

Fire Blight Control in Commercial, Low-Input & Rural Production Systems

Grower-Research-Government Cooperation in Austria, Germany, Switzerland, and Liechtenstein 2007-2011



'Together Against Fire Blight' is an international task force with 13 project partners representing the research, extension, grower, and governmental sectors in Austria, Switzerland, Germany and Liechtenstein in the Lake Constance region of Europe. Our consortia project is lead by the Austrian Vorarlberg State Government. This unique union of diverse partners from 4 countries aims to develop a multi-disciplinary/sector approach for sustainable fire blight management in commercial, low-input and traditional fruit production systems.

Central to our mission is facilitating the co-existence of commercial orchard and nursery economic viability while retaining the ecological and quality-of-life value of our traditional 'Hochstamm' (or old-growth, cider tree) ecosystems. We are focused on delivering fire blight solutions for sustainable production of traditional apple/pear varieties that are a cultural and rural-economic cornerstone of this region.

Research in laboratory, greenhouse and field studies is underway including the screening of a diverse-range of novel active compounds (soft chemicals, biocontrol agents), screening germplasm collections of heritage varieties, developing and implementing tools for advanced resistance breeding, and designing improved cultural practices to optimize sanitation and quarantine strategies. This project intends to become a long-term catalyst for sustained and active interaction and information transfer between regional partners.



1



2

Work Package 1: Cultural control approaches

- Visual Disease Monitoring in Nursery, Orchard and Landscape Locations
- Field trials with culture-based treatments (e.g., sanitation techniques)
- Epidemiological studies to enhance coexistence of commercial and landscape systems
- Latent infection and asymptomatic pathogen detection in apparently healthy trees

Work Package 2: Chemical and biocontrol approaches

- Evaluating commercial products for local conditions and proofing new control products
- Improving efficacy of biocontrol agents based on better understanding of mechanisms of action and interaction with the environment
- Consideration of non-target impact on crops and ecosystems

Work Package 3: Host resistance selection and breeding approaches

- Apple, pear, quince variety monitoring in the field for fire blight tolerance
- Controlled challenge trials to determine variety tolerance in the field
- Extension recommendations for replanting based on tolerant varieties
- Determination of potential efficacy values for proposed fire blight control products



3

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