

## **Vector monitoring on *Flavescence dorée*, *Xylella fastidiosa* and regulated non-quarantine pests in fruit crops and viticulture**

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Quarantine pests (QPs) such as *Flavescence dorée* and *Xylella fastidiosa* are immense threats for fruit crops and viticulture. Globalization, tourism and climate change increase their distribution and the chance of their establishment in Germany. Additionally, regulated non-quarantine pests (RNQP) spread and affect the phytosanitary quality of planting material.

QP and RNQP phytoplasmas, bacteria and viruses are often distributed by plant-sucking insect vectors such as Auchenorrhyncha, scale insects and psyllids. Currently monitoring of QPs and RNQPs is mainly based on manual checking on symptoms and monitoring of vectors in orchards and vineyards. However, increasing risks for carryover lead to an increasing necessity for monitoring activities. Goal of this project is the development of a new effective and sensitive monitoring strategy based on the analysis of unsorted mass catches of plant-sucking insects from the field. For this, nucleic acids of both insects and pathogens need to be extracted from mass catches and analysed by next generation sequencing methods to identify both vectors and pathogens present in the field.

QPs and RNQPs have to be identified fast and effective to keep these important pests under control and prevent further spreading. Additionally, the generated data might help to investigate how QPs and RNQPs spread and/or to identify new vectors for important threats. To provide the results to researchers, plant protection services and farmers, an online platform will be set up.