in the current growing season will be the containment of the vector. In this context, several plant protection products accompanied by different agricultural techniques will be evaluated in a project that will be carried out in 2015.
7.5 Measures affecting the movement of goods.	The measures do not affect import into or movement within the Union of goods.
7.6 Specific surveys.	Official surveys of the carrot and potato fields are planned in the concerned area. Plants with symptoms will be sampled and tested for *L. solanacearum* at least two times between June and August.
8 Pest risk analysis/assessment	
Pest risk analysis exists (JKI and EPPO). The phytosanitary risk for Germany and other Member States is considered high, with medium uncertainty of the assessment. The pathogen is not listed in the Directive 2000/29/EC but on the EPPO A1 list. *L. solanacearum* originates in North America. Potatoes, tomatoes, and pepper can be damaged heavily and carrots can also be damaged. As far as known up-to-now in Europe the disease has only been found on carrots but not on Solanaceae hosts. Some psyllids are the vectors. The disease can be transmitted with the vectors or	

with infested plant material. The phytosanitary risk is especially high for potato growing areas where the vector *Bactericera cockerelli* can establish. The control of the vectors is difficult and requires intensive use of insecticides.

9 Links to relevant websites, other sources of information.

Express-PRA (JKI, 2013), in German:
http://pflanzengesundheit.jki.bund.de/index.php?menuid=57
EPPO:
http://www.eppo.int/QUARANTINE/Pest_Risk_Analysis/PRA_intro.htm