

Worldwide the pine wood nematode (PWN), *Bursaphelenchus xylophilus*, is one of the severest quarantine pests mainly in coniferous stands. In the concerned countries severe damage was caused by the nematode induced pine wilt disease (PWD).

Mainly the international trade of wood and wooden products led to an introduction of the pine wood nematode from its habitat in Northern America to Asia (Japan, China, Korea, Taiwan) and Europe (Portugal, Spain). Since then efforts were made in the infested areas to eradicate the nematode. Not only in the infested countries but also in many other countries new research approaches and conception plans were pursued in the previous years to manage the pine wilt disease.

Since the last IUFRO Symposium in Nanjing/China in 2009, several expert groups in the whole world - among other things - worked intensively on the following topics:

- Impact on the international trade as well as economic consequences in the infested areas including corresponding modeling of outbreak scenarios and pathways,
- Pathway analysis and modeling/predicting of pine wilt expression across eco-climatic zones taking account of latency ,
- Biology of *Bursaphelenchus xylophilus* and other *Bursaphelenchus* species including their interaction with bacteria and fungi and their impact on host trees,
- Diagnostic methods aimed to a fast and reliable determination of PWN in pure culture and in plant tissue as well as in laboratory and under field conditions,
- Examinations on the tree physiology and resistance characteristics of host trees,
- PWN and vector association, vector dispersal capacity, strategies for vector control,
- Behavior and population dynamics in infested trees,
- Non-vector transmission and treatment options for wood and wood products,
- Management strategies for PWD.

All research approaches contribute to enhance procedures on the eradication and the management of the PWN resp. the PWD and thus to minimize the economical and the ecological impact on concerned forests.

The aim of the symposium is to bundle the actual research progress and the management of the pine wood nematode and its vector beetles and to enhance the scientific exchange and thus to present the research results to a broad interested group of scientists, disease managers and decision makers.

This symposium, organized by the Julius Kühn-Institut (JKI), Braunschwig, Germany, is a joint action of the International Union of Forest Research Organizations (IUFRO) unit 7.02.10 Pine Wilt Disease (PWD) and the group of the EU-research project REPHRAME „Development of improved methods for detection, control and eradication of pine wood nematode“ in cooperation with the Deutsche Phytomedizinische Gesellschaft - German Scientific Society for Plant Protection and Plant Health (DPG).

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