Candidatus liberibacter solanacearum haplotype C: vector, insect feeding damage and symptoms of the bacterium infection on carrot

Anne Nissinen, Luke

Haplotype C: vector

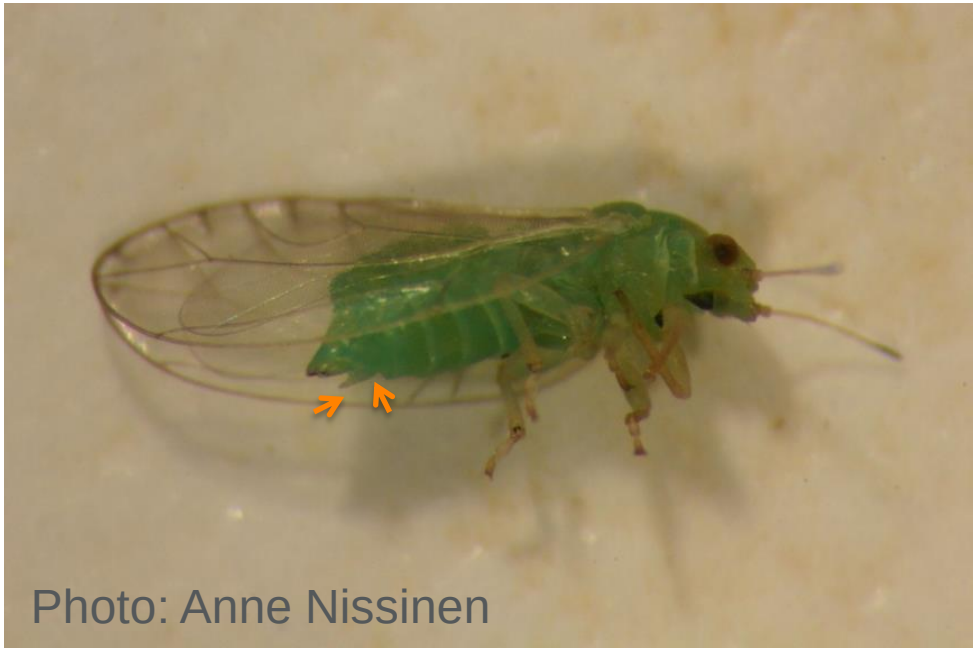


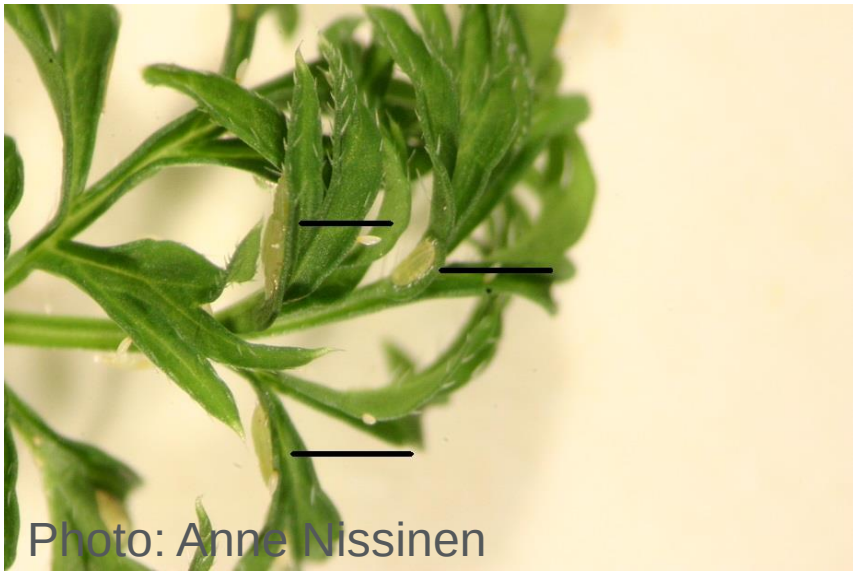
Photo: Anne Nissinen

- Identification of *T. apicalis* is based on genital parts
- The tip of the subgenital plate of *T. anthrici* is longer and narrower than in *T. apicalis* (in the photo). In addition, the subgenital plate is curved beneath whereas in *T. apicalis* it is straight. Differences are pointed by arrows. (for further details see Burckhardt & Freuler 2000)

Trioza apicalis on carrots

Female

Eggs and nymphs



Nymphs are pointed by arrows.

Leaf curling: psyllid feeding damage caused by over-wintered *T. apicalis* females

Psyllid feeding damage without and with CaLsol infection

Female CaLsol-

Female CaLsol+

Leaf curling caused by psyllid feeding

(See Nissinen et al. 2014. Plant Pathology 63, 812–820)

Haplotype C: symptoms on carrot

Discolouration starts from the leaf edges

Fully discoloured leaves

Haplotype C: symptoms in the carrot fields

Leaf curling + discolouration

Leaf curling + discolouration

Haplotype C: symptoms in the carrot fields