

Validation of the Bait Test with Rhododendron Leaves for *Phytophthora* Diagnosis¹

Corina Junker² and Sabine Werres²

Abstract

Bait tests are very helpful for diagnosis of *Phytophthora* in for example soil, substrate, water, sediment, and rootball samples (Werres and others 2014). By attracting the motile zoospores of the *Phytophthora* species with the baits these pathogens can be separated from other organisms. Bait tests are simple and cost effective and - compared with other diagnostic techniques - they are much more independent on the varying sample quality. Furthermore, bait tests can be used for evaluating big sample quantities.

Within the preparation of laboratory accreditation according to ISO standard ISO/IEC 17025 the European Plant Protection Organization (EPPO) recommends the validation of laboratory methods (“Specific requirements for laboratories preparing accreditation for plant pest diagnostic activity” EPPO standard PM 7/98; PM 7/76). In this guideline, detailed instructions on test verification are given, like analytical sensitivity and specificity, selectivity, repeatability, and reproducibility.

Within the European project “Responses of European Forests and Society to Invasive Pathogens” (RESIPATH, <http://www.slu.se/resipath>) the bait test with rhododendron leaves will be validated according to the EPPO guidelines. For the validation the standard protocol with detached rhododendron leaves according to Themann and Werres (1998, 2000) will be used. First results of the different validation steps will be presented.

Literature Cited

- Themann, K.; Werres, S. 1998.** Use of *Rhododendron* leaves to detect *Phytophthora* species in root and soil samples. Nachrichtenblatt des Deutschen Pflanzenschutzdienstes. 50(2):37-45.
- Themann, K.; Werres, S. 2000.** Experience with different diagnostic techniques to detect *Phytophthora* species in water. 4th IUFRO Working Party 7.03.04 - Diseases and Insects in Forest Nurseries, The Finnish Forest Research Institute.
- Werres, S.; Ghimire, S.R.; Pettitt, T. 2014.** Baiting assays for detection of *Phytophthora* species in irrigation water. In, Biology, detection and management of plant pathogens in irrigation water. Chuanxue, H.; Moorman, G.; Wohanka, W.; Büttner, C.: 125-138, APS Press, St. Paul, Minnesota.

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² Julius Kühn Institute - Federal Research Center for Cultivated Plants, Messeweg 11-12, 38104 Braunschweig, Germany. Corresponding author: corina.junker@jki.bund.de.