

## Epidemiological investigation on bois noir disease in Central and Southern Italy

G. Pasquini<sup>1</sup>, L. Ferretti<sup>1</sup>, B. Bagnoli<sup>2</sup>, A. Gentili<sup>1,3</sup> and E. Gargani<sup>2</sup>

<sup>1</sup>CRA-PAV, Plant Pathology Research Centre, Via C.G. Bertero, 22, 00156 Rome Italy; graziella.pasquini@entecra.it

<sup>2</sup>CRA-ABP Research Centre for Agrobiological and Pedology (ABP) Florence, Italy

<sup>3</sup>Mediterranean University of Reggio Calabria, Italy

Bois noir (BN) is one of the main grapevine yellows diseases. It is wide-spread in several grapevine growing areas and it is induced by stolbur phytoplasma, belonging to 16SrXII-A subgroup. In order to improve on the knowledge of the disease, one nursery and several infected vineyards were surveyed in the central and southern Italy regions as models for epidemiological investigations. The infection rate and the distribution of grapevine symptomatic plants were evaluated. Moreover monitoring and sampling of Auchenorrhyncha fauna and wild plant species were performed for several years and the stolbur isolates from the different hosts were molecularly characterized (Langer & Maixner, *Vitis*, 43, 191-200. 2004). In the selected vineyards results showed that several insect and weed species were infected by the same Stolbur type identified in symptomatic grapevines, suggesting their possible involvement in the disease epidemiology. *Reptalus quinquecostatus* (Dufour), *R. panzeri* (Low), *Exitianus capicola* (Stål), *Toya propinqua* (Fieber), *Hyalesthes luteipes* Fieber, *Thamnotettix zelleri* (Kirschbaum) and *Anoplotettix putoni* Ribaut (Pasquini *et al.*, Bull. Insectol., 60, 355-356. 2007) could be considered possible Stolbur vectors together with *Hyalesthes obsoletus* Signoret. *Urtica dioica* L. and *Convolvulus arvensis* L. are certainly involved in stolbur cycle (Maixner, 15th ICGV, 103-104. 2006), but also *Cirsium arvense* L. Scopoli in southern regions and some annual species as *Solanum nigrum* L. and *Amaranthus* spp. could be involved as source of inoculum (Pasquini *et al.*, Petria, 18, 218-221. 2008). In the investigated nursery a high population density of *H. obsoletus* was found on nettle plants growing along side the border and 12% of the collected specimens resulted in the presence of stolbur-infection. Although no symptomatic grapevine plantlets were observed, the presence of infected insect vectors could play an important role in spreading the disease.