

Pest Information Note

What is it?

C. l. solanacearum is a recently discovered species of bacteria associated with serious diseases of potatoes and tomatoes. The pathogen is considered the causal agent of Zebra Chip, a disease of potatoes which has caused significant economic losses in the Americas and New Zealand due to a reduction in yield and quality of the potatoes.



Transmission

The Tomato/ Potato psyllid (*Bactericera cockerelli*) is suspected as the vector of this disease. *C. l. solanacearum* was added to the EPPO (European Plant Protection Organisation) alert list in 2009 and has since been detected in carrot and celery (Apiaceae) crops in Europe in association with other psyllid species but *C. l. solanacearum* and *B. cockerelli* have not been detected in tomato or potato crops in Europe.



The bacterium has been found on a wide variety of plants in twenty families but has been reported to complete its lifecycle only on Solanaceae, Convolvulaceae and Lamiaceae. However, as

Candidiatus liberibacter solanacearum is a relatively newly discovered disease, future studies may reveal a wider host and vector range.

Symptoms

Potatoes: Purple top, shortened internodes, smaller leaves and enlargement of stems, swollen axillary buds, aerial tubers and unproductive tubers. The most distinctive symptom is the striping of the tubers when cut. This effect is accentuated when the potatoes are cut and fried.

Tomatoes: Plant stunting, chlorotic apical growth, leaf curling and fruit deformation.

Capsicum: Pointed, chlorotic leaves, upward leaf curling, shortened internodes and petioles, necrosis of the main apical meristem, flower abortion and plant stunting.



Carrots: Leaf curling, yellow and purple discolouration of leaves, stunting of roots and shoots and proliferation of secondary roots.

Reasons for concern

Both New Zealand and parts of the Americas have experienced serious economic impact due to the infection of potato and tomato plants.

Host plants of *C. l. solanacearum* are widely planted throughout Europe and are economically significant. Although the vector, Potato/Tomato Psyllid, has not been detected in the Europe to date, the climate of the region is presumed to support it. Crops produced both in field and glasshouse conditions are at risk of infection.

Actions in the event of suspect cases

Any suspected sightings of this disease in suspect plants or psyllids should be reported to your local plant health inspector or the Division Headquarters at the number below.

Horticulture and Plant Health Division,
Department of Agriculture, Food and the
Marine,
Backweston Administration Building,
Backweston Campus,
Celbridge,
Co. Kildare.
Phone: 01-5058885
Fax: 01-6275994
Email: plantandpests@agriculture.gov.ie.

Further information and symptoms of this pest can be viewed on the website of the European Plant Protection Organisation (EPPO) by clicking on the links below.

http://www.eppo.int/QUARANTINE/Alert_List/bacteria/Liberibacter_psyllaurous.htm