

Infectivity and Survival of *P. ramorum* in Recirculation Water of Nurseries

Katrin Kaminski, Stefan Wagner, Sabine Werres, Federal Biological Research Centre for Agriculture and Forestry, Institute for Plant Protection in Horticulture, Messeweg 11/12, D-38104 Braunschweig, Germany; +49(0)2994407; S.Werres@BBA.de; Heinrich Beltz, Chamber of Agriculture Weser-Ems, Department of Nursery Stock, Hogen Kamp 35, D-26160 Bad Zwischenahn, Germany; Dankwart Seipp, Chamber of Agriculture Weser-Ems, Department of Horticulture, Hogen Kamp 51, D-26160 Bad Zwischenahn, Germany; Thomas Brand, Chamber of Agriculture Weser-Ems, Plant Protection Service, Sedanstraße 4, D-26121 Oldenburg, Germany

In Europe the quarantine pathogen *Phytophthora ramorum* has been detected mainly on *Rhododendron* and *Viburnum* plants. The pathogen has been isolated from plants, soil and water including recirculation water in nurseries. So far little is known on the vitality and aggressiveness of the propagules in the water and whether the pathogen can survive in the recirculation system of nurseries.

A research project founded by the USDA forest service has started to focus on the pathogenicity and the survival of *P. ramorum* in irrigation water in a recirculation system over a period of two years. In a model system *Rhododendron* plants were cultivated on separated container stands and contaminated water is used for overhead irrigation. The disease development on the plants is observed regularly. Plants showing symptoms are investigated by direct isolation of *P. ramorum* and/or by PCR detection. For investigation of the survival of *P. ramorum* in the recirculation system, the occurrence and vitality of *P. ramorum* in the water reservoirs are tested with a bait test using *Rhododendron* leaves. Climate data and chemical data of the water are taken regularly.

The aims of the project and the test facility are described. Investigations are conducted over a period of two years and are still in process. Preliminary results of the first year are presented.