

Magnusson C, Henriques J, Sousa E. Studies on non-vector transmission of *Bursaphelenchus xylophilus* on *Pinus pinaster*. In: Schröder, T. (ed.), Pine Wilt Disease Conference 2013, pp. 115, Braunschweig, ISSN: 1866-590X

(132) Studies on non-vector transmission of *Bursaphelenchus xylophilus* on *Pinus pinaster*.

Magnusson C¹, Henriques J², and Sousa E²

¹ Norwegian Institute for Agricultural and Environmental Research (Bioforsk), Høgskoleveien 7, N-1430 Ås, Norway.

² Instituto Nacional de Investigação Agrária e Veterinária, I.P. Av. da República, Quinta do Marquês, Edifício da ex-EFN. 2780-159 Oeiras – Portugal.

Email: christer.magnusson@bioforsk.no;

Since the pinewood nematode (PWN), *Bursaphelenchus xylophilus* was regulated as a quarantine pest questions have been raised concerning the possibility of nematode spread with means other than the vector beetles *Monochamus* spp. In the REPHRAME-project these concerns are addressed in Work Package 5. In Portugal experiments on non-vector transmission of PWN to maritime pine *Pinus pinaster* have been started. Studies on root transmission in the field are carried out in the Lisbon area and are located at Herdade da Comporta, Companhia das Lezirias and Mata da Machada. Here, PWN transmission from nematode-inoculated adult trees (50 000 ind/tree) to covered undergrowth trees will be studied. In an outdoor greenhouse facility root transmission of PWN is studied on 7-years-old trees. The experiment includes 60 trees potted in pairs in 30 containers, where 1 tree in each pair is inoculated with 6 000 PWN and the spread of PWN from one tree to its neighbor is followed. Transmission of PWN from boards to trees is studied in the field. Infested boards (n=5) and nematode-free boards (n=5) will be tied to trees with intact bark, to trees with exposed cambium and to trees with exposed xylem. Transmission from infested chips to trees will be studied in the outdoor greenhouse facility on 7-year-old potted trees, with chips placed on top of soil or in contact with roots. In both situations there will be a treatment with intact and a treatment with artificially wounded roots.

Keywords: Non-vector transmission, *Bursaphelenchus xylophilus*, *Pinus pinaster*, Portugal.