

DAFM Plant Pest Factsheet

Bactericera cockerelli tomato/potato psyllid

EU
Priority
Pest!



Fig 1: Adult *Bactericera cockerelli*. The adult psyllids are only around 2.5mm long.

Pest Characteristics

- **Pest:** *Bactericera cockerelli*
- **Common name:** Tomato/potato psyllid
- **Hosts:** *Bactericera cockerelli* primarily feeds on species from the Solanaceae family including the crop hosts (potato, tomato) and wild hosts
- **Invasive Risk:** The psyllid poses a risk through its direct feeding impact and due to its ability to vector '*Candidatus Liberibacter solanacearum*', a bacterium that cannot be transmitted mechanically but may be spread into new areas by infected *B. cockerelli*. Both the psyllid and bacterium have invaded new regions, such as in New Zealand. Additionally, there has been interceptions of *B. cockerelli* recorded in trade into Europe.
- **Entry Pathways:** Planting material and fruit (tomato, pepper, eggplant) especially when they are associated with green parts (e.g. truss tomato)
- **Impact:** Potato and tomato growers have suffered extensive economic losses in regions where *B. cockerelli* and '*Candidatus Liberibacter solanacearum*' occur. Together their association is commonly known as 'zebra chip' disease of potatoes. Given the significant impact it has in regions where it occurs, potential impact for Ireland is high.
- **Symptoms:** The three life stages (eggs, nymphs, adults) are very small (<3mm) but can be seen with the naked eye. For example, Fig 2 (a) adult with yellow eggs. Also, characteristic is white excrement or 'psyllid sugars' on leaf surface that adults and nymphs produce Fig 2 (a) & (b). Symptoms of zebra chip disease of potato should also be monitored, the most characteristic symptoms being brown streaking within the tuber (c) & (d).

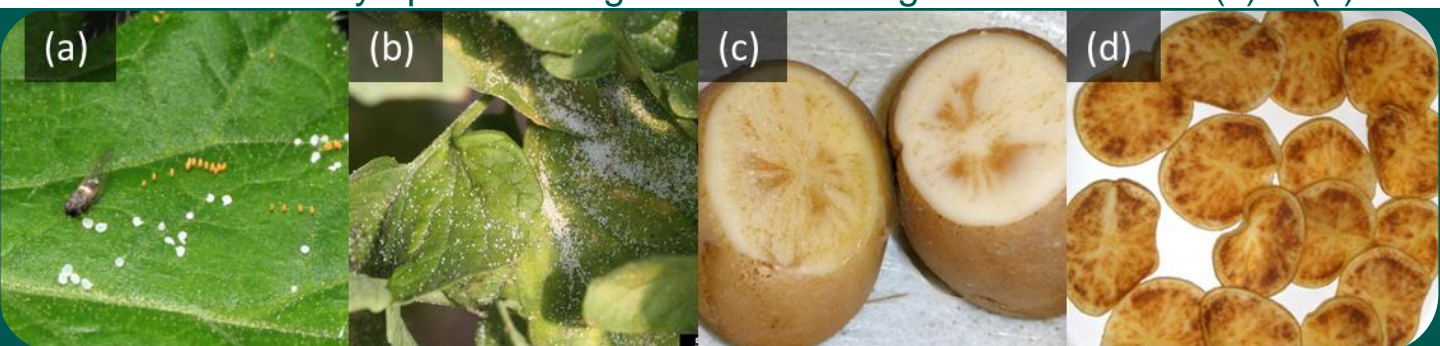
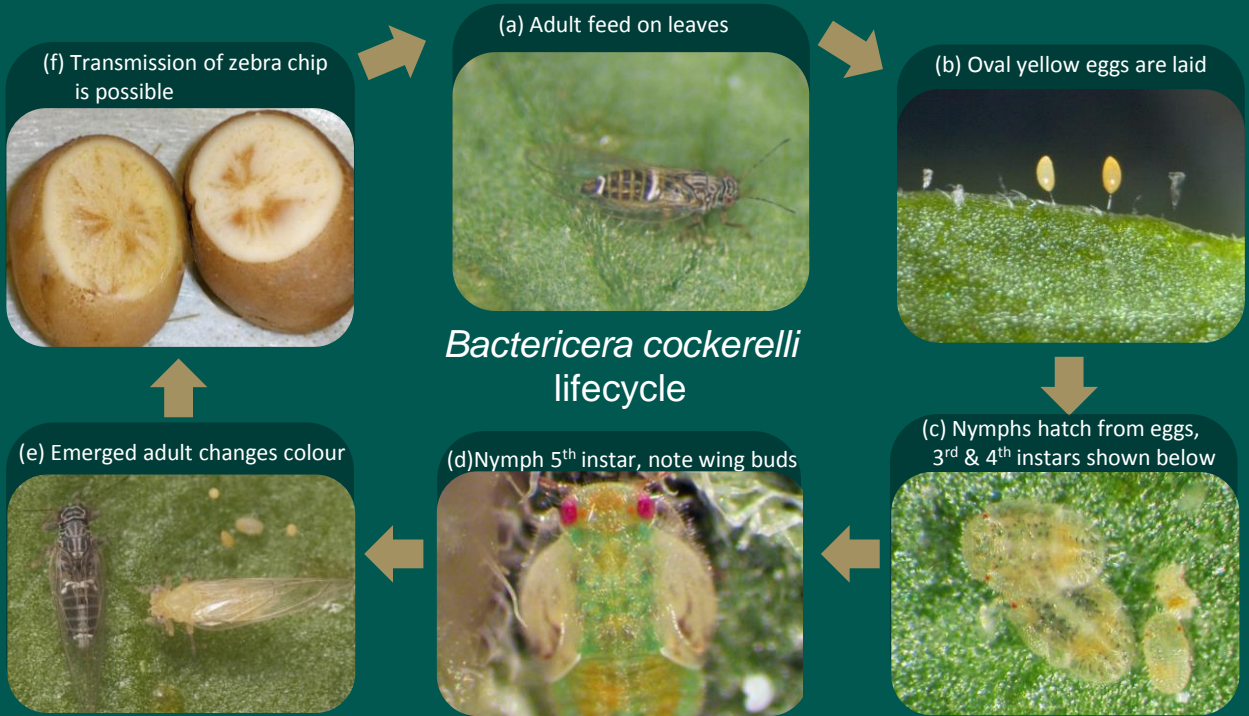


Fig 2: (a) fully developed adult, with eggs (yellow) and excrement/ psyllid sugars; (b) large quantities of psyllid sugars; (c) & (d) 'zebra chip' symptoms. More photos are available on the [EPPO Database](#)



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- **Lifecycle:** (a) Adults feed on leaves and mate b) eggs are laid, attaching to leaves by a thin stalk (c – d) nymphs hatch from eggs, and undergo five nymphal stages. They are mostly found on the lower surfaces of leaves and are generally sedentary (e) newly emerged adults are pale, becoming darker in colour within days, adults can disperse (f) the bacterium causing zebra chip can be transmitted to new hosts during feeding. Multiple generations (3-7) of the psyllid are possible dependent on temperature.
- **Adaptability:** Considering modelling and the distribution of *B. cockerelli* throughout New Zealand, this pest is could become established outdoors in Ireland. Major outdoor hosts (*Solanum* spp.) are available. Indoor protected glasshouse cultivation is also at risk.
- **Dispersal:** Adults actively disperse between plants, long distance wind assisted dispersal is believed to occur in the order of 100s of kms
- **Distribution:** *Bactericera cockerelli* is native to North America. It is also found in Central, Southern America and has invaded areas of Oceania with the psyllid and the associated zebra chip disease found in NZ (Fig 3).
- **If suspected:** DAFM perform annual surveys to substantiate Irelands pest free status for *B. cockerelli* .If you find suspected symptoms/specimens, please submit images to DAFM at: plantpestreport@agriculture.gov.ie

Photo credits: Fig 1, Fig 2 (c), (d) Lifecycle (b), (f) © [Plant & Food Research](https://www.plantandfoodresearch.co.nz/); Fig 2 (b) Lifecycle (a), (e) © Whitney Cranshaw, Colorado State University, Bugwood.org; Fig 2 (a), Lifecycle (c), (d) © Joseph E. Munyaneza/USDA-ARS [CABI](https://www.cabi.org/)

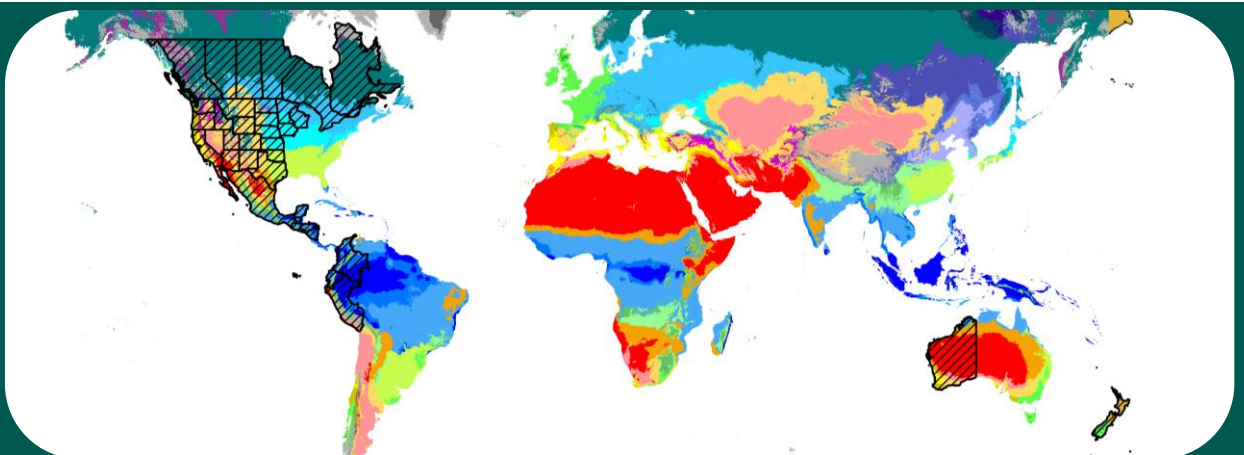


Fig 3: Known world distribution of *B. cockerelli* (cross hatched areas) overlaid on regional climate classifications



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