

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

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Economic Relevance: Plantations



Foto: Sanddorn Storchennest

Ecological Relevance: Wildplants



German sea buckthorn production is mostly localized in north-east 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.

Sea buckthorn dieback



Foto: R. Hornig

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;
- **Project partner JKI: Pathogen diagnostics.**

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.

Preliminary results after testing 10 plants

- Different isolates were obtained from shoot and root material;
- *Hymenoplectella 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



n total= 10 plants

Multiple isolations from different plants

Single isolates

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.

Gefördert durch: