

Tracking vectors of bacteria and phytoplasmas threatening Europe's major crops



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Research consortium

FPS (BE), CRAW (BE), ANSES (FR), INIAV (PT), INRA (MA)

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Goals

Several harmful phytoplasmas and bacteria are nowadays threatening important European crops. For these pathogens, some phloem and xylem feeding insects are already identified as vectors or candidate vectors whereas involvement of other *Auchenorrhyncha* in the transmission of the diseases has not yet been investigated. Knowledge on vectors involved, their phytosanitary status in specific areas, their host range, alternative hosts, and influence of abiotic factors on the vector occurrence and disease transmission capacity is fragmented or lacking. A comprehensive scientific insight is indispensable in order to improve risk evaluation and define effective regulation and phytosanitary management strategies adapted to local conditions for this type of vectored plant diseases.

Key outputs and results

- Mapping scientific knowledge and research projects on phloem and xylem feeding insect vectors (*Auchenorrhyncha* vectors) threatening selected major crops in Europe
- Identifying knowledge gaps and prioritise research activities on *Auchenorrhyncha* vectors and their interaction with pathogens, potential hosts and abiotic factors
- Optimisation and knowledge building on phloem and xylem feeding insect vector monitoring and trapping techniques
- Validated diagnostics tools for vector identification and identification of the pathogen inside the vector
 - Monitoring potential phloem and xylem feeding insect vectors in and around infested fields
 - Performing transmission trials towards susceptible crops
 - Research on life cycle and host range of these vectors depending on regional climate and seasonal variation
 - Vector plant host preference studies
 - Launching coordinated actions to join plant bug researchers and parties involved in vector transmissible plant pathogen issues
 - Formulating recommendations for disease and insect management