

Epidemiology and diagnosis of potato phytoplasmas and *Candidatus Liberibacter solanacearum* and their contribution to risk management (PHYLIB)



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Research consortium

SASA-UK, FERA-UK, IVIA-SP, CIMA-CSIC-SP, ILVO-BE, PPI-TR, Univ.-Helsinki-FI, Phytolab-HU; CFIA-Canada, ANSES-FR, INRA-FR, PPS-NL

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Goals

The goal of PHYLIB is to support the work of national plant protection organizations (NPPOs) in producing PRAs and in the rapid and reliable detection and identification of phytoplasmas and *Ca. Liberibacter* infecting potato by method development and evaluation.

Objectives

- Evaluate methods for the reliable maintenance of isolates in potato and in other hosts (*in vitro* and *in vivo*).
- Establish the most reliable sampling protocol for detection of the pests in potato (and other hosts if relevant) for use especially in post-entry potato quarantine or for the production of pest free nuclear potato stocks.
- Study the epidemiology *Ca. Phytoplasma solani* and *Ca. Liberibacter solanacearum* including hosts, vectors, seed transmission, biology, establishment and impact.
- Identify available diagnostic protocols (laboratory and in-field methods) and develop new protocols if necessary.
- Set up a proficiency testing scheme (or ring test) for potato phytoplasmas and *Ca. Liberibacter solanacearum*

Key outputs and results

- Bertolini E, Teresani GR, Loiseau M, Tanaka FAO, Barbé S, Martínez C, P. Gentit P, López MM, Cambra M. 2014., Transmission of '*Candidatus Liberibacter solanacearum*' in carrot seeds. ***Plant Pathology***. DOI: 10.1111/ppa.1224
- Loiseau M, Garnier S, Boirin V, Merieau M, Leguay A, Renaudin I., Renvoisé J.-P, Gentit P. 2014. First Report of '*Candidatus Liberibacter solanacearum*' in Carrot in France. ***Plant Disease*** 98:839