Investigations of fungi as potential cause of sea buckthorn dieback in **Northern Germany**

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Economic Relevance: Plantations



Ecological Relevance: Wildplants





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German sea buckthorn production localized in north-east mostly Germany. The berries are characterized by high Vit. C contents. The plants are propagated by cuttings. So far, sea buckthorn was considered a low-maintenance culture. Since 2015, reports on sea buckthorn dieback accumulated. Up to now, the cause of plant death remains unexplained.

Foto: Sanddorn Storchennest Sea buckthorn dieback





Isolation approach

Sampling symptomatic shrubs (shoots and roots) from one plantation (Brandenburg); surface sterilization and isolation of fungi; identification by ITS-PCR and Sanger sequencing.

Project HippRham: Start Nov. 2020

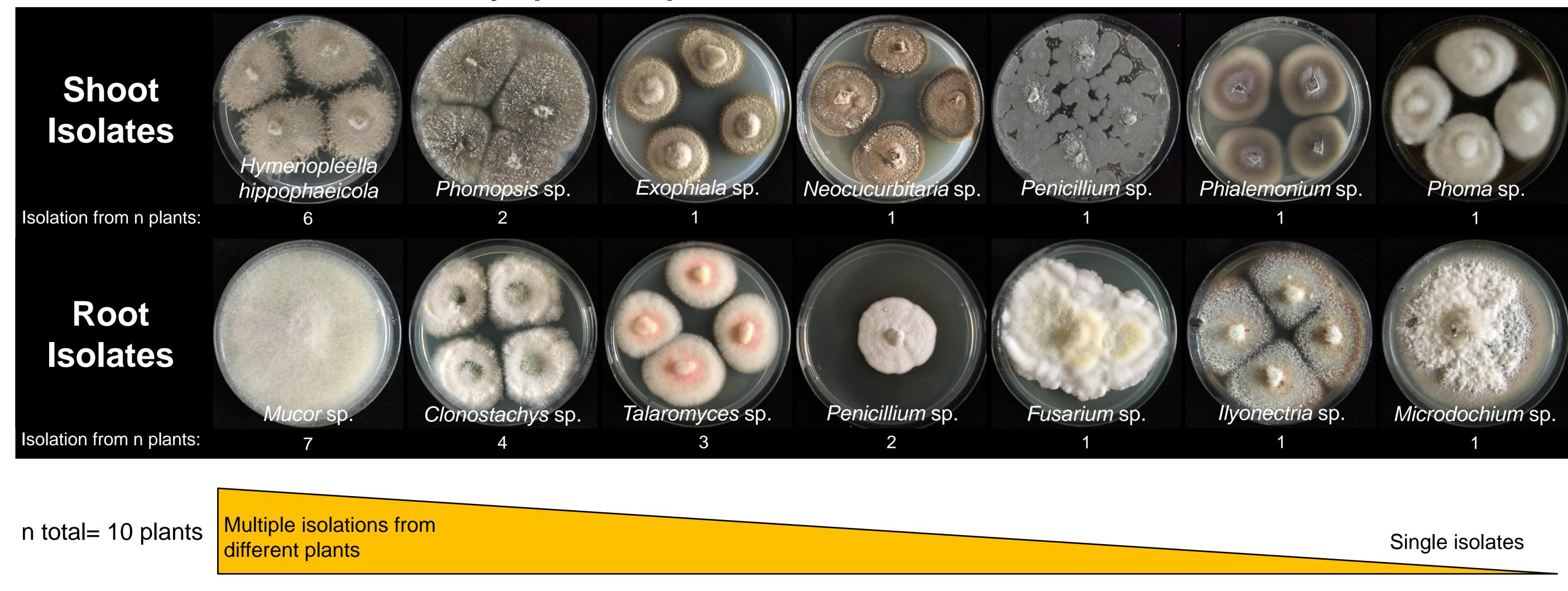
Aim is to reveal the **cause** of disease and to develop practical **control** strategies;

- Project partner LFA: Abiotic stressors and crop management strategies;
- Project partner LALLF: Testing of plant protection practices; \bullet
- **Project partner JKI: Pathogen diagnostics.** lacksquare

Preliminary results after testing 10 plants

- Different isolates were obtained from shoot and root material;
- Hymenopleella hippophaeicola was the most frequently isolated species from • shoots;
- From root material *Mucor* sp. was the most frequently isolated species.

First identified isolates from 10 symptomatic plants



Gefördert durch:

Outlook

- Further isolations from plantations and wild plants, also from asymptomatic plant material;
- Inoculation experiments with healthy plant material to study the effect of fungal isolates;
- Culture-independent sequencing approach;
- Bioassay with sterilized soil from different locations.

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Bundesministerium für Ernährung und Landwirtschaft

aufgrund eines Beschlusses des Deutschen Bundestages

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